

SITE INFORMATION

Report Type: Closure Request

General Site Information:

Site:	JR's Horz Federal #2					
Company:	COG Operating LLC					
Section, Township and Range	Unit D	Sec. 10	T 26S	R 29E		
County:	Eddy County					
GPS:	32.0641			-103.9789		
Surface Owner:	Federal					
Directions:	From the intersection of HWY 285 and Longhorn Rd Head east on Longhorn Rd and go 3.95 miles and turn left Northeast and go 1.20 miles and arrive on Location					

Release Data:

Date Released:	2/04/2019
Type Release:	Produced Water
Source of Contamination:	Flowline
Fluid Released:	37 bbl water
Fluids Recovered:	20 bbls water

Official Communication:

Name:	Ike Tavaréz		Mike Carmona
Company:	COG Operating, LLC		Tetra Tech
Address:	One Concho Center		901 West Wall Street
	600 W. Illinois Ave.		Suite 100
City:	Midland Texas, 79701		Midland, Texas
Phone number:	(432) 686-3023		(432) 687-8121
Fax:	(432) 684-7137		
Email:	itavarez@concho.com		Mike.carmona@tetrattech.com

Site Characterization

Depth to Groundwater:	78' bgs
Karst	Medium

Recommended Remedial Action Levels (RRALs)

Benzene	Total BTEX	TPH (GRO+DRO+MRO)	Chlorides
10 mg/kg	50 mg/kg	100 mg/kg	600 mg/kg



October 20, 2020

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, JR's Horz Federal #002, Unit D, Section 10, Township 26 South, Range 29 East, Eddy County, New Mexico.

Mr Bratcher:

Tetra Tech, Inc. (Tetra Tech) was contacted by COG Operating, LLC (COG) to assess a release that occurred at the JR's Horz Federal #002, Unit D, Section 04, Township 26 South, Range 29 East, Eddy County, New Mexico (Site). The spill site coordinates are 32.0641°, -103.9789°. 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 February 04, 2019, and released approximately 37 barrels of produced water due to a pinhole leak on the flowline. A total of 20 barrels of produced water was recovered. The release occurred in the pasture and migrated into the wash/draw. The release in the pasture impacted an area measuring approximately 182' x 362'. The wash/draw area impacted areas measuring 470' x 60', 80' x 12', and 75 x 10'. The C-141 form is included in Appendix A.

A work plan was previously submitted to the NMOCD and BLM. On May 21, 2020, the OCD denied the work plan requesting sufficient groundwater data, horizontal and vertically delineation. The BLM approved the wash area and determined no excavation was needed. No additional work plan was submitted, and the remediation was performed at-risk.

Site Characterization

A Site characterization was performed for the site, and no 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. However, the site is in a medium karst potential area and migrated into a draw. Also, a watercourse is located within 300' of the site, according to the USGS topographic map.

The nearest water well is listed on USGS database, approximately 1.60 miles southeast of the site, and has a reported depth to groundwater of 120'. However, there is a well in the New Mexico State Engineer's (NMOSE) database, approximately 2.05 miles west of the site, and has a reported depth to groundwater of 78' below surface. According to the Chevron Texaco Groundwater Trend map, the

Tetra Tech

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

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average depth to groundwater in the area is approximately 125' below surface. The site characterization data is shown in Appendix B.

Depth to Water Determination

On August 3, 2020, Scarborough Drilling, Inc was onsite to drill a groundwater determination bore to 55' below ground surface, and within a ½ mile radius of the location. The borehole was left open for 72 hours and checked for the presence of groundwater. No water was detected at 55' below surface. The coordinates are 32.063589 -103.972770. The drillers log is shown in Appendix B

Regulatory

A risk-based evaluation was performed for the site in accordance with the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills, and Releases, updated August 14, 2018. The guidelines require a risk-based evaluation of the site to determine recommended remedial action levels (RRAL) for benzene, toluene, ethylbenzene and xylene (collectively referred to as BTEX) and total petroleum hydrocarbons (TPH) in soil. The proposed RRAL for benzene was determined to be 10 parts per million (ppm) or milligrams per kilogram (mg/kg) and 50 ppm for total BTEX (sum of benzene, toluene, ethylbenzene, and xylene). Based on 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 May 2 through May 15, 2019, and June 16, 2019, Tetra Tech personnel were onsite to evaluate and sample the release area. To summarize the assessment activities, the areas of concern were divided into two (2) areas, which include the pasture area and the wash area. Samples collected selected were Selected 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 and Table 2. The sample locations are shown on Figures 3 and Figure 3A.

Pasture Area

In the pasture area, a total of seven (7) hand auger holes (AH-1 through AH-7) were installed to total depths ranging from surface to 4.5' below surface. Referring to Table 1, none of the samples analyzed showed benzene, TPH, or total BTEX concentrations above the laboratory reporting limits,

The area of AH-4 showed no chloride impact, with a concentration of 341 mg/kg. The area of AH-5 showed a chloride concentration of 3,820 mg/kg at surface to 1.0', then decreased with depth. The remaining auger holes (AH-1, AH-2, AH-3, AH-6, and AH-7) showed chloride concentrations of 919 mg/kg, 931 mg/kg, 1,470 mg/kg, 1,540 mg/kg, and 3,960 mg/kg respectively. Deeper samples were not collected due to the dense formation, and backhoe trenches were installed to defined extents.

Trenches and Borehole Installation



Prior to trenching, the Kinder Morgan and Energy Transfer Pipelines lines were hydro-vacced to clear area and safety concerns. During the scheduling, there were issues with Kinder Morgan and Energy Transfer to have a company representative onsite during the assessment activities and caused delays to the sampling activities. As shown on Figure 3, the impacted area in the pasture are congested with underground pipelines operated by Kinder Morgan and Energy Transfer.

On August 20, 2019, Tetra Tech personnel were onsite to evaluate and trench the areas of auger holes AH-1, AH-2, AH-3, AH-5, and AH-6 and define the spill extent vertically. Referring to Table 1, the areas of Trench-1, 3, 5, and 6 were all vertically defined and showed concentrations ranging from 272 mg/kg to 5,920 mg/kg. The area of Trench-2 showed elevated chloride concentrations of 9,00 mg/kg at surface and 4,120 mg/kg at 12' below surface. Deeper samples were not collected due to the dense formation.

On October 17, 2019, one (1) borehole was installed in the area of AH-2 to define the extent vertically. Referring to Table 1, the chloride concentrations decreased with depth, showing a concentration of 35 mg/kg at 14'-15' below surface.

Wash/Draw Area

On May 21, 2020, it was agreed from the BLM and OCD that no additional excavation was required. Prior to evaluating the wash area, COG had removed some impacted soil from the area to a depth of 3.0' below surface. The impacted soil was accessible with a backhoe to remove majority of the impact from the area. Tetra Tech installed a total of nine (9) hand auger holes (AH-1 through AH-9) in the draw area to total depths ranging from surface to 4.0' below excavation bottom and collected a total of sixteen (16) sidewall samples.

Referring to Table 2, none of the samples analyzed showed benzene, TPH, or total BTEX concentrations above the laboratory reporting limits.

The area of AH-1 through AH-4 showed elevated chloride concentrations ranging from 1,250 mg/kg to 12,100 mg/kg deeper samples were not collected due to the dense formation. The remaining auger holes (AH-5 through AH-9) showed chloride concentrations below the RRALs, with concentrations ranging from 8.09 mg/kg to 504 mg/kg. The sidewall samples of (SSW-1, WSW-1, ESW-1, and WSW-2) showed high chloride concentrations ranging from 964 mg/kg to 1,780 mg/kg. The sidewall samples of (ESW-2, NSW-1, ESW-3, WSW-3, NSW-2, SSW-2, ESW-4, WSW-4, SSW-3, ESW-5, WSW-5, and NSW-3) all showed chloride concentrations below the RRALs.

On June 16, 2019, after a heavy rainfall event, Tetra Tech returned to site re-evaluate the areas that exceeded the threshold of 600 mg/kg. Referring to Table 2, the areas of AH-1 through AH-4 were re-sampled and showed chloride concentrations ranging from 72.6 mg/kg to 11,300 mg/kg. The sidewall samples of (SSW-1, WSW-1, ESW-1, and WSW-2) also showed concentrations ranging from 230mg/kg to 4,210 mg/kg. Due to the limited access in the area, COG was not able to remediate the spill horizontally any further.

Sloping of Wash/Draw Area

After the BLM reviewed the data and inspected the site, the BLM (James Amos) requested no additional excavation from the wash area, which may cause more damage to the surrounding areas and alter the course of the wash area. In addition, the BLM requested the area be sloped and to add



erosional controls. On December 16, 2019, Tetra Tech personnel returned to the area to slope and install erosion controls every 50.0'. The area was sloped in the natural course of the draw and would help direct the flow of the water for any future rain events. The erosion control placement is shown on Figures 3B.

Remediation Activities and Confirmation Sampling

Before remediation, the Kinder Morgan and Energy Transfer Pipelines lines were hydro-vacced to clear area and safety concerns.

Tetra Tech personnel were onsite July 27, 2020, through August 4, 2020, to supervise the remediation activities and collect confirmation samples. The area of auger hole (AH-1) was excavated to the depth of 1.5' below surface, the area of auger hole (AH-2) was excavated to the depth of 6.0' below surface, the area of auger hole (AH-5) was excavated to the depth of 1.0' below surface, and the areas of auger holes (AH-3, AH-6, and AH-7) were excavated to depths of 4.0' below surface. The area of AH-7 was remediated via hydro-vac due to the numerous lines in the area.

A total of thirty-seven (37) bottom hole samples were collected (BottomHole-1 through Bottom Hole 37) and thirty-four (34) sidewall samples (Sidewall-1 through Sidewall-34) were collected every 200 square feet to ensure proper removal of the contaminated soils. All collected samples were analyzed for TPH analysis by EPA method 8015 modified, BTEX by EPA Method 8021B and chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C. The confirmation sampling is summarized in Table 3. The excavation depths and confirmation sample locations are shown on Figure 4.

Referring to Table 3, none of the samples collected showed TPH, benzene, and total BTEX above the laboratory reporting limits. Additionally, all samples collected showed chloride concentrations below the RRALS.

Approximately 1,095 cubic yards of material were excavated and transported offsite for proper disposal. The area was then backfilled with clean material to surface grade.

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

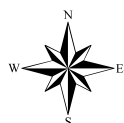
A handwritten signature in black ink, appearing to read 'Mike Carmona'.

Mike Carmona
Geologist

Figures



SITE LOCATION



0 10,416.5 20,833

Approximate Scale in Feet

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



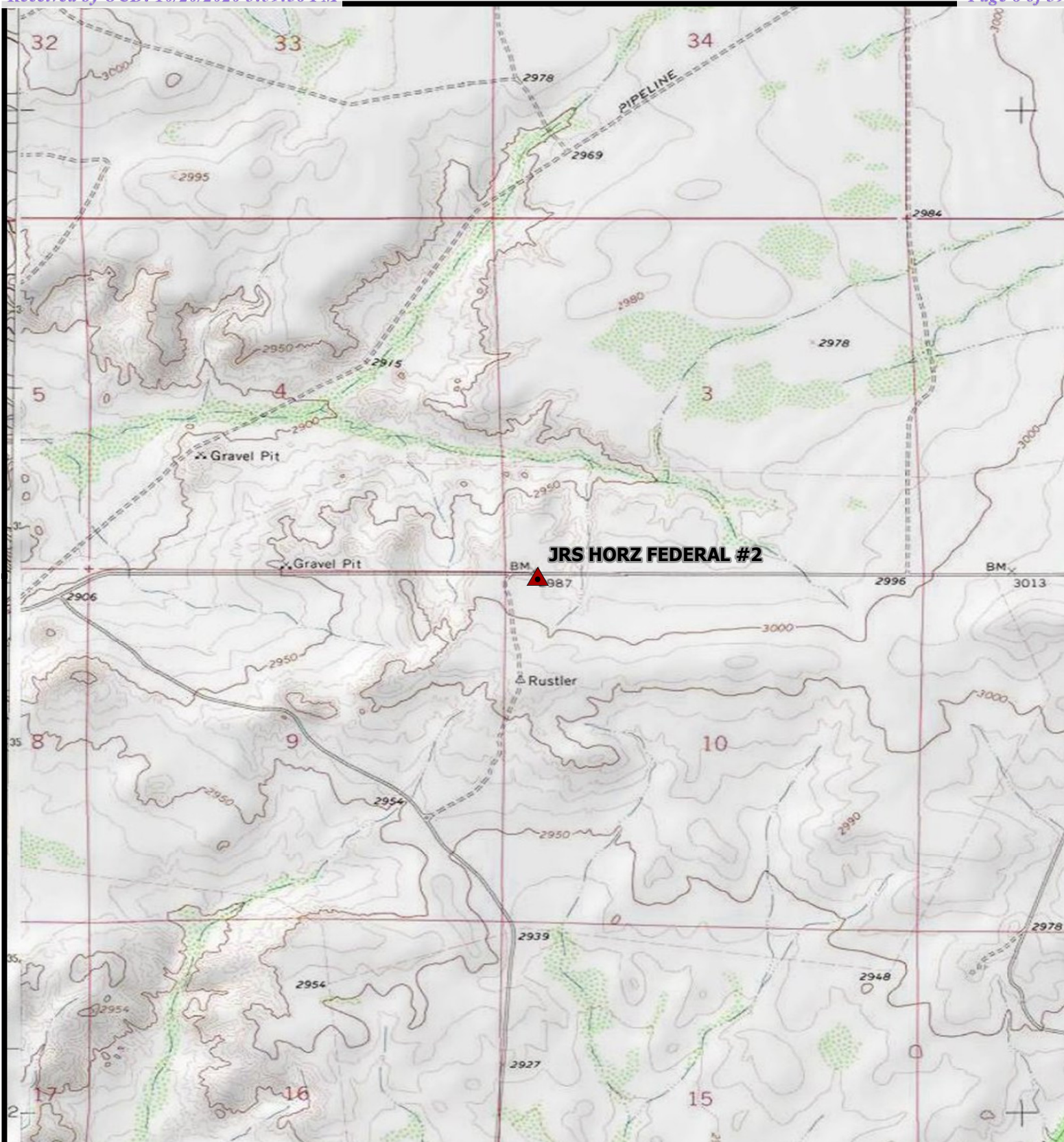
OVERVIEW MAP JRS HORZ FEDERAL #2

Property Located at coordinates 32.0641°,-103.9789°
EDDY COUNTY, NEW MEXICO

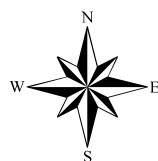


Project #:
212C-MD-01739
Date:11-05-2019

FIGURE
1



SITE LOCATION



Approximate Scale in Feet

0 1,000 2,000

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

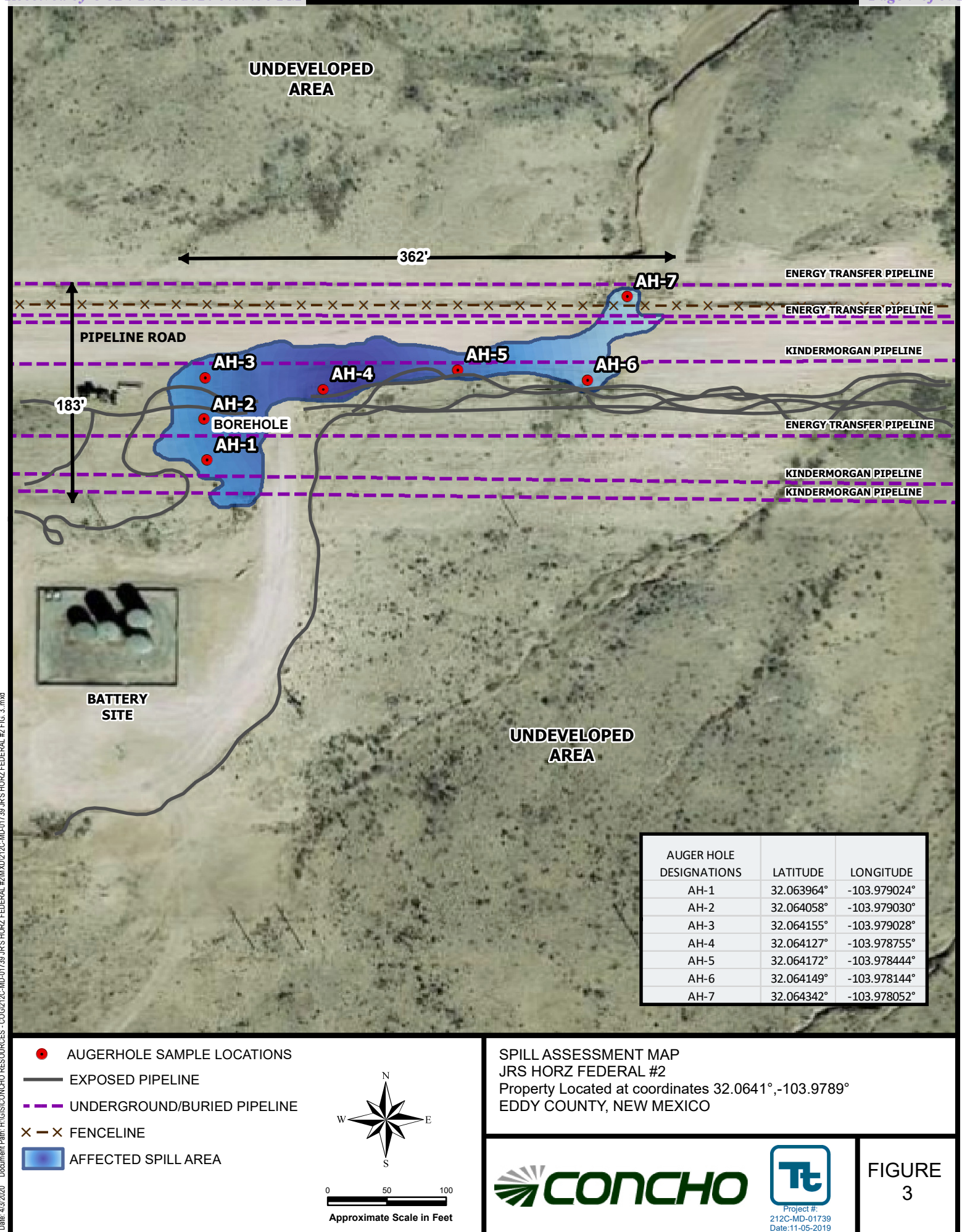
TOPOGRAPHIC MAP JRS HORZ FEDERAL #2

Property Located at coordinates 32.0641°,-103.9789°
EDDY COUNTY, NEW MEXICO

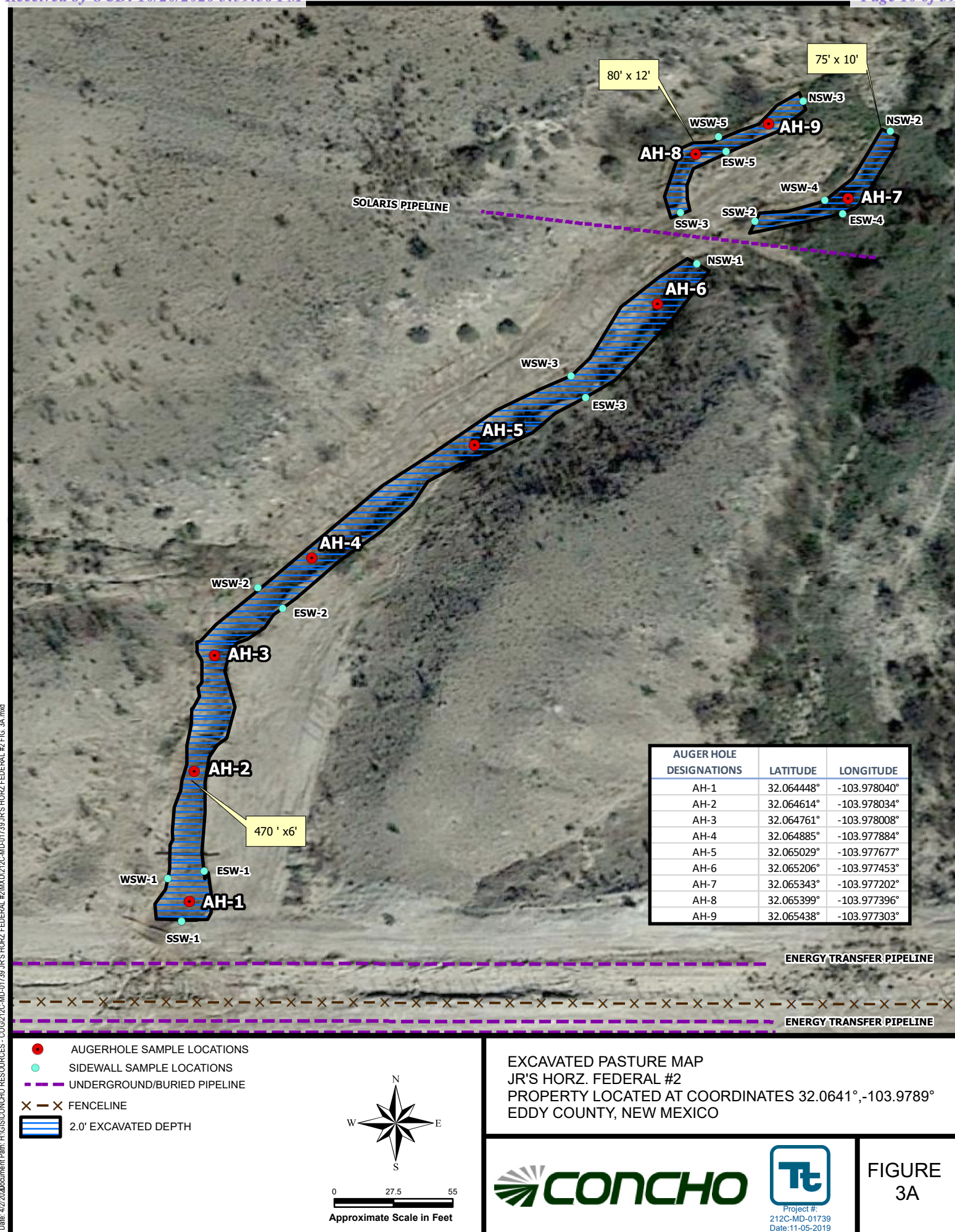


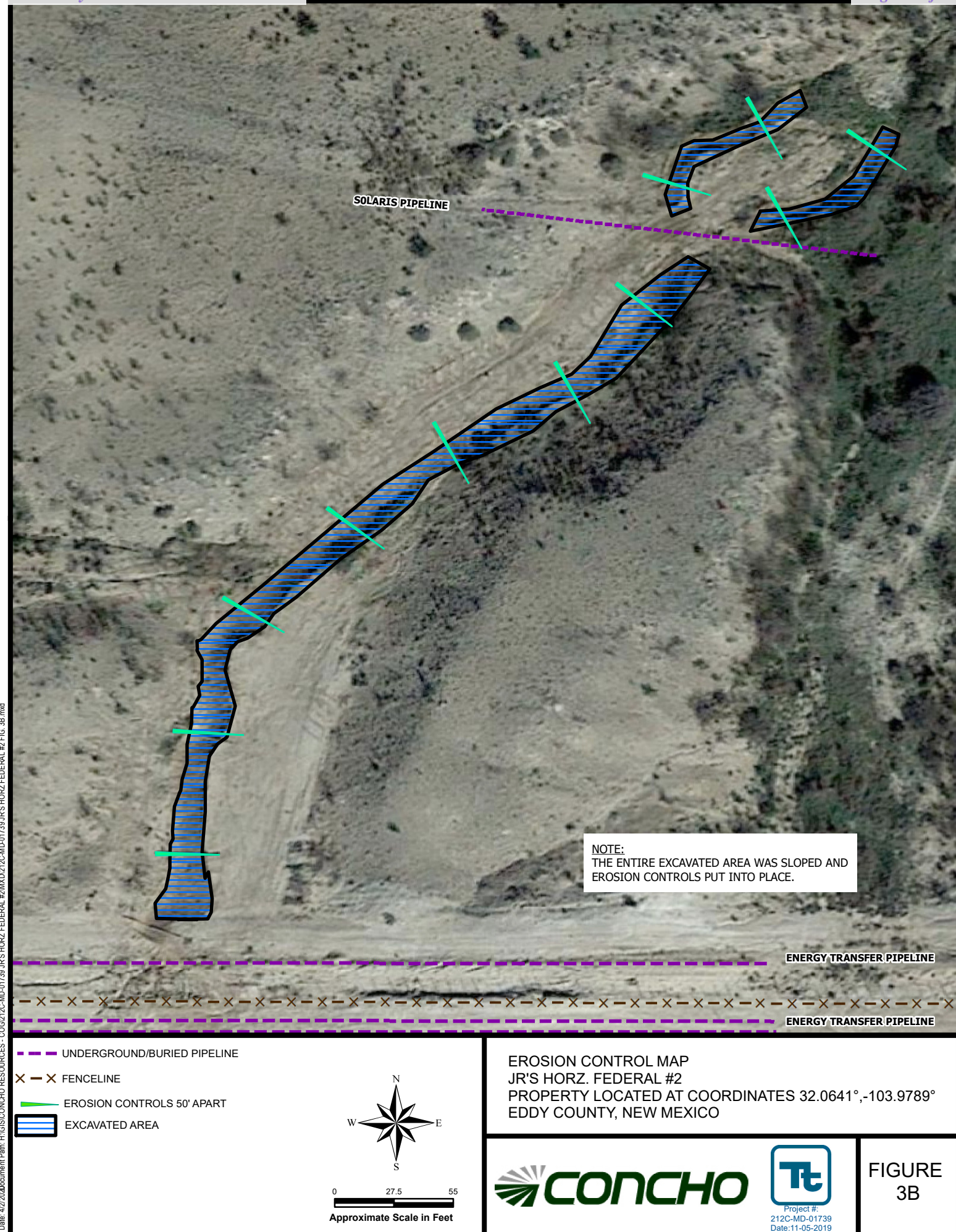
Project #:
212C-MD-01739
Date:11-05-2019

