SITE INFORMATION

Report Type: Closure Report 2RP-4944

General Site Information:						
Site:	**Screech Owl Federal #004H**					
Company:	**COG Operating LLC**					
Section, Township and Range	**Unit O**	**Sec. 18**	**T 26S**	**R 27E**		
Lease Number:	**API No. 30-015-42828**					
County:	**Eddy County**					
GPS:	**32.03527**			**-104.22497**		
Surface Owner:	**Federal**					
Directions:	From the intersection of Old Cavern Hwy and Whites City Rd. head south on Old Cavern Hwy for 2.31 miles, turn northeast onto unnamed lease rd and go 0.77 miles, turn south and go 0.32 miles, turn east and go 0.34 miles and arrive at location					

Release Data:	
Date Released:	8/18/2018
Type Release:	Produced Water
Source of Contamination:	Flowline
Fluid Released:	50 bbl water
Fluids Recovered:	0 bbls water

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:	*Less than 25' below surface*
Karst Potential:	*Medium*

Recommended Remedial Action Levels (RRALs)				
Benzene	***Total BTEX***	***TPH (GRO+DRO)***	***TPH (GRO+DRO+MRO)***	***Chlorides***
10 mg/kg	*50 mg/kg*	*100 mg/kg*	*100 mg/kg*	*600 mg/kg*

TETRA TECH

March 27, 2019

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

Re: Closure Report for the COG Operating, LLC, Screech Owl Federal #004H, Unit O, Section 18, Township 26 South, Range 27 East, Eddy County, New Mexico. 2RP-4944

Mr. Bratcher:

Tetra Tech, Inc. (Tetra Tech) was contacted by COG Operating, LLC (COG) to assess a release that occurred at the Screech Owl Federal #004H, Unit O, Section 18, Township 26 South, Range 27 East, Eddy County, New Mexico (Site). The spill site coordinates are 32.0352751°, -104.2249731°. 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 August 8, 2018 and released approximately 50 barrels of produced water due to a flowline rupture. No fluid's were recovered. The release originated in an area of pasture and migrated northward, crossing a lease road, a pipeline right of way (ROW) that contains multiple, above ground and buried pipelines, before terminating in pasture to the north. The flow path was composed of multiple channels with variable width and impacted an overall area measuring approximately 500' X 10'-145'. The initial C-141 Forms are 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 and the site is in a medium karst potential area. The nearest well is listed in the USGS National Water Information Database website in Section 9, approximately 2.45 miles northeast of the site, and has a reported depth to groundwater of 18 feet below ground surface. According to the Chevron Texaco Groundwater Trend map, the average depth to groundwater in this area is less than 50' below surface. The groundwater data is shown in Appendix B.

Tetra Tech
4000 North Big Spring, Suite 401, Midland, TX 79705
Tel 432.682.4559 Fax 432.682.3946 www.tetratech.com

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 100 mg/kg (GRO + DRO + MRO). Additionally, based on the site characterization, the proposed RRAL for chlorides is 600 mg/kg.

Soil Assessment and Analytical Results

On October 11, 2018, HRL Compliance Solutions personnel were onsite to sample the release area. A total of twelve (12) sample points (S-1, S-2, S-3, S-4, S-5, S-6, S-7, S-8, S-9, S-10, S-11, and S-12) were installed to total depths of 1.0' to 2.0' below surface. Soil samples were collected and submitted to the laboratory for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B, and chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The results of the sampling are summarized in Table 1. The sample locations are shown on Figure 3.

All sample points analyzed for benzene, total BTEX, and TPH were below the laboratory reporting limits. Sample point (S-7) showed chloride concentrations below the RRAL, with a high of 160 mg/kg at 2.0' below surface. Sample points (S-1, S-2, S-3, S-4, S-5, S-6, S-8, S-9, S-10, S-11, and S-12) all showed chloride concentrations above the RRAL, with concentrations ranging from 752 mg/kg to 6,800 mg/kg.

Remediation Activities

Tetra Tech personnel were onsite from January 21 through February 7, 2019 to supervise the remediation activities. The pasture areas were excavated to total depths between 2.0' to 6.0' below surface. Forty-seven (47) bottom hole confirmation samples and thirty-six (36) sidewall confirm samples were collected to ensure proper removal of the impacted soils. The samples were submitted to the laboratory to be analyzed for TPH method 8015 extended, BTEX method 8021B, and Chloride by EPA Method 300.0. The sampling results are summarized in Table 2. The excavation depths and sample locations are shown in Figure 4.

Referring to Table 1, all collected confirmation samples analyzed for benzene, total BTEX, and TPH were below the laboratory reporting limits. The areas of bottom holes (Bottom Hole #2, Bottom Hole #24, Bottom Hole #25, Bottom Hole #26, Bottom Hole #27, Bottom Hole #34, and Bottom Hole #35), had documented chloride concentrations of 848 mg/kg at 3.0', 851 mg/kg at 2.0', 659 mg/kg at 3.0', 929 mg/kg at 3.0', 682 mg/kg at 3.0', 882 mg/kg at 3.0', and 993 mg/kg at 3.0', respectively. The areas were then excavated an additional 0.5' below surface and subsequent confirmation composite samples exhibited chloride concentration levels below the RRAL. All other bottom hole confirmation composite samples collected showed chloride concentrations below the RRAL.

With the exception of sidewalls (NSW #5 and NSW #6), all other final composite sidewall samples showed chloride concentrations below the RRAL. Composite sidewall samples (NSW #5 and NSW #6) showed chloride concentrations of 1,800 mg/kg and 912 mg/kg, respectively. However, sidewalls (NSW #5 and NSW #6) were not expanded due to safety concerns, as they were located at the edge of an active lease road. All of the excavated material was transported offsite for proper disposal and backfilled with clean material to surface grade.

In the area of sample point (S-3), which was located between multiple above ground and buried lines, a trench (SP-3) was installed to a total depth of 4.0' below surface to reassess the soils between the buried and above ground pipelines. None of trench (SP-3) samples showed chloride concentrations above the laboratory reporting limit. Additionally, no samples showed benzene, total BTEX, or TPH above the laboratory reporting limits.

Revegetation Plan

The area will be seeded with a Bureau of Land Management (BLM) seed mixture 4 for shallow sites in June 2019 in order to coincide with the rainy season in Southeastern New Mexico to aid in revegetation. Based on the soils at the site, the Bureau of Land Management (BLM) Seed Mixture 4 will be used for seeding and will be planted in the amount specified in the pounds pure live seed (PLS) per acre. The seed mixture will be spread by a drill equipped with a depth regulator or a hand-held broadcaster and raked. If a hand-held broadcaster is used for dispersal, the pounds pure live seed per acre will be doubled.

Site inspections will be performed to assess the revegetation progress and evaluate the site for the presence of primary or secondary noxious weeds. If noxious weeds are identified, the BLM will be contacted to determine an effective method for eradication. If the site does not show revegetation after one growing season, the area will be reseeded as appropriate. The BLM seed mixture details and corresponding pounds pure live seed per acre are included in Appendix D.

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,
Project Manager

Johnathon Kell,
Geologist

cc: Ike Tavarez – COG
Dakota Neel - COG
Rebecca Haskell - COG
Sheldon Hitchcock - COG
DeAnn Grant - COG

Figures

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FIGURE 1

SCREECH OWL FEDERAL #4
(32.0352751°,-104.2249731)

OVERVIEW MAP

EDDY COUNTY, NEW MEXICO

Project : 212C-MD-01549	
Date : 02/22/2019	
File : H:\GIS\212C-MD-01549	

MAPPED BY: Misti Morgan

OVERALL VIEW
1:1,476,557

N
W
E
S

SCREECH OWL FEDERAL #4

Forehand West Tank

Hollow

0 2,000 4,000 Feet

1 inch = 2,000 feet

LEGEND

◉ SAMPLE SITE LOCATIONS

CONCHO

FIGURE 2

SCREECH OWL FEDERAL #4
(32.0352751°,-104.2249731°)

TOPOGRAPHIC MAP

EDDY COUNTY, NEW MEXCIO

Project : 212C-MD-01549	
Date : 02/21/2019	
File : H:\GIS\212C-MD-01549	

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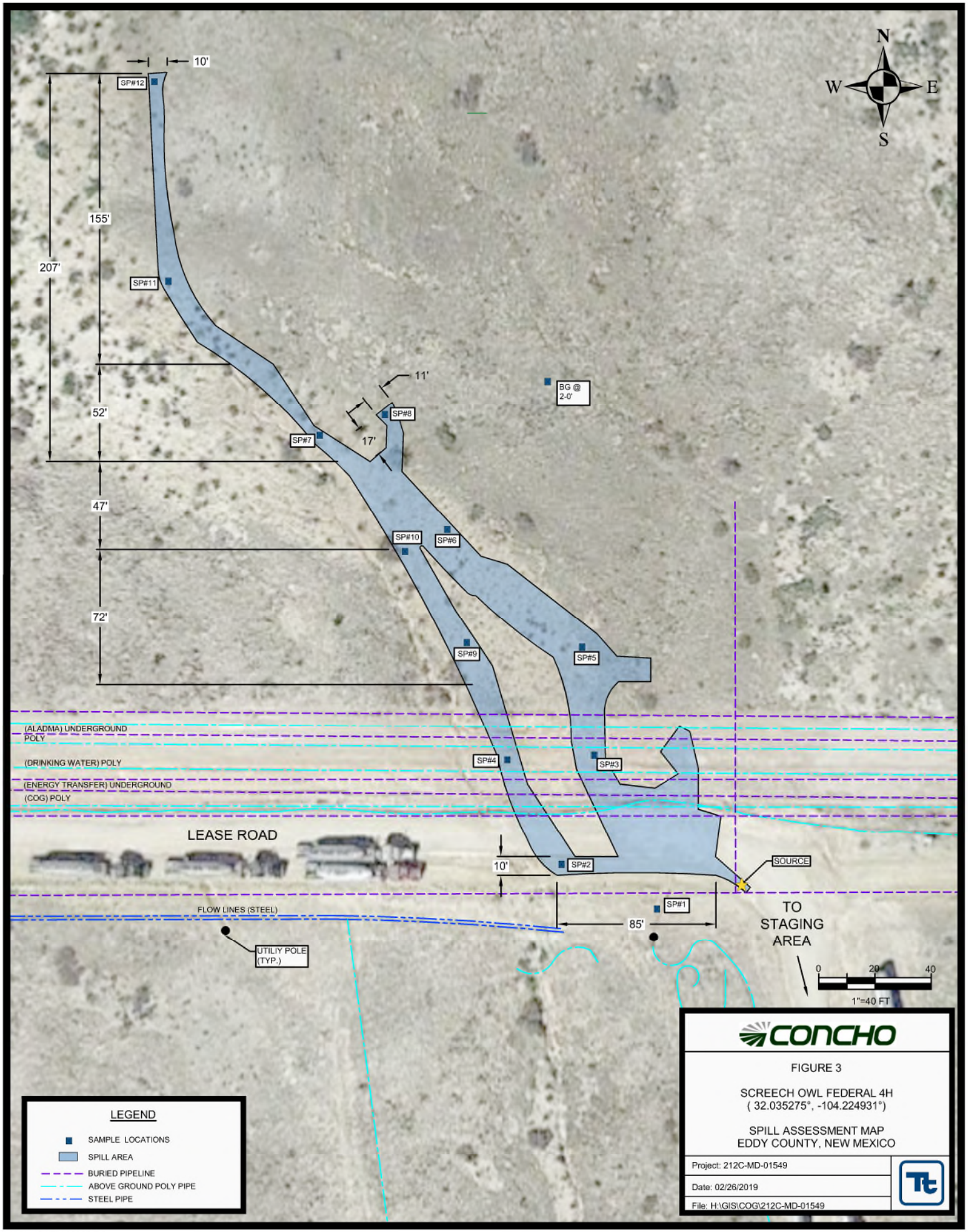
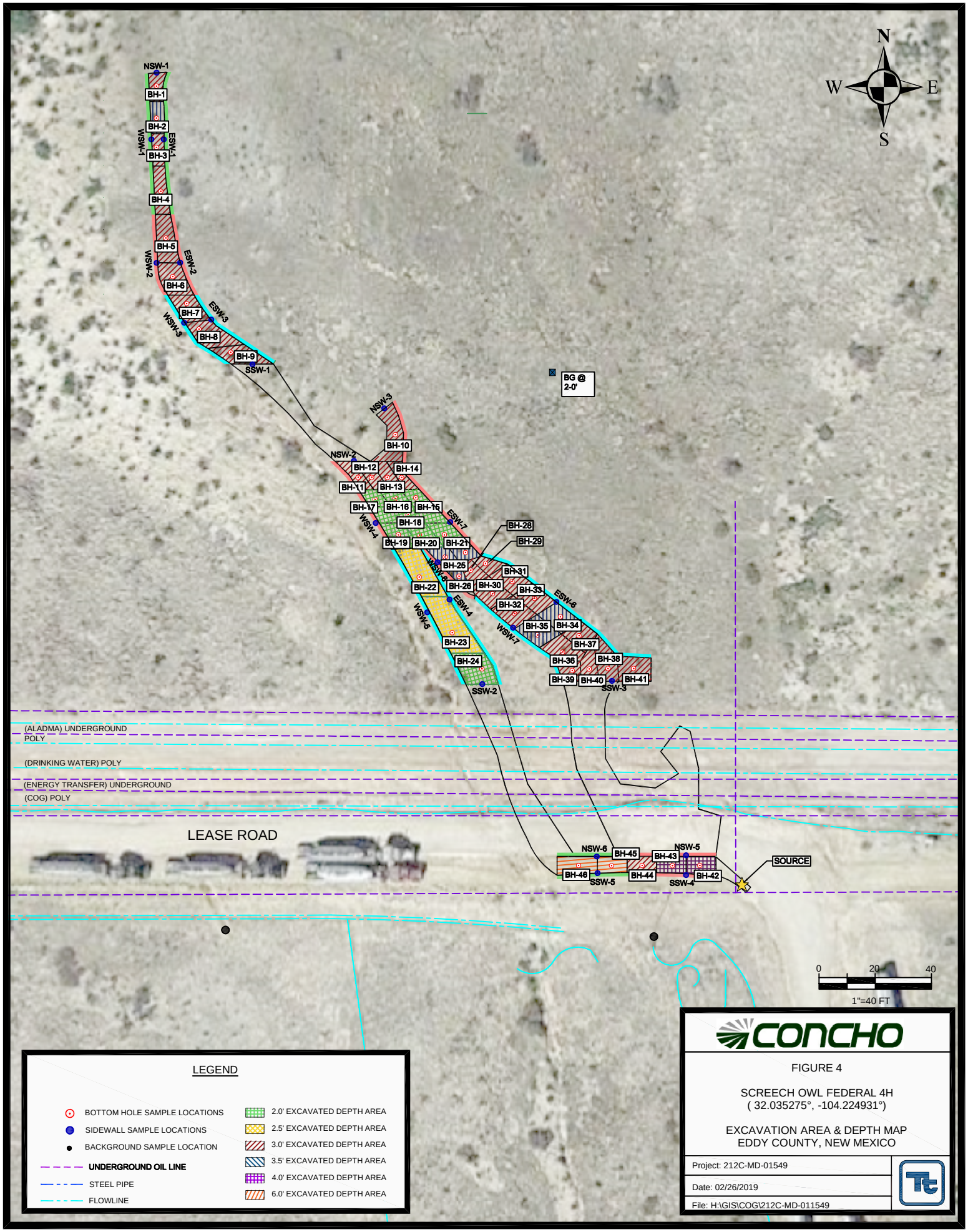
MAPPED BY: Misti Morgan



Drawn By: MISTI MORGAN



CONCHO

FIGURE 4

SCREECH OWL FEDERAL 4H
(32.035275°, -104.224931°)

EXCAVATION AREA & DEPTH MAP
EDDY COUNTY, NEW MEXICO

Project: 212C-MD-01549

Date: 02/26/2019

File: H:\GIS\COG\212C-MD-011549

Photos

COG
Screech Owl Federal #004H
Eddy County, New Mexico

Area of Excavation – View South

Area of Excavation – View West

COG
Screech Owl Federal #004H
Eddy County, New Mexico

Area of Excavation – View West

Area of Excavation – View North

COG
Screech Owl Federal #004H
Eddy County, New Mexico

Area of Excavation – View South

Area of Excavation – View North

COG
Screech Owl Federal #004H
Eddy County, New Mexico

Area of Excavation – View Southwest

Area of Excavation – View Northeast

COG
Screech Owl Federal #004H
Eddy County, New Mexico

Area of Excavation – View North-northwest

Area of Excavation – View Northwest

COG
Screech Owl Federal #004H
Eddy County, New Mexico

Area of Excavation – View West

Area of Excavation – View Southwest

Tables

Table 1
COG
Screech Owl Federal #4H
Eddy 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						
S1	10/11/2018	Surface	-		X	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	**2,760**
	"	1	-		X	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	**1,330**
	"	2	-		X	-	-	-	-	-	-	-	-	-	176
S2	10/11/2018	Surface	-		X	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	**752**
	"	1	-		X	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	240
	"	2	-		X	-	-	-	-	-	-	-	-	-	**1,170**
S3	10/11/2018	Surface	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	**1,330**
	"	1	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	608
SP-3	1/31/2019	0-1	-	X		<49.8	<49.8	<49.8	<49.8	-	-	-	-	-	<20.0
	"	2	-	X		<50.0	<50.0	<50.0	<50.0	-	-	-	-	-	<20.0
	"	3	-	X		<49.6	<49.6	<49.6	<49.6	-	-	-	-	-	<20.0
	"	4	-	X		<49.6	<49.6	<49.6	<49.6	-	-	-	-	-	<20.0
S4	10/11/2018	Surface	-		X	<10.0	91.0	21.4	112	<0.050	<0.050	<0.050	<0.150	<0.300	**848**
	"	1	-		X	<10.0	34.0	<10.0	34.0	<0.050	<0.050	<0.050	<0.150	<0.300	**1,470**
	"	2	-		X	-	-	-	-	-	-	-	-	-	**5,280**
S5	10/11/2018	Surface	-		X	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	**3,680**
	"	1	-		X	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	**1,010**
	"	2	-		X	-	-	-	-	-	-	-	-	-	**1,060**
S6	10/11/2018	Surface	-		X	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	**592**
	"	1	-		X	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	**2,960**
	"	2	-		X	-	-	-	-	-	-	-	-	-	**1,570**
S7	10/11/2018	Surface	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	48.0
	"	1	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	64.0
	"	2	-	X		-	-	-	-	-	-	-	-	-	160
S8	10/11/2018	Surface	-		X	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	**320**
	"	1	-		X	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	**1,410**
	"	2	-		X	-	-	-	-	-	-	-	-	-	**1,280**

Table 1
COG
Screech Owl Federal #4H
Eddy 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						
S9	10/11/2018	Surface	-		X	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	80.0
	"	1	-		X	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	272
	"	2	-		X	-	-	-	-	-	-	-	-	-	**752**
S10	10/11/2018	Surface	-		X	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	224
	"	1	-		X	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	**4,200**
	"	2	-		X	-	-	-	-	-	-	-	-	-	**6,800**
S11	10/11/2018	Surface	-		X	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	**112**
	"	1	-		X	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	144
	"	2	-		X	-	-	-	-	-	-	-	-	-	**3,040**
S12	10/11/2018	Surface	-		X	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	32
	"	1	-		X	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	240
	"	2	-		X	-	-	-	-	-	-	-	-	-	**1,020**
Bottom Hole #1	1/22/2019	-	3	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	192
Bottom Hole #2	1/22/2019	-	3		X	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	**848**
	1/31/2019	-	3.5	X		<49.8	<49.8	<49.8	<49.8	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	224
BH #2 North Sidewall	1/31/2019	-	-	X		-	-	-	-	-	-	-	-	-	153
BH #2 South Sidewall	1/31/2019	-	-	X		<49.5	<49.5	<49.5	<49.5	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	459
Bottom Hole #3	1/22/2019	-	3	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	176
Bottom Hole #4	1/22/2019	-	3	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	480
Bottom Hole #5	1/23/2019	-	3	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	128
Bottom Hole #6	1/23/2019	-	3	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	64.0
Bottom Hole #7	1/23/2019	-	3	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	80.0
Bottom Hole #8	1/23/2019	-	3	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	48.0
Bottom Hole #9	1/23/2019	-	3	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	160
Bottom Hole #10	1/25/2019	-	3	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	432
Bottom Hole #11	1/25/2019	-	3	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	320

Table 1
COG
Screech Owl Federal #4H
Eddy 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						
Bottom Hole #12	1/25/2019	-	3	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	528
Bottom Hole #13	1/25/2019	-	3	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	480
Bottom Hole #14	1/25/2019	-	3	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	560
Bottom Hole #15	1/31/2019	-	2.5	X		-	-	-	-	-	-	-	-	-	64.0
Bottom Hole #16	1/31/2019	-	2.5	X		<49.7	<49.7	<49.7	<49.7	<0.00092	<0.00092	<0.00092	<0.00092	<0.00092	227
Bottom Hole #17	1/31/2019	-	2.5	X		-	-	-	-	-	-	-	-	-	184
Bottom Hole #18	1/31/2019	-	2.5	X		<49.7	<49.7	<49.7	<49.7	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	173
Bottom Hole #19	1/31/2019	-	2.5	X		-	-	-	-	-	-	-	-	-	454
Bottom Hole #20	1/31/2019	-	2.5	X		<49.8	<49.8	<49.8	<49.8	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	241
Bottom Hole #21	1/31/2019	-	2.5	X		-	-	-	-	-	-	-	-	-	132
Bottom Hole #22	1/31/2019	-	2	X		<49.5	<49.5	<49.5	<49.5	<0.000996	<0.000996	<0.000996	<0.000996	<0.000996	176
Bottom Hole #23	1/31/2019	-	2	X		-	-	-	-	-	-	-	-	-	48.6
Bottom Hole #24	1/31/2019	-	2		X	<49.9	<49.9	<49.9	<49.9	<0.000992	<0.000992	<0.000992	<0.000992	<0.000992	**851**
	2/5/2019	-	2.5	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	64.0
Bottom Hole #25	1/31/2019	-	3		X	-	-	-	-	-	-	-	-	-	**659**
	2/5/2019	-	3.5	X		-	-	-	-	-	-	-	-	-	32.0
North 25 Sidewall	2/6/2019	-	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	96.0
South 25 Sidewall	2/6/2019	-	-	X		-	-	-	-	-	-	-	-	-	96.0
Bottom Hole #26	1/31/2019	-	3		X	<49.8	<49.8	<49.8	<49.8	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	**929**
	2/5/2019	-	3.5	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	48.0
Bottom Hole #27	1/31/2019	-	3		X	-	-	-	-	-	-	-	-	-	**682**
	2/5/2019	-	3.5	X		-	-	-	-	-	-	-	-	-	272
Bottom Hole #28	1/31/2019	-	3	X		<50.0	<50.0	<50.0	<50.0	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	347
Bottom Hole #29	1/31/2019	-	3	X		-	-	-	-	-	-	-	-	-	93.6
Bottom Hole #30	1/31/2019	-	3	X		<49.6	<49.6	<49.6	<49.6	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<20.0

Table 1
COG
Screech Owl Federal #4H
Eddy 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						
Bottom Hole #31	1/31/2019	-	3	X		-	-	-	-	-	-	-	-	-	549
Bottom Hole #32	1/31/2019	-	3	X		<49.7	<49.7	<49.7	<49.7	<0.000996	<0.000996	<0.000996	<0.000996	<0.000996	352
Bottom Hole #33	1/31/2019	-	3	X		-	-	-	-	-	-	-	-	-	41.2
Bottom Hole #34	1/31/2019	-	3		X	<50.0	<50.0	<50.0	<50.0	<0.000992	<0.000992	<0.000992	<0.000992	<0.000992	**882**
	2/5/2019	-	3.5	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	32.0
North 34 Sidewall	2/6/2019	-	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	128
South 34 Sidewall	2/6/2019	-	-	X		-	-	-	-	-	-	-	-	-	144
Bottom Hole #35	1/31/2019	-	3		X	-	-	-	-	-	-	-	-	-	**933**
	2/5/2019	-	3.5	X		-	-	-	-	-	-	-	-	-	48.0
Bottom Hole #36	1/31/2019	-	3	X		<49.9	<49.9	<49.9	<49.9	<0.000994	<0.000994	<0.000994	<0.000994	<0.000994	416
Bottom Hole #37	1/31/2019	-	3	X		-	-	-	-	-	-	-	-	-	218
Bottom Hole #38	1/31/2019	-	3	X		<49.6	<49.6	<49.6	<49.6	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	431
Bottom Hole #39	1/31/2019	-	3	X		-	-	-	-	-	-	-	-	-	144
Bottom Hole #40	1/31/2019	-	3	X		<49.5	<49.5	<49.5	<49.5	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	570
Bottom Hole #41	1/31/2019	-	3	X		-	-	-	-	-	-	-	-	-	568
Bottom Hole #42	2/6/2019	-	4	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	96.0
Bottom Hole #43	2/6/2019	-	4	X		-	-	-	-	-	-	-	-	-	32.0
Bottom Hole #44	2/6/2019	-	3	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	288
Bottom Hole #45	2/6/2019	-	6	X		-	-	-	-	-	-	-	-	-	112
Bottom Hole #46	2/6/2019	-	6	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	112
Bottom Hole #47	2/7/2019	-	3	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	

Table 1
COG
Screech Owl Federal #4H
Eddy 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						
North Sidewall #1	1/22/2019	-	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	384
North Sidewall #2	1/31/2019	-	-	X		<50.0	<50.0	<50.0	<50.0	<0.000996	<0.000996	<0.000996	<0.000996	<0.000996	539
North Sidewall #3	1/31/2019	-	-	X		-	-	-	-	-	-	-	-	-	350
North Sidewall #4	1/31/2019	-	-	X		<49.8	<49.8	<49.8	<49.8	<0.000992	<0.000992	<0.000992	<0.000992	<0.000992	165
North Sidewall #5	2/5/2019	-	-	X		-	-	-	-	-	-	-	-	-	**1,800**
North Sidewall #6	2/5/2019	-	-	X		-	-	-	-	-	-	-	-	-	**912**
South Sidewall #1	1/31/2019	-	-	X		-	-	-	-	-	-	-	-	-	214
South Sidewall #2	1/31/2019	-	-	X		<49.5	<49.5	<49.5	<49.5	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	236
South Sidewall #3	1/31/2019	-	-	X		-	-	-	-	-	-	-	-	-	373
South Sidewall #4	2/5/2019	-	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	160
South Sidewall #5	2/5/2019	-	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	496
East Sidewall #1	1/22/2019	-	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	320
East Sidewall #2	1/22/2019	-	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	112
East Sidewall #3	1/23/2019	-	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	224
East Sidewall #4	1/31/2019	-	-	X		-	-	-	-	-	-	-	-	-	<19.8
East Sidewall #5	1/31/2019	-	-	X		<49.6	<49.6	<49.6	<49.6	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	<20.0
East Sidewall #6	1/31/2019	-	-	X		-	-	-	-	-	-	-	-	-	529
East Sidewall #7	1/31/2019	-	-	X		<49.9	<49.9	<49.9	<49.9	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	90.2
East Sidewall #8	2/6/2019	-	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	416

Table 1
COG
Screech Owl Federal #4H
Eddy 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						
East Sidewall #9	2/5/2019	-	-		X	<49.9	<49.9	<49.9	<49.9	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	**656**
	2/7/2019	-	-	X		-	-	-	-	-	-	-	-	-	272
East Sidewall #10	2/6/2019	-	-	X		-	-	-	-	-	-	-	-	-	352
East Sidewall #11	2/7/2019	-	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	32
West Sidewall #1	1/22/2019	-	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	304
West Sidewall #2	1/22/2019	-	-		X	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	**704**
	1/31/2019	-	-	X		<49.6	<49.6	<49.6	<49.6	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	125
West Sidewall #3	1/23/2019	-	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	48.0
West Sidewall #4	1/31/2019	-	-	X		-	-	-	-	-	-	-	-	-	115
West Sidewall #5	1/31/2019	-	-	X		<49.5	<49.5	<49.5	<49.5	<0.000998	<0.000998	<0.000998	<0.000998	<0.000998	<10.0
West Sidewall #6	1/31/2019	-	-		X	-	-	-	-	-	-	-	-	-	**623**
	2/5/2019	-	-		X	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	**688**
	2/7/2019	-	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	48.0
West Sidewall #7	1/31/2019	-	-	-	X	<49.9	<49.9	<49.9	<49.9	<0.00101	<0.00101	<0.00101	<0.00101	<0.00101	**876**
	2/5/2019	-	-	X		-	-	-	-	-	-	-	-	-	80.0
West Sidewall #8	2/5/2019	-	-		X	-	-	-	-	-	-	-	-	-	**2,480**
	2/7/2019	-	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	320
Background	1/24/2019	1	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	64.0
	"	2	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	64.0
	"	3	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	32.0
	"	4	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	64.0
	"	5	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	48.0
	"	6	-	X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	64.0

(-) Not Analyzed

Excavation Depths

Appendix A

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

State of New Mexico
Energy Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

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

Incident ID	
District RP	2RP-4944
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party COG Operating LLC	OGRID 229137
Contact Name Robert McNeill	Contact Telephone 432-683-7443
Contact email rmcneill@concho.com	Incident # *(assigned by OCD)*
Contact mailing address 600 West Illinois Avenue, Midland, TX 79701	

Location of Release Source

Latitude 32.0352751 Longitude -104.2249731
(NAD 83 in decimal degrees to 5 decimal places)

Site Name Screech Owl Federal #004H	Site Type Flowline
Date Release Discovered 8/18/2018	API# *(if applicable) 30-015-*

Unit Letter	Section	Township	Range	County
O	18	26S	27E	Eddy

Surface Owner: ☐ State ☒ Federal ☐ Tribal ☐ Private (*Name:)*

Nature and Volume of Release

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

☐ Crude Oil	Volume Released (bbls)	Volume Recovered (bbls)
☒ Produced Water	Volume Released (bbls) 50	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	☒ Yes ☐ No
☐ Condensate	Volume Released (bbls)	Volume Recovered (bbls)
☐ Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
☐ Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release
The release was caused by a rupture in the flowline.