FIGURE
2

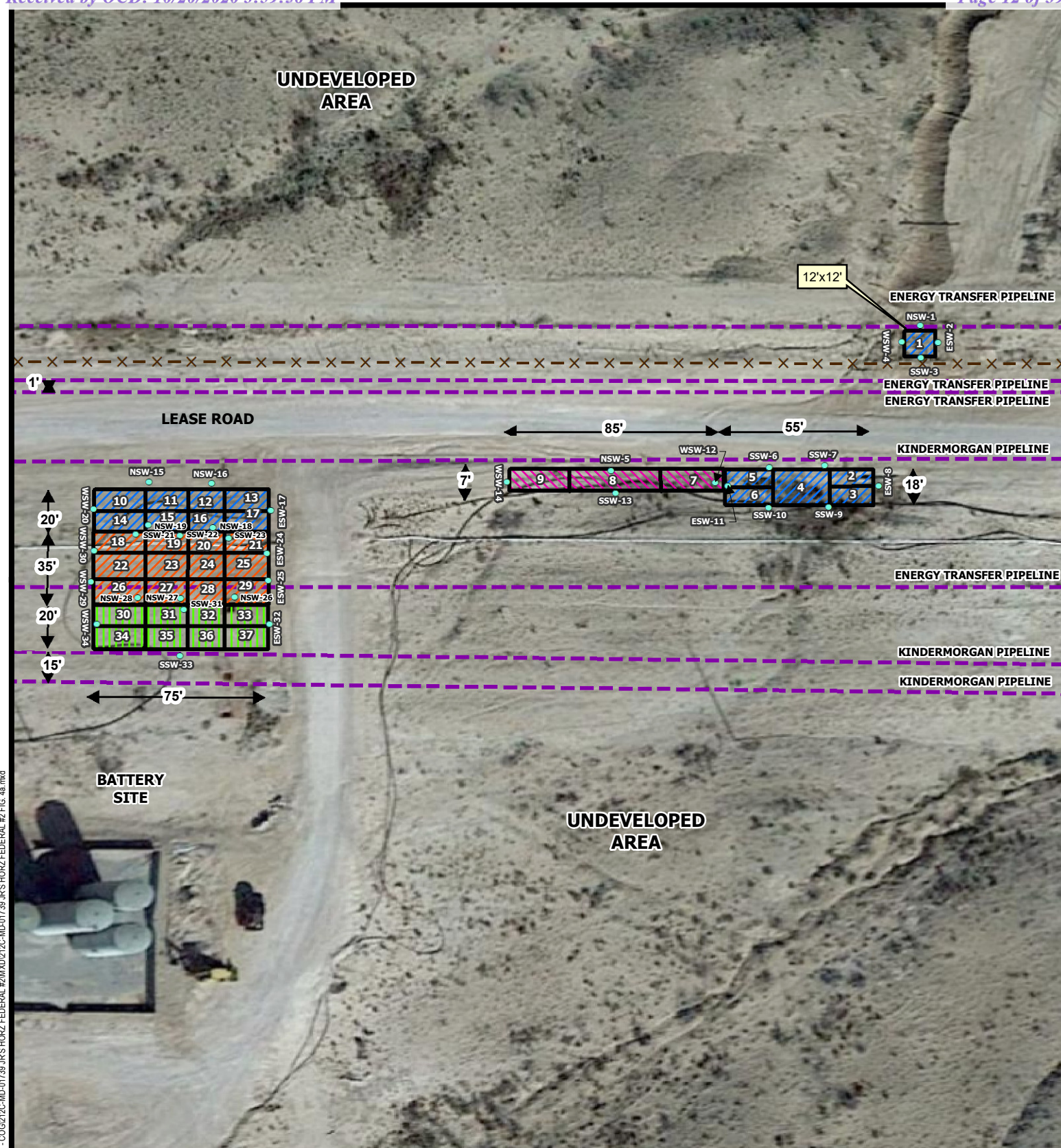


Date: 4/2/2020 Document Path: H:\GIS\CONCHO RESOURCES - COG\212C-MD-01739 - JR'S HORZ FEDERAL #2\FIG. 3A.mxd





Date: 4/2/2020 Document Path: H:\GIS\CONCHO RESOURCES - COG\212C-MD-01739 - JR'S HORZ FEDERAL #2\110XMD\212C-MD-01739 - JR'S HORZ FEDERAL #2 FIG. 3B.mxd



1-37 BOTTOM HOLE SAMPLE LOCATIONS

● SIDEWALL SAMPLE LOCATIONS

— UNDERGROUND/BURIED PIPELINE

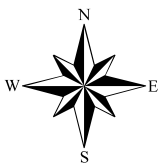
X FENCELINE

1.0' EXCAVATED DEPTH

1.5' EXCAVATED DEPTH

4.0' EXCAVATED DEPTH

6.0' EXCAVATED DEPTH



0 32.5 65
Approximate Scale in Feet

EXCAVATION AREA & DEPTH MAP

JR'S HORZ. FEDERAL #2

PROPERTY LOCATED AT COORDINATES 32.0641°,-103.9789°
EDDY COUNTY, NEW MEXICO

Project #: 212C-MD-01739
Date: 09/02/2020
Drawn By: MLM

FIGURE
4

Tables

Table 1
COG
JR Horz Federal #2
Eddy County, NM

Sample ID	Sample Date	Sample Depth (ft)	BEB Sample Depth (ft)	Soil Status		TPH (mg/kg)				Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	MRO	Total						
Pasture Area															
AH-1	6/19/2019	0-1			X	<15.0	<15.0	<15.0	<15.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	3,740
	"	1-1.5			X	-	-	-	-	-	-	-	-	-	1,300
	"	2-2.5		X		-	-	-	-	-	-	-	-	-	919
Trench-1	8/20/2019	2		X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	272
	"	3		X		-	-	-	-	-	-	-	-	-	208
	"	4		X		-	-	-	-	-	-	-	-	-	336
	"	6		X		-	-	-	-	-	-	-	-	-	480
AH-2	6/19/2019	0-1			X	<15.0	<15.0	<15.0	<15.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	931
Trench-2	8/20/2019	1			X	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	9,000
	"	2			X	-	-	-	-	-	-	-	-	-	14,800
	"	3			X	-	-	-	-	-	-	-	-	-	2,120
	"	4			X	-	-	-	-	-	-	-	-	-	3,720
	"	5			X	-	-	-	-	-	-	-	-	-	2,280
	"	6			X	-	-	-	-	-	-	-	-	-	3,600
	"	7		X		-	-	-	-	-	-	-	-	-	5,600
	"	8		X		-	-	-	-	-	-	-	-	-	4,640
	"	10		X		-	-	-	-	-	-	-	-	-	1,730
"	12		X		-	-	-	-	-	-	-	-	-	4,120	
Borehole-2	10/17/2019	0-1			X	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	1,600
	"	2-3			X	-	-	-	-	-	-	-	-	-	3,490
	"	4-5			X	-	-	-	-	-	-	-	-	-	273
	"	6-7			X	-	-	-	-	-	-	-	-	-	147
	"	9-10		X		-	-	-	-	-	-	-	-	-	218
"	14-15		X		-	-	-	-	-	-	-	-	-	135	
AH-3	5/15/2019	0-1			X	<15.0	<15.0	<15.0	<15.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	3,020
	"	1-1.5			X	-	-	-	-	-	-	-	-	-	1,310
	"	1.5-2			X	-	-	-	-	-	-	-	-	-	1,470
Trench-3	8/20/2019	1			X	<0.10	<0.10	<0.10	<0.10	<0.050	<0.050	<0.050	<0.150	<0.300	800
	"	2			X	-	-	-	-	-	-	-	-	-	992
	"	3			X	-	-	-	-	-	-	-	-	-	736
	"	4			X	-	-	-	-	-	-	-	-	-	1,180
	"	6			X	-	-	-	-	-	-	-	-	-	992
	"	8			X	-	-	-	-	-	-	-	-	-	432
	"	10			X	-	-	-	-	-	-	-	-	-	432
"	12			X	-	-	-	-	-	-	-	-	-	272	
AH-4	5/15/2019	0-1	-		X	<15.0	<15.0	<15.0	<15.0	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	341
AH-5	5/15/2019	0-1			X	<15.0	<15.0	<15.0	<15.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	3,820
	"	1-1.5			X	-	-	-	-	-	-	-	-	-	281
	"	2-2.5			X	-	-	-	-	-	-	-	-	-	26.1
	"	3-3.5			X	-	-	-	-	-	-	-	-	-	68.0
"	4-4.5			X	-	-	-	-	-	-	-	-	-	58.3	
Trench-5	8/20/2019	1			X	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	1940
	"	2			X	-	-	-	-	-	-	-	-	-	528.0
	"	3			X	-	-	-	-	-	-	-	-	-	16.0

Table 1
COG
JR Horz Federal #2
Eddy County, NM

Sample ID	Sample Date	Sample Depth (ft)	BEB Sample Depth (ft)	Soil Status		TPH (mg/kg)				Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	MRO	Total						
AH-6	5/15/2019	0-1			X	<15.0	<15.0	<15.0	<15.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	8,160
	"	1-1.5			X	-	-	-	-	-	-	-	-	-	6,080
	"	2-2.5			X	-	-	-	-	-	-	-	-	-	13,300
	"	3-3.5			X	-	-	-	-	-	-	-	-	-	7,950
	"	4-4.5			X	-	-	-	-	-	-	-	-	-	1,540
Trench-6	8/20/2019	1			X	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	2,200
	"	2			X	-	-	-	-	-	-	-	-	-	4,480
	"	3			X	-	-	-	-	-	-	-	-	-	5,920
	"	4			X	-	-	-	-	-	-	-	-	-	1,920
	"	5		X		-	-	-	-	-	-	-	-	-	160
	"	8		X		-	-	-	-	-	-	-	-	-	32.0
	"	10		X		-	-	-	-	-	-	-	-	-	1,410
	"	12		X		-	-	-	-	-	-	-	-	-	144
AH-7	6/19/2019	0-1			X	<15.0	26.2	<15.0	26.2	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	2,960
	"	1-1.5			X	-	-	-	-	-	-	-	-	-	5,190
	"	2-2.5			X	-	-	-	-	-	-	-	-	-	12,200
	"	3-3.5			X	-	-	-	-	-	-	-	-	-	595
	8/22/2019	0-1			X	<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	2,520
	"	1-1.5			X	-	-	-	-	-	-	-	-	-	5,280
	"	2-2.5			X	-	-	-	-	-	-	-	-	-	7,280
	"	3-3.5			X	-	-	-	-	-	-	-	-	-	5,760
	"	4-4.5			X	-	-	-	-	-	-	-	-	-	3,960
Background 1	8/20/2019	1		X		<10.0	<10.0	<10.0	<10.0	<0.050	<0.050	<0.050	<0.150	<0.300	16.0
	"	2		X		-	-	-	-	-	-	-	-	-	32.0
	"	3		X		-	-	-	-	-	-	-	-	-	16.0
	"	4		X		-	-	-	-	-	-	-	-	-	176

(-) Not Analyzed

Excavated

Table 2
COG
JR Horz Federal #2
Eddy County, NM

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	MRO	Total						
Wash/Draw															
AH-1	5/15/2019	0-1	3	X		<15.0	<15.0	<15.0	<15.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	502
	"	2	"	X		-	-	-	-	-	-	-	-	-	1,260
	"	3	"	X		-	-	-	-	-	-	-	-	-	4,320
	"	4	"	X		-	-	-	-	-	-	-	-	-	3,240
	6/19/2019	0-1	"	X		-	-	-	-	-	-	-	-	-	72.6
	"	2	"	X		-	-	-	-	-	-	-	-	-	177
	"	3	"	X		-	-	-	-	-	-	-	-	-	403
"	4	"	X		-	-	-	-	-	-	-	-	-	-	1,150
SSW-1	5/15/2019	-	-	X		<14.9	<14.9	<14.9	<14.9	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	964
	6/19/2019					-	-	-	-	-	-	-	-	-	346
WSW-1	5/15/2019	-	-	X		<15.0	<15.0	<15.0	<15.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	1,410
	6/19/2019					-	-	-	-	-	-	-	-	-	230
ESW-1	5/15/2019	-	-	X		<15.0	<15.0	<15.0	<15.0	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	1,160
	6/19/2019					-	-	-	-	-	-	-	-	-	339
AH-2	5/2/2019	0-1	3	X		<15.0	<15.0	<15.0	<15.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	191
	"	2	"	X		<15.0	<15.0	<15.0	<15.0	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	1,250
	"	3	"	X		<15.0	<15.0	<15.0	<15.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	6,110
	"	4	"	X		<15.0	<15.0	<15.0	<15.0	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	159
	6/19/2019	0-1	3			-	-	-	-	-	-	-	-	-	58.6
	"	2	"			-	-	-	-	-	-	-	-	-	130
	"	3	"			-	-	-	-	-	-	-	-	-	1,190
"	4	"			-	-	-	-	-	-	-	-	-	-	633
AH-3	5/15/2019	0-1	3	X		<15.0	<15.0	<15.0	<15.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	9,050
	"	2	"	X		-	-	-	-	-	-	-	-	-	12,100
	"	3	"	X		-	-	-	-	-	-	-	-	-	4,350
	6/19/2019	0-1	3	X		-	-	-	-	-	-	-	-	-	1,160
	"	2	"	X		-	-	-	-	-	-	-	-	-	11,300
	"	3	"	X		-	-	-	-	-	-	-	-	-	10,600
ESW-2	5/15/2015	-	-	X		-	-	-	-	-	-	-	-	-	236
WSW-2	5/15/2015	-	-	X		-	-	-	-	-	-	-	-	-	1,780
	6/19/2019	-	-	X		-	-	-	-	-	-	-	-	-	4,210

Table 2
COG
JR Horz Federal #2
Eddy County, NM

Sample ID	Sample Date	Sample Depth (ft)	BEB Sample Depth (ft)	Soil Status		TPH (mg/kg)				Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	MRO	Total						
AH-4	5/2/2019	0-1	3	X		<15.0	<15.0	<15.0	<15.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	4,960
	"	2	"	X		<15.0	<15.0	<15.0	<15.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	2,950
	"	3	"	X		<15.0	<15.0	<15.0	<15.0	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	286
	"	4	"	X		<15.0	<15.0	<15.0	<15.0	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	10.2
	6/19/2019	0-1	3	X		-	-	-	-	-	-	-	-	-	94.9
	"	2	"	X		-	-	-	-	-	-	-	-	-	1,450
	"	3	"	X		-	-	-	-	-	-	-	-	-	809
AH-5	5/15/2019	0-1	3	X		<15.0	<15.0	<15.0	<15.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	504
	"	2	"	X		-	-	-	-	-	-	-	-	-	409
	"	3	"	X		-	-	-	-	-	-	-	-	-	473
AH-6	5/15/2019	0-1	3	X		<14.9	<14.9	<14.9	<14.9	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	212
	"	2	"	X		-	-	-	-	-	-	-	-	-	95.2
	6/19/2019	0-1	"	X		-	-	-	-	-	-	-	-	-	31.5
	"	2	"	X		-	-	-	-	-	-	-	-	-	55.9
NSW-1	5/15/2019	-	-	X		<14.9	24.6	<14.9	24.6	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	98.1
ESW-3	"	-	-	X		-	-	-	-	-	-	-	-	-	352
WSW-3	"	-	-	X		-	-	-	-	-	-	-	-	-	324
AH-7	5/15/2019	0-1	3	X		<15.0	<15.0	<15.0	<15.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	13.5
	"	2	"	X		-	-	-	-	-	-	-	-	-	8.09
	"	3	"	X		-	-	-	-	-	-	-	-	-	12.4
NSW-2	"	-	-	X		-	-	-	-	-	-	-	-	-	66.8
SSW-2	"	-	-	X		-	-	-	-	-	-	-	-	-	102
ESW-4	"	-	-	X		<15.0	<15.0	<15.0	<15.0	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	29.4
WSW-4	"	-	-	X		<15.0	<15.0	<15.0	<15.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	136
AH-8	5/15/2019	0-1	3-3.5	X		<15.0	<15.0	<15.0	<15.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	318
	"	2	"	X		-	-	-	-	-	-	-	-	-	175
	"	3	"	X		-	-	-	-	-	-	-	-	-	343
SSW-3	"	-	-	X		<15.0	15.3	<15.0	15.3	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	261
ESW-5	"	-	-	X		-	-	-	-	-	-	-	-	-	66.3
WSW-5	"	-	-	X		-	-	-	-	-	-	-	-	-	261
AH-9	5/15/2019	0-1	3-3.5	X		<15.0	<15.0	<15.0	<15.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	137
	"	2	"	X		-	-	-	-	-	-	-	-	-	168
	"	3	"	X		-	-	-	-	-	-	-	-	-	425
NSW-3	"	-	-	X		<15.0	<15.0	<15.0	<15.0	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	80.4

(-) Not Analyzed

Table 3
COG
JR Horz Federal #2
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth	Excavation Depth (ft)	Soil Status		TPH (mg/kg)				Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	ORO	Total						
Pasture Area															
Bottomhole-1	8/4/2020		4.0	X	-	<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	8.35
Bottomhole-2	8/4/2020		4.0	X	-	<49.8	<49.8	<49.8	<49.8	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	7.95
Bottomhole-3	8/4/2020		4.0	X	-	<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	7.71
Bottomhole-4	8/4/2020		4.0	X	-	<49.8	<49.8	<49.8	<49.8	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	8.21
Bottomhole-5	8/4/2020		4.0	X	-	<49.9	<49.9	<49.9	<49.9	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	7.61
Bottomhole-6	8/4/2020		4.0	X	-	<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	7.73
Bottomhole-7	8/4/2020		1.0	X	-	<50.0	<50.0	<50.0	<50.0	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	8.18
Bottomhole-8	8/4/2020		1.0	X	-	<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	8.20
Bottomhole-9	8/4/2020		1.0	X	-	<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	8.75
Bottomhole-10	8/4/2020		4.0	X	-	<49.9	<49.9	<49.9	<49.9	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	9.74
Bottomhole-11	8/4/2020		4.0	X	-	<50.0	<50.0	<50.0	<50.0	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	8.61
Bottomhole-12	8/4/2020		4.0	X	-	<49.9	<49.9	<49.9	<49.9	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	8.06
Bottomhole-13	8/4/2020		4.0	X	-	<49.8	<49.8	<49.8	<49.8	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	8.76
Bottomhole-14	8/4/2020		4.0	X	-	<50.0	<50.0	<50.0	<50.0	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	8.17
Bottomhole-15	8/4/2020		4.0	X	-	<49.9	<49.9	<49.9	<49.9	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	8.44
Bottomhole-16	8/4/2020		4.0	X	-	<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	8.00
Bottomhole-17	8/4/2020		4.0	X	-	<49.8	<49.8	<49.8	<49.8	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	8.38
Bottomhole-18	8/4/2020		6.0	X	-	<50.0	<50.0	<50.0	<50.0	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	8.50
Bottomhole-19	8/4/2020		6.0	X	-	<49.9	<49.9	<49.9	<49.9	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	8.03
Bottomhole-20	8/4/2020		6.0	X	-	<49.8	<49.8	<49.8	<49.8	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<5.02
Bottomhole-21	8/4/2020		6.0	X	-	<50.0	<50.0	<50.0	<50.0	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<4.97
Bottomhole-22	8/4/2020		6.0	X	-	<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<4.95
Bottomhole-23	8/4/2020		6.0	X	-	<50.0	<50.0	<50.0	<50.0	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<4.95
Bottomhole-24	8/4/2020		6.0	X	-	<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<4.95

Table 3
COG
JR Horz Federal #2
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth	Excavation Depth (ft)	Soil Status		TPH (mg/kg)				Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	ORO	Total						
Bottomhole-25	8/4/2020		6.0	X	-	<49.9	<49.9	<49.9	<49.9	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<5.04
Bottomhole-26	8/4/2020		6.0	X	-	<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<5.00
Bottomhole-27	8/4/2020		6.0	X	-	<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<4.99
Bottomhole-28	8/4/2020		6.0	X	-	<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<4.96
Bottomhole-29	8/4/2020		6.0	X	-	<49.8	<49.8	<49.8	<49.8	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<4.98
Bottomhole-30	8/4/2020		1.5	X	-	<49.9	<49.9	<49.9	<49.9	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<4.99
Bottomhole-31	8/4/2020		1.5	X	-	<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<5.03
Bottomhole-32	8/4/2020		1.5	X	-	<49.8	<49.8	<49.8	<49.8	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<5.00
Bottomhole-33	8/4/2020		1.5	X	-	<50.0	<50.0	<50.0	<50.0	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	<4.96
Bottomhole-34	8/4/2020		1.5	X	-	<49.9	<49.9	<49.9	<49.9	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	<4.99
Bottomhole-35	8/4/2020		1.5	X	-	<49.9	<49.9	<49.9	<49.9	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<4.98
Bottomhole-36	8/4/2020		1.5	X	-	<49.8	<49.8	<49.8	<49.8	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	<4.95
Bottomhole-37	8/4/2020		1.5	X	-	<49.9	<49.9	<49.9	<49.9	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<5.05
Sidewall-1	8/4/2020		4.0	X	-	<50.0	<50.0	<50.0	<50.0	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<5.05
Sidewall-2	8/4/2020		4.0	X	-	<49.9	<49.9	<49.9	<49.9	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	<4.96
Sidewall-3	8/4/2020		4.0	X	-	<49.8	<49.8	<49.8	<49.8	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	7.73
Sidewall-4	8/4/2020		4.0	X	-	<50.0	<50.0	<50.0	<50.0	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	8.31
Sidewall-5	8/4/2020		1.0	X	-	<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	8.34
Sidewall-6	8/4/2020		4.0	X	-	<49.9	<49.9	<49.9	<49.9	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	6.27
Sidewall-7	8/4/2020		4.0	X	-	<49.8	<49.8	<49.8	<49.8	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	8.37
Sidewall-8	8/4/2020		4.0	X	-	<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	8.66
Sidewall-9	8/4/2020		4.0	X	-	<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	8.77
Sidewall-10	8/4/2020		4.0	X	-	<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	7.68
Sidewall-11	8/4/2020		4.0	X	-	<50.0	<50.0	<50.0	<50.0	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	9.52
Sidewall-12	8/4/2020		1.0	X	-	<49.8	<49.8	<49.8	<49.8	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	8.24

Table 3
COG
JR Horz Federal #2
Eddy County, New Mexico

Sample ID	Sample Date	Sample Depth	Excavation Depth (ft)	Soil Status		TPH (mg/kg)				Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
				In-Situ	Removed	GRO	DRO	ORO	Total						
Sidewall-13	8/4/2020		1.0	X	-	<50.0	<50.0	<50.0	<50.0	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	9.03
Sidewall-14	8/4/2020		1.0	X	-	<49.9	<49.9	<49.9	<49.9	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	8.48
Sidewall-15	8/4/2020		4.0	X	-	<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	9.61
Sidewall-16	8/4/2020		4.0	X	-	<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	9.05
Sidewall-17	8/4/2020		4.0	X	-	<49.8	<49.8	<49.8	<49.8	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	9.15
Sidewall-18	8/4/2020		4.0	X	-	<49.9	<49.9	<49.9	<49.9	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	8.82
Sidewall-19	8/4/2020		4.0	X	-	<49.8	<49.8	<49.8	<49.8	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	9.10
Sidewall-20	8/4/2020		4.0	X	-	<50.0	<50.0	<50.0	<50.0	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	9.01
Sidewall-21	8/4/2020		6.0	X	-	<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	8.29
Sidewall-22	8/4/2020		6.0	X	-	<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	9.43
Sidewall-23	8/4/2020		6.0	X	-	<50.0	<50.0	<50.0	<50.0	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	9.09
Sidewall-24	8/4/2020		6.0	X	-	<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	8.70
Sidewall-25	8/4/2020		6.0	X	-	<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	8.77
Sidewall-26	8/4/2020		6.0	X	-	<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	8.27
Sidewall-27	8/4/2020		6.0	X	-	<49.8	<49.8	<49.8	<49.8	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	8.54
Sidewall-28	8/4/2020		6.0	X	-	<50.0	<50.0	<50.0	<50.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	8.28
Sidewall-29	8/4/2020		6.0	X	-	<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	8.91
Sidewall-30	8/4/2020		6.0	X	-	<49.9	<49.9	<49.9	<49.9	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	<4.99
Sidewall-31	8/4/2020		1.5	X	-	<50.0	<50.0	<50.0	<50.0	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	7.95
Sidewall-32	8/4/2020		1.5	X	-	<50.0	<50.0	<50.0	<50.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	8.68
Sidewall-33	8/4/2020		1.5	X	-	<49.9	<49.9	<49.9	<49.9	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	7.99
Sidewall-34	8/4/2020		1.5	X	-	<49.8	<49.8	<49.8	<49.8	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	8.16

(-)

Not Analyzed

Photos

COG
JR'S HORZ
Eddy County, New Mexico



View Northeast – Remediated Area of AH-1

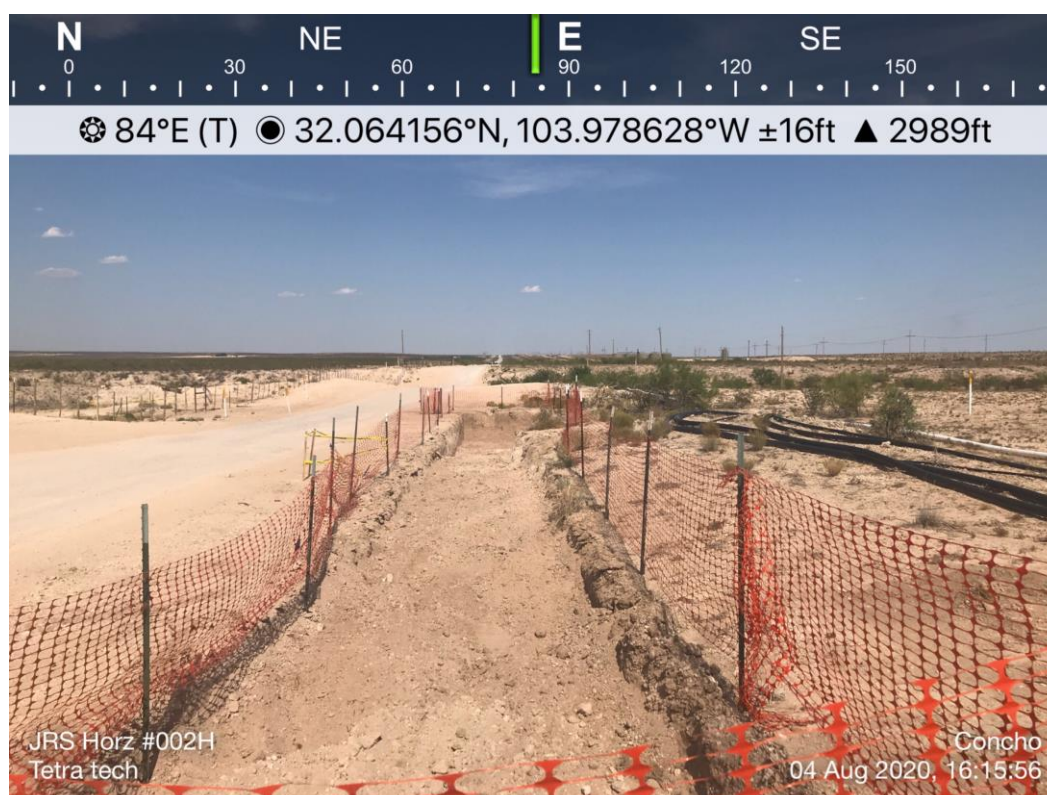


View Southwest – Remediated Area of AH-1

COG
JR'S HORZ
Eddy County, New Mexico



View Northeast – Remediated Area of AH-2 and AH-3

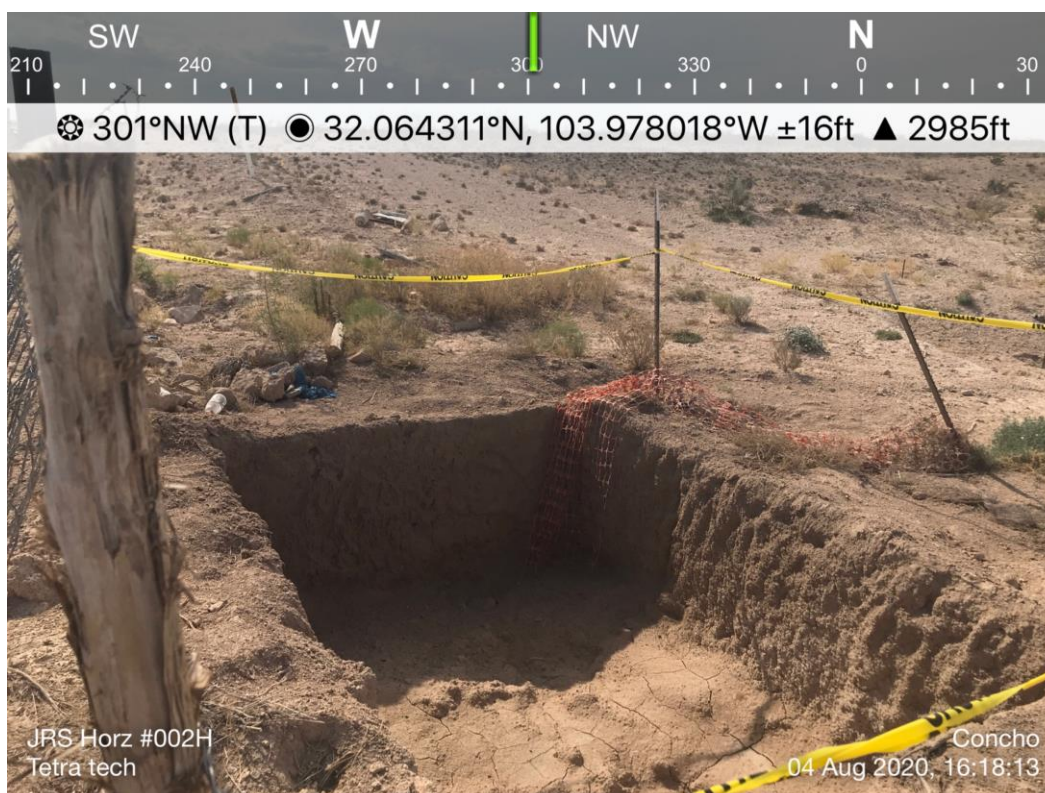


View East – Remediated Area of AH-5 and AH-6

COG
JR'S HORZ
Eddy County, New Mexico



View West – Remediated Area of AH-5 and AH-6



View Northwest– Remediated Area of AH-7

Appendix A

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

State of New Mexico
Energy Minerals and Natural
Resources Department

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

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

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

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

Location of Release Source

Latitude 32.0641 Longitude -103.9789
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	JR's Horz Federal #002	Site Type	Flowline
Date Release Discovered	February 4, 2019	API# (if applicable)	

Unit Letter	Section	Township	Range	County
D	10	26S	29E	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) 37	Volume Recovered (bbls) 20
	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 hole in the flowline. A fitting is being installed where the hole was. The release was on the lease road and in the pasture. A vacuum truck was dispatched to remove all freestanding fluids. Concho will evaluate the site to determine if we may commence remediation immediately or delineate any possible impact from the release and we will present a remediation work plan to the NMOCD for approval prior to any significant remediation activities.

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? ☒ Yes ☐ No	If YES, for what reason(s) does the responsible party consider this a major release? The volume released was greater than 25 barrels.
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)? Immediate notice was given by DeAnn Grant via e-mail February 4, 2019 at 3:37 pm to Mike Bratcher and Jim Amos.	

Initial Response

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

☒ The source of the release has been stopped. ☒ The impacted area has been secured to protect human health and the environment. ☒ Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices. ☒ All free liquids and recoverable materials have been removed and managed appropriately.	
If all the actions described above have <u>not</u> been undertaken, explain why: 	
Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.	
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.	
Printed Name: <u>DeAnn Grant</u>	Title: <u>HSE Administrative Assistant</u>
Signature: <u></u>	Date: <u>2/7/2019</u>
email: <u>agrانت@concho.com</u>	Telephone: <u>(432) 253-4513</u>
<u>OCD Only</u> Received by: _____ Date: _____	

Incident ID	
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	78' (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

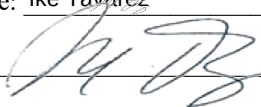
If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, 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

Page 4

Incident ID	
District RP	
Facility ID	
Application ID	

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

Printed Name: Ike Tavaréz Title: Senior HSE Supervisor
Signature:  Date: 4/03/2020
email: itavarez@concho.com Telephone: 432-701-8630

OCD Only

Received by: _____ Date: _____

Incident ID	
District RP	
Facility ID	
Application ID	

Closure

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

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

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

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

Printed Name: _____ Title: _____

Signature:  _____ Date: 10/20/2020

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: _____ Date: _____

Printed Name: _____ Title: _____

Appendix B

COG
JRS HORZ FEDERAL #2

Legend

- 0.50 mile radius
- COG - JRS Horz Federal #2
- Groundwater Determination Bore



TEST HOLES • WATER WELLS

LAMESA, TEXAS 79331

2001 South Hwy. 87

[illegible]

Date 8-3-20 Driller

Driller

Lee Scarlett
GIBBS PRINTING CO.-DAMESA, TX

GIBBS PRINTING CO. - LAMESA, TX

Water Well Data
Average Depth to Groundwater (ft)
COG - JR's Horz Federal #2
Eddy County, New Mexico

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

25 South			29 East		
6	5	4	3	2	1
40					
7	8	9	10	11	12
			40		
18	17	16	15	14	13
			60		
19	20	21	22	23	24
30	29	28	27	26	25
30					
31	32	115	33	34	35
					36

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

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

26 South			29 East		
6	5	4	3	2	1
	78				
7	8	9	10	11	12
18	17	16	120	15	14
			125		
19	20	21	22	23	24
			57		
			69		
30	29	28	27	26	25
31	32	33	34	35	36

26 South			30 East		
6	5	4	3	2	1
	179				
	180				
7	8	9	10	11	12
	172				
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36
					180

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



New Mexico Office of the State Engineer

Water Column/Average Depth to Water

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

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

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-Code	basin	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Depth Well	Depth Water	Water Column
C 01354 X-3	CUB	ED	2	1	3	23	26S	29E	598323	3543837		170		
C 02038	C	ED	3	2	4	26	26S	29E	599204	3541992*		200		
C 03507 POD1	C	ED	1	3	3	05	26S	29E	593064	3548313		140	78	62
C 03508 POD1	C	ED	1	3	3	05	26S	29E	593063	3548361		140	75	65
C 03605 POD1	CUB	ED	4	2	3	27	26S	29E	596990	3541983		45	0	45

Average Depth to Water: **51 feet**

Minimum Depth: **0 feet**

Maximum Depth: **78 feet**

Record Count: 5

PLSS Search:

Township: 26S

Range: 29E

*UTM location was derived from PLSS - see Help

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

10/31/19 12:55 PM

Page 1 of 1

WATER COLUMN/ AVERAGE
DEPTH TO WATER



[USGS Home](#)
[Contact USGS](#)
[Search USGS](#)

National Water Information System: Web Interface

[USGS Water Resources](#)

Data Category:

Groundwater

Geographic Area:

United States

GO

Click to hide News Bulletins

- [Introducing The Next Generation of USGS Water Data for the Nation](#)
- [Full News](#) 

Groundwater levels for the Nation

Search Results -- 1 sites found

site_no list =

- 320301103572201

Minimum number of levels = 1

[Save file of selected sites](#) to local disk for future upload

USGS 320301103572201 26S.29E.16.213241

Available data for this site

Groundwater: Field measurements

GO

Eddy County, New Mexico

Hydrologic Unit Code 13070001

Latitude 32°03'01", Longitude 103°57'22" NAD27

Land-surface elevation 2,958 feet above NAVD88

The depth of the well is 335 feet below land surface.

This well is completed in the Rustler Formation (312RSLR) local aquifer.

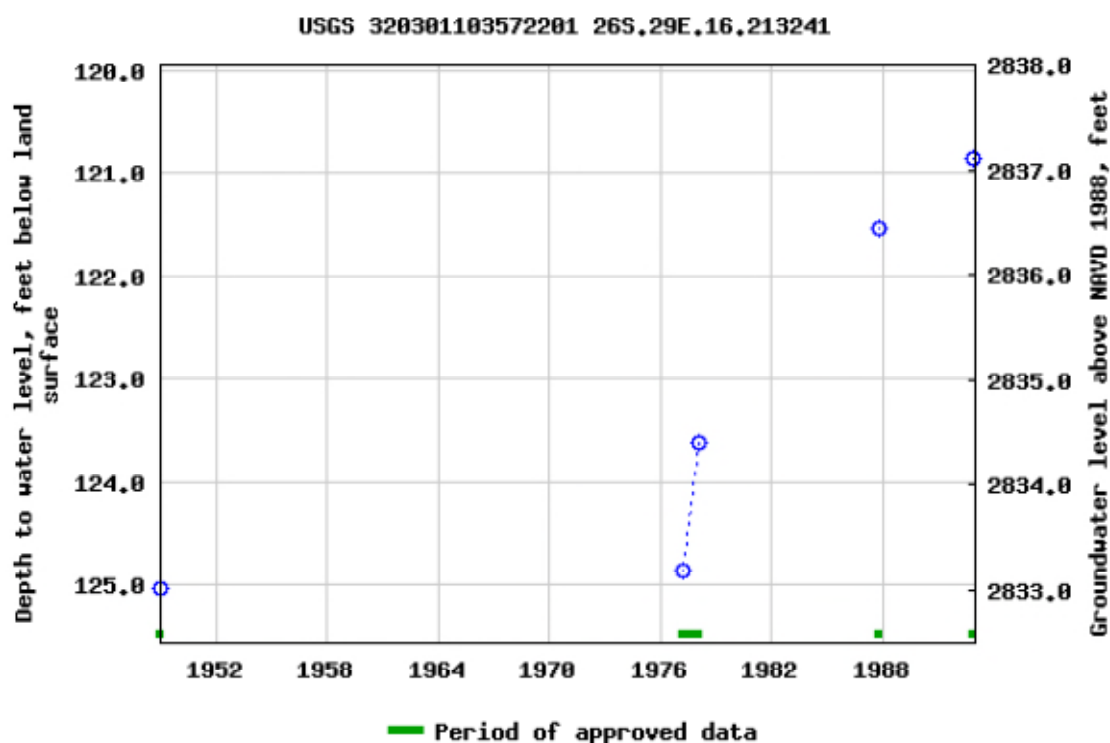
Output formats

[Table of data](#)

[Tab-separated data](#)

[Graph of data](#)

[Reselect period](#)



Breaks in the plot represent a gap of at least one year between field measurements.

[Download a presentation-quality graph](#)

[Questions about sites/data?](#)

[Feedback on this web site](#)

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[FOIA](#)

[Privacy](#)

[Policies and Notices](#)

[U.S. Department of the Interior](#) | [U.S. Geological Survey](#)

Title: Groundwater for USA: Water Levels

URL: <https://nwis.waterdata.usgs.gov/nwis/gwlevels?>



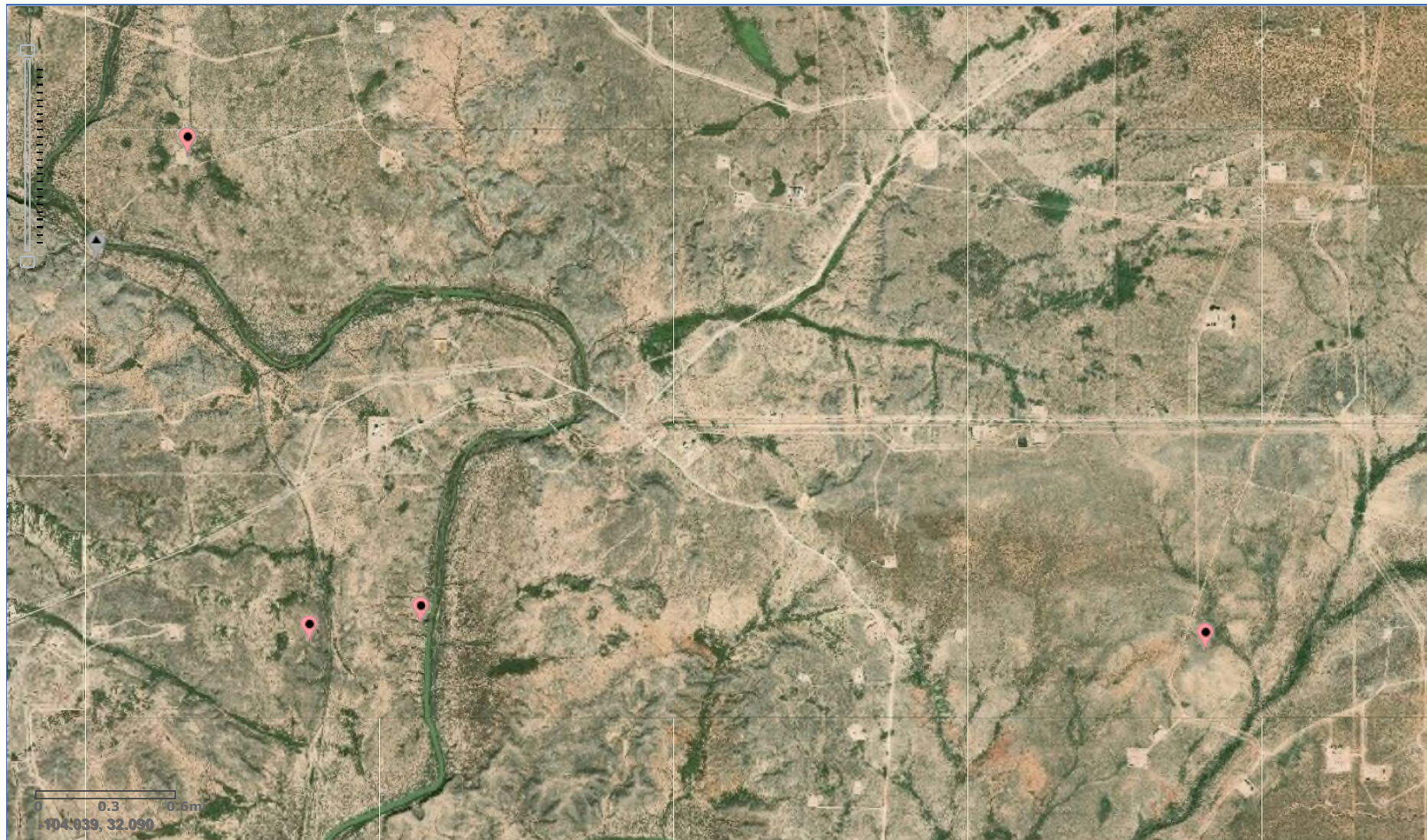
Page Contact Information: [USGS Water Data Support Team](#)

Page Last Modified: 2019-10-31 14:59:25 EDT

0.62 0.53 nadww01



National Water Information System: Mapper



Site Information

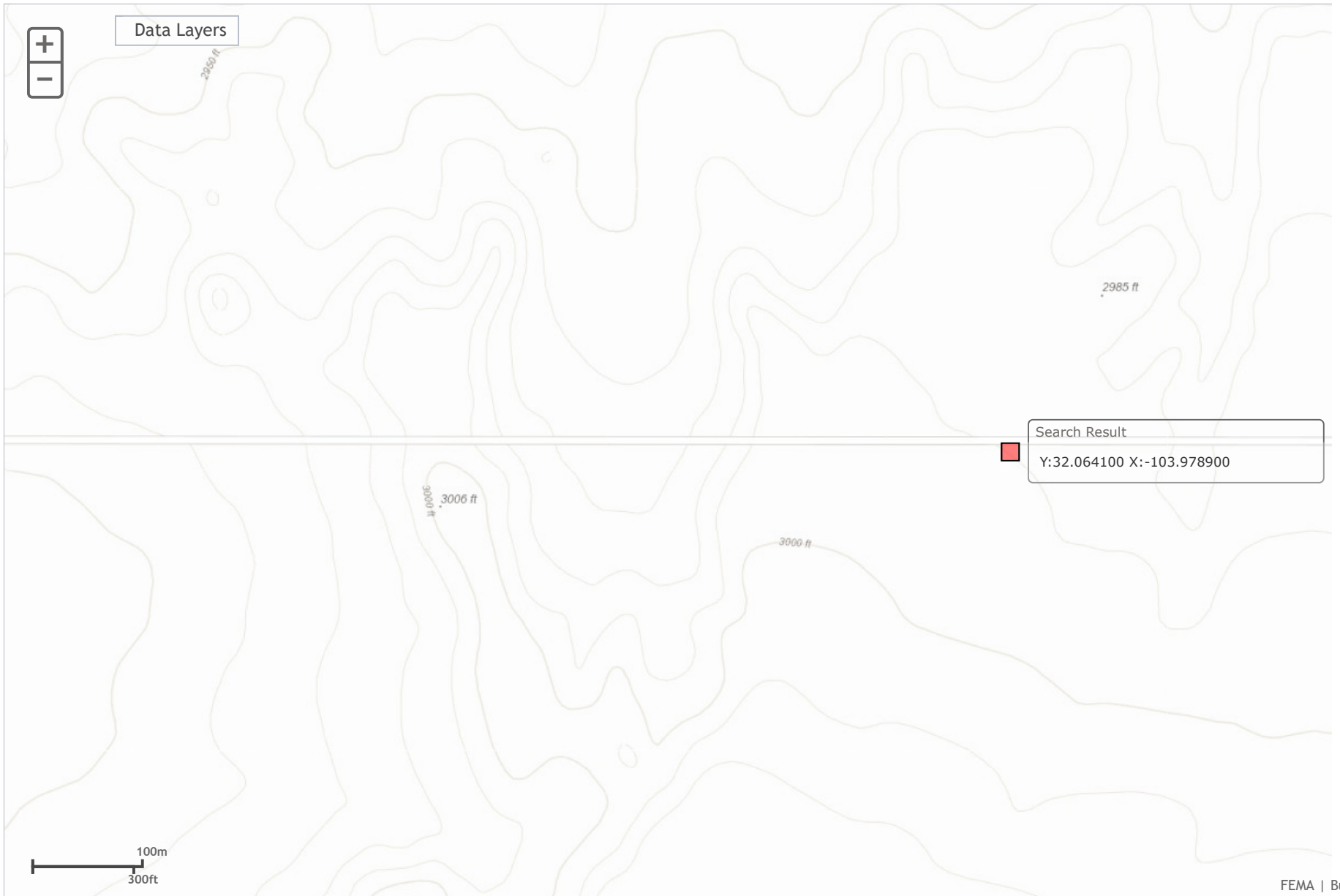




NFHL Web Mapping Application



Data Layers



FEMA | Bureau of Land Management

Appendix C

Analytical Report 624554

for
Tetra Tech- Midland

Project Manager: Mike Carmona

JR's Horz Federal #2 Area 1 (2/4/19)

212C-MD-01739

20-MAY-19

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)

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-Atlanta (LELAP Lab ID #04176)

Xenco-Tampa: Florida (E87429), North Carolina (483)



20-MAY-19

Project Manager: **Mike Carmona**

Tetra Tech- Midland

901 West Wall ST

Midland, TX 79701

Reference: XENCO Report No(s): **624554**

JR's Horz Federal #2 Area 1 (2/4/19)

Project Address: Eddy County, NM

Mike Carmona:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 624554. 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. 624554 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,

A handwritten signature in black ink that reads 'Jessica Kramer'.