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-4944
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? Over 25 bbls released
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? 8/19/2018 at 12:27pm via phone to: Mike Bratcher – NMOCD Maria Pruett – NMOCD Shelly Tucker - SLO	

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: Jennifer Knowlton Title: HRL Compliance Solutions, Regional Manager

Signature: Jennifer Knowlton Date: 11/02/2018

email: jknowlton@hrlcomp.com Telephone: 505-238-3588

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-4944
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?	< 25' (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	2RP-4944
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: Ike Tavarez Title: Senior HSE Supervisor

Signature:  Date: 3/27/19

email: itavarez@concho.com Telephone: 432-685-2573

OCD Only

Received by: _____ Date: _____

State of New Mexico
Oil Conservation Division

Incident ID	
District RP	2RP-4944
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: 3/27/19

email: itavarez@concho.com Telephone: 432-685-2573

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

Appendix B

Water Well Data
Average Depth to Groundwater (ft)
COG-Screech Owl Federal #004H
Eddy County, New Mexico

25 South 26 East

6	5	4	3 45	2	1
7 60	8	9 45	10	11	12
18	17	16	15	14	13
19	20	21	22 118	23	24
30	29	28	27	26	25
31	32	33	34	35	36

25 South 27 East

6	5	4	3	2 27	1
7	8	9	10	11	12 92
18	17	16	15	14	13
19	20 24	21	22 26	23	24 67
30	29	28	27 16	26	25 12
31	32	33 19	34	35	36

25 South 28 East

6	5 59	4 35	3 32	2	1 Site
7	8	9	10	11	12
18 67	17	16	15 48 49	14	13
19	20 96	21	22	23	24
30	29 15	28 90	27	26 40	25
31	32	33	34	35 55	36 40

26 South 26 East

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

26 South 27 East

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

26 South 28 East

6	5	4	3	2 120 21	1
7	8	9	10	11	12 100
18	17	16	15 175	14 93 120	13 56
19	20	21	22 120 22	23	24
30	29	28	27 145	26	25
31	32	33	34	35	36

88 New Mexico State Engineers Well Reports

105 USGS Well Reports

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

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

34 NMOCD - Groundwater Data

123 Tetra Tech installed temporary wells and field water level

143 NMOCD Groundwater map well location

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 New Mexico

Click to hide state-specific text

Search Results -- 1 sites found

site_no list =

- 320323104112901

Minimum number of levels = 1

Save file of selected sites to local disk for future upload

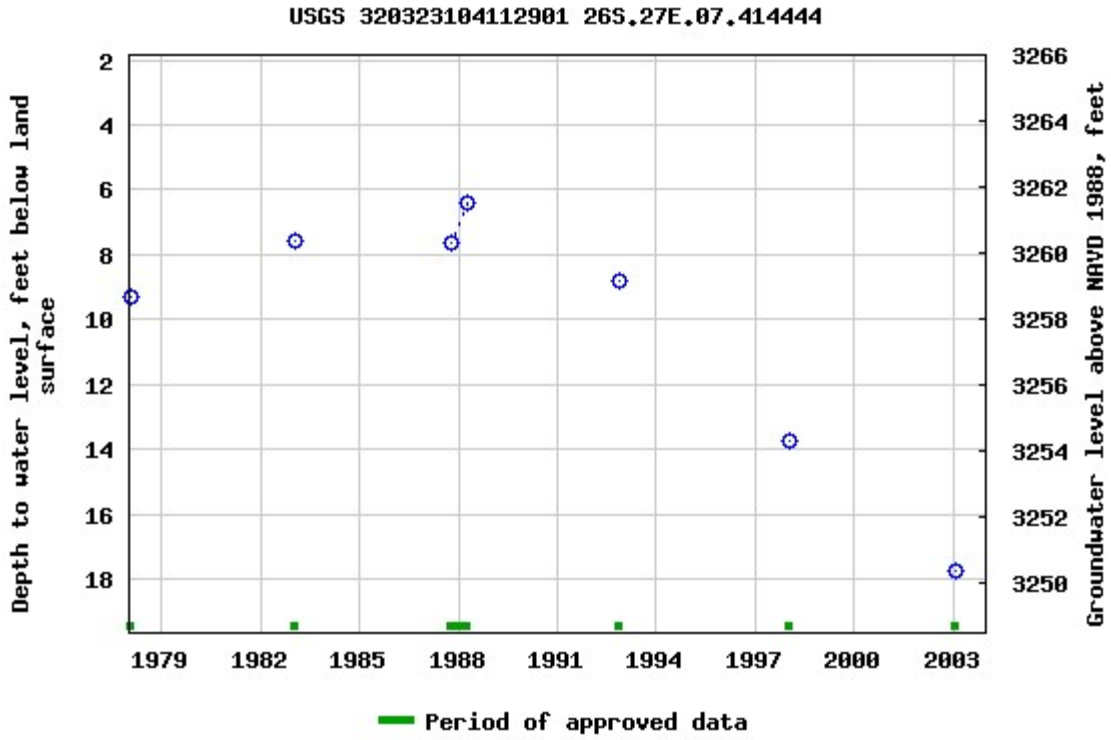
USGS 320323104112901 26S.27E.07.414444

Available data for this site Groundwater: Field measurements GO

Eddy County, New Mexico
Hydrologic Unit Code --
Latitude 32°03'23", Longitude 104°11'29" NAD27
Land-surface elevation 3,268 feet above NAVD88
This well is completed in the Castile Formation (312CSTL) 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?
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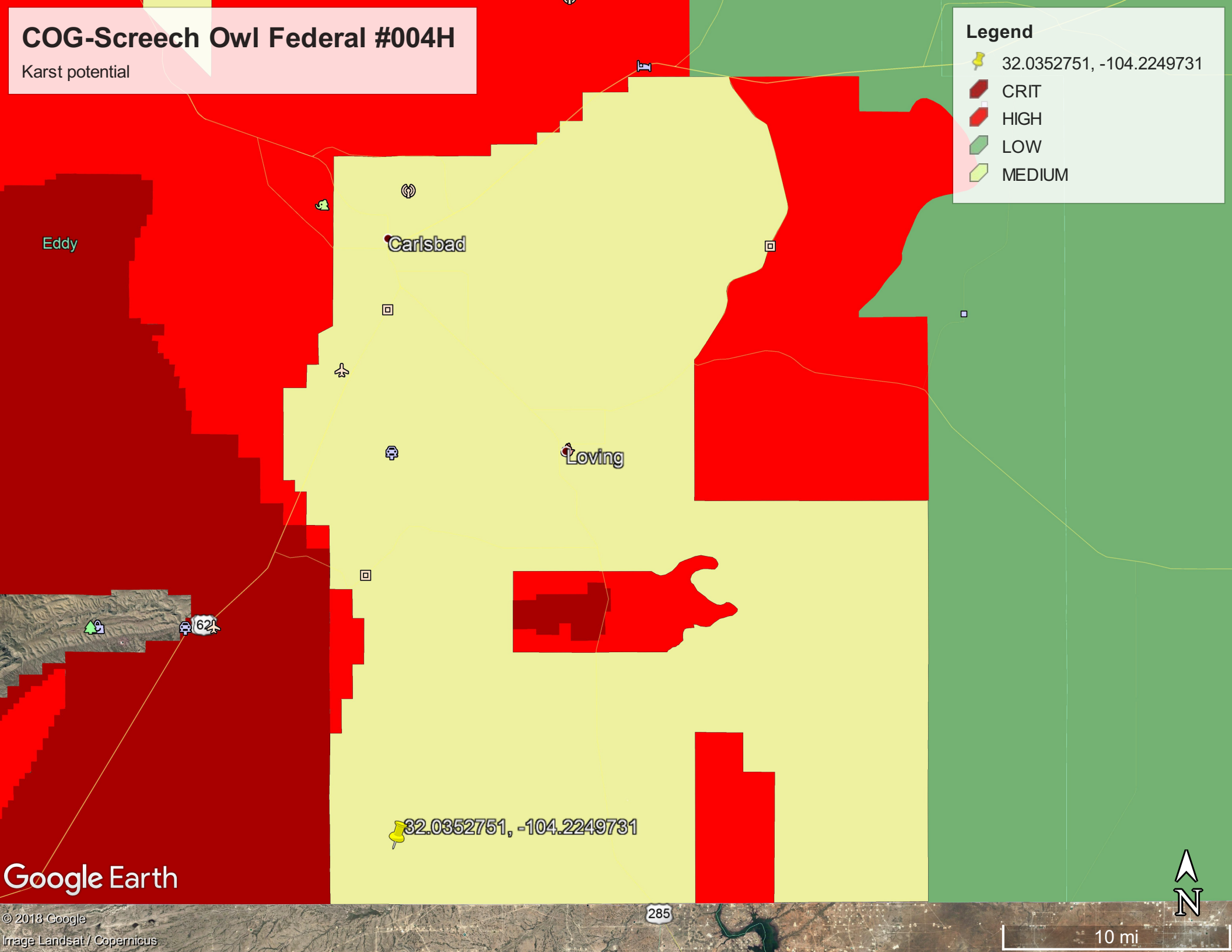
U.S. Department of the Interior | U.S. Geological Survey

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

Page Contact Information: New Mexico Water Data Maintainer
Page Last Modified: 2019-02-19 12:02:30 EST
1.56 1.43 nadww01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Legend
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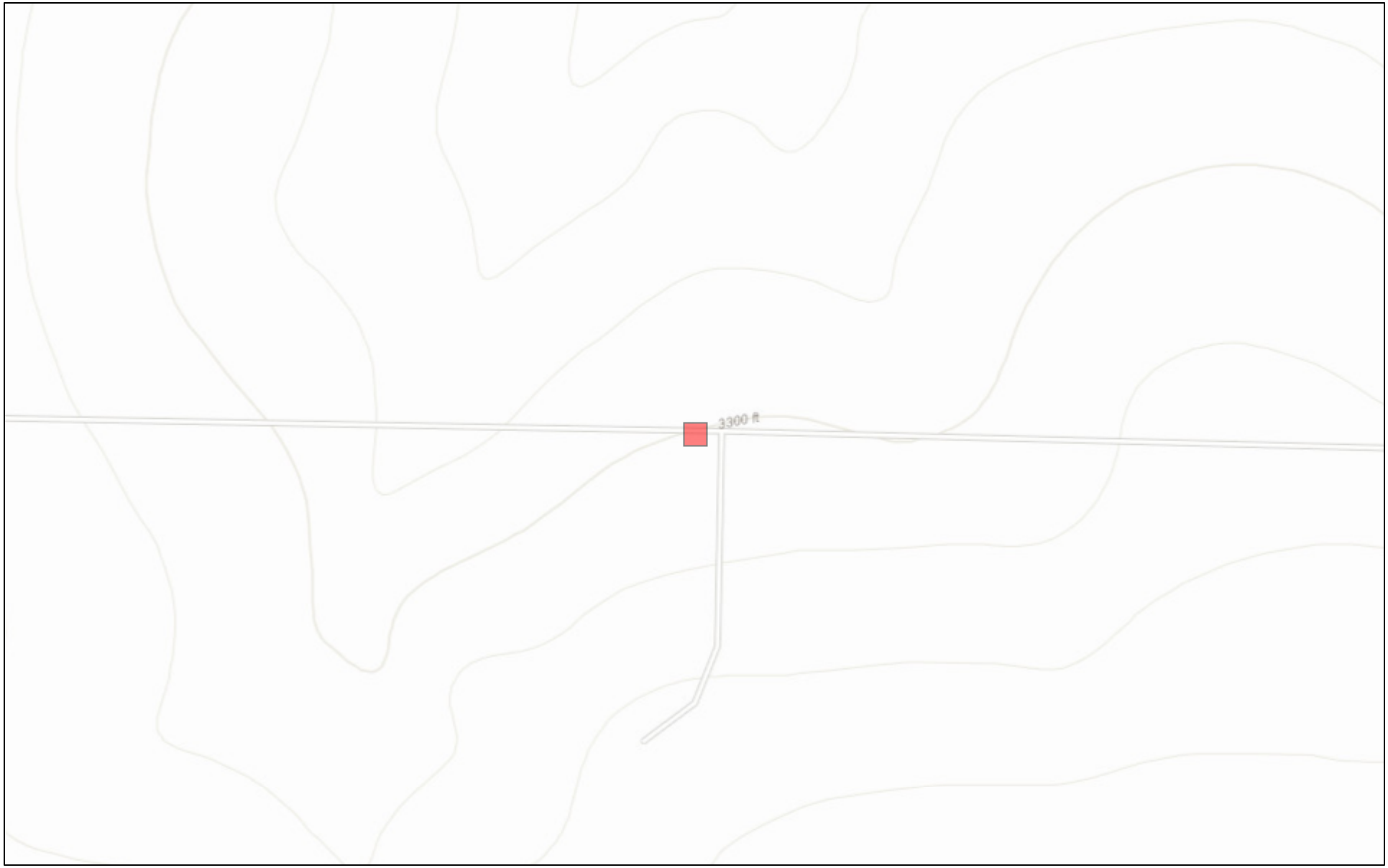
CRIT
HIGH
LOW
MEDIUM
Eddy
Carlsbad
Loving
62
285
32.0352751, -104.2249731
Google Earth
© 2018 Google
Image Landsat / Copernicus
N
10 mi

New Mexico NFHL Data



February 20, 2019

1:4,514

0 0.0375 0.075 0.15 mi

0 0.05 0.1 0.2 km

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

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Appendix C

CARDINAL Laboratories

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

January 28, 2019

CLAIR GONZALES

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: SCREECH OWL FED 4H

Enclosed are the results of analyses for samples received by the laboratory on 01/25/19 16:50.

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: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 28-Jan-19 11:47

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BACKGROUND 1' BEB	H900283-01	Soil	24-Jan-19 00:00	25-Jan-19 16:50
BG 2' BEB	H900283-02	Soil	24-Jan-19 00:00	25-Jan-19 16:50
BG 3' BEB	H900283-03	Soil	24-Jan-19 00:00	25-Jan-19 16:50
BG 4' BEB	H900283-04	Soil	24-Jan-19 00:00	25-Jan-19 16:50
BG 5' BEB	H900283-05	Soil	24-Jan-19 00:00	25-Jan-19 16:50
BG 6' BEB	H900283-06	Soil	24-Jan-19 00:00	25-Jan-19 16:50
BOTTOM HOLE #1 (3' BEB)	H900283-07	Soil	22-Jan-19 00:00	25-Jan-19 16:50
BOTTOM HOLE #2 (3' BEB)	H900283-08	Soil	22-Jan-19 00:00	25-Jan-19 16:50
BOTTOM HOLE #3 (3' BEB)	H900283-09	Soil	22-Jan-19 00:00	25-Jan-19 16:50
BOTTOM HOLE #4 (3' BEB)	H900283-10	Soil	22-Jan-19 00:00	25-Jan-19 16:50
BOTTOM HOLE #5 (3' BEB)	H900283-11	Soil	23-Jan-19 00:00	25-Jan-19 16:50
BOTTOM HOLE #6 (3' BEB)	H900283-12	Soil	23-Jan-19 00:00	25-Jan-19 16:50
BOTTOM HOLE #7 (3' BEB)	H900283-13	Soil	23-Jan-19 00:00	25-Jan-19 16:50
BOTTOM HOLE #8 (3' BEB)	H900283-14	Soil	23-Jan-19 00:00	25-Jan-19 16:50
BOTTOM HOLE #9 (3' BEB)	H900283-15	Soil	23-Jan-19 00:00	25-Jan-19 16:50
BOTTOM HOLE #10 (3' BEB)	H900283-16	Soil	25-Jan-19 00:00	25-Jan-19 16:50
BOTTOM HOLE #11 (3' BEB)	H900283-17	Soil	25-Jan-19 00:00	25-Jan-19 16:50
BOTTOM HOLE #12 (3' BEB)	H900283-18	Soil	25-Jan-19 00:00	25-Jan-19 16:50
BOTTOM HOLE #13 (3' BEB)	H900283-19	Soil	25-Jan-19 00:00	25-Jan-19 16:50
BOTTOM HOLE #14 (3' BEB)	H900283-20	Soil	25-Jan-19 00:00	25-Jan-19 16:50
NORTH #1 SW	H900283-21	Soil	22-Jan-19 00:00	25-Jan-19 16:50
EAST #1 SIDEWALL	H900283-22	Soil	22-Jan-19 00:00	25-Jan-19 16:50
EAST #2 SW	H900283-23	Soil	22-Jan-19 00:00	25-Jan-19 16:50
EAST #3 SW	H900283-24	Soil	23-Jan-19 00:00	25-Jan-19 16:50
WEST #1 SIDEWALL	H900283-25	Soil	22-Jan-19 00:00	25-Jan-19 16:50
WEST #2 SW	H900283-26	Soil	22-Jan-19 00:00	25-Jan-19 16:50
WEST #3 SW	H900283-27	Soil	23-Jan-19 00:00	25-Jan-19 16:50

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 28-Jan-19 11:47

BACKGROUND 1' BEB

H900283-01 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**64.0**		16.0	mg/kg	4	9012806	AC	28-Jan-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*101 %*	*73.3-129*		*9012701*	ms	*27-Jan-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9012512	MS	27-Jan-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9012512	MS	27-Jan-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9012512	MS	27-Jan-19	8015B	
Surrogate: 1-Chlorooctane			*99.8 %*	*41-142*		*9012512*	MS	*27-Jan-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*98.4 %*	*37.6-147*		*9012512*	MS	*27-Jan-19*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 28-Jan-19 11:47

BG 2' BEB

H900283-02 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**64.0**		16.0	mg/kg	4	9012806	AC	28-Jan-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*101 %*	*73.3-129*		*9012701*	ms	*27-Jan-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9012512	MS	27-Jan-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9012512	MS	27-Jan-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9012512	MS	27-Jan-19	8015B	
Surrogate: 1-Chlorooctane			*85.6 %*	*41-142*		*9012512*	MS	*27-Jan-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*82.5 %*	*37.6-147*		*9012512*	MS	*27-Jan-19*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 28-Jan-19 11:47

BG 3' BEB

H900283-03 (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	9012806	AC	28-Jan-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*103 %*	*73.3-129*		*9012701*	ms	*27-Jan-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9012512	MS	27-Jan-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9012512	MS	27-Jan-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9012512	MS	27-Jan-19	8015B	
Surrogate: 1-Chlorooctane			*88.8 %*	*41-142*		*9012512*	MS	*27-Jan-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*85.5 %*	*37.6-147*		*9012512*	MS	*27-Jan-19*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 28-Jan-19 11:47

BG 4' BEB

H900283-04 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**64.0**		16.0	mg/kg	4	9012806	AC	28-Jan-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*104 %*	*73.3-129*		*9012701*	ms	*27-Jan-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9012512	MS	27-Jan-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9012512	MS	27-Jan-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9012512	MS	27-Jan-19	8015B	
Surrogate: 1-Chlorooctane			*83.5 %*	*41-142*		*9012512*	MS	*27-Jan-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*82.8 %*	*37.6-147*		*9012512*	MS	*27-Jan-19*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 28-Jan-19 11:47

BG 5' BEB

H900283-05 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**48.0**		16.0	mg/kg	4	9012806	AC	28-Jan-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*103 %*	*73.3-129*		*9012701*	ms	*27-Jan-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9012512	MS	27-Jan-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9012512	MS	27-Jan-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9012512	MS	27-Jan-19	8015B	
Surrogate: 1-Chlorooctane			*84.7 %*	*41-142*		*9012512*	MS	*27-Jan-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*82.0 %*	*37.6-147*		*9012512*	MS	*27-Jan-19*	*8015B*	

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 28-Jan-19 11:47

BG 6' BEB

H900283-06 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**64.0**		16.0	mg/kg	4	9012806	AC	28-Jan-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*103 %*	*73.3-129*		*9012701*	ms	*27-Jan-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9012512	MS	27-Jan-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9012512	MS	27-Jan-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9012512	MS	27-Jan-19	8015B	
Surrogate: 1-Chlorooctane			*84.8 %*	*41-142*		*9012512*	MS	*27-Jan-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*82.6 %*	*37.6-147*		*9012512*	MS	*27-Jan-19*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 28-Jan-19 11:47

BOTTOM HOLE #1 (3' BEB)

H900283-07 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**192**		16.0	mg/kg	4	9012806	AC	28-Jan-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*103 %*	*73.3-129*		*9012701*	ms	*27-Jan-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9012512	MS	27-Jan-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9012512	MS	27-Jan-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9012512	MS	27-Jan-19	8015B	
Surrogate: 1-Chlorooctane			*83.3 %*	*41-142*		*9012512*	MS	*27-Jan-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*79.3 %*	*37.6-147*		*9012512*	MS	*27-Jan-19*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 28-Jan-19 11:47

BOTTOM HOLE #2 (3' BEB)

H900283-08 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**848**		16.0	mg/kg	4	9012806	AC	28-Jan-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*103 %*	*73.3-129*		*9012701*	ms	*27-Jan-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
Surrogate: 1-Chlorooctane			*78.8 %*	*41-142*		*9012703*	MS	*28-Jan-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*77.1 %*	*37.6-147*		*9012703*	MS	*28-Jan-19*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 28-Jan-19 11:47

BOTTOM HOLE #3 (3' BEB)

H900283-09 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**176**		16.0	mg/kg	4	9012806	AC	28-Jan-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*104 %*	*73.3-129*		*9012701*	ms	*27-Jan-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
Surrogate: 1-Chlorooctane			*79.1 %*	*41-142*		*9012703*	MS	*28-Jan-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*76.5 %*	*37.6-147*		*9012703*	MS	*28-Jan-19*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 28-Jan-19 11:47

BOTTOM HOLE #4 (3' BEB)

H900283-10 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**480**		16.0	mg/kg	4	9012806	AC	28-Jan-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*103 %*	*73.3-129*		*9012701*	ms	*27-Jan-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
Surrogate: 1-Chlorooctane			*79.6 %*	*41-142*		*9012703*	MS	*28-Jan-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*77.2 %*	*37.6-147*		*9012703*	MS	*28-Jan-19*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 28-Jan-19 11:47

BOTTOM HOLE #5 (3' BEB)

H900283-11 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**128**		16.0	mg/kg	4	9012806	AC	28-Jan-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*103 %*	*73.3-129*		*9012701*	ms	*27-Jan-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
Surrogate: 1-Chlorooctane			*80.3 %*	*41-142*		*9012703*	MS	*28-Jan-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*77.5 %*	*37.6-147*		*9012703*	MS	*28-Jan-19*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 28-Jan-19 11:47

BOTTOM HOLE #6 (3' BEB)

H900283-12 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**64.0**		16.0	mg/kg	4	9012806	AC	28-Jan-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*103 %*	*73.3-129*		*9012701*	ms	*27-Jan-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
Surrogate: 1-Chlorooctane			*80.2 %*	*41-142*		*9012703*	MS	*28-Jan-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*78.5 %*	*37.6-147*		*9012703*	MS	*28-Jan-19*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 28-Jan-19 11:47

BOTTOM HOLE #7 (3' BEB)

H900283-13 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**80.0**		16.0	mg/kg	4	9012806	AC	28-Jan-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*102 %*	*73.3-129*		*9012701*	ms	*27-Jan-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
Surrogate: 1-Chlorooctane			*81.6 %*	*41-142*		*9012703*	MS	*28-Jan-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*79.7 %*	*37.6-147*		*9012703*	MS	*28-Jan-19*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 28-Jan-19 11:47

BOTTOM HOLE #8 (3' BEB)

H900283-14 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**48.0**		16.0	mg/kg	4	9012806	AC	28-Jan-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*103 %*	*73.3-129*		*9012701*	ms	*27-Jan-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
Surrogate: 1-Chlorooctane			*81.2 %*	*41-142*		*9012703*	MS	*28-Jan-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*80.2 %*	*37.6-147*		*9012703*	MS	*28-Jan-19*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 28-Jan-19 11:47

BOTTOM HOLE #9 (3' BEB)

H900283-15 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**160**		16.0	mg/kg	4	9012806	AC	28-Jan-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*102 %*	*73.3-129*		*9012701*	ms	*27-Jan-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
Surrogate: 1-Chlorooctane			*81.2 %*	*41-142*		*9012703*	MS	*28-Jan-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*80.5 %*	*37.6-147*		*9012703*	MS	*28-Jan-19*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 28-Jan-19 11:47

BOTTOM HOLE #10 (3' BEB)

H900283-16 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**432**		16.0	mg/kg	4	9012807	AC	28-Jan-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*102 %*	*73.3-129*		*9012701*	ms	*27-Jan-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
Surrogate: 1-Chlorooctane			*81.7 %*	*41-142*		*9012703*	MS	*28-Jan-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*80.3 %*	*37.6-147*		*9012703*	MS	*28-Jan-19*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 28-Jan-19 11:47

BOTTOM HOLE #11 (3' BEB)

H900283-17 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**320**		16.0	mg/kg	4	9012806	AC	28-Jan-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*102 %*	*73.3-129*		*9012701*	ms	*27-Jan-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
Surrogate: 1-Chlorooctane			*80.2 %*	*41-142*		*9012703*	MS	*28-Jan-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*78.0 %*	*37.6-147*		*9012703*	MS	*28-Jan-19*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 28-Jan-19 11:47

BOTTOM HOLE #12 (3' BEB)

H900283-18 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**528**		16.0	mg/kg	4	9012807	AC	28-Jan-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*103 %*	*73.3-129*		*9012701*	ms	*27-Jan-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
Surrogate: 1-Chlorooctane			*84.8 %*	*41-142*		*9012703*	MS	*28-Jan-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*84.0 %*	*37.6-147*		*9012703*	MS	*28-Jan-19*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 28-Jan-19 11:47

BOTTOM HOLE #13 (3' BEB)

H900283-19 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**480**		16.0	mg/kg	4	9012807	AC	28-Jan-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*103 %*	*73.3-129*		*9012701*	ms	*27-Jan-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
Surrogate: 1-Chlorooctane			*88.9 %*	*41-142*		*9012703*	MS	*28-Jan-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*88.4 %*	*37.6-147*		*9012703*	MS	*28-Jan-19*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 28-Jan-19 11:47

BOTTOM HOLE #14 (3' BEB)

H900283-20 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**560**		16.0	mg/kg	4	9012807	AC	28-Jan-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9012701	ms	27-Jan-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*100 %*	*73.3-129*		*9012701*	ms	*27-Jan-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
Surrogate: 1-Chlorooctane			*88.4 %*	*41-142*		*9012703*	MS	*28-Jan-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*88.4 %*	*37.6-147*		*9012703*	MS	*28-Jan-19*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 28-Jan-19 11:47