Jessica Kramer

Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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



Sample Cross Reference 624554

Tetra Tech- Midland, Midland, TX

JR's Horz Federal #2 Area 1 (2/4/19)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
AH-3 (0-1')	S	05-15-19 00:00		624554-001
AH-3 (1-1.5')	S	05-15-19 00:00		624554-002
AH-3 (1.5-2')	S	05-15-19 00:00		624554-003
AH-4 (0-1')	S	05-15-19 00:00		624554-004
AH-5 (0-1')	S	05-15-19 00:00		624554-005
AH-5 (1-1.5')	S	05-15-19 00:00		624554-006
AH-5 (2-2.5')	S	05-15-19 00:00		624554-007
AH-5 (3-3.5')	S	05-15-19 00:00		624554-008
AH-5 (4-4.5')	S	05-15-19 00:00		624554-009
AH-6 (0-1')	S	05-15-19 00:00		624554-010
AH-6 (1-1.5')	S	05-15-19 00:00		624554-011
AH-6 (2-2.5')	S	05-15-19 00:00		624554-012
AH-6 (3-3.5')	S	05-15-19 00:00		624554-013
AH-6 (4-4.5')	S	05-15-19 00:00		624554-014



CASE NARRATIVE

Client Name: Tetra Tech- Midland

Project Name: JR's Horz Federal #2 Area 1 (2/4/19)

Project ID: 212C-MD-01739
Work Order Number(s): 624554

Report Date: 20-MAY-19
Date Received: 05/16/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3089307 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.

Samples affected are: 624554-005,624554-004.



Certificate of Analysis Summary 624554

Tetra Tech- Midland, Midland, TX

Project Name: JR's Horz Federal #2 Area 1 (2/4/19)



Project Id: 212C-MD-01739
Contact: Mike Carmona
Project Location: Eddy County, NM

Date Received in Lab: Thu May-16-19 01:47 pm
Report Date: 20-MAY-19
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	624554-001	624554-002	624554-003	624554-004	624554-005	624554-006
	<i>Field Id:</i>	AH-3 (0-1')	AH-3 (1-1.5')	AH-3 (1.5-2')	AH-4 (0-1')	AH-5 (0-1')	AH-5 (1-1.5')
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	May-15-19 00:00	May-15-19 00:00	May-15-19 00:00	May-15-19 00:00	May-15-19 00:00	May-15-19 00:00
BTEX by EPA 8021B	<i>Extracted:</i>	May-16-19 17:00			May-16-19 17:00	May-16-19 17:00	
	<i>Analyzed:</i>	May-17-19 02:54			May-17-19 03:13	May-17-19 03:32	
	<i>Units/RL:</i>	mg/kg RL			mg/kg RL	mg/kg RL	
Benzene		<0.00199 0.00199			<0.00202 0.00202	<0.00199 0.00199	
Toluene		<0.00199 0.00199			<0.00202 0.00202	<0.00199 0.00199	
Ethylbenzene		<0.00199 0.00199			<0.00202 0.00202	<0.00199 0.00199	
m,p-Xylenes		<0.00398 0.00398			<0.00403 0.00403	<0.00398 0.00398	
o-Xylene		<0.00199 0.00199			<0.00202 0.00202	<0.00199 0.00199	
Total Xylenes		<0.00199 0.00199			<0.00202 0.00202	<0.00199 0.00199	
Total BTEX		<0.00199 0.00199			<0.00202 0.00202	<0.00199 0.00199	
Chloride by EPA 300	<i>Extracted:</i>	May-17-19 10:30	May-17-19 10:30	May-17-19 10:30	May-17-19 10:30	May-17-19 10:30	May-17-19 10:30
	<i>Analyzed:</i>	May-17-19 23:00	May-17-19 23:07	May-17-19 23:15	May-17-19 23:22	May-17-19 23:29	May-17-19 23:58
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		3020 25.1	1310 4.96	1470 5.01	341 5.01	3820 50.1	281 5.01
TPH by SW8015 Mod	<i>Extracted:</i>	May-17-19 14:00			May-17-19 14:00	May-17-19 14:00	
	<i>Analyzed:</i>	May-18-19 01:36			May-18-19 01:56	May-18-19 02:16	
	<i>Units/RL:</i>	mg/kg RL			mg/kg RL	mg/kg RL	
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0			<15.0 15.0	<15.0 15.0	
Diesel Range Organics (DRO)		<15.0 15.0			<15.0 15.0	<15.0 15.0	
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0			<15.0 15.0	<15.0 15.0	
Total TPH		<15.0 15.0			<15.0 15.0	<15.0 15.0	

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.

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

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 624554

Tetra Tech- Midland, Midland, TX

Project Name: JR's Horz Federal #2 Area 1 (2/4/19)



Project Id: 212C-MD-01739
Contact: Mike Carmona
Project Location: Eddy County, NM

Date Received in Lab: Thu May-16-19 01:47 pm
Report Date: 20-MAY-19
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	624554-007	624554-008	624554-009	624554-010	624554-011	624554-012
	<i>Field Id:</i>	AH-5 (2-2.5')	AH-5 (3-3.5')	AH-5 (4-4.5')	AH-6 (0-1')	AH-6 (1-1.5')	AH-6 (2-2.5')
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	May-15-19 00:00	May-15-19 00:00	May-15-19 00:00	May-15-19 00:00	May-15-19 00:00	May-15-19 00:00
BTEX by EPA 8021B	<i>Extracted:</i>				May-16-19 17:00		
	<i>Analyzed:</i>				May-17-19 03:51		
	<i>Units/RL:</i>				mg/kg RL		
Benzene					<0.00200 0.00200		
Toluene					<0.00200 0.00200		
Ethylbenzene					<0.00200 0.00200		
m,p-Xylenes					<0.00401 0.00401		
o-Xylene					<0.00200 0.00200		
Total Xylenes					<0.00200 0.00200		
Total BTEX					<0.00200 0.00200		
Chloride by EPA 300	<i>Extracted:</i>	May-17-19 10:30	May-17-19 10:30	May-17-19 10:30	May-17-19 10:30	May-17-19 10:30	May-17-19 10:30
	<i>Analyzed:</i>	May-17-19 23:36	May-18-19 00:05	May-18-19 00:27	May-18-19 00:34	May-18-19 00:42	May-18-19 00:49
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		26.1 4.99	68.0 50.2	58.3 5.03	8160 50.3	6080 49.7	13300 100
TPH by SW8015 Mod	<i>Extracted:</i>				May-17-19 14:00		
	<i>Analyzed:</i>				May-18-19 03:17		
	<i>Units/RL:</i>				mg/kg RL		
Gasoline Range Hydrocarbons (GRO)					<15.0 15.0		
Diesel Range Organics (DRO)					<15.0 15.0		
Motor Oil Range Hydrocarbons (MRO)					<15.0 15.0		
Total TPH					<15.0 15.0		

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 624554

Tetra Tech- Midland, Midland, TX

Project Name: JR's Horz Federal #2 Area 1 (2/4/19)



Project Id: 212C-MD-01739
Contact: Mike Carmona
Project Location: Eddy County, NM

Date Received in Lab: Thu May-16-19 01:47 pm
Report Date: 20-MAY-19
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	624554-013	624554-014				
	Field Id:	AH-6 (3-3.5')	AH-6 (4-4.5')				
	Depth:						
	Matrix:	SOIL	SOIL				
	Sampled:	May-15-19 00:00	May-15-19 00:00				
Chloride by EPA 300	Extracted:	May-17-19 10:30	May-17-19 10:30				
	Analyzed:	May-18-19 00:56	May-18-19 01:14				
	Units/RL:	mg/kg RL	mg/kg RL				
Chloride		7950 49.7	1540 24.9				

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Jessica Kramer

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: JR's Horz Federal #2 Area 1 (2/4/19)

Work Orders : 624554,

Project ID: 212C-MD-01739

Lab Batch #: 3089307

Sample: 624554-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/17/19 02:54

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0298	0.0300	99	70-130	
4-Bromofluorobenzene	0.0377	0.0300	126	70-130	

Lab Batch #: 3089307

Sample: 624554-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/17/19 03:13

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0288	0.0300	96	70-130	
4-Bromofluorobenzene	0.0410	0.0300	137	70-130	**

Lab Batch #: 3089307

Sample: 624554-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/17/19 03:32

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0276	0.0300	92	70-130	
4-Bromofluorobenzene	0.0438	0.0300	146	70-130	**

Lab Batch #: 3089307

Sample: 624554-010 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/17/19 03:51

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0299	0.0300	100	70-130	
4-Bromofluorobenzene	0.0368	0.0300	123	70-130	

Lab Batch #: 3089544

Sample: 624554-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/18/19 01:36

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	100	99.8	100	70-135	
o-Terphenyl	49.8	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: JR's Horz Federal #2 Area 1 (2/4/19)

Work Orders : 624554,

Project ID: 212C-MD-01739

Lab Batch #: 3089544

Sample: 624554-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/18/19 01:56

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	99.8	101	70-135	
o-Terphenyl	50.0	49.9	100	70-135	

Lab Batch #: 3089544

Sample: 624554-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/18/19 02:16

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	100	99.9	100	70-135	
o-Terphenyl	50.1	50.0	100	70-135	

Lab Batch #: 3089544

Sample: 624554-010 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/18/19 03:17

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	99.7	101	70-135	
o-Terphenyl	50.3	49.9	101	70-135	

Lab Batch #: 3089307

Sample: 7678055-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/17/19 00:41

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0308	0.0300	103	70-130	
4-Bromofluorobenzene	0.0317	0.0300	106	70-130	

Lab Batch #: 3089544

Sample: 7678170-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/17/19 21:36

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	100	107	70-135	
o-Terphenyl	54.0	50.0	108	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: JR's Horz Federal #2 Area 1 (2/4/19)

Work Orders : 624554,

Project ID: 212C-MD-01739

Lab Batch #: 3089307

Sample: 7678055-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/16/19 23:08

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0285	0.0300	95	70-130	
4-Bromofluorobenzene	0.0330	0.0300	110	70-130	

Lab Batch #: 3089544

Sample: 7678170-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/17/19 21:55

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	129	100	129	70-135	
o-Terphenyl	61.1	50.0	122	70-135	

Lab Batch #: 3089307

Sample: 7678055-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/16/19 23:27

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0283	0.0300	94	70-130	
4-Bromofluorobenzene	0.0326	0.0300	109	70-130	

Lab Batch #: 3089544

Sample: 7678170-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/17/19 22:15

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	129	100	129	70-135	
o-Terphenyl	64.9	50.0	130	70-135	

Lab Batch #: 3089307

Sample: 624486-021 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/16/19 23:46

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0283	0.0300	94	70-130	
4-Bromofluorobenzene	0.0346	0.0300	115	70-130	

* 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: JR's Horz Federal #2 Area 1 (2/4/19)

Work Orders : 624554,

Project ID: 212C-MD-01739

Lab Batch #: 3089544

Sample: 624551-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/17/19 22:55

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	128	99.7	128	70-135	
o-Terphenyl	58.5	49.9	117	70-135	

Lab Batch #: 3089307

Sample: 624486-021 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/17/19 00:05

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0287	0.0300	96	70-130	
4-Bromofluorobenzene	0.0342	0.0300	114	70-130	

Lab Batch #: 3089544

Sample: 624551-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/17/19 23:15

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	125	99.9	125	70-135	
o-Terphenyl	56.4	50.0	113	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: JR's Horz Federal #2 Area 1 (2/4/19)

Work Order #: 624554

Project ID: 212C-MD-01739

Analyst: SCM

Date Prepared: 05/16/2019

Date Analyzed: 05/16/2019

Lab Batch ID: 3089307

Sample: 7678055-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	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
Analytes											
Benzene	<0.00201	0.100	0.100	100	0.0998	0.103	103	3	70-130	35	
Toluene	<0.00201	0.100	0.0984	98	0.0998	0.0997	100	1	70-130	35	
Ethylbenzene	<0.00201	0.100	0.106	106	0.0998	0.107	107	1	70-130	35	
m,p-Xylenes	<0.00402	0.201	0.224	111	0.200	0.225	113	0	70-130	35	
o-Xylene	<0.00201	0.100	0.111	111	0.0998	0.112	112	1	70-130	35	

Analyst: SPC

Date Prepared: 05/17/2019

Date Analyzed: 05/17/2019

Lab Batch ID: 3089480

Sample: 7678108-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300	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
Analytes											
Chloride	<5.00	250	260	104	250	261	104	0	90-110	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: JR's Horz Federal #2 Area 1 (2/4/19)

Work Order #: 624554

Project ID: 212C-MD-01739

Analyst: ARM

Date Prepared: 05/17/2019

Date Analyzed: 05/17/2019

Lab Batch ID: 3089544

Sample: 7678170-1-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)	<8.00	1000	1080	108	1000	1090	109	1	70-135	20	
Diesel Range Organics (DRO)	<8.13	1000	1120	112	1000	1120	112	0	70-135	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



Form 3 - MS / MSD Recoveries



Project Name: JR's Horz Federal #2 Area 1 (2/4/19)

Work Order #: 624554

Project ID: 212C-MD-01739

Lab Batch ID: 3089307

QC- Sample ID: 624486-021 S

Batch #: 1 Matrix: Soil

Date Analyzed: 05/16/2019

Date Prepared: 05/16/2019

Analyst: SCM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B 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	<0.00202	0.101	0.0847	84	0.0996	0.0951	95	12	70-130	35	
Toluene	<0.00202	0.101	0.0868	86	0.0996	0.0940	94	8	70-130	35	
Ethylbenzene	<0.00202	0.101	0.0942	93	0.0996	0.102	102	8	70-130	35	
m,p-Xylenes	<0.00403	0.202	0.199	99	0.199	0.215	108	8	70-130	35	
o-Xylene	<0.00202	0.101	0.0993	98	0.0996	0.106	106	7	70-130	35	

Lab Batch ID: 3089480

QC- Sample ID: 624551-017 S

Batch #: 1 Matrix: Soil

Date Analyzed: 05/17/2019

Date Prepared: 05/17/2019

Analyst: SPC

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	175	248	421	99	248	420	99	0	90-110	20	

Lab Batch ID: 3089480

QC- Sample ID: 624554-007 S

Batch #: 1 Matrix: Soil

Date Analyzed: 05/17/2019

Date Prepared: 05/17/2019

Analyst: SPC

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	26.1	250	296	108	250	298	109	1	90-110	20	

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

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

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: JR's Horz Federal #2 Area 1 (2/4/19)

Work Order # : 624554

Project ID: 212C-MD-01739

Lab Batch ID: 3089544

QC- Sample ID: 624551-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 05/17/2019

Date Prepared: 05/17/2019

Analyst: ARM

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)	8.20	997	1130	113	999	1150	114	2	70-135	20	
Diesel Range Organics (DRO)	8.48	997	1090	108	999	1120	111	3	70-135	20	

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

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

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.

Analysis Request of Chain of Custody Record

Page 1 of 2



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: Mike Carmona

Project Name: JRs Horz Federal #2 Area 1 (2/4/19)

Project Location: (county, state) Eddy County, NM Project #: 212C-MD-01739

Invoice to: COG Ike Tavez

Receiving Laboratory: Xenco Sampler Signature: Mike Carmona

Comments: Run deeper samples if TPH (GRO + DRO + MRO) exceeds 1,000 mg/gk. Run deeper samples if benzene exceeds 10 mg/kg or Total BTEX exceeds 50 mg/kg.

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING		MATRIX				PRESERVATIVE METHOD				# CONTAINERS	FILTERED (Y/N)
		DATE	TIME	WATER	SOIL	HCL	HNO ₃	ICE					
AH-3 (0-1')		5/15/2019		X				X				1	N
AH-3 (1-1.5')		5/15/2019		X				X				1	N
AH-3 (1.5-2')		5/15/2019		X				X				1	N
AH-4 (0-1')		5/15/2019		X				X				1	N
AH-5 (0-1')		5/15/2019		X				X				1	N
AH-5 (1-1.5')		5/15/2019		X				X				1	N
AH-5 (2-2.5')		5/15/2019		X				X				1	N
AH-5 (3-3.5')		5/15/2019		X				X				1	N
AH-5 (4-4.5')		5/15/2019		X				X				1	N

 ANALYSIS REQUEST
 (Circle or Specify Method No.)

024554

LAB USE ONLY	REMARKS:
☐ RUSH: Same Day 24 hr 48 hr 72 hr ☐ Rush Charges Authorized ☐ Special Report Limits or TRRP Report	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

ORIGINAL COPY

(Circle) HAND DELIVERED FEDEX UPS Tracking #

 11/1/0
 128-0.1

Analysis Request of Chain of Custody Record



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:

Mike Carmona

Project Name:

JRS Horz Federal #2 Area 1 (2/4/19)

Project Location: (county, _____)

Project #:

212C-MD-01739

Invoice to:

COG lke Tavaréz

Receiving Laboratory:**Sampler Signature:**

Mike Carmona

Comments:

Run deeper samples if TPH (GRO + DRO + MRO) exceeds 1,000 mg/gk. Run deeper samples if benzene exceeds 10 mg/kg or Total BTEX exceeds 50 mg/kg.

[illegible]

ANALYSIS REQUEST

(Circle or Specify Method No.)

Relinquished by:

Date: _____ Time: _____

Received by:

Date: _____ Time: _____

Relinquished by:

Date: _____ Time: _____

~~Received by:~~

Sept.

Relinquished by:

Date: Time:

Received by:

D. H. H. H.

**LAB USE
ONLY**

Sample Temperature

1-11-0
P8-01

REMARKS:

☐ 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



Client: Tetra Tech- Midland

Date/ Time Received: 05/16/2019 01:47:00 PM

Work Order #: 624554

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)?	1
#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)?	No
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Katie Lowe

Date: 05/16/2019

Checklist reviewed by:

Jessica Kramer

Date: 05/17/2019

Analytical Report 624555

for
Tetra Tech- Midland

Project Manager: Mike Carmona

JRs Horz Federal #2 Washout Area (2/4/19)

212C-MD-01739

20-MAY-19

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)

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-Atlanta (LELAP Lab ID #04176)

Xenco-Tampa: Florida (E87429), North Carolina (483)



20-MAY-19

Project Manager: **Mike Carmona**

Tetra Tech- Midland

901 West Wall ST

Midland, TX 79701

Reference: XENCO Report No(s): **624555**

JRs Horz Federal #2 Washout Area (2/4/19)

Project Address: Eddy County, NM

Mike Carmona:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 624555. 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. 624555 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,

A handwritten signature in black ink that reads 'Jessica Kramer'.

Jessica Kramer

Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

**Sample Cross Reference 624555****Tetra Tech- Midland, Midland, TX**

JR's Horz Federal #2 Washout Area (2/4/19)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
NSW-1	S	05-15-19 00:00		624555-001
NSW-2	S	05-15-19 00:00		624555-002
NSW-3	S	05-15-19 00:00		624555-003
SSW-1	S	05-15-19 00:00		624555-004
SSW-2	S	05-15-19 00:00		624555-005
SSW-3	S	05-15-19 00:00		624555-006
ESW-1	S	05-15-19 00:00		624555-007
ESW-2	S	05-15-19 00:00		624555-008
ESW-3	S	05-15-19 00:00		624555-009
ESW-4	S	05-15-19 00:00		624555-010
ESW-5	S	05-15-19 00:00		624555-011
WSW-1	S	05-15-19 00:00		624555-012
WSW-2	S	05-15-19 00:00		624555-013
WSW-3	S	05-15-19 00:00		624555-014
WSW-4	S	05-15-19 00:00		624555-015
WSW-5	S	05-15-19 00:00		624555-016



CASE NARRATIVE

Client Name: Tetra Tech- Midland

Project Name: JRs Horz Federal #2 Washout Area (2/4/19)

Project ID: 212C-MD-01739
Work Order Number(s): 624555

Report Date: 20-MAY-19
Date Received: 05/16/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3089307 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.

Samples affected are: 624555-001.



Certificate of Analysis Summary 624555

Tetra Tech- Midland, Midland, TX

Project Name: JRs Horz Federal #2 Washout Area (2/4/19)



Project Id: 212C-MD-01739
Contact: Mike Carmona
Project Location: Eddy County, NM

Date Received in Lab: Thu May-16-19 01:47 pm
Report Date: 20-MAY-19
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	624555-001	624555-002	624555-003	624555-004	624555-005	624555-006
	<i>Field Id:</i>	NSW-1	NSW-2	NSW-3	SSW-1	SSW-2	SSW-3
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	May-15-19 00:00	May-15-19 00:00	May-15-19 00:00	May-15-19 00:00	May-15-19 00:00	May-15-19 00:00
BTEX by EPA 8021B	<i>Extracted:</i>	May-16-19 17:00		May-16-19 17:00	May-16-19 17:00		May-16-19 17:00
	<i>Analyzed:</i>	May-17-19 05:05		May-17-19 05:24	May-17-19 05:43		May-17-19 06:02
	<i>Units/RL:</i>	mg/kg RL		mg/kg RL	mg/kg RL		mg/kg RL
Benzene		<0.00200 0.00200		<0.00201 0.00201	<0.00202 0.00202		<0.00199 0.00199
Toluene		<0.00200 0.00200		<0.00201 0.00201	<0.00202 0.00202		<0.00199 0.00199
Ethylbenzene		<0.00200 0.00200		<0.00201 0.00201	<0.00202 0.00202		<0.00199 0.00199
m,p-Xylenes		<0.00400 0.00400		<0.00402 0.00402	<0.00404 0.00404		<0.00398 0.00398
o-Xylene		<0.00200 0.00200		<0.00201 0.00201	<0.00202 0.00202		<0.00199 0.00199
Total Xylenes		<0.00200 0.00200		<0.00201 0.00201	<0.00202 0.00202		<0.00199 0.00199
Total BTEX		<0.00200 0.00200		<0.00201 0.00201	<0.00202 0.00202		<0.00199 0.00199
Chloride by EPA 300	<i>Extracted:</i>	May-17-19 10:30	May-17-19 16:15	May-17-19 16:15	May-17-19 16:15	May-17-19 16:15	May-17-19 16:15
	<i>Analyzed:</i>	May-18-19 01:21	May-18-19 04:21	May-18-19 04:43	May-18-19 04:50	May-18-19 04:58	May-18-19 05:05
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		98.1 4.97	66.8 5.00	80.4 4.98	964 5.00	102 5.02	261 4.98
TPH by SW8015 Mod	<i>Extracted:</i>	May-17-19 14:00		May-17-19 14:00	May-17-19 14:00		May-17-19 14:00
	<i>Analyzed:</i>	May-18-19 03:37		May-18-19 03:58	May-18-19 04:18		May-18-19 04:38
	<i>Units/RL:</i>	mg/kg RL		mg/kg RL	mg/kg RL		mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<14.9 14.9		<15.0 15.0	<14.9 14.9		<15.0 15.0
Diesel Range Organics (DRO)		24.6 14.9		<15.0 15.0	<14.9 14.9		15.3 15.0
Motor Oil Range Hydrocarbons (MRO)		<14.9 14.9		<15.0 15.0	<14.9 14.9		<15.0 15.0
Total TPH		24.6 14.9		<15.0 15.0	<14.9 14.9		15.3 15.0

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.

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

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 624555

Tetra Tech- Midland, Midland, TX

Project Name: JRs Horz Federal #2 Washout Area (2/4/19)



Project Id: 212C-MD-01739
Contact: Mike Carmona
Project Location: Eddy County, NM

Date Received in Lab: Thu May-16-19 01:47 pm
Report Date: 20-MAY-19
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	624555-007	624555-008	624555-009	624555-010	624555-011	624555-012
	<i>Field Id:</i>	ESW-1	ESW-2	ESW-3	ESW-4	ESW-5	WSW-1
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	May-15-19 00:00	May-15-19 00:00	May-15-19 00:00	May-15-19 00:00	May-15-19 00:00	May-15-19 00:00
BTEX by EPA 8021B	<i>Extracted:</i>	May-16-19 17:00			May-16-19 17:00		May-16-19 17:00
	<i>Analyzed:</i>	May-17-19 06:21			May-17-19 06:40		May-17-19 06:59
	<i>Units/RL:</i>	mg/kg RL			mg/kg RL		mg/kg RL
Benzene		<0.00198 0.00198			<0.00201 0.00201		<0.00199 0.00199
Toluene		<0.00198 0.00198			<0.00201 0.00201		<0.00199 0.00199
Ethylbenzene		<0.00198 0.00198			<0.00201 0.00201		<0.00199 0.00199
m,p-Xylenes		<0.00397 0.00397			<0.00402 0.00402		<0.00398 0.00398
o-Xylene		<0.00198 0.00198			<0.00201 0.00201		<0.00199 0.00199
Total Xylenes		<0.00198 0.00198			<0.00201 0.00201		<0.00199 0.00199
Total BTEX		<0.00198 0.00198			<0.00201 0.00201		<0.00199 0.00199
Chloride by EPA 300	<i>Extracted:</i>	May-17-19 16:15	May-17-19 16:15	May-17-19 16:15	May-17-19 16:15	May-17-19 16:15	May-17-19 16:15
	<i>Analyzed:</i>	May-18-19 05:27	May-18-19 05:34	May-18-19 05:41	May-18-19 05:48	May-18-19 06:03	May-18-19 05:56
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		1160 5.03	236 5.03	352 5.05	29.4 4.98	66.3 4.99	1410 4.98
TPH by SW8015 Mod	<i>Extracted:</i>	May-17-19 14:00			May-17-19 14:00		May-17-19 14:00
	<i>Analyzed:</i>	May-18-19 04:59			May-18-19 05:19		May-18-19 05:39
	<i>Units/RL:</i>	mg/kg RL			mg/kg RL		mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0			<15.0 15.0		<15.0 15.0
Diesel Range Organics (DRO)		<15.0 15.0			<15.0 15.0		<15.0 15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0			<15.0 15.0		<15.0 15.0
Total TPH		<15.0 15.0			<15.0 15.0		<15.0 15.0

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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.

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

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 624555

Tetra Tech- Midland, Midland, TX

Project Name: JRs Horz Federal #2 Washout Area (2/4/19)



Project Id: 212C-MD-01739
Contact: Mike Carmona
Project Location: Eddy County, NM

Date Received in Lab: Thu May-16-19 01:47 pm
Report Date: 20-MAY-19
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	624555-013	624555-014	624555-015	624555-016		
	<i>Field Id:</i>	WSW-2	WSW-3	WSW-4	WSW-5		
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	May-15-19 00:00	May-15-19 00:00	May-15-19 00:00	May-15-19 00:00		
BTEX by EPA 8021B	<i>Extracted:</i>			May-16-19 17:00			
	<i>Analyzed:</i>			May-17-19 07:18			
	<i>Units/RL:</i>			mg/kg RL			
Benzene				<0.00200 0.00200			
Toluene				<0.00200 0.00200			
Ethylbenzene				<0.00200 0.00200			
m,p-Xylenes				<0.00400 0.00400			
o-Xylene				<0.00200 0.00200			
Total Xylenes				<0.00200 0.00200			
Total BTEX				<0.00200 0.00200			
Chloride by EPA 300	<i>Extracted:</i>	May-17-19 16:15	May-17-19 16:15	May-17-19 16:15	May-17-19 16:15		
	<i>Analyzed:</i>	May-18-19 06:25	May-18-19 06:32	May-18-19 06:54	May-18-19 07:01		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		1780 25.1	324 5.03	136 4.99	261 4.96		
TPH by SW8015 Mod	<i>Extracted:</i>			May-17-19 14:00			
	<i>Analyzed:</i>			May-18-19 05:59			
	<i>Units/RL:</i>			mg/kg RL			
Gasoline Range Hydrocarbons (GRO)				<15.0 15.0			
Diesel Range Organics (DRO)				<15.0 15.0			
Motor Oil Range Hydrocarbons (MRO)				<15.0 15.0			
Total TPH				<15.0 15.0			

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

Jessica Kramer

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: JRs Horz Federal #2 Washout Area (2/4/19)

Work Orders : 624555,

Project ID: 212C-MD-01739

Lab Batch #: 3089307

Sample: 624555-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/17/19 05:05

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0268	0.0300	89	70-130	
4-Bromofluorobenzene	0.0400	0.0300	133	70-130	**

Lab Batch #: 3089307

Sample: 624555-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/17/19 05:24

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0298	0.0300	99	70-130	
4-Bromofluorobenzene	0.0383	0.0300	128	70-130	

Lab Batch #: 3089307

Sample: 624555-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/17/19 05:43

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0300	0.0300	100	70-130	
4-Bromofluorobenzene	0.0368	0.0300	123	70-130	

Lab Batch #: 3089307

Sample: 624555-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/17/19 06:02

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0301	0.0300	100	70-130	
4-Bromofluorobenzene	0.0359	0.0300	120	70-130	

Lab Batch #: 3089307

Sample: 624555-007 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/17/19 06:21

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0302	0.0300	101	70-130	
4-Bromofluorobenzene	0.0375	0.0300	125	70-130	

* 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: JRs Horz Federal #2 Washout Area (2/4/19)

Work Orders : 624555,

Project ID: 212C-MD-01739

Lab Batch #: 3089307

Sample: 624555-010 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/17/19 06:40

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0305	0.0300	102	70-130	
4-Bromofluorobenzene	0.0360	0.0300	120	70-130	

Lab Batch #: 3089307

Sample: 624555-012 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/17/19 06:59

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0302	0.0300	101	70-130	
4-Bromofluorobenzene	0.0370	0.0300	123	70-130	

Lab Batch #: 3089307

Sample: 624555-015 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/17/19 07:18

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0300	0.0300	100	70-130	
4-Bromofluorobenzene	0.0366	0.0300	122	70-130	

Lab Batch #: 3089544

Sample: 624555-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/18/19 03:37

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	98.1	99.6	98	70-135	
o-Terphenyl	49.6	49.8	100	70-135	

Lab Batch #: 3089544

Sample: 624555-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/18/19 03:58

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	99.8	102	70-135	
o-Terphenyl	50.6	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: JRs Horz Federal #2 Washout Area (2/4/19)

Work Orders : 624555,

Project ID: 212C-MD-01739

Lab Batch #: 3089544

Sample: 624555-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/18/19 04:18

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	99.6	101	70-135	
o-Terphenyl	50.1	49.8	101	70-135	

Lab Batch #: 3089544

Sample: 624555-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/18/19 04:38

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	99.9	103	70-135	
o-Terphenyl	51.2	50.0	102	70-135	

Lab Batch #: 3089544

Sample: 624555-007 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/18/19 04:59

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	99.8	101	70-135	
o-Terphenyl	50.3	49.9	101	70-135	

Lab Batch #: 3089544

Sample: 624555-010 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/18/19 05:19

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	50.7	50.0	101	70-135	

Lab Batch #: 3089544

Sample: 624555-012 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/18/19 05:39

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	100	101	70-135	
o-Terphenyl	50.1	50.0	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: JRs Horz Federal #2 Washout Area (2/4/19)

Work Orders : 624555,

Project ID: 212C-MD-01739

Lab Batch #: 3089544

Sample: 624555-015 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/18/19 05:59

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.5	99.9	100	70-135	
o-Terphenyl	49.3	50.0	99	70-135	

Lab Batch #: 3089307

Sample: 7678055-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/17/19 00:41

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0308	0.0300	103	70-130	
4-Bromofluorobenzene	0.0317	0.0300	106	70-130	

Lab Batch #: 3089544

Sample: 7678170-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/17/19 21:36

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	100	107	70-135	
o-Terphenyl	54.0	50.0	108	70-135	

Lab Batch #: 3089307

Sample: 7678055-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/16/19 23:08

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0285	0.0300	95	70-130	
4-Bromofluorobenzene	0.0330	0.0300	110	70-130	

Lab Batch #: 3089544

Sample: 7678170-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/17/19 21:55

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	129	100	129	70-135	
o-Terphenyl	61.1	50.0	122	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: JRs Horz Federal #2 Washout Area (2/4/19)

Work Orders : 624555,

Project ID: 212C-MD-01739

Lab Batch #: 3089307

Sample: 7678055-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/16/19 23:27

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0283	0.0300	94	70-130	
4-Bromofluorobenzene	0.0326	0.0300	109	70-130	

Lab Batch #: 3089544

Sample: 7678170-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/17/19 22:15

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	129	100	129	70-135	
o-Terphenyl	64.9	50.0	130	70-135	

Lab Batch #: 3089307

Sample: 624486-021 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/16/19 23:46

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0283	0.0300	94	70-130	
4-Bromofluorobenzene	0.0346	0.0300	115	70-130	

Lab Batch #: 3089544

Sample: 624551-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/17/19 22:55

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	128	99.7	128	70-135	
o-Terphenyl	58.5	49.9	117	70-135	

Lab Batch #: 3089307

Sample: 624486-021 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/17/19 00:05

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0287	0.0300	96	70-130	
4-Bromofluorobenzene	0.0342	0.0300	114	70-130	

* 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: JRs Horz Federal #2 Washout Area (2/4/19)

Work Orders : 624555,

Project ID: 212C-MD-01739

Lab Batch #: 3089544

Sample: 624551-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/17/19 23:15

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	125	99.9	125	70-135	
o-Terphenyl	56.4	50.0	113	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: JRs Horz Federal #2 Washout Area (2/4/19)

Work Order #: 624555

Project ID: 212C-MD-01739

Analyst: SCM

Date Prepared: 05/16/2019

Date Analyzed: 05/16/2019

Lab Batch ID: 3089307

Sample: 7678055-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	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
Analytes											
Benzene	<0.00201	0.100	0.100	100	0.0998	0.103	103	3	70-130	35	
Toluene	<0.00201	0.100	0.0984	98	0.0998	0.0997	100	1	70-130	35	
Ethylbenzene	<0.00201	0.100	0.106	106	0.0998	0.107	107	1	70-130	35	
m,p-Xylenes	<0.00402	0.201	0.224	111	0.200	0.225	113	0	70-130	35	
o-Xylene	<0.00201	0.100	0.111	111	0.0998	0.112	112	1	70-130	35	

Analyst: SPC

Date Prepared: 05/17/2019

Date Analyzed: 05/17/2019

Lab Batch ID: 3089480

Sample: 7678108-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300	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
Analytes											
Chloride	<5.00	250	260	104	250	261	104	0	90-110	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: JRs Horz Federal #2 Washout Area (2/4/19)

Work Order #: 624555

Project ID: 212C-MD-01739

Analyst: CHE

Date Prepared: 05/17/2019

Date Analyzed: 05/18/2019

Lab Batch ID: 3089461

Sample: 7678111-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300	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
Analytes											
Chloride	2.82	250	254	102	250	254	102	0	90-110	20	

Analyst: ARM

Date Prepared: 05/17/2019

Date Analyzed: 05/17/2019

Lab Batch ID: 3089544

Sample: 7678170-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod	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
Analytes											
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	1080	108	1000	1090	109	1	70-135	20	
Diesel Range Organics (DRO)	<8.13	1000	1120	112	1000	1120	112	0	70-135	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



Form 3 - MS / MSD Recoveries



Project Name: JRs Horz Federal #2 Washout Area (2/4/19)

Work Order #: 624555

Project ID: 212C-MD-01739

Lab Batch ID: 3089307

QC- Sample ID: 624486-021 S

Batch #: 1 Matrix: Soil

Date Analyzed: 05/16/2019

Date Prepared: 05/16/2019

Analyst: SCM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B 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	<0.00202	0.101	0.0847	84	0.0996	0.0951	95	12	70-130	35	
Toluene	<0.00202	0.101	0.0868	86	0.0996	0.0940	94	8	70-130	35	
Ethylbenzene	<0.00202	0.101	0.0942	93	0.0996	0.102	102	8	70-130	35	
m,p-Xylenes	<0.00403	0.202	0.199	99	0.199	0.215	108	8	70-130	35	
o-Xylene	<0.00202	0.101	0.0993	98	0.0996	0.106	106	7	70-130	35	

Lab Batch ID: 3089461

QC- Sample ID: 624555-002 S

Batch #: 1 Matrix: Soil

Date Analyzed: 05/18/2019

Date Prepared: 05/17/2019

Analyst: CHE

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	66.8	250	327	104	250	321	102	2	90-110	20	

Lab Batch ID: 3089461

QC- Sample ID: 624555-011 S

Batch #: 1 Matrix: Soil

Date Analyzed: 05/18/2019

Date Prepared: 05/17/2019

Analyst: CHE

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	66.3	250	328	105	250	325	103	1	90-110	20	

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

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

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: JRs Horz Federal #2 Washout Area (2/4/19)

Work Order #: 624555

Project ID: 212C-MD-01739

Lab Batch ID: 3089480

QC- Sample ID: 624551-017 S

Batch #: 1 Matrix: Soil

Date Analyzed: 05/17/2019

Date Prepared: 05/17/2019

Analyst: SPC

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	175	248	421	99	248	420	99	0	90-110	20	

Lab Batch ID: 3089480

QC- Sample ID: 624554-007 S

Batch #: 1 Matrix: Soil

Date Analyzed: 05/17/2019

Date Prepared: 05/17/2019

Analyst: SPC

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	26.1	250	296	108	250	298	109	1	90-110	20	

Lab Batch ID: 3089544

QC- Sample ID: 624551-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 05/17/2019

Date Prepared: 05/17/2019

Analyst: ARM

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)	8.20	997	1130	113	999	1150	114	2	70-135	20	
Diesel Range Organics (DRO)	8.48	997	1090	108	999	1120	111	3	70-135	20	

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

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

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.

Analysis Request of Chain of Custody Record

Page 1 of 2



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: Mike Carmona	
Project Name: JRS Horz Federal #2 Washout Area (2/4/19)			
Project Location: (county, state) Eddy County, NM		Project #: 212C-MD-01739	
Invoice to: COG like Tavaréz		Sampler Signature: Mike Carmona	
Receiving Laboratory: Xenco		Comments:	

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING		MATRIX		PRESERVATIVE METHOD		# CONTAINERS	FILTERED (Y/N)	
		DATE	TIME	WATER	SOIL	HCL	HNO ₃			ICE
NSW-1		5/15/2019		X		X		1	N	
NSW-2		5/15/2019		X		X		1	N	
NSW-3		5/15/2019		X		X		1	N	
SSW-1		5/15/2019		X		X		1	N	
SSW-2		5/15/2019		X		X		1	N	
SSW-3		5/15/2019		X		X		1	N	

LAB USE ONLY	REMARKS:
Relinquished by: <i>[Signature]</i> Date: 5/16/19 Time: 13:47 Relinquished by: <i>[Signature]</i> Date: 5/16/19 Time: 13:47 Relinquished by: _____ Date: _____ Time: _____	Sample Temperature: 1-11-0 18-01 ☐ RUSH: Same Day 24 hr 48 hr 72 hr ☐ Rush Charges Authorized ☐ Special Report Limits or TRRP Report

ORIGINAL COPY

 ANALYSIS REQUEST
 (Circle or Specify Method No.)

1024555

Hold

Analysis Request of Chain of Custody Record

Page 2 of 2



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:		Mike Carmona	
Project Name:		JRs Horz Federal #2 Washout Area (2/4/19)					
Project Location: (county, state)		Eddy County, NM		Project #:		212C-MD-01739	
Invoice to:		COG Ike Tavares					
Receiving Laboratory:		Xenco		Sampler Signature:		Mike Carmona	
Comments:							

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION		SAMPLING		MATRIX		PRESERVATIVE METHOD				# CONTAINERS	FILTERED (Y/N)	
			YEAR	DATE	TIME	WATER	SOIL	HCL	HNO ₃	ICE			
ESW-1				5/15/2019			X		X			1	N
ESW-2				5/15/2019			X		X			1	N
ESW-3				5/15/2019			X		X			1	N
ESW-4				5/15/2019			X		X			1	N
ESW-5				5/15/2019			X		X			1	N
MSW-1				5/15/2019			X		X			1	N
MSW-2				5/15/2019			X		X			1	N
MSW-3				5/15/2019			X		X			1	N
MSW-4				5/15/2019			X		X			1	N
MSW-5				5/15/2019			X		X			1	N

LAB USE ONLY	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			

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
<i>[Signature]</i>	5/16/19	13:47	<i>[Signature]</i>	5/16/19	13:47
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

LAB USE ONLY	REMARKS:
Sample Temperature	
11/11.0	
11-0-1	
	☐ RUSH: Same Day 24 hr ☐ Rush Charges Authorized ☐ Special Report Limits or TRRP Report

ORIGINAL COPY

ANALYSIS REQUEST
(Circle or Specify Method No.)

10245555



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Tetra Tech- Midland

Date/ Time Received: 05/16/2019 01:47:00 PM

Work Order #: 624555

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)?	1
#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)?	No
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Katie Lowe

Date: 05/16/2019

Checklist reviewed by:

Jessica Kramer

Date: 05/17/2019

Analytical Report 624551

for
Tetra Tech- Midland

Project Manager: Mike Carmona

JR's Horz Federal #2 Washout Area (2/4/19)

212C-MD-01739

20-MAY-19

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)

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-Atlanta (LELAP Lab ID #04176)

Xenco-Tampa: Florida (E87429), North Carolina (483)



20-MAY-19

Project Manager: **Mike Carmona**

Tetra Tech- Midland

901 West Wall ST

Midland, TX 79701

Reference: XENCO Report No(s): **624551**

JR's Horz Federal #2 Washout Area (2/4/19)

Project Address: Eddy County, NM

Mike Carmona:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 624551. 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. 624551 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,

A handwritten signature in black ink that reads 'Jessica Kramer'.

Jessica Kramer

Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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



Sample Cross Reference 624551

Tetra Tech- Midland, Midland, TX

JR's Horz Federal #2 Washout Area (2/4/19)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
AH-1 (0-1')	S	05-15-19 00:00		624551-001
AH-1 (2')	S	05-15-19 00:00		624551-002
AH-1 (3')	S	05-15-19 00:00		624551-003
AH-1 (4')	S	05-15-19 00:00		624551-004
AH-3 (0-1')	S	05-15-19 00:00		624551-005
AH-3 (2')	S	05-15-19 00:00		624551-006
AH-3 (3')	S	05-15-19 00:00		624551-007
AH-5 (0-1')	S	05-15-19 00:00		624551-008
AH-5 (2')	S	05-15-19 00:00		624551-009
AH-5 (3')	S	05-15-19 00:00		624551-010
AH-6 (0-1')	S	05-15-19 00:00		624551-011
AH-6 (2')	S	05-15-19 00:00		624551-012
AH-7 (0-1')	S	05-15-19 00:00		624551-013
AH-7 (2')	S	05-15-19 00:00		624551-014
AH-7 (3')	S	05-15-19 00:00		624551-015
AH-8 (0-1')	S	05-15-19 00:00		624551-016
AH-8 (2')	S	05-15-19 00:00		624551-017
AH-8 (3')	S	05-15-19 00:00		624551-018
AH-9 (0-1')	S	05-15-19 00:00		624551-019
AH-9 (2')	S	05-15-19 00:00		624551-020
AH-9 (3')	S	05-15-19 00:00		624551-021

**CASE NARRATIVE****Client Name: Tetra Tech- Midland****Project Name: JR's Horz Federal #2 Washout Area (2/4/19)**Project ID: 212C-MD-01739
Work Order Number(s): 624551Report Date: 20-MAY-19
Date Received: 05/16/2019**Sample receipt non conformances and comments:**

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3089300 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3089307 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3089463 Inorganic Anions by EPA 300

Lab Sample ID 624551-011 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 624551-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014, -015, -016.

The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.



Certificate of Analysis Summary 624551

Tetra Tech- Midland, Midland, TX

Project Name: JR's Horz Federal #2 Washout Area (2/4/19)



Project Id: 212C-MD-01739
Contact: Mike Carmona
Project Location: Eddy County, NM

Date Received in Lab: Thu May-16-19 01:47 pm
Report Date: 20-MAY-19
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	624551-001	624551-002	624551-003	624551-004	624551-005	624551-006
	<i>Field Id:</i>	AH-1 (0-1')	AH-1 (2')	AH-1 (3')	AH-1 (4')	AH-3 (0-1')	AH-3 (2')
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	May-15-19 00:00	May-15-19 00:00	May-15-19 00:00	May-15-19 00:00	May-15-19 00:00	May-15-19 00:00
BTEX by EPA 8021B	<i>Extracted:</i>	May-16-19 15:00				May-16-19 15:00	
	<i>Analyzed:</i>	May-17-19 07:30				May-17-19 07:49	
	<i>Units/RL:</i>	mg/kg RL				mg/kg RL	
Benzene		<0.00200 0.00200				<0.00200 0.00200	
Toluene		<0.00200 0.00200				<0.00200 0.00200	
Ethylbenzene		<0.00200 0.00200				<0.00200 0.00200	
m,p-Xylenes		<0.00399 0.00399				<0.00401 0.00401	
o-Xylene		<0.00200 0.00200				<0.00200 0.00200	
Total Xylenes		<0.00200 0.00200				<0.00200 0.00200	
Total BTEX		<0.00200 0.00200				<0.00200 0.00200	
Chloride by EPA 300	<i>Extracted:</i>	May-16-19 16:30	May-16-19 16:30	May-16-19 16:30	May-16-19 16:30	May-16-19 16:30	May-16-19 16:30
	<i>Analyzed:</i>	May-17-19 17:55	May-17-19 18:17	May-17-19 18:24	May-17-19 18:32	May-17-19 18:39	May-17-19 19:01
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		502 5.01	1260 25.0	4320 25.1	3240 25.0	9050 49.9	12100 100
TPH by SW8015 Mod	<i>Extracted:</i>	May-17-19 14:00				May-17-19 14:00	
	<i>Analyzed:</i>	May-17-19 22:35				May-17-19 23:35	
	<i>Units/RL:</i>	mg/kg RL				mg/kg RL	
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0				<15.0 15.0	
Diesel Range Organics (DRO)		<15.0 15.0				<15.0 15.0	
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0				<15.0 15.0	
Total TPH		<15.0 15.0				<15.0 15.0	

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.