NORTH #1 SW

H900283-21 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**384**		16.0	mg/kg	4	9012807	AC	28-Jan-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9012702	ms	27-Jan-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9012702	ms	27-Jan-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9012702	ms	27-Jan-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9012702	ms	27-Jan-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9012702	ms	27-Jan-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*103 %*	*73.3-129*		*9012702*	ms	*27-Jan-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
Surrogate: 1-Chlorooctane			*89.3 %*	*41-142*		*9012703*	MS	*28-Jan-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*88.1 %*	*37.6-147*		*9012703*	MS	*28-Jan-19*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 28-Jan-19 11:47

EAST #1 SIDEWALL

H900283-22 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**320**		16.0	mg/kg	4	9012807	AC	28-Jan-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9012702	ms	27-Jan-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9012702	ms	27-Jan-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9012702	ms	27-Jan-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9012702	ms	27-Jan-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9012702	ms	27-Jan-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*102 %*	*73.3-129*		*9012702*	ms	*27-Jan-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
Surrogate: 1-Chlorooctane			*93.3 %*	*41-142*		*9012703*	MS	*28-Jan-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*92.1 %*	*37.6-147*		*9012703*	MS	*28-Jan-19*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 28-Jan-19 11:47

EAST #2 SW

H900283-23 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**112**		16.0	mg/kg	4	9012807	AC	28-Jan-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9012702	ms	27-Jan-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9012702	ms	27-Jan-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9012702	ms	27-Jan-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9012702	ms	27-Jan-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9012702	ms	27-Jan-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*102 %*	*73.3-129*		*9012702*	ms	*27-Jan-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
Surrogate: 1-Chlorooctane			*89.2 %*	*41-142*		*9012703*	MS	*28-Jan-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*89.6 %*	*37.6-147*		*9012703*	MS	*28-Jan-19*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 28-Jan-19 11:47

EAST #3 SW

H900283-24 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**224**		16.0	mg/kg	4	9012807	AC	28-Jan-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9012702	ms	27-Jan-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9012702	ms	27-Jan-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9012702	ms	27-Jan-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9012702	ms	27-Jan-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9012702	ms	27-Jan-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*102 %*	*73.3-129*		*9012702*	ms	*27-Jan-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
Surrogate: 1-Chlorooctane			*91.6 %*	*41-142*		*9012703*	MS	*28-Jan-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*91.3 %*	*37.6-147*		*9012703*	MS	*28-Jan-19*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 28-Jan-19 11:47

WEST #1 SIDEWALL

H900283-25 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**304**		16.0	mg/kg	4	9012807	AC	28-Jan-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9012702	ms	28-Jan-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9012702	ms	28-Jan-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9012702	ms	28-Jan-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9012702	ms	28-Jan-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9012702	ms	28-Jan-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*103 %*	*73.3-129*		*9012702*	ms	*28-Jan-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
Surrogate: 1-Chlorooctane			*93.3 %*	*41-142*		*9012703*	MS	*28-Jan-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*93.0 %*	*37.6-147*		*9012703*	MS	*28-Jan-19*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 28-Jan-19 11:47

WEST #2 SW

H900283-26 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**704**		16.0	mg/kg	4	9012807	AC	28-Jan-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9012702	ms	28-Jan-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9012702	ms	28-Jan-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9012702	ms	28-Jan-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9012702	ms	28-Jan-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9012702	ms	28-Jan-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*103 %*	*73.3-129*		*9012702*	ms	*28-Jan-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
Surrogate: 1-Chlorooctane			*89.4 %*	*41-142*		*9012703*	MS	*28-Jan-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*89.7 %*	*37.6-147*		*9012703*	MS	*28-Jan-19*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 28-Jan-19 11:47

WEST #3 SW

H900283-27 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**48.0**		16.0	mg/kg	4	9012807	AC	28-Jan-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9012702	ms	28-Jan-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9012702	ms	28-Jan-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9012702	ms	28-Jan-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9012702	ms	28-Jan-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9012702	ms	28-Jan-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*104 %*	*73.3-129*		*9012702*	ms	*28-Jan-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9012703	MS	28-Jan-19	8015B	
Surrogate: 1-Chlorooctane			*88.3 %*	*41-142*		*9012703*	MS	*28-Jan-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*89.1 %*	*37.6-147*		*9012703*	MS	*28-Jan-19*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 28-Jan-19 11:47

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 9012806 - General Prep - Wet Chem										
Blank (9012806-BLK1)				Prepared & Analyzed: 28-Jan-19						
Chloride	ND	16.0	mg/kg							
LCS (9012806-BS1)				Prepared & Analyzed: 28-Jan-19						
Chloride	432	16.0	mg/kg	400		108	80-120			
LCS Dup (9012806-BSD1)				Prepared & Analyzed: 28-Jan-19						
Chloride	432	16.0	mg/kg	400		108	80-120	0.00	20	
Batch 9012807 - General Prep - Wet Chem										
Blank (9012807-BLK1)				Prepared & Analyzed: 28-Jan-19						
Chloride	ND	16.0	mg/kg							
LCS (9012807-BS1)				Prepared & Analyzed: 28-Jan-19						
Chloride	432	16.0	mg/kg	400		108	80-120			
LCS Dup (9012807-BSD1)				Prepared & Analyzed: 28-Jan-19						
Chloride	416	16.0	mg/kg	400		104	80-120	3.77	20	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 28-Jan-19 11:47

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 9012701 - Volatiles										
Blank (9012701-BLK1)				Prepared & Analyzed: 27-Jan-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)	*0.103*		mg/kg	*0.100*		*103*	*73.3-129*			
LCS (9012701-BS1)				Prepared & Analyzed: 27-Jan-19						
Benzene	2.13	0.050	mg/kg	2.00		107	72.2-131			
Toluene	2.18	0.050	mg/kg	2.00		109	71.7-126			
Ethylbenzene	2.17	0.050	mg/kg	2.00		108	68.9-126			
Total Xylenes	6.72	0.150	mg/kg	6.00		112	71.4-125			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0992*		mg/kg	*0.100*		*99.2*	*73.3-129*			
LCS Dup (9012701-BSD1)				Prepared & Analyzed: 27-Jan-19						
Benzene	2.17	0.050	mg/kg	2.00		108	72.2-131	1.44	6.91	
Toluene	2.21	0.050	mg/kg	2.00		110	71.7-126	1.46	7.12	
Ethylbenzene	2.21	0.050	mg/kg	2.00		110	68.9-126	1.97	7.88	
Total Xylenes	6.85	0.150	mg/kg	6.00		114	71.4-125	1.84	7.46	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0997*		mg/kg	*0.100*		*99.7*	*73.3-129*			
Batch 9012702 - Volatiles										
Blank (9012702-BLK1)				Prepared & Analyzed: 27-Jan-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)	*0.103*		mg/kg	*0.100*		*103*	*73.3-129*			

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 28-Jan-19 11:47

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 9012702 - Volatiles										
LCS (9012702-BS1)				Prepared & Analyzed: 27-Jan-19						
Benzene	2.21	0.050	mg/kg	2.00		110	72.2-131			
Toluene	2.26	0.050	mg/kg	2.00		113	71.7-126			
Ethylbenzene	2.27	0.050	mg/kg	2.00		113	68.9-126			
Total Xylenes	6.92	0.150	mg/kg	6.00		115	71.4-125			
Surrogate: 4-Bromofluorobenzene (PID)	*0.101*		mg/kg	*0.100*		*101*	*73.3-129*			
LCS Dup (9012702-BSD1)				Prepared & Analyzed: 27-Jan-19						
Benzene	2.22	0.050	mg/kg	2.00		111	72.2-131	0.760	6.91	
Toluene	2.27	0.050	mg/kg	2.00		113	71.7-126	0.447	7.12	
Ethylbenzene	2.28	0.050	mg/kg	2.00		114	68.9-126	0.547	7.88	
Total Xylenes	6.93	0.150	mg/kg	6.00		115	71.4-125	0.138	7.46	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0995*		mg/kg	*0.100*		*99.5*	*73.3-129*			

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 28-Jan-19 11:47

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 9012512 - General Prep - Organics										
Blank (9012512-BLK1)				Prepared: 25-Jan-19 Analyzed: 27-Jan-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	*45.3*		mg/kg	*50.0*		*90.6*	*41-142*			
Surrogate: 1-Chlorooctadecane	*45.4*		mg/kg	*50.0*		*90.9*	*37.6-147*			
LCS (9012512-BS1)				Prepared: 25-Jan-19 Analyzed: 27-Jan-19						
GRO C6-C10	222	10.0	mg/kg	200		111	76.5-133			
DRO >C10-C28	211	10.0	mg/kg	200		105	72.9-138			
Total TPH C6-C28	433	10.0	mg/kg	400		108	78-132			
Surrogate: 1-Chlorooctane	*48.6*		mg/kg	*50.0*		*97.2*	*41-142*			
Surrogate: 1-Chlorooctadecane	*47.6*		mg/kg	*50.0*		*95.2*	*37.6-147*			
LCS Dup (9012512-BSD1)				Prepared: 25-Jan-19 Analyzed: 27-Jan-19						
GRO C6-C10	224	10.0	mg/kg	200		112	76.5-133	0.941	20.6	
DRO >C10-C28	211	10.0	mg/kg	200		105	72.9-138	0.0475	20.6	
Total TPH C6-C28	435	10.0	mg/kg	400		109	78-132	0.461	18	
Surrogate: 1-Chlorooctane	*47.4*		mg/kg	*50.0*		*94.9*	*41-142*			
Surrogate: 1-Chlorooctadecane	*45.9*		mg/kg	*50.0*		*91.8*	*37.6-147*			
Batch 9012703 - General Prep - Organics										
Blank (9012703-BLK1)				Prepared: 27-Jan-19 Analyzed: 28-Jan-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	*45.1*		mg/kg	*50.0*		*90.2*	*41-142*			
Surrogate: 1-Chlorooctadecane	*45.7*		mg/kg	*50.0*		*91.4*	*37.6-147*			

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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: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 28-Jan-19 11:47

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 9012703 - General Prep - Organics										
LCS (9012703-BS1)				Prepared & Analyzed: 27-Jan-19						
GRO C6-C10	220	10.0	mg/kg	200		110	76.5-133			
DRO >C10-C28	241	10.0	mg/kg	200		120	72.9-138			
Total TPH C6-C28	461	10.0	mg/kg	400		115	78-132			
Surrogate: 1-Chlorooctane	*48.0*		mg/kg	*50.0*		*96.0*	*41-142*			
Surrogate: 1-Chlorooctadecane	*47.2*		mg/kg	*50.0*		*94.4*	*37.6-147*			
LCS Dup (9012703-BSD1)				Prepared: 27-Jan-19 Analyzed: 28-Jan-19						
GRO C6-C10	227	10.0	mg/kg	200		114	76.5-133	3.28	20.6	
DRO >C10-C28	218	10.0	mg/kg	200		109	72.9-138	10.2	20.6	
Total TPH C6-C28	445	10.0	mg/kg	400		111	78-132	3.52	18	
Surrogate: 1-Chlorooctane	*48.4*		mg/kg	*50.0*		*96.8*	*41-142*			
Surrogate: 1-Chlorooctadecane	*47.0*		mg/kg	*50.0*		*93.9*	*37.6-147*			

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence ar any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damage including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether su claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence ar any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damage including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether su claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager

Analysis Request of Chain of Custody Record

Page 1 of 3

Tetra Tech, Inc.

4000 N. Big Spring Street, Ste
401 Midland, Texas 79705
Tel (432) 682-4559
Fax (432) 682-3946

Client Name: COG	**Site Manager:** Clair Gonzales
Project Name: Screech Owl Fed 4H	
Project Location: (county, state) Eddy Co, NM	**Project #:** 212C-MD-01549
Invoice to: COG - Ike Tavarez	
Receiving Laboratory: Cardnial	**Sampler Signature:** Conner Moehring
Comments:	

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE (YEAR: 2019)	SAMPLING TIME	MATRIX: WATER	MATRIX: SOIL	PRESERVATIVE METHOD: HCL	PRESERVATIVE METHOD: HNO_3	PRESERVATIVE METHOD: ICE	PRESERVATIVE METHOD: None	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B	BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	Hold
H900283																															
1	~~BG~~ BACKGROUND 1' BEB		1/24/19		X			X		1	N	X		X													X				
2	BG 2' BEB		1/24/19		X			X		1	N	X		X													X				
3	BG 3' BEB		1/24/19		X			X		1	N	X		X													X				
4	BG 4' BEB		1/24/19		X			X		1	N	X		X													X				
5	BG 5' BEB		1/24/19		X			X		1	N	X		X													X				
6	BG 6' BEB		1/24/19		X			X		1	N	X		X													X				
7	Bottom Hole #1 (3' BEB)		1/22/19		X			X		1	N	X		X													X				
8	Bottom Hole 2		1/22/19		X			X		1	N	X		X													X				
9	Bottom Hole 3		1/22/19		X			X		1	N	X		X													X				
10	Bottom Hole 4		1/22/19		X			X		1	N	X		X													X				

Relinquished by: Conner Moehring	Date: 1/25/19	Time: 5:49	Received by: Jodi Henson 1/25/19 16:50
Relinquished by:	Date:	Time:	Received by: Date: Time:
Relinquished by:	Date:	Time:	Received by: Date: Time:

LAB USE ONLY
Sample Temperature
3.8°C
#97

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

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Analysis Request of Chain of Custody Record

Page 2 of 3

Tetra Tech, Inc.

4000 N. Big Spring Street, Ste
401 Midland,Texas 79705
Tel (432) 682-4559
Fax (432) 682-3946

Client Name: COG	**Site Manager:** Clair Gonzales
Project Name: Screech Owl Fed 4H	
Project Location: (county, state) Eddy Co, NM	**Project #:** 212C-MD-01549
Invoice to: COG - Ike Tavarez	
Receiving Laboratory: Cardnial	**Sampler Signature:** Conner Moehring
Comments:	

H900283

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE (YEAR: 2019)	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)
11	Bottom Hole #5 (3' BEB)	1/23/19			X				X			1	N
12	Bottom Hole 6	1/23/19			X				X			1	N
13	Bottom Hole 7	1/23/19			X				X			1	N
14	Bottom Hole 8	1/23/19			X				X			1	N
15	Bottom Hole 9	1/23/19			X				X			1	N
16	Bottom Hole 10	1/25/19			X				X			1	N
17	Bottom Hole 11	1/25/19			X				X			1	N
18	Bottom Hole 12	1/25/19			X				X			1	N
19	Bottom Hole 13	1/25/19			X				X			1	N
20	Bottom Hole 14	1/25/19			X				X			1	N

ANALYSIS REQUEST
(Circle or Specify Method No.)

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

Relinquished by: Conner Moehring Date: 1/25/19 Time: 5:44
Received by: Jodi Henson Date: 1/25/19 Time: 16:50

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

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

LAB USE ONLY
Sample Temperature 3.8°C
#97

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

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Analysis Request of Chain of Custody Record

Page 3 of 3

Tetra Tech, Inc.

4000 N. Big Spring Street, Ste
401 Midland, Texas 79705
Tel (432) 682-4559
Fax (432) 682-3946

Client Name: COG	**Site Manager:** Clair Gonzales
Project Name: Screech Owl Fed 4H	
Project Location: (county, state) Eddy Co, NM	**Project #:** 212C-MD-01549
Invoice to: COG - Ike Tavarez	
Receiving Laboratory: Cardnial	**Sampler Signature:** Conner Moehring
Comments:	

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	MATRIX	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD None	PRESERVATIVE METHOD	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance				Hold
H900283		YEAR: 2019																																	
21	NORTH #1 SW	1/22/19			X				X			1	N	X		X											X								
22	EAST #1 Sidewall	1/22/19			X				X			1	N	X		X											X								
23	EAST 2 SW	1/22/19			X				X			1	N	X		X											X								
24	EAST 3 SW	1/23/19			X				X			1	N	X		X											X								
25	West #1 sidewall	1/22/19			X				X			1	N	X		X											X								
26	WEST 2 SW	1/22/19			X				X			1	N	X		X											X								
27	WEST 3 SW	1/23/19			X				X			1	N	X		X											X								
					X				X			1	N																						
					X				X			1	N																						
					X				X			1	N																						

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Conner Moehring	1/25/19	5:49	Jodi Henson	1/25/19	16:50
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

LAB USE ONLY
Sample Temperature
3.8°C
#97

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

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Analytical Report 613274

for

Tetra Tech- Midland

Project Manager: Clair Gonzales

Screech Owl Fed 4H

212C-MD-01549

04-FEB-19

Collected By: Client

1211 W. Florida Ave, Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122):
Texas (T104704215-18-28), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):
Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429)
Xenco-Lakeland: Florida (E84098)

04-FEB-19

Project Manager: **Clair Gonzales**
Tetra Tech- Midland
901 West Wall ST
Midland, TX 79701

Reference: XENCO Report No(s): **613274**
Screech Owl Fed 4H
Project Address: Eddy Co, NM

Clair Gonzales:

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) 613274. 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. 613274 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

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Certified and approved by numerous States and Agencies.
A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

Sample Cross Reference 613274

Tetra Tech- Midland, Midland, TX

Screech Owl Fed 4H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Bottom Hole #2 (3.5' BEB)	S	01-31-19 00:00		613274-001
Bottom Hole #15 (2.5' BEB)	S	01-31-19 00:00		613274-002
Bottom Hole #16 (2.5' BEB)	S	01-31-19 00:00		613274-003
Bottom Hole #17 (2.5' BEB)	S	01-31-19 00:00		613274-004
Bottom Hole #18 (2.5' BEB)	S	01-31-19 00:00		613274-005
Bottom Hole #19 (2.5' BEB)	S	01-31-19 00:00		613274-006
Bottom Hole #20 (2.5' BEB)	S	01-31-19 00:00		613274-007
Bottom Hole #21 (2.5' BEB)	S	01-31-19 00:00		613274-008
Bottom Hole #22 (2.0' BEB)	S	01-31-19 00:00		613274-009
Bottom Hole #23 (2.0' BEB)	S	01-31-19 00:00		613274-010
Bottom Hole #24 (2.0' BEB)	S	01-31-19 00:00		613274-011
Bottom Hole #25 (3.0' BEB)	S	01-31-19 00:00		613274-012
Bottom Hole #26 (3.0' BEB)	S	01-31-19 00:00		613274-013
Bottom Hole #27 (3.0' BEB)	S	01-31-19 00:00		613274-014
Bottom Hole #28 (3.0' BEB)	S	01-31-19 00:00		613274-015
Bottom Hole #29 (3.0' BEB)	S	01-31-19 00:00		613274-016
Bottom Hole #30 (3.0' BEB)	S	01-31-19 00:00		613274-017
Bottom Hole #31 (3.0' BEB)	S	01-31-19 00:00		613274-018
Bottom Hole #32 (3.0' BEB)	S	01-31-19 00:00		613274-019
Bottom Hole #33 (3.0' BEB)	S	01-31-19 00:00		613274-020
Bottom Hole #34 (3.0' BEB)	S	01-31-19 00:00		613274-021
Bottom Hole #35 (3.0' BEB)	S	01-31-19 00:00		613274-022
Bottom Hole #36 (3.0' BEB)	S	01-31-19 00:00		613274-023
Bottom Hole #37 (3.0' BEB)	S	01-31-19 00:00		613274-024
Bottom Hole #38 (3.0' BEB)	S	01-31-19 00:00		613274-025
Bottom Hole #39 (3.0' BEB)	S	01-31-19 00:00		613274-026
Bottom Hole #40 (3.0' BEB)	S	01-31-19 00:00		613274-027
Bottom Hole #41 (3.0' BEB)	S	01-31-19 00:00		613274-028
North #2 Sidewall	S	01-31-19 00:00		613274-029
North #3 Sidewall	S	01-31-19 00:00		613274-030
North #4 Sidewall	S	01-31-19 00:00		613274-031
East #4 Sidewall	S	01-31-19 00:00		613274-032
East #5 Sidewall	S	01-31-19 00:00		613274-033
East #6 Sidewall	S	01-31-19 00:00		613274-034
East #7 Sidewall	S	01-31-19 00:00		613274-035
South #1 Sidewall	S	01-31-19 00:00		613274-036
South #2 Sidewall	S	01-31-19 00:00		613274-037
South #3 Sidewall	S	01-31-19 00:00		613274-038
West #2 Sidewall	S	01-31-19 00:00		613274-039
West #4 Sidewall	S	01-31-19 00:00		613274-040
West #5 Sidewall	S	01-31-19 00:00		613274-041
West #6 Sidewall	S	01-31-19 00:00		613274-042
West #7 Sidewall	S	01-31-19 00:00		613274-043

Bottom Hole #2 South Sidewall	S	01-31-19 00:00	613274-044
Bottom Hole #2 South Sidewall	S	01-31-19 00:00	613274-045
SP #3 Trench (0-1')	S	01-31-19 00:00	613274-046
SP #3 Trench (2')	S	01-31-19 00:00	613274-047
SP #3 Trench (3')	S	01-31-19 00:00	613274-048
SP #3 Trench (4')	S	01-31-19 00:00	613274-049

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Certificate of Analysis Summary 613274

Tetra Tech- Midland, Midland, TX

Project Name: Screech Owl Fed 4H

Project Id: 212C-MD-01549
Contact: Clair Gonzales
Project Location: Eddy Co, NM

Date Received in Lab: Fri Feb-01-19 03:40 pm
Report Date: 04-FEB-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	613274-001		613274-002		613274-003		613274-004		613274-005		613274-006	
	Field Id:	Bottom Hole #2 (3.5' BEB)		Bottom Hole #15 (2.5' BEB)		Bottom Hole #16 (2.5' BEB)		Bottom Hole #17 (2.5' BEB)		Bottom Hole #18 (2.5' BEB)		Bottom Hole #19 (2.5' BEB)	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-31-19 00:00		Jan-31-19 00:00		Jan-31-19 00:00		Jan-31-19 00:00		Jan-31-19 00:00		Jan-31-19 00:00	
BTEX by SW 8260B SUB: T104704215-18-28	***Extracted:***	Feb-02-19 12:10				Feb-02-19 17:10				Feb-02-19 17:10			
	Analyzed:	Feb-02-19 18:54				Feb-03-19 06:51				Feb-03-19 07:13			
	Units/RL:	mg/kg	RL			mg/kg	RL			mg/kg	RL		
Benzene		<0.00100	0.00100			<0.000992	0.000992			<0.00100	0.00100		
Toluene		<0.00100	0.00100			<0.000992	0.000992			<0.00100	0.00100		
Ethylbenzene		<0.00100	0.00100			<0.000992	0.000992			<0.00100	0.00100		
m,p-Xylenes		<0.00200	0.00200			<0.00198	0.00198			<0.00200	0.00200		
o-Xylene		<0.00100	0.00100			<0.000992	0.000992			<0.00100	0.00100		
Total Xylenes		<0.00100	0.00100			<0.000992	0.000992			<0.00100	0.00100		
Total BTEX		<0.00100	0.00100			<0.000992	0.000992			<0.00100	0.00100		
Chloride by EPA 300 SUB: T104704215-18-28	***Extracted:***	Feb-02-19 16:27		Feb-02-19 16:27		Feb-02-19 16:27		Feb-02-19 16:27		Feb-02-19 16:27		Feb-02-19 16:27	
	Analyzed:	Feb-02-19 19:49		Feb-02-19 20:23		Feb-02-19 20:31		Feb-02-19 20:39		Feb-02-19 21:04		Feb-02-19 21:13	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		224	10.0	64.0	20.0	227	19.8	184	20.0	173	19.8	454	19.9
TPH by SW8015 Mod SUB: T104704215-18-28	***Extracted:***	Feb-03-19 14:09				Feb-03-19 14:18				Feb-03-19 14:21			
	Analyzed:	Feb-03-19 20:38				Feb-03-19 21:42				Feb-03-19 22:03			
	Units/RL:	mg/kg	RL			mg/kg	RL			mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		<49.8	49.8			<49.7	49.7			<49.7	49.7		
Diesel Range Organics (DRO)		<49.8	49.8			<49.7	49.7			<49.7	49.7		
Motor Oil Range Hydrocarbons (MRO)		<49.8	49.8			<49.7	49.7			<49.7	49.7		
Total TPH		<49.8	49.8			<49.7	49.7			<49.7	49.7		

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 613274

Tetra Tech- Midland, Midland, TX

Project Name: Screech Owl Fed 4H

Project Id: 212C-MD-01549
Contact: Clair Gonzales
Project Location: Eddy Co, NM

Date Received in Lab: Fri Feb-01-19 03:40 pm
Report Date: 04-FEB-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	613274-007		613274-008		613274-009		613274-010		613274-011		613274-012	
	Field Id:	Bottom Hole #20 (2.5' BEB)		Bottom Hole #21 (2.5' BEB)		Bottom Hole #22 (2.0' BEB)		Bottom Hole #23 (2.0' BEB)		Bottom Hole #24 (2.0' BEB)		Bottom Hole #25 (3.0' BEB)	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-31-19 00:00		Jan-31-19 00:00		Jan-31-19 00:00		Jan-31-19 00:00		Jan-31-19 00:00		Jan-31-19 00:00	
BTEX by SW 8260B SUB: T104704215-18-28	***Extracted:***	Feb-02-19 17:10				Feb-02-19 17:10				Feb-02-19 17:10			
	Analyzed:	Feb-03-19 07:35				Feb-03-19 07:57				Feb-03-19 08:18			
	Units/RL:	mg/kg	RL			mg/kg	RL			mg/kg	RL		
Benzene		<0.00100	0.00100			<0.000996	0.000996			<0.000992	0.000992		
Toluene		<0.00100	0.00100			<0.000996	0.000996			<0.000992	0.000992		
Ethylbenzene		<0.00100	0.00100			<0.000996	0.000996			<0.000992	0.000992		
m,p-Xylenes		<0.00200	0.00200			<0.00199	0.00199			<0.00198	0.00198		
o-Xylene		<0.00100	0.00100			<0.000996	0.000996			<0.000992	0.000992		
Total Xylenes		<0.00100	0.00100			<0.000996	0.000996			<0.000992	0.000992		
Total BTEX		<0.00100	0.00100			<0.000996	0.000996			<0.000992	0.000992		
Chloride by EPA 300 SUB: T104704215-18-28	***Extracted:***	Feb-02-19 16:27		Feb-02-19 16:27		Feb-02-19 16:27		Feb-02-19 16:27		Feb-02-19 16:27		Feb-02-19 16:27	
	Analyzed:	Feb-02-19 21:21		Feb-02-19 21:29		Feb-02-19 21:38		Feb-02-19 21:46		Feb-02-19 21:54		Feb-02-19 22:44	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		241	20.0	132	20.1	176	20.0	48.6	20.0	851	10.0	659	20.1
TPH by SW8015 Mod SUB: T104704215-18-28	***Extracted:***	Feb-03-19 14:24				Feb-03-19 14:27				Feb-03-19 14:30			
	Analyzed:	Feb-03-19 22:25				Feb-03-19 22:46				Feb-03-19 23:07			
	Units/RL:	mg/kg	RL			mg/kg	RL			mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		<49.8	49.8			<49.5	49.5			<49.9	49.9		
Diesel Range Organics (DRO)		<49.8	49.8			<49.5	49.5			<49.9	49.9		
Motor Oil Range Hydrocarbons (MRO)		<49.8	49.8			<49.5	49.5			<49.9	49.9		
Total TPH		<49.8	49.8			<49.5	49.5			<49.9	49.9		

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Jessica Kramer
Project Assistant