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

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 624551

Tetra Tech- Midland, Midland, TX

Project Name: JR's Horz Federal #2 Washout Area (2/4/19)



Project Id: 212C-MD-01739
Contact: Mike Carmona
Project Location: Eddy County, NM

Date Received in Lab: Thu May-16-19 01:47 pm
Report Date: 20-MAY-19
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	624551-007	624551-008	624551-009	624551-010	624551-011	624551-012
	<i>Field Id:</i>	AH-3 (3')	AH-5 (0-1')	AH-5 (2')	AH-5 (3')	AH-6 (0-1')	AH-6 (2')
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	May-15-19 00:00	May-15-19 00:00	May-15-19 00:00	May-15-19 00:00	May-15-19 00:00	May-15-19 00:00
BTEX by EPA 8021B	<i>Extracted:</i>		May-16-19 15:00			May-16-19 17:00	
	<i>Analyzed:</i>		May-17-19 08:08			May-17-19 01:38	
	<i>Units/RL:</i>		mg/kg RL			mg/kg RL	
Benzene			<0.00199 0.00199			<0.00200 0.00200	
Toluene			<0.00199 0.00199			<0.00200 0.00200	
Ethylbenzene			<0.00199 0.00199			<0.00200 0.00200	
m,p-Xylenes			<0.00398 0.00398			<0.00399 0.00399	
o-Xylene			<0.00199 0.00199			<0.00200 0.00200	
Total Xylenes			<0.00199 0.00199			<0.00200 0.00200	
Total BTEX			<0.00199 0.00199			<0.00200 0.00200	
Chloride by EPA 300	<i>Extracted:</i>	May-16-19 16:30	May-16-19 16:30	May-16-19 16:30	May-16-19 16:30	May-16-19 16:30	May-16-19 16:30
	<i>Analyzed:</i>	May-17-19 19:08	May-17-19 19:15	May-17-19 19:22	May-17-19 19:30	May-17-19 19:37	May-17-19 19:59
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		4350 25.2	504 5.04	409 5.00	473 5.03	212 5.02	95.2 5.04
TPH by SW8015 Mod	<i>Extracted:</i>		May-17-19 14:00			May-17-19 14:00	
	<i>Analyzed:</i>		May-17-19 23:55			May-18-19 00:16	
	<i>Units/RL:</i>		mg/kg RL			mg/kg RL	
Gasoline Range Hydrocarbons (GRO)			<15.0 15.0			<14.9 14.9	
Diesel Range Organics (DRO)			<15.0 15.0			<14.9 14.9	
Motor Oil Range Hydrocarbons (MRO)			<15.0 15.0			<14.9 14.9	
Total TPH			<15.0 15.0			<14.9 14.9	

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 624551

Tetra Tech- Midland, Midland, TX

Project Name: JR's Horz Federal #2 Washout Area (2/4/19)



Project Id: 212C-MD-01739
Contact: Mike Carmona
Project Location: Eddy County, NM

Date Received in Lab: Thu May-16-19 01:47 pm
Report Date: 20-MAY-19
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	624551-013	624551-014	624551-015	624551-016	624551-017	624551-018
	<i>Field Id:</i>	AH-7 (0-1')	AH-7 (2')	AH-7 (3')	AH-8 (0-1')	AH-8 (2')	AH-8 (3')
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	May-15-19 00:00	May-15-19 00:00	May-15-19 00:00	May-15-19 00:00	May-15-19 00:00	May-15-19 00:00
BTEX by EPA 8021B	<i>Extracted:</i>	May-16-19 17:00			May-16-19 17:00		
	<i>Analyzed:</i>	May-17-19 01:57			May-17-19 02:16		
	<i>Units/RL:</i>	mg/kg RL			mg/kg RL		
Benzene		<0.00200 0.00200			<0.00200 0.00200		
Toluene		<0.00200 0.00200			<0.00200 0.00200		
Ethylbenzene		<0.00200 0.00200			<0.00200 0.00200		
m,p-Xylenes		<0.00399 0.00399			<0.00400 0.00400		
o-Xylene		<0.00200 0.00200			<0.00200 0.00200		
Total Xylenes		<0.00200 0.00200			<0.00200 0.00200		
Total BTEX		<0.00200 0.00200			<0.00200 0.00200		
Chloride by EPA 300	<i>Extracted:</i>	May-16-19 16:30	May-16-19 16:30	May-16-19 16:30	May-16-19 16:30	May-17-19 10:30	May-17-19 10:30
	<i>Analyzed:</i>	May-17-19 20:06	May-17-19 20:28	May-17-19 20:35	May-17-19 20:42	May-17-19 21:55	May-17-19 22:17
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		13.5 5.02	8.09 4.98	12.4 5.00	318 5.04	175 4.96	343 4.95
TPH by SW8015 Mod	<i>Extracted:</i>	May-17-19 14:00			May-17-19 14:00		
	<i>Analyzed:</i>	May-18-19 00:36			May-18-19 00:56		
	<i>Units/RL:</i>	mg/kg RL			mg/kg RL		
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0			<15.0 15.0		
Diesel Range Organics (DRO)		<15.0 15.0			<15.0 15.0		
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0			<15.0 15.0		
Total TPH		<15.0 15.0			<15.0 15.0		

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

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 624551

Tetra Tech- Midland, Midland, TX

Project Name: JR's Horz Federal #2 Washout Area (2/4/19)



Project Id: 212C-MD-01739
Contact: Mike Carmona
Project Location: Eddy County, NM

Date Received in Lab: Thu May-16-19 01:47 pm
Report Date: 20-MAY-19
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	624551-019	624551-020	624551-021			
	<i>Field Id:</i>	AH-9 (0-1')	AH-9 (2')	AH-9 (3')			
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL			
	<i>Sampled:</i>	May-15-19 00:00	May-15-19 00:00	May-15-19 00:00			
BTEX by EPA 8021B	<i>Extracted:</i>	May-16-19 17:00					
	<i>Analyzed:</i>	May-17-19 02:35					
	<i>Units/RL:</i>	mg/kg RL					
Benzene		<0.00200 0.00200					
Toluene		<0.00200 0.00200					
Ethylbenzene		<0.00200 0.00200					
m,p-Xylenes		<0.00401 0.00401					
o-Xylene		<0.00200 0.00200					
Total Xylenes		<0.00200 0.00200					
Total BTEX		<0.00200 0.00200					
Chloride by EPA 300	<i>Extracted:</i>	May-17-19 10:30	May-17-19 10:30	May-17-19 10:30			
	<i>Analyzed:</i>	May-17-19 22:24	May-17-19 22:31	May-17-19 22:38			
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL			
Chloride		137 5.03	168 5.02	425 5.02			
TPH by SW8015 Mod	<i>Extracted:</i>	May-17-19 14:00					
	<i>Analyzed:</i>	May-18-19 01:16					
	<i>Units/RL:</i>	mg/kg RL					
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0					
Diesel Range Organics (DRO)		<15.0 15.0					
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0					
Total TPH		<15.0 15.0					

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

Jessica Kramer

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: JR's Horz Federal #2 Washout Area (2/4/19)

Work Orders : 624551,

Project ID: 212C-MD-01739

Lab Batch #: 3089307

Sample: 624551-011 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/17/19 01:38

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0302	0.0300	101	70-130	
4-Bromofluorobenzene	0.0366	0.0300	122	70-130	

Lab Batch #: 3089307

Sample: 624551-013 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/17/19 01:57

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0301	0.0300	100	70-130	
4-Bromofluorobenzene	0.0375	0.0300	125	70-130	

Lab Batch #: 3089307

Sample: 624551-016 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/17/19 02:16

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0301	0.0300	100	70-130	
4-Bromofluorobenzene	0.0370	0.0300	123	70-130	

Lab Batch #: 3089307

Sample: 624551-019 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/17/19 02:35

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0300	0.0300	100	70-130	
4-Bromofluorobenzene	0.0369	0.0300	123	70-130	

Lab Batch #: 3089307

Sample: 624551-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/17/19 07:30

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0308	0.0300	103	70-130	
4-Bromofluorobenzene	0.0323	0.0300	108	70-130	

* 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: JR's Horz Federal #2 Washout Area (2/4/19)

Work Orders : 624551,

Project ID: 212C-MD-01739

Lab Batch #: 3089300

Sample: 624551-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/17/19 07:49

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0305	0.0300	102	70-130	
4-Bromofluorobenzene	0.0310	0.0300	103	70-130	

Lab Batch #: 3089300

Sample: 624551-008 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/17/19 08:08

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0306	0.0300	102	70-130	
4-Bromofluorobenzene	0.0313	0.0300	104	70-130	

Lab Batch #: 3089544

Sample: 624551-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/17/19 22:35

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	100	99.7	100	70-135	
o-Terphenyl	50.0	49.9	100	70-135	

Lab Batch #: 3089544

Sample: 624551-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/17/19 23:35

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	102	99.8	102	70-135	
o-Terphenyl	51.0	49.9	102	70-135	

Lab Batch #: 3089544

Sample: 624551-008 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/17/19 23:55

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	101	99.9	101	70-135	
o-Terphenyl	50.7	50.0	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: JR's Horz Federal #2 Washout Area (2/4/19)

Work Orders : 624551,

Project ID: 212C-MD-01739

Lab Batch #: 3089544

Sample: 624551-011 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/18/19 00:16

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	99.6	103	70-135	
o-Terphenyl	51.9	49.8	104	70-135	

Lab Batch #: 3089544

Sample: 624551-013 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/18/19 00:36

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	99.7	102	70-135	
o-Terphenyl	51.2	49.9	103	70-135	

Lab Batch #: 3089544

Sample: 624551-016 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/18/19 00:56

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	99.9	101	70-135	
o-Terphenyl	50.3	50.0	101	70-135	

Lab Batch #: 3089544

Sample: 624551-019 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/18/19 01:16

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	100	102	70-135	
o-Terphenyl	50.9	50.0	102	70-135	

Lab Batch #: 3089307

Sample: 7678055-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/17/19 00:41

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0308	0.0300	103	70-130	
4-Bromofluorobenzene	0.0317	0.0300	106	70-130	

* 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: JR's Horz Federal #2 Washout Area (2/4/19)

Work Orders : 624551,

Project ID: 212C-MD-01739

Lab Batch #: 3089300

Sample: 7678051-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/17/19 00:53

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0274	0.0300	91	70-130	
4-Bromofluorobenzene	0.0240	0.0300	80	70-130	

Lab Batch #: 3089544

Sample: 7678170-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/17/19 21:36

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	107	100	107	70-135	
o-Terphenyl	54.0	50.0	108	70-135	

Lab Batch #: 3089307

Sample: 7678055-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/16/19 23:08

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0285	0.0300	95	70-130	
4-Bromofluorobenzene	0.0330	0.0300	110	70-130	

Lab Batch #: 3089300

Sample: 7678051-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/16/19 23:20

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0302	0.0300	101	70-130	
4-Bromofluorobenzene	0.0289	0.0300	96	70-130	

Lab Batch #: 3089544

Sample: 7678170-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/17/19 21:55

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	129	100	129	70-135	
o-Terphenyl	61.1	50.0	122	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: JR's Horz Federal #2 Washout Area (2/4/19)

Work Orders : 624551,

Project ID: 212C-MD-01739

Lab Batch #: 3089307

Sample: 7678055-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/16/19 23:27

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0283	0.0300	94	70-130	
4-Bromofluorobenzene	0.0326	0.0300	109	70-130	

Lab Batch #: 3089307

Sample: 7678051-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/16/19 23:39

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0310	0.0300	103	70-130	
4-Bromofluorobenzene	0.0307	0.0300	102	70-130	

Lab Batch #: 3089544

Sample: 7678170-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/17/19 22:15

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	129	100	129	70-135	
o-Terphenyl	64.9	50.0	130	70-135	

Lab Batch #: 3089307

Sample: 624486-021 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/16/19 23:46

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0283	0.0300	94	70-130	
4-Bromofluorobenzene	0.0346	0.0300	115	70-130	

Lab Batch #: 3089307

Sample: 624489-011 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/16/19 23:58

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0311	0.0300	104	70-130	
4-Bromofluorobenzene	0.0299	0.0300	100	70-130	

* 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: JR's Horz Federal #2 Washout Area (2/4/19)

Work Orders : 624551,

Project ID: 212C-MD-01739

Lab Batch #: 3089544

Sample: 624551-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/17/19 22:55

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	128	99.7	128	70-135	
o-Terphenyl	58.5	49.9	117	70-135	

Lab Batch #: 3089307

Sample: 624486-021 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/17/19 00:05

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0287	0.0300	96	70-130	
4-Bromofluorobenzene	0.0342	0.0300	114	70-130	

Lab Batch #: 3089300

Sample: 624489-011 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/17/19 00:17

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0313	0.0300	104	70-130	
4-Bromofluorobenzene	0.0312	0.0300	104	70-130	

Lab Batch #: 3089544

Sample: 624551-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/17/19 23:15

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	125	99.9	125	70-135	
o-Terphenyl	56.4	50.0	113	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: JR's Horz Federal #2 Washout Area (2/4/19)

Work Order #: 624551

Project ID: 212C-MD-01739

Analyst: SCM

Date Prepared: 05/16/2019

Date Analyzed: 05/16/2019

Lab Batch ID: 3089300

Sample: 7678051-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	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
Analytes											
Benzene	<0.000386	0.100	0.105	105	0.0998	0.112	112	6	70-130	35	
Toluene	<0.000457	0.100	0.0978	98	0.0998	0.103	103	5	70-130	35	
Ethylbenzene	<0.000567	0.100	0.0998	100	0.0998	0.106	106	6	70-130	35	
m,p-Xylenes	<0.00102	0.201	0.206	102	0.200	0.219	110	6	70-130	35	
o-Xylene	<0.000346	0.100	0.105	105	0.0998	0.110	110	5	70-130	35	

Analyst: SCM

Date Prepared: 05/16/2019

Date Analyzed: 05/16/2019

Lab Batch ID: 3089307

Sample: 7678055-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	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
Analytes											
Benzene	<0.00201	0.100	0.100	100	0.0998	0.103	103	3	70-130	35	
Toluene	<0.00201	0.100	0.0984	98	0.0998	0.0997	100	1	70-130	35	
Ethylbenzene	<0.00201	0.100	0.106	106	0.0998	0.107	107	1	70-130	35	
m,p-Xylenes	<0.00402	0.201	0.224	111	0.200	0.225	113	0	70-130	35	
o-Xylene	<0.00201	0.100	0.111	111	0.0998	0.112	112	1	70-130	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



BS / BSD Recoveries



Project Name: JR's Horz Federal #2 Washout Area (2/4/19)

Work Order #: 624551

Project ID: 212C-MD-01739

Analyst: CHE

Date Prepared: 05/16/2019

Date Analyzed: 05/17/2019

Lab Batch ID: 3089463

Sample: 7678026-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300	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
Analytes											
Chloride	<5.00	250	254	102	250	254	102	0	90-110	20	

Analyst: SPC

Date Prepared: 05/17/2019

Date Analyzed: 05/17/2019

Lab Batch ID: 3089463

Sample: 7678108-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300	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
Analytes											
Chloride	<5.00	250	260	104	250	261	104	0	90-110	20	

Analyst: ARM

Date Prepared: 05/17/2019

Date Analyzed: 05/17/2019

Lab Batch ID: 3089544

Sample: 7678170-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod	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
Analytes											
Gasoline Range Hydrocarbons (GRO)	<8.00	1000	1080	108	1000	1090	109	1	70-135	20	
Diesel Range Organics (DRO)	<8.13	1000	1120	112	1000	1120	112	0	70-135	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



Form 3 - MS / MSD Recoveries



Project Name: JR's Horz Federal #2 Washout Area (2/4/19)

Work Order #: 624551

Project ID: 212C-MD-01739

Lab Batch ID: 3089300

QC- Sample ID: 624489-011 S

Batch #: 1 Matrix: Soil

Date Analyzed: 05/16/2019

Date Prepared: 05/16/2019

Analyst: SCM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B 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	0.000403	0.101	0.0950	94	0.0992	0.0955	96	1	70-130	35	
Toluene	0.000494	0.101	0.0840	83	0.0992	0.0847	85	1	70-130	35	
Ethylbenzene	<0.000568	0.101	0.0739	73	0.0992	0.0745	75	1	70-130	35	
m,p-Xylenes	<0.00102	0.201	0.141	70	0.198	0.140	71	1	70-130	35	
o-Xylene	<0.000346	0.101	0.0731	72	0.0992	0.0740	74	1	70-130	35	

Lab Batch ID: 3089307

QC- Sample ID: 624486-021 S

Batch #: 1 Matrix: Soil

Date Analyzed: 05/16/2019

Date Prepared: 05/16/2019

Analyst: SCM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B 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	<0.00202	0.101	0.0847	84	0.0996	0.0951	95	12	70-130	35	
Toluene	<0.00202	0.101	0.0868	86	0.0996	0.0940	94	8	70-130	35	
Ethylbenzene	<0.00202	0.101	0.0942	93	0.0996	0.102	102	8	70-130	35	
m,p-Xylenes	<0.00403	0.202	0.199	99	0.199	0.215	108	8	70-130	35	
o-Xylene	<0.00202	0.101	0.0993	98	0.0996	0.106	106	7	70-130	35	

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

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

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: JR's Horz Federal #2 Washout Area (2/4/19)

Work Order #: 624551

Project ID: 212C-MD-01739

Lab Batch ID: 3089463

QC- Sample ID: 624551-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 05/18/2019

Date Prepared: 05/16/2019

Analyst: CHE

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	502	251	719	86	251	720	87	0	90-110	20	X

Lab Batch ID: 3089463

QC- Sample ID: 624551-011 S

Batch #: 1 Matrix: Soil

Date Analyzed: 05/17/2019

Date Prepared: 05/16/2019

Analyst: CHE

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	212	251	474	104	251	468	102	1	90-110	20	

Lab Batch ID: 3089480

QC- Sample ID: 624551-017 S

Batch #: 1 Matrix: Soil

Date Analyzed: 05/17/2019

Date Prepared: 05/17/2019

Analyst: SPC

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	175	248	421	99	248	420	99	0	90-110	20	

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

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

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: JR's Horz Federal #2 Washout Area (2/4/19)

Work Order #: 624551

Project ID: 212C-MD-01739

Lab Batch ID: 3089480

QC- Sample ID: 624554-007 S

Batch #: 1 Matrix: Soil

Date Analyzed: 05/17/2019

Date Prepared: 05/17/2019

Analyst: SPC

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	26.1	250	296	108	250	298	109	1	90-110	20	

Lab Batch ID: 3089544

QC- Sample ID: 624551-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 05/17/2019

Date Prepared: 05/17/2019

Analyst: ARM

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)	8.20	997	1130	113	999	1150	114	2	70-135	20	
Diesel Range Organics (DRO)	8.48	997	1090	108	999	1120	111	3	70-135	20	

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

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

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.

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:

Site Manager:

Mike Carmona

Project Name:

JRS Horz Federal #2 Washout Area (2/4/19)

Project Location: (county,
state)

Eddy County, NM

Project #:

212C-MD-01739

Invoice to:

COG Ike Tavaréz

Receiving Laboratory:

Xenco

Sampler Signature:

Mike Carmona

Comments:

 Run deeper samples if TPH (GRO + DRO + MRO) exceeds 1,000 mg/gk. Run deeper samples if benzene exceeds 10 mg/kg or
 Total BTEX exceeds 50 mg/kg.

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING		MATRIX		PRESERVATIVE METHOD		# CONTAINERS	FILTERED (Y/N)		
		YEAR	DATE	TIME	WATER	SOIL	HCL			HNO ₃	ICE
	AH-1 (0-1')		5/15/2019		X		X		1	N	
	AH-1 (2)		5/15/2019		X		X		1	N	
	AH-1 (3)		5/15/2019		X		X		1	N	
	AH-1 (4)		5/15/2019		X		X		1	N	
	AH-3 (0-1')		5/15/2019		X		X		1	N	
	AH-3 (2)		5/15/2019		X		X		1	N	
	AH-3 (3)		5/15/2019		X		X		1	N	
	AH-5 (0-1')		5/15/2019		X		X		1	N	
	AH-5 (2)		5/15/2019		X		X		1	N	
	AH-5 (3)		5/15/2019		X		X		1	N	

LAB USE ONLY	REMARKS:
Sample Temperature 1.1/1.0 28-0.1	☐ RUSH: Same Day 24 hr 48 hr 72 hr ☐ Rush Charges Authorized ☐ Special Report Limits or TRRP Report

 ANALYSIS REQUEST
 (Circle or Specify Method No.)

024551

ORIGINAL COPY

(Circle) HAND DELIVERED FEDEX UPS Tracking #

Page 2 of 3

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

ANALYSIS REQUEST

(Circle or Specify Method No.)

[illegible][illegible]

e Hg
e Hg
ttache

25

624
270C/62
TDS
mistry /

[illegible]

REMARKS:	
----------	--

☐ RUSH: Same Day 24 hr.

1

☐ Special Report Limits or TRRP

LAB USE ONLY

REMARKS:

☐ RUSH: Same Day 24 hr 48 hr 72 hr

☐ Rush Charges Authorized

☐ Special Report Limits or TRRP Report

Sample Temperature

1.1/1.0

R8-0.1

ORIGINAL COPY

Analysis Request of Chain of Custody Record



Tetra Tech, Inc.

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

0245

Page 3 of 3

[illegible]

ORIGINAL COPY



Client: Tetra Tech- Midland

Date/ Time Received: 05/16/2019 01:47:00 PM

Work Order #: 624551

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)?	1
#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)?	No
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:

Katie Lowe

Date: 05/16/2019

Checklist reviewed by:

Jessica Kramer

Date: 05/17/2019

Analytical Report 623130

for
Tetra Tech- Midland

Project Manager: Mike Carmona

JRs Horz Federal #2 (4-4-19)

212CMD-01739

08-MAY-19

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)

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-Atlanta (LELAP Lab ID #04176)

Xenco-Tampa: Florida (E87429), North Carolina (483)



08-MAY-19

Project Manager: **Mike Carmona**

Tetra Tech- Midland

901 West Wall ST

Midland, TX 79701

Reference: XENCO Report No(s): **623130**

JRs Horz Federal #2 (4-4-19)

Project Address: Eddy County, New Mexico

Mike Carmona:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 623130. 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. 623130 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,

A handwritten signature in black ink that reads 'Jessica Kramer'.

Jessica Kramer

Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

**Sample Cross Reference 623130****Tetra Tech- Midland, Midland, TX**

JR's Horz Federal #2 (4-4-19)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
AH-2 (0-1') 3'BEB	S	05-02-19 00:00		623130-001
AH-2 (2') 3'BEB	S	05-02-19 00:00		623130-002
AH-2 (3') 3'BEB	S	05-02-19 00:00		623130-003
AH-2 (4') 3'BEB	S	05-02-19 00:00		623130-004
AH-4 (0-1') 3'BEB	S	05-02-19 00:00		623130-005
AH-4 (2') 3'BEB	S	05-02-19 00:00		623130-006
AH-4 (3') 3'BEB	S	05-02-19 00:00		623130-007
AH-4 (4') 3'BEB	S	05-02-19 00:00		623130-008



CASE NARRATIVE

Client Name: Tetra Tech- Midland

Project Name: JRs Horz Federal #2 (4-4-19)

Project ID: 212CMD-01739
Work Order Number(s): 623130

Report Date: 08-MAY-19
Date Received: 05/03/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3088027 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.

Samples affected are: 623130-004.

Batch: LBA-3088033 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Surrogate 4-Bromofluorobenzene recovered above QC limits. Matrix interferences is suspected.

Samples affected are: 623130-008.



Certificate of Analysis Summary 623130

Tetra Tech- Midland, Midland, TX

Project Name: JRs Horz Federal #2 (4-4-19)

Project Id: 212CMD-01739
Contact: Mike Carmona
Project Location: Eddy County, New Mexico

Date Received in Lab: Fri May-03-19 09:45 am
Report Date: 08-MAY-19
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	623130-001	623130-002	623130-003	623130-004	623130-005	623130-006
	<i>Field Id:</i>	AH-2 (0-1') 3'BEB	AH-2 (2') 3'BEB	AH-2 (3') 3'BEB	AH-2 (4') 3'BEB	AH-4 (0-1') 3'BEB	AH-4 (2') 3'BEB
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	May-02-19 00:00	May-02-19 00:00	May-02-19 00:00	May-02-19 00:00	May-02-19 00:00	May-02-19 00:00
BTEX by EPA 8021B	<i>Extracted:</i>	May-03-19 11:30	May-03-19 11:30	May-03-19 11:30	May-03-19 11:30	May-03-19 11:30	May-03-19 13:00
	<i>Analyzed:</i>	May-03-19 19:27	May-03-19 19:46	May-03-19 20:05	May-03-19 20:24	May-03-19 20:43	May-03-19 23:31
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200	<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200
Toluene		<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200	<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200
Ethylbenzene		<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200	<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200
m,p-Xylenes		<0.00398 0.00398	<0.00402 0.00402	<0.00399 0.00399	<0.00403 0.00403	<0.00398 0.00398	<0.00399 0.00399
o-Xylene		<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200	<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200
Total Xylenes		<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200	<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200
Total BTEX		<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200	<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200
Chloride by EPA 300	<i>Extracted:</i>	May-03-19 17:00	May-03-19 17:00	May-03-19 17:00	May-03-19 17:00	May-03-19 17:00	May-03-19 17:00
	<i>Analyzed:</i>	May-03-19 19:30	May-03-19 19:35	May-03-19 19:53	May-03-19 19:58	May-03-19 20:04	May-03-19 20:10
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		191 5.02	1250 25.1	6110 49.5	159 4.95	4960 24.8	2950 24.8
TPH by SW8015 Mod	<i>Extracted:</i>	May-04-19 10:00	May-04-19 10:00	May-04-19 10:00	May-04-19 10:00	May-04-19 10:00	May-04-19 10:00
	<i>Analyzed:</i>	May-05-19 02:07	May-05-19 02:27	May-05-19 02:48	May-05-19 03:50	May-05-19 04:10	May-05-19 04:30
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0
Total TPH		<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0	<15.0 15.0

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.

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

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 623130

Tetra Tech- Midland, Midland, TX

Project Name: JRs Horz Federal #2 (4-4-19)



Project Id: 212CMD-01739
Contact: Mike Carmona
Project Location: Eddy County, New Mexico

Date Received in Lab: Fri May-03-19 09:45 am
Report Date: 08-MAY-19
Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	623130-007	623130-008				
	Field Id:	AH-4 (3') 3'BEB	AH-4 (4') 3'BEB				
	Depth:						
	Matrix:	SOIL	SOIL				
	Sampled:	May-02-19 00:00	May-02-19 00:00				
BTEX by EPA 8021B	Extracted:	May-03-19 13:00	May-03-19 13:00				
	Analyzed:	May-03-19 23:50	May-04-19 00:10				
	Units/RL:	mg/kg RL	mg/kg RL				
Benzene		<0.00201 0.00201	<0.00198 0.00198				
Toluene		<0.00201 0.00201	<0.00198 0.00198				
Ethylbenzene		<0.00201 0.00201	<0.00198 0.00198				
m,p-Xylenes		<0.00402 0.00402	<0.00397 0.00397				
o-Xylene		<0.00201 0.00201	<0.00198 0.00198				
Total Xylenes		<0.00201 0.00201	<0.00198 0.00198				
Total BTEX		<0.00201 0.00201	<0.00198 0.00198				
Chloride by EPA 300	Extracted:	May-03-19 17:00	May-03-19 17:00				
	Analyzed:	May-03-19 20:16	May-03-19 20:21				
	Units/RL:	mg/kg RL	mg/kg RL				
Chloride		286 5.00	10.2 5.03				
TPH by SW8015 Mod	Extracted:	May-04-19 10:00	May-04-19 10:00				
	Analyzed:	May-05-19 04:50	May-05-19 05:11				
	Units/RL:	mg/kg RL	mg/kg RL				
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0	<15.0 15.0				
Diesel Range Organics (DRO)		<15.0 15.0	<15.0 15.0				
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0	<15.0 15.0				
Total TPH		<15.0 15.0	<15.0 15.0				

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.

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

Jessica Kramer

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: JRs Horz Federal #2 (4-4-19)

Work Orders : 623130, 623130

Project ID: 212CMD-01739

Lab Batch #: 3088027

Sample: 623130-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/03/19 19:27

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0301	0.0300	100	70-130	
4-Bromofluorobenzene	0.0371	0.0300	124	70-130	

Lab Batch #: 3088027

Sample: 623130-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/03/19 19:46

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0304	0.0300	101	70-130	
4-Bromofluorobenzene	0.0372	0.0300	124	70-130	

Lab Batch #: 3088027

Sample: 623130-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/03/19 20:05

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0304	0.0300	101	70-130	
4-Bromofluorobenzene	0.0362	0.0300	121	70-130	

Lab Batch #: 3088027

Sample: 623130-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/03/19 20:24

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0283	0.0300	94	70-130	
4-Bromofluorobenzene	0.0416	0.0300	139	70-130	**

Lab Batch #: 3088027

Sample: 623130-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/03/19 20:43

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0303	0.0300	101	70-130	
4-Bromofluorobenzene	0.0382	0.0300	127	70-130	

* 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: JRs Horz Federal #2 (4-4-19)

Work Orders : 623130, 623130

Project ID: 212CMD-01739

Lab Batch #: 3088033

Sample: 623130-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/03/19 23:31

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0298	0.0300	99	70-130	
4-Bromofluorobenzene	0.0358	0.0300	119	70-130	

Lab Batch #: 3088033

Sample: 623130-007 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/03/19 23:50

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0305	0.0300	102	70-130	
4-Bromofluorobenzene	0.0349	0.0300	116	70-130	

Lab Batch #: 3088033

Sample: 623130-008 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/04/19 00:10

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0292	0.0300	97	70-130	
4-Bromofluorobenzene	0.0396	0.0300	132	70-130	**

Lab Batch #: 3088044

Sample: 623130-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/05/19 02:07

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	103	99.7	103	70-135	
o-Terphenyl	51.6	49.9	103	70-135	

Lab Batch #: 3088044

Sample: 623130-002 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/05/19 02:27

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	101	99.7	101	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: JRs Horz Federal #2 (4-4-19)

Work Orders : 623130, 623130

Project ID: 212CMD-01739

Lab Batch #: 3088044

Sample: 623130-003 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/05/19 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	99.3	100	99	70-135	
o-Terphenyl	50.1	50.0	100	70-135	

Lab Batch #: 3088044

Sample: 623130-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/05/19 03:50

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.9	99.8	100	70-135	
o-Terphenyl	50.4	49.9	101	70-135	

Lab Batch #: 3088044

Sample: 623130-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/05/19 04:10

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	102	99.9	102	70-135	
o-Terphenyl	51.1	50.0	102	70-135	

Lab Batch #: 3088044

Sample: 623130-006 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/05/19 04:30

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	100	99.8	100	70-135	
o-Terphenyl	50.1	49.9	100	70-135	

Lab Batch #: 3088044

Sample: 623130-007 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/05/19 04:50

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	99.8	100	100	70-135	
o-Terphenyl	50.1	50.0	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: JRs Horz Federal #2 (4-4-19)

Work Orders : 623130, 623130

Project ID: 212CMD-01739

Lab Batch #: 3088044

Sample: 623130-008 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/05/19 05:11

SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	101	99.7	101	70-135	
o-Terphenyl	50.9	49.9	102	70-135	

Lab Batch #: 3088027

Sample: 7677215-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/03/19 13:17

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0311	0.0300	104	70-130	
4-Bromofluorobenzene	0.0302	0.0300	101	70-130	

Lab Batch #: 3088033

Sample: 7677221-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/03/19 23:13

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0313	0.0300	104	70-130	
4-Bromofluorobenzene	0.0310	0.0300	103	70-130	

Lab Batch #: 3088044

Sample: 7677204-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/04/19 22:02

SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	109	100	109	70-135	
o-Terphenyl	55.4	50.0	111	70-135	

Lab Batch #: 3088027

Sample: 7677215-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/03/19 11:43

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0288	0.0300	96	70-130	
4-Bromofluorobenzene	0.0315	0.0300	105	70-130	

* 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: JRs Horz Federal #2 (4-4-19)

Work Orders : 623130, 623130

Project ID: 212CMD-01739

Lab Batch #: 3088033

Sample: 7677221-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/03/19 21:39

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0283	0.0300	94	70-130	
4-Bromofluorobenzene	0.0321	0.0300	107	70-130	

Lab Batch #: 3088044

Sample: 7677204-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/04/19 22:22

SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	125	100	125	70-135	
o-Terphenyl	61.1	50.0	122	70-135	

Lab Batch #: 3088027

Sample: 7677215-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/03/19 12:02

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0287	0.0300	96	70-130	
4-Bromofluorobenzene	0.0316	0.0300	105	70-130	

Lab Batch #: 3088033

Sample: 7677221-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/03/19 21:58

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0281	0.0300	94	70-130	
4-Bromofluorobenzene	0.0320	0.0300	107	70-130	

Lab Batch #: 3088044

Sample: 7677204-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 05/05/19 09:07

SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	125	100	125	70-135	
o-Terphenyl	56.3	50.0	113	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: JRs Horz Federal #2 (4-4-19)

Work Orders : 623130, 623130

Project ID: 212CMD-01739

Lab Batch #: 3088027

Sample: 623115-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/03/19 12:21

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0293	0.0300	98	70-130	
4-Bromofluorobenzene	0.0331	0.0300	110	70-130	

Lab Batch #: 3088037

Sample: 623130-006 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/03/19 22:17

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0289	0.0300	96	70-130	
4-Bromofluorobenzene	0.0337	0.0300	112	70-130	

Lab Batch #: 3088044

Sample: 623115-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/04/19 23:24

SURROGATE RECOVERY STUDY					
TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	122	99.8	122	70-135	
o-Terphenyl	53.9	49.9	108	70-135	

Lab Batch #: 3088027

Sample: 623115-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/03/19 12:40

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0293	0.0300	98	70-130	
4-Bromofluorobenzene	0.0333	0.0300	111	70-130	

Lab Batch #: 3088033

Sample: 623130-006 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/03/19 22:36

SURROGATE RECOVERY STUDY					
BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0292	0.0300	97	70-130	
4-Bromofluorobenzene	0.0325	0.0300	108	70-130	

* 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: JRs Horz Federal #2 (4-4-19)

Work Orders : 623130, 623130

Project ID: 212CMD-01739

Lab Batch #: 3088044

Sample: 623115-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 05/04/19 23:44

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	129	99.9	129	70-135	
o-Terphenyl	63.5	50.0	127	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: JRs Horz Federal #2 (4-4-19)

Work Order #: 623130, 623130

Project ID: 212CMD-01739

Analyst: SCM

Date Prepared: 05/03/2019

Date Analyzed: 05/03/2019

Lab Batch ID: 3088027

Sample: 7677215-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	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
Analytes											
Benzene	<0.00198	0.0992	0.0973	98	0.101	0.104	103	7	70-130	35	
Toluene	<0.00198	0.0992	0.0935	94	0.101	0.0999	99	7	70-130	35	
Ethylbenzene	<0.00198	0.0992	0.102	103	0.101	0.108	107	6	70-130	35	
m,p-Xylenes	<0.00397	0.198	0.211	107	0.202	0.225	111	6	70-130	35	
o-Xylene	<0.00198	0.0992	0.104	105	0.101	0.110	109	6	70-130	35	

Analyst: SCM

Date Prepared: 05/03/2019

Date Analyzed: 05/03/2019

Lab Batch ID: 3088033

Sample: 7677221-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	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
Analytes											
Benzene	<0.00202	0.101	0.0983	97	0.100	0.101	101	3	70-130	35	
Toluene	<0.00202	0.101	0.0970	96	0.100	0.0994	99	2	70-130	35	
Ethylbenzene	<0.00202	0.101	0.105	104	0.100	0.108	108	3	70-130	35	
m,p-Xylenes	<0.00403	0.202	0.219	108	0.200	0.224	112	2	70-130	35	
o-Xylene	<0.00202	0.101	0.109	108	0.100	0.111	111	2	70-130	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



BS / BSD Recoveries



Project Name: JRs Horz Federal #2 (4-4-19)

Work Order #: 623130, 623130

Project ID: 212CMD-01739

Analyst: CHE

Date Prepared: 05/03/2019

Date Analyzed: 05/03/2019

Lab Batch ID: 3087995

Sample: 7677141-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300	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
Analytes											
Chloride	<0.858	250	261	104	250	261	104	0	90-110	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



Form 3 - MS / MSD Recoveries



Project Name: JRs Horz Federal #2 (4-4-19)

Work Order #: 623130

Project ID: 212CMD-01739

Lab Batch ID: 3088027

QC- Sample ID: 623115-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 05/03/2019

Date Prepared: 05/03/2019

Analyst: SCM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B 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	<0.00199	0.0996	0.0826	83	0.100	0.0785	79	5	70-130	35	
Toluene	<0.00199	0.0996	0.0703	71	0.100	0.0682	68	3	70-130	35	X
Ethylbenzene	<0.00199	0.0996	0.0640	64	0.100	0.0641	64	0	70-130	35	X
m,p-Xylenes	<0.00398	0.199	0.132	66	0.200	0.134	67	2	70-130	35	X
o-Xylene	<0.00199	0.0996	0.0666	67	0.100	0.0670	67	1	70-130	35	X

Lab Batch ID: 3088033

QC- Sample ID: 623130-006 S

Batch #: 1 Matrix: Soil

Date Analyzed: 05/03/2019

Date Prepared: 05/03/2019

Analyst: SCM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B 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	<0.00201	0.100	0.103	103	0.100	0.0979	98	5	70-130	35	
Toluene	<0.00201	0.100	0.0995	100	0.100	0.0935	94	6	70-130	35	
Ethylbenzene	<0.00201	0.100	0.106	106	0.100	0.0994	99	6	70-130	35	
m,p-Xylenes	<0.00402	0.201	0.221	110	0.200	0.206	103	7	70-130	35	
o-Xylene	<0.00201	0.100	0.109	109	0.100	0.102	102	7	70-130	35	

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

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

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: JRs Horz Federal #2 (4-4-19)

Work Order #: 623130

Project ID: 212CMD-01739

Lab Batch ID: 3087995

QC- Sample ID: 623108-009 S

Batch #: 1 Matrix: Soil

Date Analyzed: 05/03/2019

Date Prepared: 05/03/2019

Analyst: CHE

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	927	252	2230	517	252	2220	513	0	90-110	20	X

Lab Batch ID: 3087995

QC- Sample ID: 623108-020 S

Batch #: 1 Matrix: Soil

Date Analyzed: 05/03/2019

Date Prepared: 05/03/2019

Analyst: CHE

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	303	250	546	97	250	533	92	2	90-110	20	

Lab Batch ID: 3088044

QC- Sample ID: 623115-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 05/04/2019

Date Prepared: 05/04/2019

Analyst: ARM

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)	<7.99	998	978	98	999	1160	116	17	70-135	20	
Diesel Range Organics (DRO)	406	998	1250	85	999	1530	113	20	70-135	20	

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

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

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.

Analysis Request of Chain of Custody Record



Tetra Tech, Inc.

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

Page

1 of

1

Client Name:		COG		Site Manager:		Mike Carmona	
Project Name:		JRs Horz Federal #2					
Project Location: (county, state)		Eddy County, New Mexico		Project #:		212C-MD-01739	
Invoice to:		COG Ike Tavaréz					
Receiving Laboratory:		Xenco		Sampler Signature:		Mike Carmona	
Comments:							

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING		MATRIX		PRESERVATIVE METHOD			# CONTAINERS	FILTERED (Y/N)	
		DATE	TIME	WATER	SOIL	HCL	HNO ₃	ICE			None
	AH-2 (0-1') 3BEB	5/2/2019		X				X		1 N	
	AH-2 (2') 3BEB	5/2/2019		X				X		1 N	
	AH-2 (3') 3BEB	5/2/2019		X				X		1 N	
	AH-2 (4') 3BEB	5/2/2019		X				X		1 N	
	AH-4 (0-1') 3BEB	5/2/2019		X				X		1 N	
	AH-4 (2') 3BEB	5/2/2019		X				X		1 N	
	AH-4 (3') 3BEB	5/2/2019		X				X		1 N	
	AH-4 (4') 3BEB	5/2/2019		X				X		1 N	

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

ORIGINAL COPY

 (Circle) HAND DELIVERED ☒ EDEX UPS Tracking #:



Client: Tetra Tech- Midland

Date/ Time Received: 05/03/2019 09:45:00 AM

Work Order #: 623130

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)?	2.1
#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: 05/03/2019

Checklist reviewed by:

Jessica Kramer

Date: 05/03/2019

Analytical Report 628467

for
Tetra Tech- Midland

Project Manager: Mike Carmona

COG JRS Horz Federal #2 (Job number :212C-MD-01739)

28-JUN-19

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)

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-Atlanta (LELAP Lab ID #04176)

Xenco-Tampa: Florida (E87429), North Carolina (483)



28-JUN-19

Project Manager: **Mike Carmona**

Tetra Tech- Midland

901 West Wall ST

Midland, TX 79701

Reference: XENCO Report No(s): **628467**

COG JRS Horz Federal #2 (Job number :212C-MD-01739)

Project Address:

Mike Carmona:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 628467. 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. 628467 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,

A handwritten signature in black ink that reads 'Jessica Kramer'.

Jessica Kramer

Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

**Sample Cross Reference 628467****Tetra Tech- Midland, Midland, TX**

COG JRS Horz Federal #2 (Job number :212C-MD-01739)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
AH-1	S	06-19-19 00:00	0 - 1 ft	628467-001
AH-1	S	06-19-19 00:00	1 - 1.5 ft	628467-002
AH-1	S	06-19-19 00:00	2 - 2.5 ft	628467-003
AH-2	S	06-19-19 00:00	0 - 1 ft	628467-004
AH-7	S	06-19-19 00:00	0 - 1 ft	628467-005
AH-7	S	06-19-19 00:00	1 - 1.5 ft	628467-006
AH-7	S	06-19-19 00:00	2 - 2.5 ft	628467-007
AH-7	S	06-19-19 00:00	3 - 3.5 ft	628467-008



CASE NARRATIVE

Client Name: Tetra Tech- Midland

Project Name: COG JRS Horz Federal #2 (Job number :212C-MD-01739)

Project ID:

Work Order Number(s): 628467

Report Date: 28-JUN-19

Date Received: 06/20/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3093834 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



Certificate of Analysis Summary 628467

Tetra Tech- Midland, Midland, TX

Project Name: COG JRS Horz Federal #2 (Job number :212C-MD-01739)

Project Id:

Date Received in Lab: Thu Jun-20-19 11:13 am

Contact: Mike Carmona

Report Date: 28-JUN-19

Project Location:

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	628467-001	628467-002	628467-003	628467-004	628467-005	628467-006
	<i>Field Id:</i>	AH-1	AH-1	AH-1	AH-2	AH-7	AH-7
	<i>Depth:</i>	0-1 ft	1-1.5 ft	2-2.5 ft	0-1 ft	0-1 ft	1-1.5 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jun-19-19 00:00	Jun-19-19 00:00	Jun-19-19 00:00	Jun-19-19 00:00	Jun-19-19 00:00	Jun-19-19 00:00
BTEX by EPA 8021B	<i>Extracted:</i>	Jun-27-19 05:00			Jun-27-19 05:00	Jun-27-19 05:00	
	<i>Analyzed:</i>	Jun-27-19 18:18			Jun-27-19 18:42	Jun-27-19 19:05	
	<i>Units/RL:</i>	mg/kg RL			mg/kg RL	mg/kg RL	
Benzene		<0.00200 0.00200			<0.00199 0.00199	<0.00199 0.00199	
Toluene		<0.00200 0.00200			<0.00199 0.00199	<0.00199 0.00199	
Ethylbenzene		<0.00200 0.00200			<0.00199 0.00199	<0.00199 0.00199	
m,p-Xylenes		<0.00399 0.00399			<0.00398 0.00398	<0.00398 0.00398	
o-Xylene		<0.00200 0.00200			<0.00199 0.00199	<0.00199 0.00199	
Total Xylenes		<0.00200 0.00200			<0.00199 0.00199	<0.00199 0.00199	
Total BTEX		<0.00200 0.00200			<0.00199 0.00199	<0.00199 0.00199	
Chloride by EPA 300	<i>Extracted:</i>	Jun-21-19 11:45	Jun-21-19 11:45	Jun-21-19 11:45	Jun-21-19 11:45	Jun-21-19 11:45	Jun-21-19 11:45
	<i>Analyzed:</i>	Jun-21-19 15:06	Jun-21-19 15:12	Jun-21-19 15:17	Jun-21-19 15:23	Jun-21-19 15:28	Jun-21-19 15:34
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		3740 25.2	1300 4.97	919 50.1	931 5.00	2960 50.2	5190 49.7
TPH by SW8015 Mod	<i>Extracted:</i>	Jun-23-19 09:00			Jun-23-19 09:00	Jun-23-19 09:00	
	<i>Analyzed:</i>	Jun-23-19 20:08			Jun-23-19 20:33	Jun-23-19 20:57	
	<i>Units/RL:</i>	mg/kg RL			mg/kg RL	mg/kg RL	
Gasoline Range Hydrocarbons (GRO)		<15.0 15.0			<15.0 15.0	<15.0 15.0	
Diesel Range Organics (DRO)		<15.0 15.0			<15.0 15.0	26.2 15.0	
Motor Oil Range Hydrocarbons (MRO)		<15.0 15.0			<15.0 15.0	<15.0 15.0	
Total TPH		<15.0 15.0			<15.0 15.0	26.2 15.0	

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.

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Version: 1.0%

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 628467

Tetra Tech- Midland, Midland, TX

Project Name: COG JRS Horz Federal #2 (Job number :212C-MD-01739)

Project Id:

Date Received in Lab: Thu Jun-20-19 11:13 am

Contact: Mike Carmona

Report Date: 28-JUN-19

Project Location:

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	628467-007	628467-008				
	Field Id:	AH-7	AH-7				
	Depth:	2-2.5 ft	3-3.5 ft				
	Matrix:	SOIL	SOIL				
	Sampled:	Jun-19-19 00:00	Jun-19-19 00:00				
Chloride by EPA 300	Extracted:	Jun-21-19 11:45	Jun-21-19 12:15				
	Analyzed:	Jun-21-19 15:39	Jun-21-19 18:41				
	Units/RL:	mg/kg RL	mg/kg RL				
Chloride		12200 100	595 5.00				

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.