Certificate of Analysis Summary 613274

Tetra Tech- Midland, Midland, TX

Project Name: Screech Owl Fed 4H

Project Id: 212C-MD-01549
Contact: Clair Gonzales
Project Location: Eddy Co, NM

Date Received in Lab: Fri Feb-01-19 03:40 pm
Report Date: 04-FEB-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	613274-013		613274-014		613274-015		613274-016		613274-017		613274-018	
	Field Id:	Bottom Hole #26 (3.0' BEB)		Bottom Hole #27 (3.0' BEB)		Bottom Hole #28 (3.0' BEB)		Bottom Hole #29 (3.0' BEB)		Bottom Hole #30 (3.0' BEB)		Bottom Hole #31 (3.0' BEB)	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-31-19 00:00		Jan-31-19 00:00		Jan-31-19 00:00		Jan-31-19 00:00		Jan-31-19 00:00		Jan-31-19 00:00	
BTEX by SW 8260B SUB: T104704215-18-28	***Extracted:***	Feb-02-19 17:10				Feb-02-19 17:10				Feb-02-19 17:10			
	Analyzed:	Feb-03-19 08:40				Feb-03-19 09:02				Feb-03-19 09:24			
	Units/RL:	mg/kg	RL			mg/kg	RL			mg/kg	RL		
Benzene		<0.00101	0.00101			<0.00100	0.00100			<0.00100	0.00100		
Toluene		<0.00101	0.00101			<0.00100	0.00100			<0.00100	0.00100		
Ethylbenzene		<0.00101	0.00101			<0.00100	0.00100			<0.00100	0.00100		
m,p-Xylenes		<0.00202	0.00202			<0.00201	0.00201			<0.00200	0.00200		
o-Xylene		<0.00101	0.00101			<0.00100	0.00100			<0.00100	0.00100		
Total Xylenes		<0.00101	0.00101			<0.00100	0.00100			<0.00100	0.00100		
Total BTEX		<0.00101	0.00101			<0.00100	0.00100			<0.00100	0.00100		
Chloride by EPA 300 SUB: T104704215-18-28	***Extracted:***	Feb-02-19 16:27		Feb-02-19 16:27		Feb-02-19 16:27		Feb-02-19 16:27		Feb-02-19 16:27		Feb-02-19 16:27	
	Analyzed:	Feb-02-19 22:53		Feb-02-19 23:01		Feb-02-19 23:09		Feb-02-19 23:18		Feb-02-19 23:26		Feb-02-19 23:35	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		929	20.0	682	20.0	347	20.0	93.6	20.0	<20.0	20.0	549	20.0
TPH by SW8015 Mod SUB: T104704215-18-28	***Extracted:***	Feb-03-19 14:33				Feb-03-19 14:36				Feb-03-19 14:39			
	Analyzed:	Feb-03-19 23:29				Feb-03-19 23:50				Feb-04-19 00:12			
	Units/RL:	mg/kg	RL			mg/kg	RL			mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		<49.8	49.8			<50.0	50.0			<49.6	49.6		
Diesel Range Organics (DRO)		<49.8	49.8			<50.0	50.0			<49.6	49.6		
Motor Oil Range Hydrocarbons (MRO)		<49.8	49.8			<50.0	50.0			<49.6	49.6		
Total TPH		<49.8	49.8			<50.0	50.0			<49.6	49.6		

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Jessica Kramer
Project Assistant

Certificate of Analysis Summary 613274

Tetra Tech- Midland, Midland, TX

Project Name: Screech Owl Fed 4H

Project Id: 212C-MD-01549
Contact: Clair Gonzales
Project Location: Eddy Co, NM

Date Received in Lab: Fri Feb-01-19 03:40 pm
Report Date: 04-FEB-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	613274-019		613274-020		613274-021		613274-022		613274-023		613274-024	
	Field Id:	Bottom Hole #32 (3.0' BEB)		Bottom Hole #33 (3.0' BEB)		Bottom Hole #34 (3.0' BEB)		Bottom Hole #35 (3.0' BEB)		Bottom Hole #36 (3.0' BEB)		Bottom Hole #37 (3.0' BEB)	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-31-19 00:00		Jan-31-19 00:00		Jan-31-19 00:00		Jan-31-19 00:00		Jan-31-19 00:00		Jan-31-19 00:00	
BTEX by SW 8260B SUB: T104704215-18-28	***Extracted:***	Feb-02-19 17:10				Feb-02-19 17:10				Feb-02-19 17:10			
	Analyzed:	Feb-03-19 09:45				Feb-03-19 10:07				Feb-03-19 10:29			
	Units/RL:	mg/kg	RL			mg/kg	RL			mg/kg	RL		
Benzene		<0.000996	0.000996			<0.000992	0.000992			<0.000994	0.000994		
Toluene		<0.000996	0.000996			<0.000992	0.000992			<0.000994	0.000994		
Ethylbenzene		<0.000996	0.000996			<0.000992	0.000992			<0.000994	0.000994		
m,p-Xylenes		<0.00199	0.00199			<0.00198	0.00198			<0.00199	0.00199		
o-Xylene		<0.000996	0.000996			<0.000992	0.000992			<0.000994	0.000994		
Total Xylenes		<0.000996	0.000996			<0.000992	0.000992			<0.000994	0.000994		
Total BTEX		<0.000996	0.000996			<0.000992	0.000992			<0.000994	0.000994		
Chloride by EPA 300 SUB: T104704215-18-28	***Extracted:***	Feb-02-19 16:27		Feb-02-19 16:27		Feb-02-19 16:29		Feb-02-19 16:29		Feb-02-19 16:29		Feb-02-19 16:29	
	Analyzed:	Feb-02-19 23:43		Feb-02-19 23:51		Feb-03-19 00:41		Feb-03-19 01:15		Feb-03-19 01:23		Feb-03-19 01:31	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		352	20.0	41.2	19.9	882	10.0	933	19.8	416	20.0	218	20.1
TPH by SW8015 Mod SUB: T104704215-18-28	***Extracted:***	Feb-03-19 14:42				Feb-03-19 14:45				Feb-03-19 14:48			
	Analyzed:	Feb-04-19 00:34				Feb-04-19 01:19				Feb-04-19 01:42			
	Units/RL:	mg/kg	RL			mg/kg	RL			mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		<49.7	49.7			<50.0	50.0			<49.9	49.9		
Diesel Range Organics (DRO)		<49.7	49.7			<50.0	50.0			<49.9	49.9		
Motor Oil Range Hydrocarbons (MRO)		<49.7	49.7			<50.0	50.0			<49.9	49.9		
Total TPH		<49.7	49.7			<50.0	50.0			<49.9	49.9		

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Jessica Kramer
Project Assistant

Certificate of Analysis Summary 613274

Tetra Tech- Midland, Midland, TX

Project Name: Screech Owl Fed 4H

Project Id: 212C-MD-01549
Contact: Clair Gonzales
Project Location: Eddy Co, NM

Date Received in Lab: Fri Feb-01-19 03:40 pm
Report Date: 04-FEB-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	613274-025		613274-026		613274-027		613274-028		613274-029		613274-030	
	Field Id:	Bottom Hole #38 (3.0' BEB)		Bottom Hole #39 (3.0' BEB)		Bottom Hole #40 (3.0' BEB)		Bottom Hole #41 (3.0' BEB)		North #2 Sidewall		North #3 Sidewall	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-31-19 00:00		Jan-31-19 00:00		Jan-31-19 00:00		Jan-31-19 00:00		Jan-31-19 00:00		Jan-31-19 00:00	
BTEX by SW 8260B SUB: T104704215-18-28	***Extracted:***	Feb-02-19 17:10				Feb-02-19 17:10				Feb-02-19 12:10			
	Analyzed:	Feb-03-19 10:51				Feb-03-19 11:12				Feb-02-19 19:16			
	Units/RL:	mg/kg	RL			mg/kg	RL			mg/kg	RL		
Benzene		<0.00100	0.00100			<0.00100	0.00100			<0.000996	0.000996		
Toluene		<0.00100	0.00100			<0.00100	0.00100			<0.000996	0.000996		
Ethylbenzene		<0.00100	0.00100			<0.00100	0.00100			<0.000996	0.000996		
m,p-Xylenes		<0.00201	0.00201			<0.00200	0.00200			<0.00199	0.00199		
o-Xylene		<0.00100	0.00100			<0.00100	0.00100			<0.000996	0.000996		
Total Xylenes		<0.00100	0.00100			<0.00100	0.00100			<0.000996	0.000996		
Total BTEX		<0.00100	0.00100			<0.00100	0.00100			<0.000996	0.000996		
Chloride by EPA 300 SUB: T104704215-18-28	***Extracted:***	Feb-02-19 16:29		Feb-02-19 16:29		Feb-02-19 16:29		Feb-02-19 16:29		Feb-02-19 16:29		Feb-02-19 16:29	
	Analyzed:	Feb-03-19 01:56		Feb-03-19 02:05		Feb-03-19 02:13		Feb-03-19 02:21		Feb-03-19 02:30		Feb-03-19 02:38	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		431	20.0	144	19.8	570	20.1	568	19.9	539	20.0	350	20.0
TPH by SW8015 Mod SUB: T104704215-18-28	***Extracted:***	Feb-03-19 14:51				Feb-03-19 14:54				Feb-03-19 14:57			
	Analyzed:	Feb-04-19 02:03				Feb-04-19 02:25				Feb-04-19 02:48			
	Units/RL:	mg/kg	RL			mg/kg	RL			mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		<49.6	49.6			<49.5	49.5			<50.0	50.0		
Diesel Range Organics (DRO)		<49.6	49.6			<49.5	49.5			<50.0	50.0		
Motor Oil Range Hydrocarbons (MRO)		<49.6	49.6			<49.5	49.5			<50.0	50.0		
Total TPH		<49.6	49.6			<49.5	49.5			<50.0	50.0		

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Jessica Kramer
Project Assistant

Certificate of Analysis Summary 613274

Tetra Tech- Midland, Midland, TX

Project Name: Screech Owl Fed 4H

Project Id: 212C-MD-01549
Contact: Clair Gonzales
Project Location: Eddy Co, NM

Date Received in Lab: Fri Feb-01-19 03:40 pm
Report Date: 04-FEB-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	613274-031		613274-032		613274-033		613274-034		613274-035		613274-036	
	Field Id:	North #4 Sidewall		East #4 Sidewall		East #5 Sidewall		East #6 Sidewall		East #7 Sidewall		South #1 Sidewall	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-31-19 00:00		Jan-31-19 00:00		Jan-31-19 00:00		Jan-31-19 00:00		Jan-31-19 00:00		Jan-31-19 00:00	
BTEX by SW 8260B SUB: T104704215-18-28	***Extracted:***	Feb-02-19 12:10				Feb-02-19 12:10				Feb-02-19 12:10			
	Analyzed:	Feb-02-19 19:38				Feb-02-19 19:59				Feb-02-19 20:21			
	Units/RL:	mg/kg	RL			mg/kg	RL			mg/kg	RL		
Benzene		<0.000992	0.000992			<0.00101	0.00101			<0.00100	0.00100		
Toluene		<0.000992	0.000992			<0.00101	0.00101			<0.00100	0.00100		
Ethylbenzene		<0.000992	0.000992			<0.00101	0.00101			<0.00100	0.00100		
m,p-Xylenes		<0.00198	0.00198			<0.00202	0.00202			<0.00201	0.00201		
o-Xylene		<0.000992	0.000992			<0.00101	0.00101			<0.00100	0.00100		
Total Xylenes		<0.000992	0.000992			<0.00101	0.00101			<0.00100	0.00100		
Total BTEX		<0.000992	0.000992			<0.00101	0.00101			<0.00100	0.00100		
Chloride by EPA 300 SUB: T104704215-18-28	***Extracted:***	Feb-02-19 16:29		Feb-02-19 16:29		Feb-02-19 16:29		Feb-02-19 16:29		Feb-02-19 16:29		Feb-02-19 16:29	
	Analyzed:	Feb-03-19 02:47		Feb-03-19 03:37		Feb-03-19 03:45		Feb-03-19 03:53		Feb-03-19 04:02		Feb-03-19 04:10	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		165	10.0	<19.8	19.8	<20.0	20.0	529	20.0	90.2	19.9	214	19.8
TPH by SW8015 Mod SUB: T104704215-18-28	***Extracted:***	Feb-03-19 15:00				Feb-03-19 15:03				Feb-03-19 15:06			
	Analyzed:	Feb-04-19 03:10				Feb-04-19 03:32				Feb-04-19 03:54			
	Units/RL:	mg/kg	RL			mg/kg	RL			mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		<49.8	49.8			<49.6	49.6			<49.9	49.9		
Diesel Range Organics (DRO)		<49.8	49.8			<49.6	49.6			<49.9	49.9		
Motor Oil Range Hydrocarbons (MRO)		<49.8	49.8			<49.6	49.6			<49.9	49.9		
Total TPH		<49.8	49.8			<49.6	49.6			<49.9	49.9		

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Jessica Kramer
Project Assistant

Certificate of Analysis Summary 613274

Tetra Tech- Midland, Midland, TX

Project Name: Screech Owl Fed 4H

Project Id: 212C-MD-01549
Contact: Clair Gonzales
Project Location: Eddy Co, NM

Date Received in Lab: Fri Feb-01-19 03:40 pm
Report Date: 04-FEB-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	613274-037		613274-038		613274-039		613274-040		613274-041		613274-042	
	Field Id:	South #2 Sidewall		South #3 Sidewall		West #2 Sidewall		West #4 Sidewall		West #5 Sidewall		West #6 Sidewall	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-31-19 00:00		Jan-31-19 00:00		Jan-31-19 00:00		Jan-31-19 00:00		Jan-31-19 00:00		Jan-31-19 00:00	
BTEX by SW 8260B SUB: T104704215-18-28	***Extracted:***	Feb-02-19 12:10				Feb-02-19 12:10				Feb-02-19 12:10			
	Analyzed:	Feb-02-19 20:43				Feb-02-19 21:04				Feb-02-19 21:26			
	Units/RL:	mg/kg	RL			mg/kg	RL			mg/kg	RL		
Benzene		<0.00100	0.00100			<0.00100	0.00100			<0.000998	0.000998		
Toluene		<0.00100	0.00100			<0.00100	0.00100			<0.000998	0.000998		
Ethylbenzene		<0.00100	0.00100			<0.00100	0.00100			<0.000998	0.000998		
m,p-Xylenes		<0.00200	0.00200			<0.00200	0.00200			<0.00200	0.00200		
o-Xylene		<0.00100	0.00100			<0.00100	0.00100			<0.000998	0.000998		
Total Xylenes		<0.00100	0.00100			<0.00100	0.00100			<0.000998	0.000998		
Total BTEX		<0.00100	0.00100			<0.00100	0.00100			<0.000998	0.000998		
Chloride by EPA 300 SUB: T104704215-18-28	***Extracted:***	Feb-02-19 16:29		Feb-02-19 16:29		Feb-02-19 16:29		Feb-02-19 16:29		Feb-02-19 16:30		Feb-02-19 16:30	
	Analyzed:	Feb-03-19 04:18		Feb-03-19 04:27		Feb-03-19 04:35		Feb-03-19 04:43		Feb-02-19 22:53		Feb-02-19 23:24	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		236	20.0	373	20.0	125	20.0	115	20.0	<10.0	10.0	623	20.1
TPH by SW8015 Mod SUB: T104704215-18-28	***Extracted:***	Feb-03-19 15:09				Feb-03-19 15:12				Feb-03-19 15:15			
	Analyzed:	Feb-04-19 04:16				Feb-04-19 09:38				Feb-04-19 06:28			
	Units/RL:	mg/kg	RL			mg/kg	RL			mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		<49.5	49.5			<49.6	49.6			<49.5	49.5		
Diesel Range Organics (DRO)		<49.5	49.5			<49.6	49.6			<49.5	49.5		
Motor Oil Range Hydrocarbons (MRO)		<49.5	49.5			<49.6	49.6			<49.5	49.5		
Total TPH		<49.5	49.5			<49.6	49.6			<49.5	49.5		

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Jessica Kramer
Project Assistant

Certificate of Analysis Summary 613274

Tetra Tech- Midland, Midland, TX

Project Name: Screech Owl Fed 4H

Project Id: 212C-MD-01549
Contact: Clair Gonzales
Project Location: Eddy Co, NM

Date Received in Lab: Fri Feb-01-19 03:40 pm
Report Date: 04-FEB-19
Project Manager: Jessica Kramer

Analysis Requested													
	Lab Id:	613274-043		613274-044		613274-045		613274-046		613274-047		613274-048	
	Field Id:	West #7 Sidewall		Bottom Hole #2 South Sidew		Bottom Hole #2 South Sidew		SP #3 Trench (0-1')		SP #3 Trench (2')		SP #3 Trench (3')	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jan-31-19 00:00		Jan-31-19 00:00		Jan-31-19 00:00		Jan-31-19 00:00		Jan-31-19 00:00		Jan-31-19 00:00	
BTEX by SW 8260B SUB: T104704215-18-28	***Extracted:***	Feb-02-19 12:10				Feb-02-19 12:10							
	Analyzed:	Feb-02-19 21:48				Feb-02-19 22:10							
	Units/RL:	mg/kg	RL			mg/kg	RL						
Benzene		<0.00101	0.00101			<0.00100	0.00100						
Toluene		<0.00101	0.00101			<0.00100	0.00100						
Ethylbenzene		<0.00101	0.00101			<0.00100	0.00100						
m,p-Xylenes		<0.00202	0.00202			<0.00201	0.00201						
o-Xylene		<0.00101	0.00101			<0.00100	0.00100						
Total Xylenes		<0.00101	0.00101			<0.00100	0.00100						
Total BTEX		<0.00101	0.00101			<0.00100	0.00100						
Chloride by EPA 300 SUB: T104704215-18-28	***Extracted:***	Feb-02-19 16:30		Feb-02-19 16:30		Feb-02-19 16:30		Feb-02-19 16:30		Feb-02-19 16:30		Feb-02-19 16:30	
	Analyzed:	Feb-02-19 23:31		Feb-02-19 23:39		Feb-03-19 00:06		Feb-03-19 00:14		Feb-03-19 00:22		Feb-03-19 00:29	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		876	19.9	153	20.1	459	20.0	17.6	9.98	11.4	9.98	18.2	9.98
TPH by SW8015 Mod SUB: T104704215-18-28	***Extracted:***	Feb-03-19 15:15				Feb-03-19 15:15		Feb-03-19 15:15		Feb-03-19 15:15		Feb-03-19 15:15	
	Analyzed:	Feb-04-19 07:32				Feb-04-19 07:53		Feb-04-19 08:14		Feb-04-19 09:59		Feb-04-19 08:56	
	Units/RL:	mg/kg	RL			mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<49.9	49.9			<49.5	49.5	<49.8	49.8	<50.0	50.0	<49.6	49.6
Diesel Range Organics (DRO)		<49.9	49.9			<49.5	49.5	<49.8	49.8	<50.0	50.0	<49.6	49.6
Motor Oil Range Hydrocarbons (MRO)		<49.9	49.9			<49.5	49.5	<49.8	49.8	<50.0	50.0	<49.6	49.6
Total TPH		<49.9	49.9			<49.5	49.5	<49.8	49.8	<50.0	50.0	<49.6	49.6

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 613274

Tetra Tech- Midland, Midland, TX

Project Name: Screech Owl Fed 4H

Project Id: 212C-MD-01549
Contact: Clair Gonzales
Project Location: Eddy Co, NM

Date Received in Lab: Fri Feb-01-19 03:40 pm
Report Date: 04-FEB-19
Project Manager: Jessica Kramer

Analysis Requested								
	Lab Id:	613274-049						
	Field Id:	SP #3 Trench (4')						
	Depth:							
	Matrix:	SOIL						
	Sampled:	Jan-31-19 00:00						
Chloride by EPA 300 SUB: T104704215-18-28	***Extracted:***	Feb-02-19 16:30						
	Analyzed:	Feb-03-19 00:37						
	Units/RL:	mg/kg	RL					
Chloride		17.6	10.0					
TPH by SW8015 Mod SUB: T104704215-18-28	***Extracted:***	Feb-03-19 15:15						
	Analyzed:	Feb-04-19 09:17						
	Units/RL:	mg/kg	RL					
Gasoline Range Hydrocarbons (GRO)		<49.6	49.6					
Diesel Range Organics (DRO)		<49.6	49.6					
Motor Oil Range Hydrocarbons (MRO)		<49.6	49.6					
Total TPH		<49.6	49.6					

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Jessica Kramer
Project Assistant

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

Form 2 - Surrogate Recoveries

Project Name: Screech Owl Fed 4H

Work Orders : 613274,

Project ID: 212C-MD-01549

Lab Batch #: 3077975 **Sample:** 613274-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/02/19 18:54

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.00984	0.0100	98	73-132	
1,2-Dichloroethane-D4	0.0102	0.0100	102	73-124	
Toluene-D8	0.00988	0.0100	99	69-124	

Lab Batch #: 3077975 **Sample:** 613274-029 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/02/19 19:16

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.00988	0.0100	99	73-132	
1,2-Dichloroethane-D4	0.00999	0.0100	100	73-124	
Toluene-D8	0.00996	0.0100	100	69-124	

Lab Batch #: 3077975 **Sample:** 613274-031 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/02/19 19:38

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.00976	0.0100	98	73-132	
1,2-Dichloroethane-D4	0.00996	0.0100	100	73-124	
Toluene-D8	0.00990	0.0100	99	69-124	

Lab Batch #: 3077975 **Sample:** 613274-033 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/02/19 19:59

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.00982	0.0100	98	73-132	
1,2-Dichloroethane-D4	0.00971	0.0100	97	73-124	
Toluene-D8	0.00986	0.0100	99	69-124	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Screech Owl Fed 4H

Work Orders : 613274,

Project ID: 212C-MD-01549

Lab Batch #: 3077975 **Sample:** 613274-035 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/02/19 20:21

SURROGATE RECOVERY STUDY

BTEX by SW 8260B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.00996	0.0100	100	73-132	
1,2-Dichloroethane-D4	0.0102	0.0100	102	73-124	
Toluene-D8	0.00968	0.0100	97	69-124	

Lab Batch #: 3077975 **Sample:** 613274-037 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/02/19 20:43

SURROGATE RECOVERY STUDY

BTEX by SW 8260B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0100	0.0100	100	73-132	
1,2-Dichloroethane-D4	0.0102	0.0100	102	73-124	
Toluene-D8	0.00982	0.0100	98	69-124	

Lab Batch #: 3077975 **Sample:** 613274-039 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/02/19 21:04

SURROGATE RECOVERY STUDY

BTEX by SW 8260B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0102	0.0100	102	73-132	
1,2-Dichloroethane-D4	0.0101	0.0100	101	73-124	
Toluene-D8	0.00975	0.0100	98	69-124	

Lab Batch #: 3077975 **Sample:** 613274-041 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/02/19 21:26

SURROGATE RECOVERY STUDY

BTEX by SW 8260B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0101	0.0100	101	73-132	
1,2-Dichloroethane-D4	0.00997	0.0100	100	73-124	
Toluene-D8	0.00973	0.0100	97	69-124	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Screech Owl Fed 4H

Work Orders : 613274,

Project ID: 212C-MD-01549

Lab Batch #: 3077975 **Sample:** 613274-043 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/02/19 21:48

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0101	0.0100	101	73-132	
1,2-Dichloroethane-D4	0.0101	0.0100	101	73-124	
Toluene-D8	0.00978	0.0100	98	69-124	

Lab Batch #: 3077975 **Sample:** 613274-045 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/02/19 22:10

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0103	0.0100	103	73-132	
1,2-Dichloroethane-D4	0.0106	0.0100	106	73-124	
Toluene-D8	0.00960	0.0100	96	69-124	

Lab Batch #: 3077985 **Sample:** 613274-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/03/19 06:51

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0101	0.0100	101	73-132	
1,2-Dichloroethane-D4	0.0103	0.0100	103	73-124	
Toluene-D8	0.00965	0.0100	97	69-124	

Lab Batch #: 3077985 **Sample:** 613274-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/03/19 07:13

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0101	0.0100	101	73-132	
1,2-Dichloroethane-D4	0.0104	0.0100	104	73-124	
Toluene-D8	0.00961	0.0100	96	69-124	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Screech Owl Fed 4H

Work Orders : 613274,

Project ID: 212C-MD-01549

Lab Batch #: 3077985 **Sample:** 613274-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/03/19 07:35

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0100	0.0100	100	73-132	
1,2-Dichloroethane-D4	0.0107	0.0100	107	73-124	
Toluene-D8	0.00958	0.0100	96	69-124	

Lab Batch #: 3077985 **Sample:** 613274-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/03/19 07:57

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0101	0.0100	101	73-132	
1,2-Dichloroethane-D4	0.0100	0.0100	100	73-124	
Toluene-D8	0.00968	0.0100	97	69-124	

Lab Batch #: 3077985 **Sample:** 613274-011 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/03/19 08:18

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0102	0.0100	102	73-132	
1,2-Dichloroethane-D4	0.00996	0.0100	100	73-124	
Toluene-D8	0.00979	0.0100	98	69-124	

Lab Batch #: 3077985 **Sample:** 613274-013 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/03/19 08:40

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0104	0.0100	104	73-132	
1,2-Dichloroethane-D4	0.0100	0.0100	100	73-124	
Toluene-D8	0.00963	0.0100	96	69-124	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Screech Owl Fed 4H

Work Orders : 613274,

Project ID: 212C-MD-01549

Lab Batch #: 3077985 **Sample:** 613274-015 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/03/19 09:02

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0100	0.0100	100	73-132	
1,2-Dichloroethane-D4	0.00979	0.0100	98	73-124	
Toluene-D8	0.00960	0.0100	96	69-124	

Lab Batch #: 3077985 **Sample:** 613274-017 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/03/19 09:24

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.00998	0.0100	100	73-132	
1,2-Dichloroethane-D4	0.0104	0.0100	104	73-124	
Toluene-D8	0.00958	0.0100	96	69-124	

Lab Batch #: 3077985 **Sample:** 613274-019 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/03/19 09:45

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0101	0.0100	101	73-132	
1,2-Dichloroethane-D4	0.00998	0.0100	100	73-124	
Toluene-D8	0.00969	0.0100	97	69-124	

Lab Batch #: 3077985 **Sample:** 613274-021 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/03/19 10:07

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0102	0.0100	102	73-132	
1,2-Dichloroethane-D4	0.0101	0.0100	101	73-124	
Toluene-D8	0.00962	0.0100	96	69-124	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Screech Owl Fed 4H

Work Orders : 613274,

Project ID: 212C-MD-01549

Lab Batch #: 3077985 **Sample:** 613274-023 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/03/19 10:29

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0101	0.0100	101	73-132	
1,2-Dichloroethane-D4	0.0102	0.0100	102	73-124	
Toluene-D8	0.00962	0.0100	96	69-124	

Lab Batch #: 3077985 **Sample:** 613274-025 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/03/19 10:51

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0103	0.0100	103	73-132	
1,2-Dichloroethane-D4	0.0102	0.0100	102	73-124	
Toluene-D8	0.00957	0.0100	96	69-124	

Lab Batch #: 3077985 **Sample:** 613274-027 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/03/19 11:12

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0100	0.0100	100	73-132	
1,2-Dichloroethane-D4	0.0101	0.0100	101	73-124	
Toluene-D8	0.00962	0.0100	96	69-124	

Lab Batch #: 3077905 **Sample:** 613274-001 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/03/19 20:38

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	79.4	99.5	80	70-135	
o-Terphenyl	44.2	49.8	89	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Screech Owl Fed 4H

Work Orders : 613274,

Project ID: 212C-MD-01549

Lab Batch #: 3077905 **Sample:** 613274-003 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/03/19 21:42

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.0	99.3	92	70-135	
o-Terphenyl	51.5	49.7	104	70-135	

Lab Batch #: 3077905 **Sample:** 613274-005 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/03/19 22:03

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.2	99.3	88	70-135	
o-Terphenyl	49.7	49.7	100	70-135	

Lab Batch #: 3077905 **Sample:** 613274-007 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/03/19 22:25

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.1	99.6	84	70-135	
o-Terphenyl	46.0	49.8	92	70-135	

Lab Batch #: 3077905 **Sample:** 613274-009 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/03/19 22:46

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	76.3	99.0	77	70-135	
o-Terphenyl	48.4	49.5	98	70-135	

Lab Batch #: 3077905 **Sample:** 613274-011 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/03/19 23:07

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	76.8	99.7	77	70-135	
o-Terphenyl	49.7	49.9	100	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Screech Owl Fed 4H

Work Orders : 613274,

Project ID: 212C-MD-01549

Lab Batch #: 3077905 **Sample:** 613274-013 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/03/19 23:29

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	78.5	99.5	79	70-135	
o-Terphenyl	50.1	49.8	101	70-135	

Lab Batch #: 3077905 **Sample:** 613274-015 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/03/19 23:50

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	77.1	100	77	70-135	
o-Terphenyl	50.0	50.0	100	70-135	

Lab Batch #: 3077905 **Sample:** 613274-017 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/04/19 00:12

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.0	99.2	91	70-135	
o-Terphenyl	52.8	49.6	106	70-135	

Lab Batch #: 3077905 **Sample:** 613274-019 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/04/19 00:34

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.6	99.3	89	70-135	
o-Terphenyl	51.4	49.7	103	70-135	

Lab Batch #: 3077905 **Sample:** 613274-021 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/04/19 01:19

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.9	100	93	70-135	
o-Terphenyl	54.5	50.0	109	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Screech Owl Fed 4H

Work Orders : 613274,

Project ID: 212C-MD-01549

Lab Batch #: 3077905 **Sample:** 613274-023 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/04/19 01:42

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	84.7	99.7	85	70-135	
o-Terphenyl	49.2	49.9	99	70-135	

Lab Batch #: 3077905 **Sample:** 613274-025 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/04/19 02:03

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	77.4	99.2	78	70-135	
o-Terphenyl	48.2	49.6	97	70-135	

Lab Batch #: 3077905 **Sample:** 613274-027 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/04/19 02:25

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	79.0	99.0	80	70-135	
o-Terphenyl	49.8	49.5	101	70-135	

Lab Batch #: 3077905 **Sample:** 613274-029 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/04/19 02:48

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.2	100	87	70-135	
o-Terphenyl	49.7	50.0	99	70-135	

Lab Batch #: 3077905 **Sample:** 613274-031 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/04/19 03:10

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	79.2	99.6	80	70-135	
o-Terphenyl	51.3	49.8	103	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Screech Owl Fed 4H

Work Orders : 613274,

Project ID: 212C-MD-01549

Lab Batch #: 3077905 **Sample:** 613274-033 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/04/19 03:32

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.1	99.1	89	70-135	
o-Terphenyl	51.2	49.6	103	70-135	

Lab Batch #: 3077905 **Sample:** 613274-035 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/04/19 03:54

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.7	99.8	88	70-135	
o-Terphenyl	49.5	49.9	99	70-135	

Lab Batch #: 3077905 **Sample:** 613274-037 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/04/19 04:16

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	88.3	99.0	89	70-135	
o-Terphenyl	50.3	49.5	102	70-135	

Lab Batch #: 3077902 **Sample:** 613274-041 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/04/19 06:28

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	76.5	99.0	77	70-135	
o-Terphenyl	50.7	49.5	102	70-135	

Lab Batch #: 3077902 **Sample:** 613274-043 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/04/19 07:32

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.0	99.7	89	70-135	
o-Terphenyl	50.4	49.9	101	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Screech Owl Fed 4H

Work Orders : 613274,

Project ID: 212C-MD-01549

Lab Batch #: 3077902 **Sample:** 613274-045 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/04/19 07:53

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.0	99.0	83	70-135	
o-Terphenyl	45.4	49.5	92	70-135	

Lab Batch #: 3077902 **Sample:** 613274-046 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/04/19 08:14

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	87.4	99.5	88	70-135	
o-Terphenyl	49.5	49.8	99	70-135	

Lab Batch #: 3077902 **Sample:** 613274-048 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/04/19 08:56

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	79.3	99.1	80	70-135	
o-Terphenyl	52.6	49.6	106	70-135	

Lab Batch #: 3077902 **Sample:** 613274-049 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/04/19 09:17

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.8	99.1	94	70-135	
o-Terphenyl	54.5	49.6	110	70-135	

Lab Batch #: 3077905 **Sample:** 613274-039 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/04/19 09:38

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	75.8	99.2	76	70-135	
o-Terphenyl	50.1	49.6	101	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Screech Owl Fed 4H

Work Orders : 613274,

Project ID: 212C-MD-01549

Lab Batch #: 3077902 **Sample:** 613274-047 / SMP **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/04/19 09:59

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	77.9	99.9	78	70-135	
o-Terphenyl	52.1	50.0	104	70-135	

Lab Batch #: 3077975 **Sample:** 7671023-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 02/02/19 15:12

SURROGATE RECOVERY STUDY

BTEX by SW 8260B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.00966	0.0100	97	73-132	
1,2-Dichloroethane-D4	0.00960	0.0100	96	73-124	
Toluene-D8	0.00997	0.0100	100	69-124	

Lab Batch #: 3077985 **Sample:** 7671034-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 02/03/19 04:19

SURROGATE RECOVERY STUDY

BTEX by SW 8260B

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.00977	0.0100	98	73-132	
1,2-Dichloroethane-D4	0.00999	0.0100	100	73-124	
Toluene-D8	0.00984	0.0100	98	69-124	

Lab Batch #: 3077905 **Sample:** 7670933-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 02/03/19 19:35

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod

Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	79.7	100	80	70-135	
o-Terphenyl	47.0	50.0	94	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Screech Owl Fed 4H

Work Orders : 613274,

Project ID: 212C-MD-01549

Lab Batch #: 3077902 **Sample:** 7670934-1-BLK / BLK **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 02/04/19 05:00

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	78.6	100	79	70-135	
o-Terphenyl	45.6	50.0	91	70-135	

Lab Batch #: 3077975 **Sample:** 7671023-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 02/02/19 12:40

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0107	0.0100	107	73-132	
1,2-Dichloroethane-D4	0.0102	0.0100	102	73-124	
Toluene-D8	0.0103	0.0100	103	69-124	

Lab Batch #: 3077985 **Sample:** 7671034-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 02/03/19 01:47

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0108	0.0100	108	73-132	
1,2-Dichloroethane-D4	0.00979	0.0100	98	73-124	
Toluene-D8	0.0102	0.0100	102	69-124	

Lab Batch #: 3077905 **Sample:** 7670933-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 02/03/19 19:56

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.7	100	95	70-135	
o-Terphenyl	50.8	50.0	102	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Screech Owl Fed 4H

Work Orders : 613274,

Project ID: 212C-MD-01549

Lab Batch #: 3077902 **Sample:** 7670934-1-BKS / BKS **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 02/04/19 05:22

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	89.7	100	90	70-135	
o-Terphenyl	46.4	50.0	93	70-135	

Lab Batch #: 3077975 **Sample:** 7671023-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 02/02/19 13:02

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0108	0.0100	108	73-132	
1,2-Dichloroethane-D4	0.00992	0.0100	99	73-124	
Toluene-D8	0.0103	0.0100	103	69-124	

Lab Batch #: 3077985 **Sample:** 7671034-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 02/03/19 02:08

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0108	0.0100	108	73-132	
1,2-Dichloroethane-D4	0.0102	0.0100	102	73-124	
Toluene-D8	0.0102	0.0100	102	69-124	

Lab Batch #: 3077905 **Sample:** 7670933-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 02/03/19 20:17

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.7	100	95	70-135	
o-Terphenyl	51.6	50.0	103	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Screech Owl Fed 4H

Work Orders : 613274,

Project ID: 212C-MD-01549

Lab Batch #: 3077902 **Sample:** 7670934-1-BSD / BSD **Batch:** 1 **Matrix:** Solid

Units: mg/kg **Date Analyzed:** 02/04/19 05:43

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	95.3	100	95	70-135	
o-Terphenyl	51.2	50.0	102	70-135	

Lab Batch #: 3077975 **Sample:** 613292-004 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/02/19 13:23

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0110	0.0100	110	73-132	
1,2-Dichloroethane-D4	0.0105	0.0100	105	73-124	
Toluene-D8	0.0118	0.0100	118	69-124	

Lab Batch #: 3077985 **Sample:** 613148-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/03/19 02:30

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0109	0.0100	109	73-132	
1,2-Dichloroethane-D4	0.0102	0.0100	102	73-124	
Toluene-D8	0.0100	0.0100	100	69-124	

Lab Batch #: 3077905 **Sample:** 613274-001 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/03/19 21:00

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.0	99.0	92	70-135	
o-Terphenyl	44.7	49.5	90	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Screech Owl Fed 4H

Work Orders : 613274,

Project ID: 212C-MD-01549

Lab Batch #: 3077902 **Sample:** 613274-041 S / MS **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/04/19 06:49

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.4	99.0	93	70-135	
o-Terphenyl	49.4	49.5	100	70-135	

Lab Batch #: 3077975 **Sample:** 613292-004 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/02/19 13:45

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0108	0.0100	108	73-132	
1,2-Dichloroethane-D4	0.0106	0.0100	106	73-124	
Toluene-D8	0.0112	0.0100	112	69-124	

Lab Batch #: 3077985 **Sample:** 613148-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/03/19 02:52

SURROGATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Dibromofluoromethane	0.0111	0.0100	111	73-132	
1,2-Dichloroethane-D4	0.0103	0.0100	103	73-124	
Toluene-D8	0.0101	0.0100	101	69-124	

Lab Batch #: 3077905 **Sample:** 613274-001 SD / MSD **Batch:** 1 **Matrix:** Soil

Units: mg/kg **Date Analyzed:** 02/03/19 21:21

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	94.1	99.6	94	70-135	
o-Terphenyl	47.9	49.8	96	70-135	

* Surrogate outside of Laboratory QC limits

** Surrogates outside limits; data and surrogates confirmed by reanalysis

*** Poor recoveries due to dilution

Surrogate Recovery [D] = 100 * A / B

All results are based on MDL and validated for QC purposes.

Form 2 - Surrogate Recoveries

Project Name: Screech Owl Fed 4H

Work Orders : 613274,
Project ID: 212C-MD-01549
Lab Batch #: 3077902 **Sample:** 613274-041 SD / MSD **Batch:** 1 **Matrix:** Soil
Units: mg/kg **Date Analyzed:** 02/04/19 07:10

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	91.5	99.0	92	70-135	
o-Terphenyl	48.6	49.5	98	70-135	

* Surrogate outside of Laboratory QC limits
** Surrogates outside limits; data and surrogates confirmed by reanalysis
*** Poor recoveries due to dilution
Surrogate Recovery [D] = 100 * A / B
All results are based on MDL and validated for QC purposes.

BS / BSD Recoveries

Project Name: Screech Owl Fed 4H

Work Order #: 613274 **Project ID:** 212C-MD-01549

Analyst: JOL **Date Prepared:** 02/02/2019 **Date Analyzed:** 02/02/2019

Lab Batch ID: 3077975 **Sample:** 7671023-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.0500	0.0447	89	0.0500	0.0428	86	4	62-132	25	
Toluene	<0.00100	0.0500	0.0451	90	0.0500	0.0429	86	5	66-124	25	
Ethylbenzene	<0.00100	0.0500	0.0456	91	0.0500	0.0433	87	5	71-134	25	
m,p-Xylenes	<0.00200	0.100	0.0904	90	0.100	0.0860	86	5	69-128	25	
o-Xylene	<0.00100	0.0500	0.0462	92	0.0500	0.0439	88	5	72-131	25	

Analyst: JOL **Date Prepared:** 02/02/2019 **Date Analyzed:** 02/03/2019

Lab Batch ID: 3077985 **Sample:** 7671034-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00100	0.0500	0.0419	84	0.0500	0.0450	90	7	62-132	25	
Toluene	<0.00100	0.0500	0.0413	83	0.0500	0.0444	89	7	66-124	25	
Ethylbenzene	<0.00100	0.0500	0.0414	83	0.0500	0.0448	90	8	71-134	25	
m,p-Xylenes	<0.00200	0.100	0.0816	82	0.100	0.0885	89	8	69-128	25	
o-Xylene	<0.00100	0.0500	0.0427	85	0.0500	0.0458	92	7	72-131	25	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

BS / BSD Recoveries

Project Name: Screech Owl Fed 4H

Work Order #: 613274 **Project ID:** 212C-MD-01549

Analyst: JYM **Date Prepared:** 02/02/2019 **Date Analyzed:** 02/02/2019

Lab Batch ID: 3077871 **Sample:** 7670928-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<10.0	100	102	102	100	101	101	1	80-120	20	

Analyst: JYM **Date Prepared:** 02/02/2019 **Date Analyzed:** 02/03/2019

Lab Batch ID: 3077876 **Sample:** 7670929-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<10.0	100	102	102	100	101	101	1	80-120	20	

Analyst: JYM **Date Prepared:** 02/02/2019 **Date Analyzed:** 02/02/2019

Lab Batch ID: 3077867 **Sample:** 7670930-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<10.0	100	101	101	100	101	101	0	80-120	20	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

BS / BSD Recoveries

Project Name: Screech Owl Fed 4H

Work Order #: 613274 **Project ID:** 212C-MD-01549

Analyst: ISU **Date Prepared:** 02/03/2019 **Date Analyzed:** 02/03/2019

Lab Batch ID: 3077905 **Sample:** 7670933-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	874	87	1000	881	88	1	70-135	35	
Diesel Range Organics (DRO)	<50.0	1000	1070	107	1000	1090	109	2	70-135	35	

Analyst: ISU **Date Prepared:** 02/03/2019 **Date Analyzed:** 02/04/2019

Lab Batch ID: 3077902 **Sample:** 7670934-1-BKS **Batch #:** 1 **Matrix:** Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	860	86	1000	876	88	2	70-135	35	
Diesel Range Organics (DRO)	<50.0	1000	1040	104	1000	1090	109	5	70-135	35	

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|
Blank Spike Recovery [D] = 100*(C)/[B]
Blank Spike Duplicate Recovery [G] = 100*(F)/[E]
All results are based on MDL and Validated for QC Purposes

Form 3 - MS / MSD Recoveries

Project Name: Screech Owl Fed 4H

Work Order # : 613274 **Project ID:** 212C-MD-01549

Lab Batch ID: 3077975 **QC- Sample ID:** 613292-004 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 02/02/2019 **Date Prepared:** 02/02/2019 **Analyst:** JOL

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00118	0.0588	0.0530	90	0.0587	0.0491	84	8	62-132	25	
Toluene	0.0186	0.0588	0.0859	114	0.0587	0.0680	84	23	66-124	25	
Ethylbenzene	0.0355	0.0588	0.0911	95	0.0587	0.0771	71	17	71-134	25	
m,p-Xylenes	0.147	0.118	0.254	91	0.117	0.215	58	17	69-128	25	X
o-Xylene	0.0781	0.0588	0.137	100	0.0587	0.117	66	16	72-131	25	X

Lab Batch ID: 3077985 **QC- Sample ID:** 613148-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 02/03/2019 **Date Prepared:** 02/02/2019 **Analyst:** JOL

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by SW 8260B Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.000990	0.0495	0.0358	72	0.0496	0.0394	79	10	62-132	25	
Toluene	<0.000990	0.0495	0.0347	70	0.0496	0.0385	78	10	66-124	25	
Ethylbenzene	<0.000990	0.0495	0.0347	70	0.0496	0.0385	78	10	71-134	25	X
m,p-Xylenes	<0.00198	0.0990	0.0679	69	0.0992	0.0761	77	11	69-128	25	
o-Xylene	<0.000990	0.0495	0.0351	71	0.0496	0.0395	80	12	72-131	25	X

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Form 3 - MS / MSD Recoveries

Project Name: Screech Owl Fed 4H

Work Order # : 613274 **Project ID:** 212C-MD-01549

Lab Batch ID: 3077867 **QC- Sample ID:** 613274-041 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 02/02/2019 **Date Prepared:** 02/02/2019 **Analyst:** JYM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	3.20	100	104	101	100	104	101	0	80-120	20	

Lab Batch ID: 3077871 **QC- Sample ID:** 613274-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 02/02/2019 **Date Prepared:** 02/02/2019 **Analyst:** JYM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	224	100	326	102	100	326	102	0	80-120	20	

Lab Batch ID: 3077871 **QC- Sample ID:** 613274-011 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 02/02/2019 **Date Prepared:** 02/02/2019 **Analyst:** JYM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	851	100	943	92	100	952	101	1	80-120	20	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B
Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E
Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable
N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Form 3 - MS / MSD Recoveries

Project Name: Screech Owl Fed 4H

Work Order # : 613274 **Project ID:** 212C-MD-01549

Lab Batch ID: 3077876 **QC- Sample ID:** 613274-021 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 02/03/2019 **Date Prepared:** 02/02/2019 **Analyst:** JYM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	882	100	975	93	100	978	96	0	80-120	20	

Lab Batch ID: 3077876 **QC- Sample ID:** 613274-031 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 02/03/2019 **Date Prepared:** 02/02/2019 **Analyst:** JYM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	165	100	268	103	100	267	102	0	80-120	20	

Lab Batch ID: 3077902 **QC- Sample ID:** 613274-041 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 02/04/2019 **Date Prepared:** 02/03/2019 **Analyst:** ISU

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<49.5	990	866	87	990	838	85	3	70-135	35	
Diesel Range Organics (DRO)	<49.5	990	1060	107	990	1030	104	3	70-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Form 3 - MS / MSD Recoveries

Project Name: Screech Owl Fed 4H

Work Order # : 613274 **Project ID:** 212C-MD-01549

Lab Batch ID: 3077905 **QC- Sample ID:** 613274-001 S **Batch #:** 1 **Matrix:** Soil

Date Analyzed: 02/03/2019 **Date Prepared:** 02/03/2019 **Analyst:** ISU

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Gasoline Range Hydrocarbons (GRO)	<49.5	990	873	88	996	866	87	1	70-135	35	
Diesel Range Organics (DRO)	<49.5	990	1080	109	996	1090	109	1	70-135	35	

Matrix Spike Percent Recovery [D] = 100*(C-A)/B

Matrix Spike Duplicate Percent Recovery [G] = 100*(F-A)/E

Relative Percent Difference RPD = 200*|(C-F)/(C+F)|

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.

Analysis Request of Chain of Custody Record

613274

Tetra Tech, Inc.

4000 N. Big Spring Street, Ste
401 Midland,Texas 79705
Tel (432) 682-4559
Fax (432) 682-3946

Client Name: COG	**Site Manager:** Clair Gonzales
Project Name: Screech Owl Fed 4H	
Project Location: (county, state) Eddy Co, NM	**Project #:** 212C-MD-01549
Invoice to: COG - Ike Taverez	
Receiving Laboratory: Xenco	**Sampler Signature:** Conner Moehring
Comments:	

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2019 DATE	TIME	MATRIX WATER	SOIL	PRESERVATIVE METHOD HCL	HNO_3	ICE	None	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance				Hold
	Bottom Hole #2 (3.5' BEB)	1/31/2019			X			X		1	N	X		X												X							
	Bottom Hole #15 (2.5' BEB)	1/31/2019			X			X		1	N															X							
	Bottom Hole #16 (2.5' BEB)	1/31/2019			X			X		1	N	X		X												X							
	Bottom Hole #17 (2.5' BEB)	1/31/2019			X			X		1	N															X							
	Bottom Hole #18 (2.5' BEB)	1/31/2019			X			X		1	N	X		X												X							
	Bottom Hole #19 (2.5' BEB)	1/31/2019			X			X		1	N															X							
	Bottom Hole #20 (2.5' BEB)	1/31/2019			X			X		1	N	X		X												X							
	Bottom Hole #21 (2.5' BEB)	1/31/2019			X			X		1	N															X							
	Bottom Hole #22 (2.0' BEB)	1/31/2019			X			X		1	N	X		X												X							
	Bottom Hole #23 (2.0' BEB)	1/31/2019			X			X		1	N															X							

Relinquished by: Conner Moehring	Date: 2/1/19	Time:	Received by: Bill
Relinquished by:	Date:	Time:	Received by:
Relinquished by:	Date:	Time:	Received by:

Date: 2/1/19 Time: 1540

LAB USE ONLY

Sample Temperature 0.3 | 0.2

REMARKS:

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

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Analysis Request of Chain of Custody Record

613274

Tetra Tech, Inc.

4000 N. Big Spring Street, Ste
401 Midland, Texas 79705
Tel (432) 682-4559
Fax (432) 682-3946

Client Name: COG	**Site Manager:** Clair Gonzales
Project Name: Screech Owl Fed 4H	
Project Location: (county, state) Eddy Co, NM	**Project #:** 212C-MD-01549
Invoice to: COG - Ike Taverez	
Receiving Laboratory: Xenco	**Sampler Signature:** Conner Moehring
Comments:	

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2019 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	MATRIX	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD None	PRESERVATIVE METHOD	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance					Hold
	Bottom Hole #24 (2.0' BEB)	1/31/2019			X				X			1	N	X		X												X								
	Bottom Hole #25 (3.0' BEB)	1/31/2019			X				X			1	N															X								
	Bottom Hole #26 (3.0' BEB)	1/31/2019			X				X			1	N	X		X												X								
	Bottom Hole #27 (3.0' BEB)	1/31/2019			X				X			1	N															X								
	Bottom Hole #28 (3.0' BEB)	1/31/2019			X				X			1	N	X		X												X								
	Bottom Hole #29 (3.0' BEB)	1/31/2019			X				X			1	N															X								
	Bottom Hole #30 (3.0' BEB)	1/31/2019			X				X			1	N	X		X												X								
	Bottom Hole #31 (3.0' BEB)	1/31/2019			X				X			1	N															X								
	Bottom Hole #32 (3.0' BEB)	1/31/2019			X				X			1	N	X		X												X								
	Bottom Hole #33 (3.0' BEB)	1/31/2019			X				X			1	N															X								

Relinquished by: Conner Moehring	Date: 2/1/19	Time:	Received by:
Relinquished by:	Date:	Time:	Received by:
Relinquished by:	Date:	Time:	Received by:

Date: 2/1/19 Time: 1540

LAB USE ONLY
Sample Temperature 0.3/0.2

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

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Analysis Request of Chain of Custody Record

613274

Tetra Tech, Inc.

4000 N. Big Spring Street, Ste
401 Midland,Texas 79705
Tel (432) 682-4559
Fax (432) 682-3946

Client Name: COG	**Site Manager:** Clair Gonzales
Project Name: Screech Owl Fed 4H	
Project Location: (county, state) Eddy Co, NM	**Project #:** 212C-MD-01549
Invoice to: COG - Ike Taverez	
Receiving Laboratory: Xenco	**Sampler Signature:** Conner Moehring
Comments:	

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2019 DATE	TIME	MATRIX WATER	SOIL	PRESERVATIVE METHOD HCL	HNO_3	ICE	None	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B	BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance	Hold
	Bottom Hole #34 (3.0' BEB)	1/31/2019			X			X		1	N	X		X													X				
	Bottom Hole #35 (3.0' BEB)	1/31/2019			X			X		1	N																X				
	Bottom Hole #36 (3.0' BEB)	1/31/2019			X			X		1	N	X		X													X				
	Bottom Hole #37 (3.0' BEB)	1/31/2019			X			X		1	N																X				
	Bottom Hole #38 (3.0' BEB)	1/31/2019			X			X		1	N	X		X													X				
	Bottom Hole #39 (3.0' BEB)	1/31/2019			X			X		1	N																X				
	Bottom Hole #40 (3.0' BEB)	1/31/2019			X			X		1	N	X		X													X				
	Bottom Hole #41 (3.0' BEB)	1/31/2019			X			X		1	N																X				
	North #2 Sidewall	1/29/2019			X			X		1	N	X		X													X				
	North #3 Sidewall	1/29/2019			X			X		1	N																X				

Final 1.000

Page 42 of 53

Relinquished by: Conner Moehring	Date: 2/1/19	Time:	Received by: Brad
Relinquished by:	Date:	Time:	Received by:
Relinquished by:	Date:	Time:	Received by:

Date: 2/1/19 Time: 1540

LAB USE ONLY

Sample Temperature: 0.3/0.2

REMARKS:

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

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Analysis Request of Chain of Custody Record

613274

Tetra Tech, Inc.

4000 N. Big Spring Street, Ste
401 Midland,Texas 79705
Tel (432) 682-4559
Fax (432) 682-3946

Client Name: COG	**Site Manager:** Clair Gonzales
Project Name: Screech Owl Fed 4H	
Project Location: (county, state) Eddy Co, NM	**Project #:** 212C-MD-01549
Invoice to: COG - Ike Taverez	
Receiving Laboratory: Xenco	**Sampler Signature:** Conner Moehring
Comments:	

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2019 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	MATRIX	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD None	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance				Hold
	North #4 Sidewall	1/29/2019			X				X		1	N	X		X												X							
	East #4 Sidewall	1/31/2019			X				X		1	N															X							
	East #5 Sidewall	1/31/2019			X				X		1	N	X		X												X							
	East #6 Sidewall	1/31/2019			X				X		1	N															X							
	East #7 Sidewall	1/31/2019			X				X		1	N	X		X												X							
	South #1 Sidewall	1/31/2019			X				X		1	N															X							
	South #2 Sidewall	1/31/2019			X				X		1	N	X		X												X							
	South #3 Sidewall	1/31/2019			X				X		1	N															X							
	West #2 Sidewall	1/29/2019			X				X		1	N	X		X												X							
	West #4 Sidewall	1/29/2019			X				X		1	N															X							

Final 1.000

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Relinquished by: Conner Moehring	Date: 2/1/19	Time:
Received by: BCM	Date: 2/1/19	Time: 1340
Relinquished by:	Date:	Time:
Received by:	Date:	Time:
Relinquished by:	Date:	Time:
Received by:	Date:	Time:

LAB USE ONLY

Sample Temperature 0.3 | 0.2

REMARKS:

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY

Analysis Request of Chain of Custody Record

613274

Tetra Tech, Inc.

4000 N. Big Spring Street, Ste
401 Midland,Texas 79705
Tel (432) 682-4559
Fax (432) 682-3946

Client Name: COG	**Site Manager:** Clair Gonzales
Project Name: Screech Owl Fed 4H	
Project Location: (county, state) Eddy Co, NM	**Project #:** 212C-MD-01549
Invoice to: COG - Ike Taverez	
Receiving Laboratory: Xenco	**Sampler Signature:** Conner Moehring
Comments:	

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING YEAR: 2019 DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	MATRIX	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD None	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance				Hold
	West #5 Sidewall	1/29/2019			X				X		1	N	X		X												X							
	West #6 Sidewall	1/31/2019			X				X		1	N															X							
	West #7 Sidewall	1/31/2019			X				X		1	N	X		X												X							
	Bottom Hole #2 North Sidewall	1/31/2019			X				X		1	N															X							
	Bottom Hole #2 South Sidewall	1/31/2019			X				X		1	N	X		X												X							
	SP #3 Trench (0-1')	1/31/2019			X				X		1	N															X							
	SP #3 Trench (2')	1/31/2019			X				X		1	N															X							
	SP #3 Trench (3')	1/31/2019			X				X		1	N															X							
	SP #3 Trench (4')	1/31/2019			X				X		1	N															X							

Final 1.000

Page 44 of 53

Relinquished by: Conner Moehring	Date: 2/1/19	Time:
Relinquished by:	Date:	Time:
Relinquished by:	Date:	Time:
Received by:	Date: 2/1/19	Time: 1540
Received by:	Date:	Time:
Received by:	Date:	Time:

LAB USE ONLY

Sample Temperature 0.3 | 0.2

REMARKS:

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY

Inter-Office Shipment

IOS Number **121765**

Date/Time: 02/01/19 16:41
Created by: Brianna Teel
Please send report to: Jessica Kramer

Lab# From: **Midland**
Delivery Priority:
Address: 1211 W. Florida Ave, Midland TX 79701

Lab# To: **Houston**
Air Bill No.: 774375805480
E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
613274-001	S	Bottom Hole #2 (3.5' BE	01/31/19 00:00	E300_CL	Chloride by EPA 300	02/04/19	02/28/19	JKR	CL	
613274-001	S	Bottom Hole #2 (3.5' BE	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	02/04/19	02/14/19	JKR	PHCC10C28 PHCC28C35 I	
613274-001	S	Bottom Hole #2 (3.5' BE	01/31/19 00:00	SW8260BTX	BTEX by SW 8260B	02/04/19	02/14/19	JKR	BZ BZME EBZ XYLENES	
613274-002	S	Bottom Hole #15 (2.5' B	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	02/14/19	JKR	PHCC10C28 PHCC28C35 I	
613274-002	S	Bottom Hole #15 (2.5' B	01/31/19 00:00	SW8260BTX	BTEX by SW 8260B	HOLD	02/14/19	JKR	BZ BZME EBZ XYLENES	
613274-002	S	Bottom Hole #15 (2.5' B	01/31/19 00:00	E300_CL	Chloride by EPA 300	02/04/19	02/28/19	JKR	CL	
613274-002	S	Bottom Hole #15 (2.5' B	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	02/14/19	JKR	PHCC10C28 PHCC28C35 I	
613274-003	S	Bottom Hole #16 (2.5' B	01/31/19 00:00	E300_CL	Chloride by EPA 300	02/04/19	02/28/19	JKR	CL	
613274-003	S	Bottom Hole #16 (2.5' B	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	02/04/19	02/14/19	JKR	PHCC10C28 PHCC28C35 I	
613274-003	S	Bottom Hole #16 (2.5' B	01/31/19 00:00	SW8260BTX	BTEX by SW 8260B	02/04/19	02/14/19	JKR	BZ BZME EBZ XYLENES	
613274-004	S	Bottom Hole #17 (2.5' B	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	02/14/19	JKR	PHCC10C28 PHCC28C35 I	
613274-004	S	Bottom Hole #17 (2.5' B	01/31/19 00:00	SW8260BTX	BTEX by SW 8260B	HOLD	02/14/19	JKR	BZ BZME EBZ XYLENES	
613274-004	S	Bottom Hole #17 (2.5' B	01/31/19 00:00	E300_CL	Chloride by EPA 300	02/04/19	02/28/19	JKR	CL	
613274-004	S	Bottom Hole #17 (2.5' B	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	02/14/19	JKR	PHCC10C28 PHCC28C35 I	
613274-005	S	Bottom Hole #18 (2.5' B	01/31/19 00:00	E300_CL	Chloride by EPA 300	02/04/19	02/28/19	JKR	CL	
613274-005	S	Bottom Hole #18 (2.5' B	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	02/04/19	02/14/19	JKR	PHCC10C28 PHCC28C35 I	
613274-005	S	Bottom Hole #18 (2.5' B	01/31/19 00:00	SW8260BTX	BTEX by SW 8260B	02/04/19	02/14/19	JKR	BZ BZME EBZ XYLENES	
613274-006	S	Bottom Hole #19 (2.5' B	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	02/14/19	JKR	PHCC10C28 PHCC28C35 I	
613274-006	S	Bottom Hole #19 (2.5' B	01/31/19 00:00	SW8260BTX	BTEX by SW 8260B	HOLD	02/14/19	JKR	BZ BZME EBZ XYLENES	
613274-006	S	Bottom Hole #19 (2.5' B	01/31/19 00:00	E300_CL	Chloride by EPA 300	02/04/19	02/28/19	JKR	CL	
613274-006	S	Bottom Hole #19 (2.5' B	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	02/14/19	JKR	PHCC10C28 PHCC28C35 I	
613274-007	S	Bottom Hole #20 (2.5' B	01/31/19 00:00	E300_CL	Chloride by EPA 300	02/04/19	02/28/19	JKR	CL	
613274-007	S	Bottom Hole #20 (2.5' B	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	02/04/19	02/14/19	JKR	PHCC10C28 PHCC28C35 I	
613274-007	S	Bottom Hole #20 (2.5' B	01/31/19 00:00	SW8260BTX	BTEX by SW 8260B	02/04/19	02/14/19	JKR	BZ BZME EBZ XYLENES	
613274-008	S	Bottom Hole #21 (2.5' B	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	02/14/19	JKR	PHCC10C28 PHCC28C35 I	

Inter-Office Shipment

IOS Number **121765**

Date/Time: 02/01/19 16:41
Created by: Brianna Teel
Please send report to: Jessica Kramer

Lab# From: **Midland**
Delivery Priority:
Address: 1211 W. Florida Ave, Midland TX 79701

Lab# To: **Houston**
Air Bill No.: 774375805480
E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
613274-008	S	Bottom Hole #21 (2.5' B	01/31/19 00:00	SW8260BTX	BTEX by SW 8260B	HOLD	02/14/19	JKR	BZ BZME EBZ XYLENES	
613274-008	S	Bottom Hole #21 (2.5' B	01/31/19 00:00	E300_CL	Chloride by EPA 300	02/04/19	02/28/19	JKR	CL	
613274-008	S	Bottom Hole #21 (2.5' B	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	02/14/19	JKR	PHCC10C28 PHCC28C35	
613274-009	S	Bottom Hole #22 (2.0' B	01/31/19 00:00	E300_CL	Chloride by EPA 300	02/04/19	02/28/19	JKR	CL	
613274-009	S	Bottom Hole #22 (2.0' B	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	02/04/19	02/14/19	JKR	PHCC10C28 PHCC28C35	
613274-009	S	Bottom Hole #22 (2.0' B	01/31/19 00:00	SW8260BTX	BTEX by SW 8260B	02/04/19	02/14/19	JKR	BZ BZME EBZ XYLENES	
613274-010	S	Bottom Hole #23 (2.0' B	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	02/14/19	JKR	PHCC10C28 PHCC28C35	
613274-010	S	Bottom Hole #23 (2.0' B	01/31/19 00:00	SW8260BTX	BTEX by SW 8260B	HOLD	02/14/19	JKR	BZ BZME EBZ XYLENES	
613274-010	S	Bottom Hole #23 (2.0' B	01/31/19 00:00	E300_CL	Chloride by EPA 300	02/04/19	02/28/19	JKR	CL	
613274-010	S	Bottom Hole #23 (2.0' B	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	02/14/19	JKR	PHCC10C28 PHCC28C35	
613274-011	S	Bottom Hole #24 (2.0' B	01/31/19 00:00	E300_CL	Chloride by EPA 300	02/04/19	02/28/19	JKR	CL	
613274-011	S	Bottom Hole #24 (2.0' B	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	02/04/19	02/14/19	JKR	PHCC10C28 PHCC28C35	
613274-011	S	Bottom Hole #24 (2.0' B	01/31/19 00:00	SW8260BTX	BTEX by SW 8260B	02/04/19	02/14/19	JKR	BZ BZME EBZ XYLENES	
613274-012	S	Bottom Hole #25 (3.0' B	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	02/14/19	JKR	PHCC10C28 PHCC28C35	
613274-012	S	Bottom Hole #25 (3.0' B	01/31/19 00:00	SW8260BTX	BTEX by SW 8260B	HOLD	02/14/19	JKR	BZ BZME EBZ XYLENES	
613274-012	S	Bottom Hole #25 (3.0' B	01/31/19 00:00	E300_CL	Chloride by EPA 300	02/04/19	02/28/19	JKR	CL	
613274-012	S	Bottom Hole #25 (3.0' B	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	02/14/19	JKR	PHCC10C28 PHCC28C35	
613274-013	S	Bottom Hole #26 (3.0' B	01/31/19 00:00	E300_CL	Chloride by EPA 300	02/04/19	02/28/19	JKR	CL	
613274-013	S	Bottom Hole #26 (3.0' B	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	02/04/19	02/14/19	JKR	PHCC10C28 PHCC28C35	
613274-013	S	Bottom Hole #26 (3.0' B	01/31/19 00:00	SW8260BTX	BTEX by SW 8260B	02/04/19	02/14/19	JKR	BZ BZME EBZ XYLENES	
613274-014	S	Bottom Hole #27 (3.0' B	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	02/14/19	JKR	PHCC10C28 PHCC28C35	
613274-014	S	Bottom Hole #27 (3.0' B	01/31/19 00:00	SW8260BTX	BTEX by SW 8260B	HOLD	02/14/19	JKR	BZ BZME EBZ XYLENES	
613274-014	S	Bottom Hole #27 (3.0' B	01/31/19 00:00	E300_CL	Chloride by EPA 300	02/04/19	02/28/19	JKR	CL	
613274-014	S	Bottom Hole #27 (3.0' B	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	02/14/19	JKR	PHCC10C28 PHCC28C35	
613274-015	S	Bottom Hole #28 (3.0' B	01/31/19 00:00	E300_CL	Chloride by EPA 300	02/04/19	02/28/19	JKR	CL	

Inter Office Shipment or Sample Comments:

Inter-Office Shipment

IOS Number **121765**

Date/Time: 02/01/19 16:41
Lab# From: **Midland**
Lab# To: **Houston**

Created by: Brianna Teel
Delivery Priority:
Air Bill No.: 774375805480

Please send report to: Jessica Kramer
Address: 1211 W. Florida Ave, Midland TX 79701
E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
613274-015	S	Bottom Hole #28 (3.0' B	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	02/04/19	02/14/19	JKR	PHCC10C28 PHCC28C35 I	
613274-015	S	Bottom Hole #28 (3.0' B	01/31/19 00:00	SW8260BTX	BTEX by SW 8260B	02/04/19	02/14/19	JKR	BZ BZME EBZ XYLENES	
613274-016	S	Bottom Hole #29 (3.0' B	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	02/14/19	JKR	PHCC10C28 PHCC28C35 I	
613274-016	S	Bottom Hole #29 (3.0' B	01/31/19 00:00	SW8260BTX	BTEX by SW 8260B	HOLD	02/14/19	JKR	BZ BZME EBZ XYLENES	
613274-016	S	Bottom Hole #29 (3.0' B	01/31/19 00:00	E300_CL	Chloride by EPA 300	02/04/19	02/28/19	JKR	CL	
613274-016	S	Bottom Hole #29 (3.0' B	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	02/14/19	JKR	PHCC10C28 PHCC28C35 I	
613274-017	S	Bottom Hole #30 (3.0' B	01/31/19 00:00	E300_CL	Chloride by EPA 300	02/04/19	02/28/19	JKR	CL	
613274-017	S	Bottom Hole #30 (3.0' B	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	02/04/19	02/14/19	JKR	PHCC10C28 PHCC28C35 I	
613274-017	S	Bottom Hole #30 (3.0' B	01/31/19 00:00	SW8260BTX	BTEX by SW 8260B	02/04/19	02/14/19	JKR	BZ BZME EBZ XYLENES	
613274-018	S	Bottom Hole #31 (3.0' B	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	02/14/19	JKR	PHCC10C28 PHCC28C35 I	
613274-018	S	Bottom Hole #31 (3.0' B	01/31/19 00:00	SW8260BTX	BTEX by SW 8260B	HOLD	02/14/19	JKR	BZ BZME EBZ XYLENES	
613274-018	S	Bottom Hole #31 (3.0' B	01/31/19 00:00	E300_CL	Chloride by EPA 300	02/04/19	02/28/19	JKR	CL	
613274-018	S	Bottom Hole #31 (3.0' B	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	02/14/19	JKR	PHCC10C28 PHCC28C35 I	
613274-019	S	Bottom Hole #32 (3.0' B	01/31/19 00:00	E300_CL	Chloride by EPA 300	02/04/19	02/28/19	JKR	CL	
613274-019	S	Bottom Hole #32 (3.0' B	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	02/04/19	02/14/19	JKR	PHCC10C28 PHCC28C35 I	
613274-019	S	Bottom Hole #32 (3.0' B	01/31/19 00:00	SW8260BTX	BTEX by SW 8260B	02/04/19	02/14/19	JKR	BZ BZME EBZ XYLENES	
613274-020	S	Bottom Hole #33 (3.0' B	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	02/14/19	JKR	PHCC10C28 PHCC28C35 I	
613274-020	S	Bottom Hole #33 (3.0' B	01/31/19 00:00	SW8260BTX	BTEX by SW 8260B	HOLD	02/14/19	JKR	BZ BZME EBZ XYLENES	
613274-020	S	Bottom Hole #33 (3.0' B	01/31/19 00:00	E300_CL	Chloride by EPA 300	02/04/19	02/28/19	JKR	CL	
613274-020	S	Bottom Hole #33 (3.0' B	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	02/14/19	JKR	PHCC10C28 PHCC28C35 I	
613274-021	S	Bottom Hole #34 (3.0' B	01/31/19 00:00	E300_CL	Chloride by EPA 300	02/04/19	02/28/19	JKR	CL	
613274-021	S	Bottom Hole #34 (3.0' B	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	02/04/19	02/14/19	JKR	PHCC10C28 PHCC28C35 I	
613274-021	S	Bottom Hole #34 (3.0' B	01/31/19 00:00	SW8260BTX	BTEX by SW 8260B	02/04/19	02/14/19	JKR	BZ BZME EBZ XYLENES	
613274-022	S	Bottom Hole #35 (3.0' B	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	02/14/19	JKR	PHCC10C28 PHCC28C35 I	
613274-022	S	Bottom Hole #35 (3.0' B	01/31/19 00:00	SW8260BTX	BTEX by SW 8260B	HOLD	02/14/19	JKR	BZ BZME EBZ XYLENES	

Inter Office Shipment or Sample Comments:

Relinquished By:

Received By:

Inter-Office Shipment

IOS Number **121765**

Date/Time: 02/01/19 16:41
Created by: Brianna Teel
Please send report to: Jessica Kramer

Lab# From: **Midland**
Delivery Priority:
Address: 1211 W. Florida Ave, Midland TX 79701

Lab# To: **Houston**
Air Bill No.: 774375805480
E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
613274-022	S	Bottom Hole #35 (3.0' B	01/31/19 00:00	E300_CL	Chloride by EPA 300	02/04/19	02/28/19	JKR	CL	
613274-022	S	Bottom Hole #35 (3.0' B	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	02/14/19	JKR	PHCC10C28 PHCC28C35 I	
613274-023	S	Bottom Hole #36 (3.0' B	01/31/19 00:00	E300_CL	Chloride by EPA 300	02/04/19	02/28/19	JKR	CL	
613274-023	S	Bottom Hole #36 (3.0' B	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	02/04/19	02/14/19	JKR	PHCC10C28 PHCC28C35 I	
613274-023	S	Bottom Hole #36 (3.0' B	01/31/19 00:00	SW8260BTX	BTEX by SW 8260B	02/04/19	02/14/19	JKR	BZ BZME EBZ XYLENES	
613274-024	S	Bottom Hole #37 (3.0' B	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	02/14/19	JKR	PHCC10C28 PHCC28C35 I	
613274-024	S	Bottom Hole #37 (3.0' B	01/31/19 00:00	SW8260BTX	BTEX by SW 8260B	HOLD	02/14/19	JKR	BZ BZME EBZ XYLENES	
613274-024	S	Bottom Hole #37 (3.0' B	01/31/19 00:00	E300_CL	Chloride by EPA 300	02/04/19	02/28/19	JKR	CL	
613274-024	S	Bottom Hole #37 (3.0' B	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	02/14/19	JKR	PHCC10C28 PHCC28C35 I	
613274-025	S	Bottom Hole #38 (3.0' B	01/31/19 00:00	E300_CL	Chloride by EPA 300	02/04/19	02/28/19	JKR	CL	
613274-025	S	Bottom Hole #38 (3.0' B	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	02/04/19	02/14/19	JKR	PHCC10C28 PHCC28C35 I	
613274-025	S	Bottom Hole #38 (3.0' B	01/31/19 00:00	SW8260BTX	BTEX by SW 8260B	02/04/19	02/14/19	JKR	BZ BZME EBZ XYLENES	
613274-026	S	Bottom Hole #39 (3.0' B	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	02/14/19	JKR	PHCC10C28 PHCC28C35 I	
613274-026	S	Bottom Hole #39 (3.0' B	01/31/19 00:00	SW8260BTX	BTEX by SW 8260B	HOLD	02/14/19	JKR	BZ BZME EBZ XYLENES	
613274-026	S	Bottom Hole #39 (3.0' B	01/31/19 00:00	E300_CL	Chloride by EPA 300	02/04/19	02/28/19	JKR	CL	
613274-026	S	Bottom Hole #39 (3.0' B	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	02/14/19	JKR	PHCC10C28 PHCC28C35 I	
613274-027	S	Bottom Hole #40 (3.0' B	01/31/19 00:00	E300_CL	Chloride by EPA 300	02/04/19	02/28/19	JKR	CL	
613274-027	S	Bottom Hole #40 (3.0' B	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	02/04/19	02/14/19	JKR	PHCC10C28 PHCC28C35 I	
613274-027	S	Bottom Hole #40 (3.0' B	01/31/19 00:00	SW8260BTX	BTEX by SW 8260B	02/04/19	02/14/19	JKR	BZ BZME EBZ XYLENES	
613274-028	S	Bottom Hole #41 (3.0' B	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	02/14/19	JKR	PHCC10C28 PHCC28C35 I	
613274-028	S	Bottom Hole #41 (3.0' B	01/31/19 00:00	SW8260BTX	BTEX by SW 8260B	HOLD	02/14/19	JKR	BZ BZME EBZ XYLENES	
613274-028	S	Bottom Hole #41 (3.0' B	01/31/19 00:00	E300_CL	Chloride by EPA 300	02/04/19	02/28/19	JKR	CL	
613274-028	S	Bottom Hole #41 (3.0' B	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	02/14/19	JKR	PHCC10C28 PHCC28C35 I	
613274-029	S	North #2 Sidewall	01/31/19 00:00	E300_CL	Chloride by EPA 300	02/04/19	02/28/19	JKR	CL	
613274-029	S	North #2 Sidewall	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	02/04/19	02/14/19	JKR	PHCC10C28 PHCC28C35 I	

Inter Office Shipment or Sample Comments:

Date Relinquished:

Date Received:

Inter-Office Shipment

IOS Number **121765**

Date/Time: 02/01/19 16:41
Lab# From: **Midland**
Lab# To: **Houston**

Created by: Brianna Teel
Delivery Priority:
Air Bill No.: 774375805480

Please send report to: Jessica Kramer
Address: 1211 W. Florida Ave, Midland TX 79701
E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
613274-029	S	North #2 Sidewall	01/31/19 00:00	SW8260BTX	BTEX by SW 8260B	**02/04/19**	02/14/19	JKR	BZ BZME EBZ XYLENES	
613274-030	S	North #3 Sidewall	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	02/14/19	JKR	PHCC10C28 PHCC28C35 I	
613274-030	S	North #3 Sidewall	01/31/19 00:00	SW8260BTX	BTEX by SW 8260B	HOLD	02/14/19	JKR	BZ BZME EBZ XYLENES	
613274-030	S	North #3 Sidewall	01/31/19 00:00	E300_CL	Chloride by EPA 300	**02/04/19**	02/28/19	JKR	CL	
613274-030	S	North #3 Sidewall	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	02/14/19	JKR	PHCC10C28 PHCC28C35 I	
613274-031	S	North #4 Sidewall	01/31/19 00:00	E300_CL	Chloride by EPA 300	**02/04/19**	02/28/19	JKR	CL	
613274-031	S	North #4 Sidewall	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	**02/04/19**	02/14/19	JKR	PHCC10C28 PHCC28C35 I	
613274-031	S	North #4 Sidewall	01/31/19 00:00	SW8260BTX	BTEX by SW 8260B	**02/04/19**	02/14/19	JKR	BZ BZME EBZ XYLENES	
613274-032	S	East #4 Sidewall	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	02/14/19	JKR	PHCC10C28 PHCC28C35 I	
613274-032	S	East #4 Sidewall	01/31/19 00:00	SW8260BTX	BTEX by SW 8260B	HOLD	02/14/19	JKR	BZ BZME EBZ XYLENES	
613274-032	S	East #4 Sidewall	01/31/19 00:00	E300_CL	Chloride by EPA 300	**02/04/19**	02/28/19	JKR	CL	
613274-032	S	East #4 Sidewall	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	02/14/19	JKR	PHCC10C28 PHCC28C35 I	
613274-033	S	East #5 Sidewall	01/31/19 00:00	E300_CL	Chloride by EPA 300	**02/04/19**	02/28/19	JKR	CL	
613274-033	S	East #5 Sidewall	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	**02/04/19**	02/14/19	JKR	PHCC10C28 PHCC28C35 I	
613274-033	S	East #5 Sidewall	01/31/19 00:00	SW8260BTX	BTEX by SW 8260B	**02/04/19**	02/14/19	JKR	BZ BZME EBZ XYLENES	
613274-034	S	East #6 Sidewall	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	02/14/19	JKR	PHCC10C28 PHCC28C35 I	
613274-034	S	East #6 Sidewall	01/31/19 00:00	SW8260BTX	BTEX by SW 8260B	HOLD	02/14/19	JKR	BZ BZME EBZ XYLENES	
613274-034	S	East #6 Sidewall	01/31/19 00:00	E300_CL	Chloride by EPA 300	**02/04/19**	02/28/19	JKR	CL	
613274-034	S	East #6 Sidewall	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	02/14/19	JKR	PHCC10C28 PHCC28C35 I	
613274-035	S	East #7 Sidewall	01/31/19 00:00	E300_CL	Chloride by EPA 300	**02/04/19**	02/28/19	JKR	CL	
613274-035	S	East #7 Sidewall	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	**02/04/19**	02/14/19	JKR	PHCC10C28 PHCC28C35 I	
613274-035	S	East #7 Sidewall	01/31/19 00:00	SW8260BTX	BTEX by SW 8260B	**02/04/19**	02/14/19	JKR	BZ BZME EBZ XYLENES	
613274-036	S	South #1 Sidewall	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	02/14/19	JKR	PHCC10C28 PHCC28C35 I	
613274-036	S	South #1 Sidewall	01/31/19 00:00	SW8260BTX	BTEX by SW 8260B	HOLD	02/14/19	JKR	BZ BZME EBZ XYLENES	
613274-036	S	South #1 Sidewall	01/31/19 00:00	E300_CL	Chloride by EPA 300	**02/04/19**	02/28/19	JKR	CL	

Inter Office Shipment or Sample Comments:

Cooler Temperature:

Inter-Office Shipment

IOS Number **121765**

Date/Time: 02/01/19 16:41
Lab# From: **Midland**
Lab# To: **Houston**

Created by: Brianna Teel
Delivery Priority:
Air Bill No.: 774375805480

Please send report to: Jessica Kramer
Address: 1211 W. Florida Ave, Midland TX 79701
E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
613274-036	S	South #1 Sidewall	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	02/14/19	JKR	PHCC10C28 PHCC28C35	
613274-037	S	South #2 Sidewall	01/31/19 00:00	E300_CL	Chloride by EPA 300	02/04/19	02/28/19	JKR	CL	
613274-037	S	South #2 Sidewall	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	02/04/19	02/14/19	JKR	PHCC10C28 PHCC28C35	
613274-037	S	South #2 Sidewall	01/31/19 00:00	SW8260BTX	BTEX by SW 8260B	02/04/19	02/14/19	JKR	BZ BZME EBZ XYLENES	
613274-038	S	South #3 Sidewall	01/31/19 00:00	SW8260BTX	BTEX by SW 8260B	HOLD	02/14/19	JKR	BZ BZME EBZ XYLENES	
613274-038	S	South #3 Sidewall	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	02/14/19	JKR	PHCC10C28 PHCC28C35	
613274-038	S	South #3 Sidewall	01/31/19 00:00	E300_CL	Chloride by EPA 300	02/04/19	02/28/19	JKR	CL	
613274-038	S	South #3 Sidewall	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	02/14/19	JKR	PHCC10C28 PHCC28C35	
613274-039	S	West #2 Sidewall	01/31/19 00:00	E300_CL	Chloride by EPA 300	02/04/19	02/28/19	JKR	CL	
613274-039	S	West #2 Sidewall	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	02/04/19	02/14/19	JKR	PHCC10C28 PHCC28C35	
613274-039	S	West #2 Sidewall	01/31/19 00:00	SW8260BTX	BTEX by SW 8260B	02/04/19	02/14/19	JKR	BZ BZME EBZ XYLENES	
613274-040	S	West #4 Sidewall	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	02/14/19	JKR	PHCC10C28 PHCC28C35	
613274-040	S	West #4 Sidewall	01/31/19 00:00	SW8260BTX	BTEX by SW 8260B	HOLD	02/14/19	JKR	BZ BZME EBZ XYLENES	
613274-040	S	West #4 Sidewall	01/31/19 00:00	E300_CL	Chloride by EPA 300	02/04/19	02/28/19	JKR	CL	
613274-040	S	West #4 Sidewall	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	02/14/19	JKR	PHCC10C28 PHCC28C35	
613274-041	S	West #5 Sidewall	01/31/19 00:00	E300_CL	Chloride by EPA 300	02/04/19	02/28/19	JKR	CL	
613274-041	S	West #5 Sidewall	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	02/04/19	02/14/19	JKR	PHCC10C28 PHCC28C35	
613274-041	S	West #5 Sidewall	01/31/19 00:00	SW8260BTX	BTEX by SW 8260B	02/04/19	02/14/19	JKR	BZ BZME EBZ XYLENES	
613274-042	S	West #6 Sidewall	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	02/14/19	JKR	PHCC10C28 PHCC28C35	
613274-042	S	West #6 Sidewall	01/31/19 00:00	SW8260BTX	BTEX by SW 8260B	HOLD	02/14/19	JKR	BZ BZME EBZ XYLENES	
613274-042	S	West #6 Sidewall	01/31/19 00:00	E300_CL	Chloride by EPA 300	02/04/19	02/28/19	JKR	CL	
613274-042	S	West #6 Sidewall	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	02/14/19	JKR	PHCC10C28 PHCC28C35	
613274-043	S	West #7 Sidewall	01/31/19 00:00	E300_CL	Chloride by EPA 300	02/04/19	02/28/19	JKR	CL	
613274-043	S	West #7 Sidewall	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	02/04/19	02/14/19	JKR	PHCC10C28 PHCC28C35	
613274-043	S	West #7 Sidewall	01/31/19 00:00	SW8260BTX	BTEX by SW 8260B	02/04/19	02/14/19	JKR	BZ BZME EBZ XYLENES	

Inter Office Shipment or Sample Comments:

Inter-Office Shipment

IOS Number **121765**

Date/Time: 02/01/19 16:41
Created by: Brianna Teel
Please send report to: Jessica Kramer

Lab# From: **Midland**
Delivery Priority:
Address: 1211 W. Florida Ave, Midland TX 79701

Lab# To: **Houston**
Air Bill No.: 774375805480
E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
613274-044	S	Bottom Hole #2 South S	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	02/14/19	JKR	PHCC10C28 PHCC28C35	
613274-044	S	Bottom Hole #2 South S	01/31/19 00:00	SW8260BTX	BTEX by SW 8260B	HOLD	02/14/19	JKR	BZ BZME EBZ XYLENES	
613274-044	S	Bottom Hole #2 South S	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	HOLD	02/14/19	JKR	PHCC10C28 PHCC28C35	
613274-044	S	Bottom Hole #2 South S	01/31/19 00:00	E300_CL	Chloride by EPA 300	02/04/19	02/28/19	JKR	CL	
613274-045	S	Bottom Hole #2 South S	01/31/19 00:00	E300_CL	Chloride by EPA 300	02/04/19	02/28/19	JKR	CL	
613274-045	S	Bottom Hole #2 South S	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	02/04/19	02/14/19	JKR	PHCC10C28 PHCC28C35	
613274-045	S	Bottom Hole #2 South S	01/31/19 00:00	SW8260BTX	BTEX by SW 8260B	02/04/19	02/14/19	JKR	BZ BZME EBZ XYLENES	
613274-046	S	SP #3 Trench (0-1')	01/31/19 00:00	E300_CL	Chloride by EPA 300	02/04/19	02/28/19	JKR	CL	
613274-046	S	SP #3 Trench (0-1')	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	02/04/19	02/14/19	JKR	PHCC10C28 PHCC28C35	
613274-047	S	SP #3 Trench (2')	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	02/04/19	02/14/19	JKR	PHCC10C28 PHCC28C35	
613274-047	S	SP #3 Trench (2')	01/31/19 00:00	E300_CL	Chloride by EPA 300	02/04/19	02/28/19	JKR	CL	
613274-048	S	SP #3 Trench (3')	01/31/19 00:00	E300_CL	Chloride by EPA 300	02/04/19	02/28/19	JKR	CL	
613274-048	S	SP #3 Trench (3')	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	02/04/19	02/14/19	JKR	PHCC10C28 PHCC28C35	
613274-049	S	SP #3 Trench (4')	01/31/19 00:00	E300_CL	Chloride by EPA 300	02/04/19	02/28/19	JKR	CL	
613274-049	S	SP #3 Trench (4')	01/31/19 00:00	SW8015MOD_NM	TPH by SW8015 Mod	02/04/19	02/14/19	JKR	PHCC10C28 PHCC28C35	

Inter Office Shipment or Sample Comments:

Jessica Kramer

Jessica Kramer

02/01/2019

Rene Vandenberghe

02/02/2019 10:00

3.2

XENCO Laboratories

Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 121765

Acceptable Temperature Range: 0 - 6 degC
Air and Metal samples Acceptable Range: Ambient
Temperature Measuring device used : hou-068

Sent By: Brianna Teel **Date Sent:** 02/01/2019 04:41 PM

Received By: Rene Vandenberghe **Date Received:** 02/02/2019 10:00 AM

Sample Receipt Checklist		Comments
#1 *Temperature of cooler(s)?	3.2	
#2 *Shipping container in good condition?	**Yes**	
#3 *Samples received with appropriate temperature?	**Yes**	
#4 *Custody Seals intact on shipping container/ cooler?	**Yes**	
#5 *Custody Seals Signed and dated for Containers/coolers	**Yes**	
#6 *IOS present?	**Yes**	
#7 Any missing/extra samples?	**No**	
#8 IOS agrees with sample label(s)/matrix?	**Yes**	
#9 Sample matrix/ properties agree with IOS?	**Yes**	
#10 Samples in proper container/ bottle?	**Yes**	
#11 Samples properly preserved?	**Yes**	
#12 Sample container(s) intact?	**Yes**	
#13 Sufficient sample amount for indicated test(s)?	**Yes**	
#14 All samples received within hold time?	**Yes**	

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ **Contacted by :** _____ **Date:** _____

Checklist reviewed by: R. C. Vandenberghe Date: 02/02/2019

Rene Vandenberghe

XENCO Laboratories
Prelogin/Nonconformance Report- Sample Log-In

Client: Tetra Tech- Midland

Date/ Time Received: 02/01/2019 03:40:00 PM

Work Order #: 613274

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)?	.2
#2 *Shipping container in good condition?	**Yes**
#3 *Samples received on ice?	**Yes**
#4 *Custody Seals intact on shipping container/ cooler?	**N/A**
#5 Custody Seals intact on sample bottles?	**N/A**
#6*Custody Seals Signed and dated?	**N/A**
#7 *Chain of Custody present?	**Yes**
#8 Any missing/extra samples?	**No**
#9 Chain of Custody signed when relinquished/ received?	**Yes**
#10 Chain of Custody agrees with sample labels/matrix?	**Yes**
#11 Container label(s) legible and intact?	**Yes**
#12 Samples in proper container/ bottle?	**Yes**
#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: 02/01/2019
Brianna Teel

Checklist reviewed by: Jessica Kramer Date: 02/04/2019
Jessica Kramer

CARDINAL Laboratories

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

February 06, 2019

CLAIR GONZALES

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: SCREECH OWL FED 4H

Enclosed are the results of analyses for samples received by the laboratory on 02/05/19 16:55.

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: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 06-Feb-19 18:02

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BOTTOM HOLE # 24	H900436-01	Soil	05-Feb-19 00:00	05-Feb-19 16:55
BOTTOM HOLE # 25	H900436-02	Soil	05-Feb-19 00:00	05-Feb-19 16:55
BOTTOM HOLE # 26	H900436-03	Soil	05-Feb-19 00:00	05-Feb-19 16:55
BOTTOM HOLE # 27	H900436-04	Soil	05-Feb-19 00:00	05-Feb-19 16:55
BOTTOM HOLE # 34	H900436-05	Soil	05-Feb-19 00:00	05-Feb-19 16:55
BOTTOM HOLE # 35	H900436-06	Soil	05-Feb-19 00:00	05-Feb-19 16:55
WEST SIDEWALL #6	H900436-07	Soil	05-Feb-19 00:00	05-Feb-19 16:55
WEST SIDEWALL #7	H900436-08	Soil	05-Feb-19 00:00	05-Feb-19 16:55

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence ar any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damage including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether su claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 06-Feb-19 18:02

BOTTOM HOLE # 24

H900436-01 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**64.0**		16.0	mg/kg	4	9020610	AC	06-Feb-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9020601	ms	06-Feb-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9020601	ms	06-Feb-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9020601	ms	06-Feb-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9020601	ms	06-Feb-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9020601	ms	06-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*100 %*	*73.3-129*		*9020601*	ms	*06-Feb-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9020502	MS	06-Feb-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9020502	MS	06-Feb-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9020502	MS	06-Feb-19	8015B	
Surrogate: 1-Chlorooctane			*80.9 %*	*41-142*		*9020502*	MS	*06-Feb-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*75.2 %*	*37.6-147*		*9020502*	MS	*06-Feb-19*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 06-Feb-19 18:02

BOTTOM HOLE # 25

H900436-02 (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	9020610	AC	06-Feb-19	4500-Cl-B	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 06-Feb-19 18:02

BOTTOM HOLE # 26

H900436-03 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**48.0**		16.0	mg/kg	4	9020610	AC	06-Feb-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9020601	ms	06-Feb-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9020601	ms	06-Feb-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9020601	ms	06-Feb-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9020601	ms	06-Feb-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9020601	ms	06-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*101 %*	*73.3-129*		*9020601*	ms	*06-Feb-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9020502	MS	06-Feb-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9020502	MS	06-Feb-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9020502	MS	06-Feb-19	8015B	
Surrogate: 1-Chlorooctane			*88.6 %*	*41-142*		*9020502*	MS	*06-Feb-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*81.3 %*	*37.6-147*		*9020502*	MS	*06-Feb-19*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 06-Feb-19 18:02

BOTTOM HOLE # 27

H900436-04 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**272**		16.0	mg/kg	4	9020610	AC	06-Feb-19	4500-Cl-B	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 06-Feb-19 18:02

BOTTOM HOLE # 34

H900436-05 (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	9020610	AC	06-Feb-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9020602	MS	06-Feb-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9020602	MS	06-Feb-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9020602	MS	06-Feb-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9020602	MS	06-Feb-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9020602	MS	06-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*106 %*	*73.3-129*		*9020602*	MS	*06-Feb-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9020502	MS	06-Feb-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9020502	MS	06-Feb-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9020502	MS	06-Feb-19	8015B	
Surrogate: 1-Chlorooctane			*93.0 %*	*41-142*		*9020502*	MS	*06-Feb-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*85.2 %*	*37.6-147*		*9020502*	MS	*06-Feb-19*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 06-Feb-19 18:02

BOTTOM HOLE # 35

H900436-06 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**48.0**		16.0	mg/kg	4	9020610	AC	06-Feb-19	4500-Cl-B	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 06-Feb-19 18:02

WEST SIDEWALL #6

H900436-07 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**688**		16.0	mg/kg	4	9020610	AC	06-Feb-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9020602	MS	06-Feb-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9020602	MS	06-Feb-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9020602	MS	06-Feb-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9020602	MS	06-Feb-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9020602	MS	06-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*107 %*	*73.3-129*		*9020602*	MS	*06-Feb-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9020502	MS	06-Feb-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9020502	MS	06-Feb-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9020502	MS	06-Feb-19	8015B	
Surrogate: 1-Chlorooctane			*91.9 %*	*41-142*		*9020502*	MS	*06-Feb-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*85.2 %*	*37.6-147*		*9020502*	MS	*06-Feb-19*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 06-Feb-19 18:02

WEST SIDEWALL #7

H900436-08 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**80.0**		16.0	mg/kg	4	9020610	AC	06-Feb-19	4500-Cl-B	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 06-Feb-19 18:02

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 9020610 - General Prep - Wet Chem										
Blank (9020610-BLK1)				Prepared & Analyzed: 06-Feb-19						
Chloride	ND	16.0	mg/kg							
LCS (9020610-BS1)				Prepared & Analyzed: 06-Feb-19						
Chloride	432	16.0	mg/kg	400		108	80-120			
LCS Dup (9020610-BSD1)				Prepared & Analyzed: 06-Feb-19						
Chloride	432	16.0	mg/kg	400		108	80-120	0.00	20	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 06-Feb-19 18:02

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 9020601 - Volatiles										
Blank (9020601-BLK1)				Prepared & Analyzed: 06-Feb-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)	*0.101*		mg/kg	*0.100*		*101*	*73.3-129*			
LCS (9020601-BS1)				Prepared & Analyzed: 06-Feb-19						
Benzene	2.15	0.050	mg/kg	2.00		107	72.2-131			
Toluene	2.02	0.050	mg/kg	2.00		101	71.7-126			
Ethylbenzene	1.99	0.050	mg/kg	2.00		99.3	68.9-126			
Total Xylenes	6.11	0.150	mg/kg	6.00		102	71.4-125			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0987*		mg/kg	*0.100*		*98.7*	*73.3-129*			
LCS Dup (9020601-BSD1)				Prepared & Analyzed: 06-Feb-19						
Benzene	2.16	0.050	mg/kg	2.00		108	72.2-131	0.799	6.91	
Toluene	2.07	0.050	mg/kg	2.00		104	71.7-126	2.43	7.12	
Ethylbenzene	2.04	0.050	mg/kg	2.00		102	68.9-126	2.93	7.88	
Total Xylenes	6.26	0.150	mg/kg	6.00		104	71.4-125	2.51	7.46	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0997*		mg/kg	*0.100*		*99.7*	*73.3-129*			
Batch 9020602 - Volatiles										
Blank (9020602-BLK1)				Prepared & Analyzed: 06-Feb-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)	*0.0994*		mg/kg	*0.100*		*99.4*	*73.3-129*			

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 06-Feb-19 18:02

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 9020602 - Volatiles										
LCS (9020602-BS1)				Prepared & Analyzed: 06-Feb-19						
Benzene	2.14	0.050	mg/kg	2.00		107	72.2-131			
Toluene	2.24	0.050	mg/kg	2.00		112	71.7-126			
Ethylbenzene	2.24	0.050	mg/kg	2.00		112	68.9-126			
Total Xylenes	6.42	0.150	mg/kg	6.00		107	71.4-125			
Surrogate: 4-Bromofluorobenzene (PID)	*0.106*		mg/kg	*0.100*		*106*	*73.3-129*			
LCS Dup (9020602-BSD1)				Prepared & Analyzed: 06-Feb-19						
Benzene	2.09	0.050	mg/kg	2.00		105	72.2-131	2.32	6.91	
Toluene	2.18	0.050	mg/kg	2.00		109	71.7-126	2.75	7.12	
Ethylbenzene	2.21	0.050	mg/kg	2.00		110	68.9-126	1.40	7.88	
Total Xylenes	6.32	0.150	mg/kg	6.00		105	71.4-125	1.61	7.46	
Surrogate: 4-Bromofluorobenzene (PID)	*0.108*		mg/kg	*0.100*		*108*	*73.3-129*			

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 06-Feb-19 18:02

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 9020502 - General Prep - Organics										
Blank (9020502-BLK1)				Prepared: 05-Feb-19 Analyzed: 06-Feb-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	*45.9*		mg/kg	*50.0*		*91.8*	*41-142*			
Surrogate: 1-Chlorooctadecane	*43.9*		mg/kg	*50.0*		*87.9*	*37.6-147*			
LCS (9020502-BS1)				Prepared: 05-Feb-19 Analyzed: 06-Feb-19						
GRO C6-C10	168	10.0	mg/kg	200		83.8	76.5-133			
DRO >C10-C28	173	10.0	mg/kg	200		86.5	72.9-138			
Total TPH C6-C28	340	10.0	mg/kg	400		85.1	78-132			
Surrogate: 1-Chlorooctane	*47.5*		mg/kg	*50.0*		*95.1*	*41-142*			
Surrogate: 1-Chlorooctadecane	*43.0*		mg/kg	*50.0*		*86.1*	*37.6-147*			
LCS Dup (9020502-BSD1)				Prepared: 05-Feb-19 Analyzed: 06-Feb-19						
GRO C6-C10	171	10.0	mg/kg	200		85.5	76.5-133	2.05	20.6	
DRO >C10-C28	184	10.0	mg/kg	200		91.8	72.9-138	5.99	20.6	
Total TPH C6-C28	355	10.0	mg/kg	400		88.7	78-132	4.07	18	
Surrogate: 1-Chlorooctane	*47.9*		mg/kg	*50.0*		*95.9*	*41-142*			
Surrogate: 1-Chlorooctadecane	*43.5*		mg/kg	*50.0*		*87.0*	*37.6-147*			

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Notes and Definitions

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

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Analysis Request of Chain of Custody Record

Page 1 of 1

Tetra Tech, Inc.

4000 N. Big Spring Street, Ste
401 Midland, Texas 79705
Tel (432) 682-4559
Fax (432) 682-3946

Client Name: COG	Site Manager: Clair Gonzales
Project Name: Screech Owl Fed 4H	
Project Location: (county, state) Eddy Co, NM	Project #: 212C-MD-01549
Invoice to: COG - Ike Tavarez	
Receiving Laboratory: Cardnial	Sampler Signature: Conner Moehring
Comments:	

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	MATRIX	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD None	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance					Hold
H900436		YEAR: 2019																																	
1	Bottom Hole #24	2/5/19			X				X		1	N	X		X											X									
2	Bottom Hole #25	2/5/19			X				X		1	N														X									
3	Bottom Hole #26	2/6/19			X				X		1	N	X		X											X									
4	Bottom Hole #27	2/5/19			X				X		1	N														X									
5	Bottom Hole # 34	2/5/19			X				X		1	N	X		X											X									
6	Bottom Hole # 35	2/6/19			X				X		1	N														X									
7	WEST SIDEWALL #6	2/5/19			X				X		1	N	X		X											X									
8	WEST SIDEWALL #7	2/5/19			X				X		1	N														X									
					X				X		1	N																							
					X				X		1	N																							

Relinquished by: Conner Moehring	Date: 2/5/19	Time: 1700	Received by: Samara Oldaker 2-5-19 16:55
Relinquished by:	Date:	Time:	Received by: Date: Time:
Relinquished by:	Date:	Time:	Received by: Date: Time:

LAB USE ONLY
Sample Temperature
1.8°C
#97

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

ORIGINAL COPY

CARDINAL Laboratories

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February 06, 2019

CLAIR GONZALES

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: SCREECH OWL FED 4H

Enclosed are the results of analyses for samples received by the laboratory on 02/05/19 16:55.

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: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 06-Feb-19 17:58

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SOUTH #4 SIDEWALL	H900437-01	Soil	05-Feb-19 00:00	05-Feb-19 16:55
NORTH #6 SIDEWALL	H900437-02	Soil	05-Feb-19 00:00	05-Feb-19 16:55
SOUTH #5 SIDEWALL	H900437-03	Soil	05-Feb-19 00:00	05-Feb-19 16:55
WEST #8 SIDEWALL	H900437-04	Soil	05-Feb-19 00:00	05-Feb-19 16:55
EAST #9 SIDEWALL	H900437-05	Soil	05-Feb-19 00:00	05-Feb-19 16:55
NORTH #5 SW	H900437-06	Soil	05-Feb-19 00:00	05-Feb-19 16:55

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 06-Feb-19 17:58

SOUTH #4 SIDEWALL

H900437-01 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**160**		16.0	mg/kg	4	9020610	AC	06-Feb-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9020602	MS	06-Feb-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9020602	MS	06-Feb-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9020602	MS	06-Feb-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9020602	MS	06-Feb-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9020602	MS	06-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*105 %*	*73.3-129*		*9020602*	MS	*06-Feb-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9020502	MS	06-Feb-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9020502	MS	06-Feb-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9020502	MS	06-Feb-19	8015B	
Surrogate: 1-Chlorooctane			*87.5 %*	*41-142*		*9020502*	MS	*06-Feb-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*80.3 %*	*37.6-147*		*9020502*	MS	*06-Feb-19*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 06-Feb-19 17:58

NORTH #6 SIDEWALL

H900437-02 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**912**		16.0	mg/kg	4	9020610	AC	06-Feb-19	4500-Cl-B	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 06-Feb-19 17:58

SOUTH #5 SIDEWALL

H900437-03 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**496**		16.0	mg/kg	4	9020610	AC	06-Feb-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9020602	MS	06-Feb-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9020602	MS	06-Feb-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9020602	MS	06-Feb-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9020602	MS	06-Feb-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9020602	MS	06-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*102 %*	*73.3-129*		*9020602*	MS	*06-Feb-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9020502	MS	06-Feb-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9020502	MS	06-Feb-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9020502	MS	06-Feb-19	8015B	
Surrogate: 1-Chlorooctane			*85.3 %*	*41-142*		*9020502*	MS	*06-Feb-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*77.9 %*	*37.6-147*		*9020502*	MS	*06-Feb-19*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 06-Feb-19 17:58

WEST #8 SIDEWALL

H900437-04 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**2480**		16.0	mg/kg	4	9020610	AC	06-Feb-19	4500-Cl-B	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 06-Feb-19 17:58

EAST #9 SIDEWALL

H900437-05 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**656**		16.0	mg/kg	4	9020610	AC	06-Feb-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9020602	MS	06-Feb-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9020602	MS	06-Feb-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9020602	MS	06-Feb-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9020602	MS	06-Feb-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9020602	MS	06-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*106 %*	*73.3-129*		*9020602*	MS	*06-Feb-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9020502	MS	06-Feb-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9020502	MS	06-Feb-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9020502	MS	06-Feb-19	8015B	
Surrogate: 1-Chlorooctane			*86.3 %*	*41-142*		*9020502*	MS	*06-Feb-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*79.3 %*	*37.6-147*		*9020502*	MS	*06-Feb-19*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 06-Feb-19 17:58

NORTH #5 SW

H900437-06 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**1800**		16.0	mg/kg	4	9020610	AC	06-Feb-19	4500-Cl-B	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 06-Feb-19 17:58

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 9020610 - General Prep - Wet Chem										
Blank (9020610-BLK1)				Prepared & Analyzed: 06-Feb-19						
Chloride	ND	16.0	mg/kg							
LCS (9020610-BS1)				Prepared & Analyzed: 06-Feb-19						
Chloride	432	16.0	mg/kg	400		108	80-120			
LCS Dup (9020610-BSD1)				Prepared & Analyzed: 06-Feb-19						
Chloride	432	16.0	mg/kg	400		108	80-120	0.00	20	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 06-Feb-19 17:58

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 9020602 - Volatiles										
Blank (9020602-BLK1)				Prepared & Analyzed: 06-Feb-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)	*0.0994*		mg/kg	*0.100*		*99.4*	*73.3-129*			
LCS (9020602-BS1)				Prepared & Analyzed: 06-Feb-19						
Benzene	2.14	0.050	mg/kg	2.00		107	72.2-131			
Toluene	2.24	0.050	mg/kg	2.00		112	71.7-126			
Ethylbenzene	2.24	0.050	mg/kg	2.00		112	68.9-126			
Total Xylenes	6.42	0.150	mg/kg	6.00		107	71.4-125			
Surrogate: 4-Bromofluorobenzene (PID)	*0.106*		mg/kg	*0.100*		*106*	*73.3-129*			
LCS Dup (9020602-BSD1)				Prepared & Analyzed: 06-Feb-19						
Benzene	2.09	0.050	mg/kg	2.00		105	72.2-131	2.32	6.91	
Toluene	2.18	0.050	mg/kg	2.00		109	71.7-126	2.75	7.12	
Ethylbenzene	2.21	0.050	mg/kg	2.00		110	68.9-126	1.40	7.88	
Total Xylenes	6.32	0.150	mg/kg	6.00		105	71.4-125	1.61	7.46	
Surrogate: 4-Bromofluorobenzene (PID)	*0.108*		mg/kg	*0.100*		*108*	*73.3-129*			

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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: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 06-Feb-19 17:58

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 9020502 - General Prep - Organics										
Blank (9020502-BLK1)				Prepared: 05-Feb-19 Analyzed: 06-Feb-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	*45.9*		mg/kg	*50.0*		*91.8*	*41-142*			
Surrogate: 1-Chlorooctadecane	*43.9*		mg/kg	*50.0*		*87.9*	*37.6-147*			
LCS (9020502-BS1)				Prepared: 05-Feb-19 Analyzed: 06-Feb-19						
GRO C6-C10	168	10.0	mg/kg	200		83.8	76.5-133			
DRO >C10-C28	173	10.0	mg/kg	200		86.5	72.9-138			
Total TPH C6-C28	340	10.0	mg/kg	400		85.1	78-132			
Surrogate: 1-Chlorooctane	*47.5*		mg/kg	*50.0*		*95.1*	*41-142*			
Surrogate: 1-Chlorooctadecane	*43.0*		mg/kg	*50.0*		*86.1*	*37.6-147*			
LCS Dup (9020502-BSD1)				Prepared: 05-Feb-19 Analyzed: 06-Feb-19						
GRO C6-C10	171	10.0	mg/kg	200		85.5	76.5-133	2.05	20.6	
DRO >C10-C28	184	10.0	mg/kg	200		91.8	72.9-138	5.99	20.6	
Total TPH C6-C28	355	10.0	mg/kg	400		88.7	78-132	4.07	18	
Surrogate: 1-Chlorooctane	*47.9*		mg/kg	*50.0*		*95.9*	*41-142*			
Surrogate: 1-Chlorooctadecane	*43.5*		mg/kg	*50.0*		*87.0*	*37.6-147*			

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Notes and Definitions

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

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Analysis Request of Chain of Custody Record

Page 1 of

Tetra Tech, Inc.

4000 N. Big Spring Street, Ste
401 Midland, Texas 79705
Tel (432) 682-4559
Fax (432) 682-3946

Client Name:	COG	**Site Manager:**	Clair Gonzales
Project Name:	Screech Owl Fed 4H		
Project Location: (county, state)	Eddy Co, NM	**Project #:**	212C-MD-01549
Invoice to:	COG - Ike Tavarez		
Receiving Laboratory:	Cardnial	**Sampler Signature:**	Conner Moehring
Comments:			

ANALYSIS REQUEST
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE	SAMPLING TIME	MATRIX: WATER	MATRIX: SOIL	PRESERVATIVE METHOD: HCL	PRESERVATIVE METHOD: HNO_3	PRESERVATIVE METHOD: ICE	PRESERVATIVE METHOD: None	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance					Hold
H900437		YEAR: 2019																																
1	South #4 Sidewall	2/5/19			X			X		1	N	X		X												X								
2	NORTH #6 Sidewall				X			X		1	N															X								
3	South #5 Sidewall				X			X		1	N	X		X												X								
4	~~East~~ #8 Sidewall West *				X			X		1	N															X								
5	EAST #9 Sidewall				X			X		1	N	X		X												X								
6	NORTH #5 SW	2/5/19			X			X		1	N															X								
					X			X		1	N																							
					X			X		1	N																							
					X			X		1	N																							
					X			X		1	N																							

Relinquished by: Conner Moehring	Date: 2/5/19	Time: 1700	Received by: Tamara Wolfe
Relinquished by:	Date:	Time:	Received by:
Relinquished by:	Date:	Time:	Received by:

Date: 2-5-19 Time: 16:55

LAB USE ONLY
Sample Temperature
1.8°
#97

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

* Conner Changed name of sample #4. JH

ORIGINAL COPY

CARDINAL Laboratories

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

February 07, 2019

CLAIR GONZALES

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: SCREECH OWL FED 4H

Enclosed are the results of analyses for samples received by the laboratory on 02/06/19 14:45.

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: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 07-Feb-19 16:32

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
BOTTOM HOLE #42 (4' BEB)	H900461-01	Soil	06-Feb-19 00:00	06-Feb-19 14:45
BOTTOM HOLE #43 (4' BEB)	H900461-02	Soil	06-Feb-19 00:00	06-Feb-19 14:45
BOTTOM HOLE #44 (3' BEB)	H900461-03	Soil	06-Feb-19 00:00	06-Feb-19 14:45
BOTTOM HOLE #45 (6' BEB)	H900461-04	Soil	06-Feb-19 00:00	06-Feb-19 14:45
BOTTOM HOLE #46 (6' BEB)	H900461-05	Soil	06-Feb-19 00:00	06-Feb-19 14:45
EAST 10 SIDEWALL	H900461-06	Soil	06-Feb-19 00:00	06-Feb-19 14:45

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 07-Feb-19 16:32

BOTTOM HOLE #42 (4' BEB)

H900461-01 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**96.0**		16.0	mg/kg	4	9020708	AC	07-Feb-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9020614	MS	07-Feb-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9020614	MS	07-Feb-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9020614	MS	07-Feb-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9020614	MS	07-Feb-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9020614	MS	07-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*99.3 %*	*73.3-129*		*9020614*	MS	*07-Feb-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9020612	MS	07-Feb-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9020612	MS	07-Feb-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9020612	MS	07-Feb-19	8015B	
Surrogate: 1-Chlorooctane			*86.7 %*	*41-142*		*9020612*	MS	*07-Feb-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*93.1 %*	*37.6-147*		*9020612*	MS	*07-Feb-19*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 07-Feb-19 16:32

BOTTOM HOLE #43 (4' BEB)

H900461-02 (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	9020708	AC	07-Feb-19	4500-Cl-B	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 07-Feb-19 16:32

BOTTOM HOLE #44 (3' BEB)

H900461-03 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**288**		16.0	mg/kg	4	9020708	AC	07-Feb-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9020614	MS	07-Feb-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9020614	MS	07-Feb-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9020614	MS	07-Feb-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9020614	MS	07-Feb-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9020614	MS	07-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*97.7 %*	*73.3-129*		*9020614*	MS	*07-Feb-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9020612	MS	07-Feb-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9020612	MS	07-Feb-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9020612	MS	07-Feb-19	8015B	
Surrogate: 1-Chlorooctane			*86.2 %*	*41-142*		*9020612*	MS	*07-Feb-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*90.4 %*	*37.6-147*		*9020612*	MS	*07-Feb-19*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 07-Feb-19 16:32

BOTTOM HOLE #45 (6' BEB)

H900461-04 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**112**		16.0	mg/kg	4	9020708	AC	07-Feb-19	4500-Cl-B	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 07-Feb-19 16:32

BOTTOM HOLE #46 (6' BEB)

H900461-05 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**112**		16.0	mg/kg	4	9020708	AC	07-Feb-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9020614	MS	07-Feb-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9020614	MS	07-Feb-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9020614	MS	07-Feb-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9020614	MS	07-Feb-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9020614	MS	07-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*103 %*	*73.3-129*		*9020614*	MS	*07-Feb-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9020612	MS	07-Feb-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9020612	MS	07-Feb-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9020612	MS	07-Feb-19	8015B	
Surrogate: 1-Chlorooctane			*86.3 %*	*41-142*		*9020612*	MS	*07-Feb-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*92.0 %*	*37.6-147*		*9020612*	MS	*07-Feb-19*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 07-Feb-19 16:32

EAST 10 SIDEWALL

H900461-06 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**352**		16.0	mg/kg	4	9020708	AC	07-Feb-19	4500-Cl-B	

Cardinal Laboratories

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 07-Feb-19 16:32

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 9020708 - General Prep - Wet Chem										
Blank (9020708-BLK1)				Prepared & Analyzed: 07-Feb-19						
Chloride	ND	16.0	mg/kg							
LCS (9020708-BS1)				Prepared & Analyzed: 07-Feb-19						
Chloride	432	16.0	mg/kg	400		108	80-120			
LCS Dup (9020708-BSD1)				Prepared & Analyzed: 07-Feb-19						
Chloride	416	16.0	mg/kg	400		104	80-120	3.77	20	

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 07-Feb-19 16:32

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 9020614 - Volatiles										
Blank (9020614-BLK1)				Prepared: 06-Feb-19 Analyzed: 07-Feb-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)	*0.103*		mg/kg	*0.100*		*103*	*73.3-129*			
LCS (9020614-BS1)				Prepared: 06-Feb-19 Analyzed: 07-Feb-19						
Benzene	2.10	0.050	mg/kg	2.00		105	72.2-131			
Toluene	2.12	0.050	mg/kg	2.00		106	71.7-126			
Ethylbenzene	2.12	0.050	mg/kg	2.00		106	68.9-126			
Total Xylenes	6.07	0.150	mg/kg	6.00		101	71.4-125			
Surrogate: 4-Bromofluorobenzene (PID)	*0.104*		mg/kg	*0.100*		*104*	*73.3-129*			
LCS Dup (9020614-BSD1)				Prepared: 06-Feb-19 Analyzed: 07-Feb-19						
Benzene	2.05	0.050	mg/kg	2.00		102	72.2-131	2.55	6.91	
Toluene	2.06	0.050	mg/kg	2.00		103	71.7-126	2.65	7.12	
Ethylbenzene	2.07	0.050	mg/kg	2.00		103	68.9-126	2.28	7.88	
Total Xylenes	5.87	0.150	mg/kg	6.00		97.8	71.4-125	3.28	7.46	
Surrogate: 4-Bromofluorobenzene (PID)	*0.105*		mg/kg	*0.100*		*105*	*73.3-129*			

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 07-Feb-19 16:32

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 9020612 - General Prep - Organics										
Blank (9020612-BLK1)				Prepared: 06-Feb-19 Analyzed: 07-Feb-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	*42.4*		mg/kg	*50.0*		*84.8*	*41-142*			
Surrogate: 1-Chlorooctadecane	*47.0*		mg/kg	*50.0*		*94.0*	*37.6-147*			
LCS (9020612-BS1)				Prepared: 06-Feb-19 Analyzed: 07-Feb-19						
GRO C6-C10	191	10.0	mg/kg	200		95.7	76.5-133			
DRO >C10-C28	201	10.0	mg/kg	200		100	72.9-138			
Total TPH C6-C28	392	10.0	mg/kg	400		98.0	78-132			
Surrogate: 1-Chlorooctane	*46.9*		mg/kg	*50.0*		*93.8*	*41-142*			
Surrogate: 1-Chlorooctadecane	*47.6*		mg/kg	*50.0*		*95.2*	*37.6-147*			
LCS Dup (9020612-BSD1)				Prepared: 06-Feb-19 Analyzed: 07-Feb-19						
GRO C6-C10	197	10.0	mg/kg	200		98.6	76.5-133	3.04	20.6	
DRO >C10-C28	204	10.0	mg/kg	200		102	72.9-138	1.84	20.6	
Total TPH C6-C28	402	10.0	mg/kg	400		100	78-132	2.43	18	
Surrogate: 1-Chlorooctane	*48.2*		mg/kg	*50.0*		*96.4*	*41-142*			
Surrogate: 1-Chlorooctadecane	*48.6*		mg/kg	*50.0*		*97.3*	*37.6-147*			

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Notes and Definitions

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

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Analysis Request of Chain of Custody Record

Page 1 of 1

Tetra Tech, Inc.

4000 N. Big Spring Street, Ste
401 Midland,Texas 79705
Tel (432) 682-4559
Fax (432) 682-3946

Client Name: COG	**Site Manager:** Clair Gonzales
Project Name: Screech Owl Fed 4H	
Project Location: (county, state) Eddy Co, NM	**Project #:** 212C-MD-01549
Invoice to: COG - Ike Tavarez	
Receiving Laboratory: Cardnial	**Sampler Signature:** Conner Moehring
Comments:	

H900468

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE	SAMPLING TIME	MATRIX: WATER	MATRIX: SOIL	MATRIX:	PRESERVATIVE METHOD: HCL	PRESERVATIVE METHOD: HNO_3	PRESERVATIVE METHOD: ICE	PRESERVATIVE METHOD: None	PRESERVATIVE METHOD:	# CONTAINERS	FILTERED (Y/N)
01	Bottom Hole # 42 (4' BEB)	2/6/19			X				X			1	N
02	Bottom Hole # 43 (4' BEB)	2/6/19			X				X			1	N
03	Bottom Hole # 44 (3' BEB)	2/6/19			X				X			1	N
04	Bottom Hole # 45 (6' BEB)	2/6/19			X				X			1	N
05	Bottom Hole # 46 (6' BEB)	2/6/19			X				X			1	N
06	EAST 10 SIDEWALL				X				X			1	N
					X				X			1	N
					X				X			1	N
					X				X			1	N
					X				X			1	N
					X				X			1	N

ANALYSIS REQUEST (Circle or Specify Method No.)

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

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Conner Moehring	2/6/19	1443	[signature]	2-6-19	14:45
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

LAB USE ONLY

Sample Temperature
4.9°C
#97

REMARKS:

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY

CARDINAL Laboratories

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February 07, 2019

CLAIR GONZALES

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: SCREECH OWL FED 4H

Enclosed are the results of analyses for samples received by the laboratory on 02/06/19 14:45.

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

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 07-Feb-19 16:40

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
EAST #8 SIDEWALL	H900462-01	Soil	06-Feb-19 00:00	06-Feb-19 14:45

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EAST #8 SIDEWALL

H900462-01 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**416**		16.0	mg/kg	4	9020708	AC	07-Feb-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9020613	ms	07-Feb-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9020613	ms	07-Feb-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9020613	ms	07-Feb-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9020613	ms	07-Feb-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9020613	ms	07-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*98.8 %*	*73.3-129*		*9020613*	ms	*07-Feb-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9020612	MS	07-Feb-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9020612	MS	07-Feb-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9020612	MS	07-Feb-19	8015B	
Surrogate: 1-Chlorooctane			*80.6 %*	*41-142*		*9020612*	MS	*07-Feb-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*84.0 %*	*37.6-147*		*9020612*	MS	*07-Feb-19*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 07-Feb-19 16:40

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 9020708 - General Prep - Wet Chem										
Blank (9020708-BLK1)				Prepared & Analyzed: 07-Feb-19						
Chloride	ND	16.0	mg/kg							
LCS (9020708-BS1)				Prepared & Analyzed: 07-Feb-19						
Chloride	432	16.0	mg/kg	400		108	80-120			
LCS Dup (9020708-BSD1)				Prepared & Analyzed: 07-Feb-19						
Chloride	416	16.0	mg/kg	400		104	80-120	3.77	20	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 07-Feb-19 16:40

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 9020613 - Volatiles										
Blank (9020613-BLK1)				Prepared & Analyzed: 06-Feb-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)	*0.0994*		mg/kg	*0.100*		*99.4*	*73.3-129*			
LCS (9020613-BS1)				Prepared & Analyzed: 06-Feb-19						
Benzene	2.03	0.050	mg/kg	2.00		102	72.2-131			
Toluene	1.96	0.050	mg/kg	2.00		97.9	71.7-126			
Ethylbenzene	1.92	0.050	mg/kg	2.00		96.0	68.9-126			
Total Xylenes	5.82	0.150	mg/kg	6.00		97.0	71.4-125			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0982*		mg/kg	*0.100*		*98.2*	*73.3-129*			
LCS Dup (9020613-BSD1)				Prepared & Analyzed: 06-Feb-19						
Benzene	2.12	0.050	mg/kg	2.00		106	72.2-131	4.08	6.91	
Toluene	2.06	0.050	mg/kg	2.00		103	71.7-126	4.88	7.12	
Ethylbenzene	2.01	0.050	mg/kg	2.00		101	68.9-126	4.83	7.88	
Total Xylenes	6.08	0.150	mg/kg	6.00		101	71.4-125	4.36	7.46	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0976*		mg/kg	*0.100*		*97.6*	*73.3-129*			

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 07-Feb-19 16:40

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 9020612 - General Prep - Organics										
Blank (9020612-BLK1)				Prepared: 06-Feb-19 Analyzed: 07-Feb-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	*42.4*		mg/kg	*50.0*		*84.8*	*41-142*			
Surrogate: 1-Chlorooctadecane	*47.0*		mg/kg	*50.0*		*94.0*	*37.6-147*			
LCS (9020612-BS1)				Prepared: 06-Feb-19 Analyzed: 07-Feb-19						
GRO C6-C10	191	10.0	mg/kg	200		95.7	76.5-133			
DRO >C10-C28	201	10.0	mg/kg	200		100	72.9-138			
Total TPH C6-C28	392	10.0	mg/kg	400		98.0	78-132			
Surrogate: 1-Chlorooctane	*46.9*		mg/kg	*50.0*		*93.8*	*41-142*			
Surrogate: 1-Chlorooctadecane	*47.6*		mg/kg	*50.0*		*95.2*	*37.6-147*			
LCS Dup (9020612-BSD1)				Prepared: 06-Feb-19 Analyzed: 07-Feb-19						
GRO C6-C10	197	10.0	mg/kg	200		98.6	76.5-133	3.04	20.6	
DRO >C10-C28	204	10.0	mg/kg	200		102	72.9-138	1.84	20.6	
Total TPH C6-C28	402	10.0	mg/kg	400		100	78-132	2.43	18	
Surrogate: 1-Chlorooctane	*48.2*		mg/kg	*50.0*		*96.4*	*41-142*			
Surrogate: 1-Chlorooctadecane	*48.6*		mg/kg	*50.0*		*97.3*	*37.6-147*			

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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

Analysis Request of Chain of Custody Record

Page 1 of 1

Tetra Tech, Inc.

4000 N. Big Spring Street, Ste 401 Midland,Texas 79705
Tel (432) 682-4559
Fax (432) 682-3946

Client Name:	COG	Site Manager:	Clair Gonzales
Project Name:	Screech Owl Fed 4H		
Project Location: (county, state)	Eddy Co, NM	Project #:	212C-MD-01549
Invoice to:	COG - Ike Tavarez		
Receiving Laboratory:	Cardnial	Sampler Signature:	Conner Moehring
Comments:			

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB # H900462 (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE (YEAR: 2019)	SAMPLING TIME	MATRIX WATER	MATRIX SOIL	MATRIX	PRESERVATIVE METHOD HCL	PRESERVATIVE METHOD HNO_3	PRESERVATIVE METHOD ICE	PRESERVATIVE METHOD None	# CONTAINERS	FILTERED (Y/N)	BTEX 8021B BTEX 8260B	TPH TX1005 (Ext to C35)	TPH 8015M (GRO - DRO - ORO - MRO)	PAH 8270C	Total Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C/625	PCB's 8082 / 608	NORM	PLM (Asbestos)	Chloride	Chloride Sulfate TDS	General Water Chemistry (see attached list)	Anion/Cation Balance					Hold
1	East ~~WEST~~ #8 SIDEWALL	2/6/19			X				X		1	N	X		X												X								
					X				X		1	N																							
					X				X		1	N																							
					X				X		1	N																							
					X				X		1	N																							
					X				X		1	N																							
					X				X		1	N																							
					X				X		1	N																							
					X				X		1	N																							
					X				X		1	N																							

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Conner Moehring	2/6/19	1443	[signature]	2-6-19	14:45
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

LAB USE ONLY
Sample Temperature: 4.9°c #97

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

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

ORIGINAL COPY

CARDINAL Laboratories

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

February 07, 2019

CLAIR GONZALES

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: SCREECH OWL FED 4H

Enclosed are the results of analyses for samples received by the laboratory on 02/06/19 14:45.

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: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 07-Feb-19 16:43

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
NORTH 25 SW (SIDEWALL)	H900463-01	Soil	06-Feb-19 00:00	06-Feb-19 14:45
SOUTH 25 SIDEWALL	H900463-02	Soil	06-Feb-19 00:00	06-Feb-19 14:45
NORTH 34 SIDEWALL	H900463-03	Soil	06-Feb-19 00:00	06-Feb-19 14:45
SOUTH 34 SIDEWALL	H900463-04	Soil	06-Feb-19 00:00	06-Feb-19 14:45

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 07-Feb-19 16:43

NORTH 25 SW (SIDEWALL)

H900463-01 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**96.0**		16.0	mg/kg	4	9020708	AC	07-Feb-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9020614	MS	07-Feb-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9020614	MS	07-Feb-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9020614	MS	07-Feb-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9020614	MS	07-Feb-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9020614	MS	07-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*104 %*	*73.3-129*		*9020614*	MS	*07-Feb-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9020612	MS	07-Feb-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9020612	MS	07-Feb-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9020612	MS	07-Feb-19	8015B	
Surrogate: 1-Chlorooctane			*81.6 %*	*41-142*		*9020612*	MS	*07-Feb-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*84.6 %*	*37.6-147*		*9020612*	MS	*07-Feb-19*	*8015B*	

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 07-Feb-19 16:43

SOUTH 25 SIDEWALL

H900463-02 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**96.0**		16.0	mg/kg	4	9020708	AC	07-Feb-19	4500-Cl-B	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 07-Feb-19 16:43

NORTH 34 SIDEWALL

H900463-03 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**128**		16.0	mg/kg	4	9020708	AC	07-Feb-19	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	<0.050		0.050	mg/kg	50	9020614	MS	07-Feb-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9020614	MS	07-Feb-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9020614	MS	07-Feb-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9020614	MS	07-Feb-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9020614	MS	07-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*97.5 %*	*73.3-129*		*9020614*	MS	*07-Feb-19*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9020612	MS	07-Feb-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9020612	MS	07-Feb-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9020612	MS	07-Feb-19	8015B	
Surrogate: 1-Chlorooctane			*78.1 %*	*41-142*		*9020612*	MS	*07-Feb-19*	*8015B*	
Surrogate: 1-Chlorooctadecane			*81.7 %*	*37.6-147*		*9020612*	MS	*07-Feb-19*	*8015B*	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 07-Feb-19 16:43

SOUTH 34 SIDEWALL

H900463-04 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**144**		16.0	mg/kg	4	9020708	AC	07-Feb-19	4500-Cl-B	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 07-Feb-19 16:43

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 9020708 - General Prep - Wet Chem										
Blank (9020708-BLK1)				Prepared & Analyzed: 07-Feb-19						
Chloride	ND	16.0	mg/kg							
LCS (9020708-BS1)				Prepared & Analyzed: 07-Feb-19						
Chloride	432	16.0	mg/kg	400		108	80-120			
LCS Dup (9020708-BSD1)				Prepared & Analyzed: 07-Feb-19						
Chloride	416	16.0	mg/kg	400		104	80-120	3.77	20	

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 07-Feb-19 16:43

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 9020614 - Volatiles										
Blank (9020614-BLK1)				Prepared: 06-Feb-19 Analyzed: 07-Feb-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)	*0.103*		mg/kg	*0.100*		*103*	*73.3-129*			
LCS (9020614-BS1)				Prepared: 06-Feb-19 Analyzed: 07-Feb-19						
Benzene	2.10	0.050	mg/kg	2.00		105	72.2-131			
Toluene	2.12	0.050	mg/kg	2.00		106	71.7-126			
Ethylbenzene	2.12	0.050	mg/kg	2.00		106	68.9-126			
Total Xylenes	6.07	0.150	mg/kg	6.00		101	71.4-125			
Surrogate: 4-Bromofluorobenzene (PID)	*0.104*		mg/kg	*0.100*		*104*	*73.3-129*			
LCS Dup (9020614-BSD1)				Prepared: 06-Feb-19 Analyzed: 07-Feb-19						
Benzene	2.05	0.050	mg/kg	2.00		102	72.2-131	2.55	6.91	
Toluene	2.06	0.050	mg/kg	2.00		103	71.7-126	2.65	7.12	
Ethylbenzene	2.07	0.050	mg/kg	2.00		103	68.9-126	2.28	7.88	
Total Xylenes	5.87	0.150	mg/kg	6.00		97.8	71.4-125	3.28	7.46	
Surrogate: 4-Bromofluorobenzene (PID)	*0.105*		mg/kg	*0.100*		*105*	*73.3-129*			

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Analytical Results For:

TETRA TECH 901 WEST WALL STREET , STE 100 MIDLAND TX, 79701	Project: SCREECH OWL FED 4H Project Number: 212C-MD-01549 Project Manager: CLAIR GONZALES Fax To: (432) 682-3946	Reported: 07-Feb-19 16:43

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 9020612 - General Prep - Organics										
Blank (9020612-BLK1)				Prepared: 06-Feb-19 Analyzed: 07-Feb-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	*42.4*		mg/kg	*50.0*		*84.8*	*41-142*			
Surrogate: 1-Chlorooctadecane	*47.0*		mg/kg	*50.0*		*94.0*	*37.6-147*			
LCS (9020612-BS1)				Prepared: 06-Feb-19 Analyzed: 07-Feb-19						
GRO C6-C10	191	10.0	mg/kg	200		95.7	76.5-133			
DRO >C10-C28	201	10.0	mg/kg	200		100	72.9-138			
Total TPH C6-C28	392	10.0	mg/kg	400		98.0	78-132			
Surrogate: 1-Chlorooctane	*46.9*		mg/kg	*50.0*		*93.8*	*41-142*			
Surrogate: 1-Chlorooctadecane	*47.6*		mg/kg	*50.0*		*95.2*	*37.6-147*			
LCS Dup (9020612-BSD1)				Prepared: 06-Feb-19 Analyzed: 07-Feb-19						
GRO C6-C10	197	10.0	mg/kg	200		98.6	76.5-133	3.04	20.6	
DRO >C10-C28	204	10.0	mg/kg	200		102	72.9-138	1.84	20.6	
Total TPH C6-C28	402	10.0	mg/kg	400		100	78-132	2.43	18	
Surrogate: 1-Chlorooctane	*48.2*		mg/kg	*50.0*		*96.4*	*41-142*			
Surrogate: 1-Chlorooctadecane	*48.6*		mg/kg	*50.0*		*97.3*	*37.6-147*			

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Notes and Definitions

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RPD	Relative Percent Difference
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Celey D. Keene, Lab Director/Quality Manager

Analysis Request of Chain of Custody Record

Page 1 of 1

Tetra Tech, Inc.

4000 N. Big Spring Street, Ste
401 Midland, Texas 79705
Tel (432) 682-4559
Fax (432) 682-3946

Client Name: COG	**Site Manager:** Clair Gonzales
Project Name: Screech Owl Fed 4H	
Project Location: (county, state) Eddy Co, NM	**Project #:** 212C-MD-01549
Invoice to: COG - Ike Tavarez	
Receiving Laboratory: Cardnial	**Sampler Signature:** Conner Moehring
Comments:	

H900463

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING DATE	SAMPLING TIME	MATRIX: WATER	MATRIX: SOIL	MATRIX:	PRESERVATIVE METHOD: HCL	PRESERVATIVE METHOD: HNO_3	PRESERVATIVE METHOD: ICE	PRESERVATIVE METHOD: None	PRESERVATIVE METHOD:	# CONTAINERS	FILTERED (Y/N)
01	NORTH 25 SW (SIDEWALL)	2/6/19			X				X			1	N
02	~~NORTH~~ SOUTH 25 SIDEWALL	2/6/19			X				X			1	N
03	NORTH 34 SIDEWALL	2/6/19			X				X			1	N
04	SOUTH 34 SIDEWALL	2/6/19			X				X			1	N
					X				X			1	N
					X				X			1	N
					X				X			1	N
					X				X			1	N
					X				X			1	N
					X				X			1	N
					X				X			1	N

ANALYSIS REQUEST
(Circle or Specify Method No.)

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

Relinquished by: Conner Moehring Date: 2/6/19 Time: 1443
Received by: Clair Gonzales 2-6-19 Time: 14:45

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

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

LAB USE ONLY

Sample Temperature

4.9°C
#97

REMARKS:

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

(Circle) HAND DELIVERED FEDEX UPS Tracking #: _____

ORIGINAL COPY

CARDINAL Laboratories

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

February 08, 2019

CLAIR GONZALES

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: SCREECH OWL FED 4H

Enclosed are the results of analyses for samples received by the laboratory on 02/07/19 16:45.

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

Received:	02/07/2019	Sampling Date:	02/07/2019
Reported:	02/08/2019	Sampling Type:	Soil
Project Name:	SCREECH OWL FED 4H	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01549	Sample Received By:	Jodi Henson
Project Location:	COG - EDDY CO NM		

Sample ID: WEST SIDEWALL #8 (H900496-01)

BTEX 8021B mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/08/2019	ND	2.22	111	2.00	2.55	
Toluene*	<0.050	0.050	02/08/2019	ND	2.11	106	2.00	2.39	
Ethylbenzene*	<0.050	0.050	02/08/2019	ND	2.08	104	2.00	1.97	
Total Xylenes*	<0.150	0.150	02/08/2019	ND	6.23	104	6.00	2.24	
Total BTEX	<0.300	0.300	02/08/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *99.1 %* *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	**320**	16.0	02/08/2019	ND	416	104	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	02/08/2019	ND	194	97.2	200	2.86	
DRO >C10-C28*	<10.0	10.0	02/08/2019	ND	200	100	200	3.55	
EXT DRO >C28-C36	<10.0	10.0	02/08/2019	ND					

Surrogate: 1-Chlorooctane *77.2 %* *41-142*

Surrogate: 1-Chlorooctadecane *80.0 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Analytical Results For:

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

Received:	02/07/2019	Sampling Date:	02/07/2019
Reported:	02/08/2019	Sampling Type:	Soil
Project Name:	SCREECH OWL FED 4H	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01549	Sample Received By:	Jodi Henson
Project Location:	COG - EDDY CO NM		

Sample ID: EAST SIDEWALL #9 (H900496-02)

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

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**272**	16.0	02/08/2019	ND	416	104	400	3.77	

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

Received:	02/07/2019	Sampling Date:	02/07/2019
Reported:	02/08/2019	Sampling Type:	Soil
Project Name:	SCREECH OWL FED 4H	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01549	Sample Received By:	Jodi Henson
Project Location:	COG - EDDY CO NM		

Sample ID: EAST SIDEWALL #11 (H900496-03)

BTEX 8021B mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/08/2019	ND	2.22	111	2.00	2.55	
Toluene*	<0.050	0.050	02/08/2019	ND	2.11	106	2.00	2.39	
Ethylbenzene*	<0.050	0.050	02/08/2019	ND	2.08	104	2.00	1.97	
Total Xylenes*	<0.150	0.150	02/08/2019	ND	6.23	104	6.00	2.24	
Total BTEX	<0.300	0.300	02/08/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *101 %* *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	02/08/2019	ND	416	104	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	02/08/2019	ND	194	97.2	200	2.86	
DRO >C10-C28*	<10.0	10.0	02/08/2019	ND	200	100	200	3.55	
EXT DRO >C28-C36	<10.0	10.0	02/08/2019	ND					

Surrogate: 1-Chlorooctane *85.5 %* *41-142*

Surrogate: 1-Chlorooctadecane *91.2 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

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

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
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

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Celey D. Keene

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: CLAIR GONZALES	P.O. #:		
Address: 901 W. WALL. ST. STE. 100	Company: COG		
City: MIDLAND State: TX Zip: 79701	Attn: IKE TAVAREZ		
Phone #: Fax #:	Address:		
Project #: 212C-MD-01545 Project Owner:	City:		
Project Name: SCREECH OWL FED 4H	State: Zip:		
Project Location: Eddy Co, NM	Phone #:		
Sampler Name: CONNER MOEHRING	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	BTEX 8021B BTEX 8260B	TPH 8015M (GRO - DRO - ORO - MRO)	Chlorides
H900496																	
1	WEST SIDEWALL #8		1			X					X		2/7/19		X	X	X
2	EAST SIDEWALL #9		1			X					X		2/7/19				X
3	EAST SIDEWALL #11		1			X					X		2/7/19		X	X	X

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Relinquished By: Conner Moehring	Date: 2/7/19 Time: 1645	Received By: Jodi Henson	Phone Result: ☐ Yes ☐ No	Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	Fax Result: ☐ Yes ☐ No	Add'l Fax #:
			REMARKS: 24 hr. Rush	

Delivered By: (Circle One)	Sample Condition	CHECKED BY: (Initials)
(Sampler) - UPS - Bus - Other: 4.6°C / #97	Cool: ☑ Yes ☐ No Intact: ☑ Yes ☐ No	

CARDINAL Laboratories

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

February 08, 2019

CLAIR GONZALES

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: SCREECH OWL FED 4H

Enclosed are the results of analyses for samples received by the laboratory on 02/07/19 16:45.

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

Received:	02/07/2019	Sampling Date:	02/07/2019
Reported:	02/08/2019	Sampling Type:	Soil
Project Name:	SCREECH OWL FED 4H	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01549	Sample Received By:	Jodi Henson
Project Location:	COG - EDDY CO NM		

Sample ID: BOTTOM HOLE #47 (3' BEB) (H900497-01)

BTEX 8021B mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/08/2019	ND	2.22	111	2.00	2.55	
Toluene*	<0.050	0.050	02/08/2019	ND	2.11	106	2.00	2.39	
Ethylbenzene*	<0.050	0.050	02/08/2019	ND	2.08	104	2.00	1.97	
Total Xylenes*	<0.150	0.150	02/08/2019	ND	6.23	104	6.00	2.24	
Total BTEX	<0.300	0.300	02/08/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.5 %* *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	**304**	16.0	02/08/2019	ND	416	104	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	02/08/2019	ND	194	97.2	200	2.86	
DRO >C10-C28*	<10.0	10.0	02/08/2019	ND	200	100	200	3.55	
EXT DRO >C28-C36	<10.0	10.0	02/08/2019	ND					

Surrogate: 1-Chlorooctane *73.8 %* *41-142*

Surrogate: 1-Chlorooctadecane *78.0 %* *37.6-147*

Cardinal Laboratories *=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
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: TETRA TECH	BILL TO		
Project Manager: CLAIR GONZALES	P.O. #:		
Address: 901 W. WALL. ST. STE 100	Company: COG		
City: MIDLAND State: TX Zip: 79701	Attn: IKE TAVAREZ		
Phone #: Fax #:	Address:		
Project #: 212C-MD-01545 Project Owner:	City:		
Project Name: SCREECH OWL FED 4H	State: Zip:		
Project Location: Eddy Co, NM	Phone #:		
Sampler Name: CONNER MOEHRING	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	BTEX 8021B BTEX 8260B	TPH 8015M (GRO - DRO - ORO - MRO)	Chlorides								
H900497	~~EAST SIDEWALL Bottom Hole #~~																								
1	Bottom Hole # 47 (3 'BEB)		1			X					X		2/7/19		X	X	X								

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

Relinquished By: Conner Moehring	Date: 2/7/19 Time: 1645	Received By: Jodi Henson	Phone Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	Fax Result: ☐ Yes ☐ No Add'l Fax #:
Delivered By: (Circle One) Sampler - UPS - Bus - Other: 4.6°C / #97	Sample Condition Cool ☑ Yes ☐ No Intact ☑ Yes ☐ No	CHECKED BY: (Initials) JH	REMARKS: 24 hr. Rush

CARDINAL Laboratories

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

February 08, 2019

CLAIR GONZALES

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: SCREECH OWL FED 4H

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

Received:	02/07/2019	Sampling Date:	02/07/2019
Reported:	02/08/2019	Sampling Type:	Soil
Project Name:	SCREECH OWL FED 4H	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01549	Sample Received By:	Jodi Henson
Project Location:	COG - EDDY CO NM		

Sample ID: WEST #6 SIDEWALL (H900498-01)

BTEX 8021B mg/kg Analyzed By: ms

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	02/08/2019	ND	2.22	111	2.00	2.55	
Toluene*	<0.050	0.050	02/08/2019	ND	2.11	106	2.00	2.39	
Ethylbenzene*	<0.050	0.050	02/08/2019	ND	2.08	104	2.00	1.97	
Total Xylenes*	<0.150	0.150	02/08/2019	ND	6.23	104	6.00	2.24	
Total BTEX	<0.300	0.300	02/08/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID *97.2 %* *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	**48.0**	16.0	02/08/2019	ND	416	104	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	02/08/2019	ND	194	97.2	200	2.86	
DRO >C10-C28*	<10.0	10.0	02/08/2019	ND	200	100	200	3.55	
EXT DRO >C28-C36	<10.0	10.0	02/08/2019	ND					

Surrogate: 1-Chlorooctane *62.4 %* *41-142*

Surrogate: 1-Chlorooctadecane *64.9 %* *37.6-147*

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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

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

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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: CLAIR GONZALES		P.O. #:	
Address: 901 W. WALL ST. STE 100		Company: COG	
City: MIDLAND	State: TX Zip: 79701	Attn: IKE TAVAREZ	
Phone #:	Fax #:	Address:	
Project #: 212C-MD-01545	Project Owner:	City:	
Project Name: SCREECH OWL FED 4H		State: Zip:	
Project Location: Eddy CO, NM		Phone #:	
Sampler Name: CONNER M.		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	BTEX 8021B 8260B	TPH 8015M (GRO - DRO - ORO - MRO)	Chlorides								
H900498																									
	WEST #6 SIDEWALL		1			X					X		2/7/19		X	X	X								

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Relinquished By: Conner Marley	Date: 2/7/19 Time: 1645	Received By: Jodi Henson	Phone Result: ☐ Yes ☐ No Add'l Phone #:
Relinquished By:	Date: Time:	Received By:	Fax Result: ☐ Yes ☐ No Add'l Fax #:
Delivered By: (Circle One) Sampler - UPS - Bus - Other: 4.6°C / #97	Sample Condition Cool ☑ Yes ☐ No Intact ☑ Yes ☐ No	CHECKED BY: (Initials)	REMARKS: 24 hr. Rush

Appendix D

Eddy Area, New Mexico

GC—Gypsum land-Cottonwood complex, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 1w4g
Elevation: 1,250 to 5,000 feet
Mean annual precipitation: 10 to 25 inches
Mean annual air temperature: 57 to 66 degrees F
Frost-free period: 190 to 225 days
Farmland classification: Not prime farmland

Map Unit Composition

Gypsum land: 60 percent
Cottonwood and similar soils: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Gypsum Land

Setting

Landform: Ridges, hills, plains
Landform position (two-dimensional): Backslope, footslope, shoulder, toeslope
Landform position (three-dimensional): Side slope, crest, nose slope, head slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Residuum weathered from gypsum

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s
Hydric soil rating: No

Description of Cottonwood

Setting

Landform: Ridges, hills
Landform position (two-dimensional): Backslope, footslope, shoulder, toeslope
Landform position (three-dimensional): Side slope, crest, nose slope, head slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Residuum weathered from gypsum

Typical profile

H1 - 0 to 8 inches: loam
H2 - 8 to 60 inches: bedrock

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: 3 to 12 inches to paralithic bedrock
Natural drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.20 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 15 percent
Gypsum, maximum in profile: 5 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 1.0
Available water storage in profile: Very low (about 1.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: D
Ecological site: Gyp Upland (R042XC006NM)
Hydric soil rating: No

Minor Components

Cottonwood

Percent of map unit:
Ecological site: Salty Bottomland (R042XC033NM)
Hydric soil rating: No

Rock outcrop

Percent of map unit:
Hydric soil rating: No

Data Source Information

Soil Survey Area: Eddy Area, New Mexico
Survey Area Data: Version 14, Sep 12, 2018

BLM SERIAL #:

COMPANY REFERENCE:

3.5 Seed Mixture 4, for Gypsum Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

Species	lb/acre
Alkali Sacaton (Sporobolus airoides)	1.0
DWS Four-wing saltbush (Atriplex canescens)	5.0
(DWS: DeWinged Seed)	

*Pounds of pure live seed: Pounds of seed x percent purity x percent germination = pounds pure live seed