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

Version: 1.0%

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: COG JRS Horz Federal #2 (Job number :212C-MD-01739)

Work Orders : 628467,

Lab Batch #: 3093433

Sample: 628467-001 / SMP

Project ID:

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/19 20:08

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	75.0	99.9	75	70-135	
o-Terphenyl	39.3	50.0	79	70-135	

Lab Batch #: 3093433

Sample: 628467-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/19 20:33

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	43.5	50.0	87	70-135	

Lab Batch #: 3093433

Sample: 628467-005 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/19 20:57

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	82.3	99.7	83	70-135	
o-Terphenyl	46.7	49.9	94	70-135	

Lab Batch #: 3093834

Sample: 628467-001 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/27/19 18:18

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0305	0.0300	102	70-130	
4-Bromofluorobenzene	0.0340	0.0300	113	70-130	

Lab Batch #: 3093834

Sample: 628467-004 / SMP

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/27/19 18:42

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0308	0.0300	103	70-130	
4-Bromofluorobenzene	0.0333	0.0300	111	70-130	

* 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: COG JRS Horz Federal #2 (Job number :212C-MD-01739)

Work Orders : 628467,

Lab Batch #: 3093834

Sample: 628467-005 / SMP

Project ID:

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/27/19 19:05

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0297	0.0300	99	70-130	
4-Bromofluorobenzene	0.0324	0.0300	108	70-130	

Lab Batch #: 3093433

Sample: 7680670-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/19 12:39

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	100	100	100	70-135	
o-Terphenyl	59.7	50.0	119	70-135	

Lab Batch #: 3093834

Sample: 7680951-1-BLK / BLK

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/27/19 08:08

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0271	0.0300	90	70-130	
4-Bromofluorobenzene	0.0353	0.0300	118	70-130	

Lab Batch #: 3093433

Sample: 7680670-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/19 13:04

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1-Chlorooctane	82.2	100	82	70-135	
o-Terphenyl	51.1	50.0	102	70-135	

Lab Batch #: 3093834

Sample: 7680951-1-BKS / BKS

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/27/19 05:46

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
Analytes					
1,4-Difluorobenzene	0.0264	0.0300	88	70-130	
4-Bromofluorobenzene	0.0354	0.0300	118	70-130	

* 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: COG JRS Horz Federal #2 (Job number :212C-MD-01739)

Work Orders : 628467,

Lab Batch #: 3093433

Sample: 7680670-1-BSD / BSD

Project ID:

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/23/19 13:29

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	90.7	100	91	70-135	
o-Terphenyl	52.7	50.0	105	70-135	

Lab Batch #: 3093834

Sample: 7680951-1-BSD / BSD

Batch: 1 Matrix: Solid

Units: mg/kg

Date Analyzed: 06/27/19 06:10

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0271	0.0300	90	70-130	
4-Bromofluorobenzene	0.0348	0.0300	116	70-130	

Lab Batch #: 3093433

Sample: 628256-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/19 14:19

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	78.2	99.9	78	70-135	
o-Terphenyl	47.7	50.0	95	70-135	

Lab Batch #: 3093834

Sample: 628256-001 S / MS

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/27/19 06:33

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0274	0.0300	91	70-130	
4-Bromofluorobenzene	0.0350	0.0300	117	70-130	

Lab Batch #: 3093433

Sample: 628256-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/23/19 14:44

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	83.4	99.7	84	70-135	
o-Terphenyl	45.3	49.9	91	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: COG JRS Horz Federal #2 (Job number :212C-MD-01739)

Work Orders : 628467,

Project ID:

Lab Batch #: 3093834

Sample: 627832-001 SD / MSD

Batch: 1 Matrix: Soil

Units: mg/kg

Date Analyzed: 06/27/19 06:56

SURROGATE RECOVERY STUDY

BTEX by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorobenzene	0.0276	0.0300	92	70-130	
4-Bromofluorobenzene	0.0343	0.0300	114	70-130	

* 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: COG JRS Horz Federal #2 (Job number :212C-MD-01739)

Work Order #: 628467

Project ID:

Analyst: DVM

Date Prepared: 06/27/2019

Date Analyzed: 06/27/2019

Lab Batch ID: 3093834

Sample: 7680951-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B	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
Analytes											
Benzene	<0.00199	0.0994	0.0837	84	0.100	0.0862	86	3	70-130	35	
Toluene	<0.000453	0.0994	0.102	103	0.100	0.102	102	0	70-130	35	
Ethylbenzene	<0.00199	0.0994	0.116	117	0.100	0.116	116	0	70-130	35	
m,p-Xylenes	<0.00101	0.199	0.234	118	0.200	0.232	116	1	70-130	35	
o-Xylene	0.000349	0.0994	0.112	113	0.100	0.111	111	1	70-130	35	

Analyst: SPC

Date Prepared: 06/21/2019

Date Analyzed: 06/21/2019

Lab Batch ID: 3093266

Sample: 7680449-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300	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
Analytes											
Chloride	<5.00	250	233	93	250	234	94	0	90-110	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

Version: 1.0%



BS / BSD Recoveries



Project Name: COG JRS Horz Federal #2 (Job number :212C-MD-01739)

Work Order #: 628467

Project ID:

Analyst: SPC

Date Prepared: 06/21/2019

Date Analyzed: 06/21/2019

Lab Batch ID: 3093268

Sample: 7680450-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300	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
Analytes											
Chloride	<5.00	250	235	94	250	235	94	0	90-110	20	

Analyst: ARM

Date Prepared: 06/23/2019

Date Analyzed: 06/23/2019

Lab Batch ID: 3093433

Sample: 7680670-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

TPH by SW8015 Mod	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
Analytes											
Gasoline Range Hydrocarbons (GRO)	<15.0	1000	1020	102	1000	1080	108	6	70-135	20	
Diesel Range Organics (DRO)	<8.13	1000	1160	116	1000	1170	117	1	70-135	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

Version: 1.0%



Form 3 - MS / MSD Recoveries



Project Name: COG JRS Horz Federal #2 (Job number :212C-MD-0172--)

Work Order # : 628467

Project ID:

Lab Batch ID: 3093834

QC- Sample ID: 627832-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 06/27/2019

Date Prepared: 06/27/2019

Analyst: DVM

Reporting Units: mg/kg

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

BTEX by EPA 8021B 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	<0.00201	0.101	0.0777	77	0.100	0.0748	75	4	70-130	35	
Toluene	<0.000458	0.101	0.0806	80	0.100	0.0747	75	8	70-130	35	
Ethylbenzene	<0.00201	0.101	0.0815	81	0.100	0.0756	76	8	70-130	35	
m,p-Xylenes	<0.00402	0.201	0.154	77	0.200	0.142	71	8	70-130	35	
o-Xylene	<0.00201	0.101	0.0777	77	0.100	0.0723	72	7	70-130	35	

Lab Batch ID: 3093266

QC- Sample ID: 628028-012 S

Batch #: 1 Matrix: Soil

Date Analyzed: 06/21/2019

Date Prepared: 06/21/2019

Analyst: SPC

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	21.7	252	260	95	252	260	95	0	90-110	20	

Lab Batch ID: 3093266

QC- Sample ID: 628028-022 S

Batch #: 1 Matrix: Soil

Date Analyzed: 06/21/2019

Date Prepared: 06/21/2019

Analyst: SPC

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	4.87	250	258	101	250	257	101	0	90-110	20	

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

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

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: COG JRS Horz Federal #2 (Job number :212C-MD-0172--)

Work Order # : 628467

Project ID:

Lab Batch ID: 3093268

QC- Sample ID: 627846-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 06/21/2019

Date Prepared: 06/21/2019

Analyst: SPC

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	121	251	369	99	251	367	98	1	90-110	20	

Lab Batch ID: 3093268

QC- Sample ID: 628468-008 S

Batch #: 1 Matrix: Soil

Date Analyzed: 06/21/2019

Date Prepared: 06/21/2019

Analyst: SPC

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	633	251	879	98	251	883	100	0	90-110	20	

Lab Batch ID: 3093433

QC- Sample ID: 628256-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 06/23/2019

Date Prepared: 06/23/2019

Analyst: ARM

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)	11.6	999	871	86	997	854	84	2	70-135	20	
Diesel Range Organics (DRO)	11.8	999	966	96	997	993	98	3	70-135	20	

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

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

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.



Setting the Standard since 1990
Stafford, Texas (281-240-4200)
Dallas Texas (214-902-0300)

San Antonio, Texas (210-509-3334)
Midland, Texas (432-704-5251)

Phoenix, Arizona (480-355-0900)

CHAIN OF CUSTODY

Page 1 Of 1

Client / Reporting Information						Project Information							Analytical Information								Matrix Codes								
Company Name / Branch: Tetra Tech, Inc. on behalf of COG Operating, LLC.						Project Name/Number: COG JRS Horiz Federal #2 (job number: 212C-MD-01739)																							
Company Address: 901 W. Wall St., Ste. 100, Midland, TX 79705						Date June 20 th , 2019																							
Email: mike.cammona@tetratech.com						Phone No: (432) 682-4559							Invoice To: Ike Tavaraz, P.G. Senior HSE Supervisor - COG Operating, LLC.																
Project Contact: Mike Cammona						PO Number:																							
Sampler's Name: Mike Cammona & Devin Brown																													
No.	Field ID / Point of Collection	Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MeOH	None/On Ice	Chlorides	BTEX 8021B	BTEX 8260B	TPH 8015M (GRO - DRO - ORO - MRO)											
1	AH-1	0-1'	6/19/19		S	1									✓	✓		✓											
2	AH-1	1-1.5'	6/19/19		S	1									✓	✓													
3	AH-1	2-2.5'	6/19/19		S	1									✓	✓													
4	AH-2	0-1'	6/19/19		S	1									✓	✓		✓											
5	AH-7	0-1'	6/19/19		S	1									✓	✓		✓											
6	AH-7	1-1.5'	6/19/19		S	1									✓	✓		✓											
7	AH-7	2-2.5'	6/19/19		S	1									✓	✓		✓											
8	AH-7	3-3.5'	6/19/19		S	1									✓	✓		✓											
9																													
10																													
Turnaround Time (Business days)						Data Deliverable Information						Notes:																	
☐ Same Day TAT						☐ Level II Std QC						☐ Level IV (Full Data Pkg /raw data)																	
☐ Next Day EMERGENCY						☐ 7 Day TAT						☐ Level III Std QC+ Forms						☐ TRRP Level IV											
☐ 2 Day EMERGENCY						☐ Contract TAT						☐ Level 3 (CLP Forms)						☐ UST / RG -411											
☒ 3 Day EMERGENCY												☐ TRRP Checklist																	
TAT Starts Day received by Lab, if received by 5:00 pm																													
Relinquished by Sampler:						SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY						FED-EX / UPS: Tracking #																	
1 Relinquished by: <i>[Signature]</i>						Date Time: <i>6/20/19 11:13</i>						Received By: <i>[Signature]</i>						Date Time: <i>6/20/19 11:13</i>						Received By: <i>[Signature]</i>					
3 Relinquished by:						Date Time:						Received By:						Date Time:						Received By:					
5 Relinquished by:						Date Time:						Received By:						Date Time:						Received By:					
						Cooler Temp. <i>0.6/10.4</i>						Thermo, Corr. Factor																	



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In

Client: Tetra Tech- Midland

Date/ Time Received: 06/20/2019 11:13:00 AM

Work Order #: 628467

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)?	.4
#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: 06/20/2019

Checklist reviewed by:

Jessica Kramer

Date: 06/20/2019

Analytical Report 628468

for
Tetra Tech- Midland

Project Manager: Mike Carmona

COG Jrs Horz Federal #2 (Job number:212C-MD-01739)

25-JUN-19

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)

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-Atlanta (LELAP Lab ID #04176)

Xenco-Tampa: Florida (E87429), North Carolina (483)



25-JUN-19

Project Manager: **Mike Carmona**

Tetra Tech- Midland

901 West Wall ST

Midland, TX 79701

Reference: XENCO Report No(s): **628468**

COG Jrs Horz Federal #2 (Job number:212C-MD-01739)

Project Address:

Mike Carmona:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 628468. 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. 628468 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,

A handwritten signature in black ink that reads 'Jessica Kramer'.

Jessica Kramer

Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

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



Sample Cross Reference 628468

Tetra Tech- Midland, Midland, TX

COG Jrs Horz Federal #2 (Job number:212C-MD-01739)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
AH-1	S	06-19-19 00:00	0 - 1 ft	628468-001
AH-1	S	06-19-19 00:00	2 - 1 ft	628468-002
AH-1	S	06-19-19 00:00	3 - 1 ft	628468-003
AH-1	S	06-19-19 00:00	4 - 1 ft	628468-004
AH-2	S	06-19-19 00:00	0 - 1 ft	628468-005
AH-2	S	06-19-19 00:00	2 - 1 ft	628468-006
AH-2	S	06-19-19 00:00	3 - 1 ft	628468-007
AH-2	S	06-19-19 00:00	4 - 1 ft	628468-008
AH-3	S	06-19-19 00:00	0 - 1 ft	628468-009
AH-3	S	06-19-19 00:00	2 - 1 ft	628468-010
AH-3	S	06-19-19 00:00	3 - 1 ft	628468-011
AH-3	S	06-19-19 00:00	0 - 1 ft	628468-012
AH-4	S	06-19-19 00:00	2 - 1 ft	628468-013
AH-4	S	06-19-19 00:00	3 - 1 ft	628468-014
AH-6	S	06-19-19 00:00	0 - 1 ft	628468-015
AH-6	S	06-19-19 00:00	2 - 1 ft	628468-016
ESW-1	S	06-19-19 00:00	ft	628468-017
SSW-1	S	06-19-19 00:00	ft	628468-018
WSW-1	S	06-19-19 00:00	ft	628468-019
WSW-2	S	06-19-19 00:00	ft	628468-020



CASE NARRATIVE

Client Name: Tetra Tech- Midland

Project Name: COG Jrs Horz Federal #2 (Job number:212C-MD-01739)

Project ID:

Work Order Number(s): 628468

Report Date: 25-JUN-19

Date Received: 06/20/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None



Certificate of Analysis Summary 628468

Tetra Tech- Midland, Midland, TX

Project Name: COG Jrs Horz Federal #2 (Job number:212C-MD-01739)

Project Id:

Date Received in Lab: Thu Jun-20-19 11:13 am

Contact: Mike Carmona

Report Date: 25-JUN-19

Project Location:

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	628468-001	628468-002	628468-003	628468-004	628468-005	628468-006
	<i>Field Id:</i>	AH-1	AH-1	AH-1	AH-1	AH-2	AH-2
	<i>Depth:</i>	0-1 ft	2-1 ft	3-1 ft	4-1 ft	0-1 ft	2-1 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jun-19-19 00:00	Jun-19-19 00:00	Jun-19-19 00:00	Jun-19-19 00:00	Jun-19-19 00:00	Jun-19-19 00:00
Chloride by EPA 300	<i>Extracted:</i>	Jun-21-19 12:15	Jun-21-19 12:15	Jun-21-19 12:15	Jun-21-19 12:15	Jun-21-19 12:15	Jun-21-19 12:15
	<i>Analyzed:</i>	Jun-21-19 16:29	Jun-21-19 16:34	Jun-21-19 16:40	Jun-21-19 16:45	Jun-21-19 17:02	Jun-21-19 17:07
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		72.6 5.00	177 4.95	403 5.02	1150 5.00	58.6 5.01	130 5.00

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.

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

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 628468

Tetra Tech- Midland, Midland, TX

Project Name: COG Jrs Horz Federal #2 (Job number:212C-MD-01739)

Project Id:

Date Received in Lab: Thu Jun-20-19 11:13 am

Contact: Mike Carmona

Report Date: 25-JUN-19

Project Location:

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	628468-007	628468-008	628468-009	628468-010	628468-011	628468-012
	Field Id:	AH-2	AH-2	AH-3	AH-3	AH-3	AH-3
	Depth:	3-1 ft	4-1 ft	0-1 ft	2-1 ft	3-1 ft	0-1 ft
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Jun-19-19 00:00	Jun-19-19 00:00	Jun-19-19 00:00	Jun-19-19 00:00	Jun-19-19 00:00	Jun-19-19 00:00
Chloride by EPA 300	Extracted:	Jun-21-19 12:15	Jun-21-19 12:15	Jun-21-19 12:15	Jun-21-19 12:15	Jun-21-19 12:15	Jun-21-19 12:15
	Analyzed:	Jun-21-19 17:13	Jun-21-19 17:29	Jun-21-19 17:18	Jun-21-19 17:24	Jun-21-19 17:46	Jun-21-19 17:51
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		1190 5.03	633 5.02	1160 25.1	11300 100	10600 49.6	94.9 4.96

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.

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

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 628468

Tetra Tech- Midland, Midland, TX

Project Name: COG Jrs Horz Federal #2 (Job number:212C-MD-01739)

Project Id:

Date Received in Lab: Thu Jun-20-19 11:13 am

Contact: Mike Carmona

Report Date: 25-JUN-19

Project Location:

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	628468-013	628468-014	628468-015	628468-016	628468-017	628468-018
	Field Id:	AH-4	AH-4	AH-6	AH-6	ESW-1	SSW-1
	Depth:	2-1 ft	3-1 ft	0-1 ft	2-1 ft		
	Matrix:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Sampled:	Jun-19-19 00:00	Jun-19-19 00:00	Jun-19-19 00:00	Jun-19-19 00:00	Jun-19-19 00:00	Jun-19-19 00:00
Chloride by EPA 300	Extracted:	Jun-21-19 12:15	Jun-21-19 12:15	Jun-21-19 12:15	Jun-21-19 12:15	Jun-21-19 12:15	Jun-21-19 12:15
	Analyzed:	Jun-21-19 18:08	Jun-21-19 18:14	Jun-21-19 18:19	Jun-21-19 18:25	Jun-21-19 18:30	Jun-21-19 18:36
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		1450 25.2	809 4.97	31.5 4.98	55.9 4.96	339 5.02	346 5.01

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Jessica Kramer
Project Assistant



Certificate of Analysis Summary 628468

Tetra Tech- Midland, Midland, TX

Project Name: COG Jrs Horz Federal #2 (Job number:212C-MD-01739)

Project Id:

Date Received in Lab: Thu Jun-20-19 11:13 am

Contact: Mike Carmona

Report Date: 25-JUN-19

Project Location:

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	628468-019	628468-020				
	Field Id:	WSW-1	WSW-2				
	Depth:						
	Matrix:	SOIL	SOIL				
	Sampled:	Jun-19-19 00:00	Jun-19-19 00:00				
Chloride by EPA 300	Extracted:	Jun-22-19 10:50	Jun-22-19 10:50				
	Analyzed:	Jun-22-19 11:52	Jun-22-19 11:56				
	Units/RL:	mg/kg RL	mg/kg RL				
Chloride		230 5.00	4210 25.1				

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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



BS / BSD Recoveries



Project Name: COG Jrs Horz Federal #2 (Job number:212C-MD-01739)

Work Order #: 628468

Project ID:

Analyst: SPC

Date Prepared: 06/21/2019

Date Analyzed: 06/21/2019

Lab Batch ID: 3093268

Sample: 7680450-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300	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
Analytes											
Chloride	<5.00	250	235	94	250	235	94	0	90-110	20	

Analyst: CHE

Date Prepared: 06/22/2019

Date Analyzed: 06/22/2019

Lab Batch ID: 3093318

Sample: 7680530-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300	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
Analytes											
Chloride	<5.00	250	239	96	250	239	96	0	90-110	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



Form 3 - MS / MSD Recoveries



Project Name: COG Jrs Horz Federal #2 (Job number:212C-MD-01739,

Work Order # : 628468

Project ID:

Lab Batch ID: 3093268

QC- Sample ID: 627846-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 06/21/2019

Date Prepared: 06/21/2019

Analyst: SPC

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	121	251	369	99	251	367	98	1	90-110	20	

Lab Batch ID: 3093268

QC- Sample ID: 628468-008 S

Batch #: 1 Matrix: Soil

Date Analyzed: 06/21/2019

Date Prepared: 06/21/2019

Analyst: SPC

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	633	251	879	98	251	883	100	0	90-110	20	

Lab Batch ID: 3093318

QC- Sample ID: 626604-080 S

Batch #: 1 Matrix: Soil

Date Analyzed: 06/22/2019

Date Prepared: 06/22/2019

Analyst: CHE

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	<5.03	252	244	97	252	244	97	0	90-110	20	

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

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

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.



Setting the Standard since 1990
 Stafford, Texas (281-240-4200)
 Dallas Texas (214-902-0300)

CHAIN OF CUSTODY

Page 1 of 2

San Antonio, Texas (210-509-3334)
 Midland, Texas (432-704-5251)

Phoenix, Arizona (480-355-0900)

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Xenco Quote #

Xenco Job #

1020109

Client / Reporting Information				Project Information				Analytical Information				Matrix Codes				
Company Name / Branch: Tetra Tech, Inc. on behalf of COG Operating, LLC.				Project Name/Number: COG JRS Horz Federal #2 (job number: 212C-MD-01739)												
Company Address: 901 W. Wall St., Ste. 100, Midland, TX 79705				Date: June 20 th , 2019												
Email: mike.cammona@tetratech.com				Phone No: (432) 682-4559				Invoice To: Ike Tavaraz, P.G. Senior HSE Supervisor - COG Operating, LLC.								
Project Contact: Mike Cammona				PO Number:												
Samplers Name: Mike Cammona & Devin Brown																
No.	Field ID / Point of Collection	Sample Depth	Collection Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MeOH	NONE	Chlorides	Field Comments
1	AH-1	0-1'	6/19/19		S	1										
2	AH-1	2'	6/19/19		S	1										
3	AH-1	3'	6/19/19		S	1										
4	AH-1	4'	6/19/19		S	1										
5	AH-2	0-1'	6/19/19		S	1										
6	AH-2	2'	6/19/19		S	1										
7	AH-2	3'	6/19/19		S	1										
8	AH-2	4'	6/19/19		S	1										
9	AH-3	0-1'	6/19/19		S	1										
10	AH-3	2'	6/19/19		S	1										
Turnaround Time (Business days)																
Data Deliverable Information																
Notes:																
☐ Same Day TAT ☐ 5 Day TAT ☐ Level II Std QC ☐ Level IV (Full Data Pkg/raw data) ☐ Next Day EMERGENCY ☐ 7 Day TAT ☐ Level III Std QC+ Forms ☐ TRRP Level IV ☐ 2 Day EMERGENCY ☐ Contract TAT ☐ Level 3 (CLP Forms) ☐ UST / RG-411 ☒ 3 Day EMERGENCY ☐ TRRP Checklist																
TAT Starts Day received by Lab. if received by 5:00 pm																
SAMPLE CUSTODY MUST BE DOCUMENTED BEFORE EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY																
Relinquished by Sampler:				Date Time:				Received By:				Date Time:				
1. <i>[Signature]</i>				6/19/19 11:13				2. <i>[Signature]</i>				2				
Relinquished by:				Date Time:				Received By:				Date Time:				
3. <i>[Signature]</i>				6/19/19				4. <i>[Signature]</i>				4				
Relinquished by:				Date Time:				Custody Seal #				Preserved where applicable				
5. <i>[Signature]</i>				6/19/19				5				On log Cooler Temp. Thermo Corr Factor				



Setting the Standard since 1990
Stafford, Texas (281-240-4200)
Dallas Texas (214-902-0300)

San Antonio, Texas (210-509-3334)
Midland, Texas (432-704-5251)

Phoenix, Arizona (480-355-0900)

Page 2 Of 2

CHAIN OF CUSTODY

[illegible]



Client: Tetra Tech- Midland

Date/ Time Received: 06/20/2019 11:13:00 AM

Work Order #: 628468

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)?	.4
#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: 06/20/2019

Checklist reviewed by:

Jessica Kramer

Date: 06/20/2019



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

August 27, 2019

MIKE CARMONA

TETRA TECH

901 WEST WALL STREET , STE 100

MIDLAND, TX 79701

RE: JRS HORS FED 2 (2.4.19)

Enclosed are the results of analyses for samples received by the laboratory on 08/22/19 15:25.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	08/22/2019	Sampling Date:	08/20/2019
Reported:	08/27/2019	Sampling Type:	Soil
Project Name:	JRS HORS FED 2 (2.4.19)	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01739	Sample Received By:	Tamara Oldaker
Project Location:	COG - EDDY CO NM		

Sample ID: TRENCH # 1 (2') (H902893-01)

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	08/23/2019	ND	1.69	84.6	2.00	7.56		
Toluene*	<0.050	0.050	08/23/2019	ND	1.83	91.3	2.00	8.61		
Ethylbenzene*	<0.050	0.050	08/23/2019	ND	1.94	97.0	2.00	8.57		
Total Xylenes*	<0.150	0.150	08/23/2019	ND	5.84	97.4	6.00	8.47		
Total BTEX	<0.300	0.300	08/23/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 91.7 % 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	272	16.0	08/26/2019	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/24/2019	ND	191	95.6	200	3.67	
DRO >C10-C28*	<10.0	10.0	08/24/2019	ND	189	94.4	200	6.47	
EXT DRO >C28-C36	<10.0	10.0	08/24/2019	ND					

Surrogate: 1-Chlorooctane 86.3 % 41-142

Surrogate: 1-Chlorooctadecane 91.8 % 37.6-147

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received:	08/22/2019	Sampling Date:	08/20/2019
Reported:	08/27/2019	Sampling Type:	Soil
Project Name:	JRS HORS FED 2 (2.4.19)	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01739	Sample Received By:	Tamara Oldaker
Project Location:	COG - EDDY CO NM		

Sample ID: TRENCH # 1 (3') (H902893-02)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	208	16.0	08/26/2019	ND	432	108	400	3.77		

Sample ID: TRENCH # 1 (4') (H902893-03)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	336	16.0	08/26/2019	ND	432	108	400	3.77		

Sample ID: TRENCH # 1 (6') (H902893-04)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	480	16.0	08/26/2019	ND	432	108	400	3.77	

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received: 08/22/2019
 Reported: 08/27/2019
 Project Name: JRS HORS FED 2 (2.4.19)
 Project Number: 212C-MD-01739
 Project Location: COG - EDDY CO NM

Sampling Date: 08/20/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: TRENCH # 2 (1') (H902893-05)

BTX 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	08/23/2019	ND	1.69	84.6	2.00	7.56		
Toluene*	<0.050	0.050	08/23/2019	ND	1.83	91.3	2.00	8.61		
Ethylbenzene*	<0.050	0.050	08/23/2019	ND	1.94	97.0	2.00	8.57		
Total Xylenes*	<0.150	0.150	08/23/2019	ND	5.84	97.4	6.00	8.47		
Total BTX	<0.300	0.300	08/23/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 92.5 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	9000	16.0	08/26/2019	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/24/2019	ND	191	95.6	200	3.67	
DRO >C10-C28*	<10.0	10.0	08/24/2019	ND	189	94.4	200	6.47	
EXT DRO >C28-C36	<10.0	10.0	08/24/2019	ND					

Surrogate: 1-Chlorooctane 106 % 41-142

Surrogate: 1-Chlorooctadecane 112 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received: 08/22/2019
 Reported: 08/27/2019
 Project Name: JRS HORS FED 2 (2.4.19)
 Project Number: 212C-MD-01739
 Project Location: COG - EDDY CO NM

Sampling Date: 08/20/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: TRENCH # 2 (2') (H902893-06)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	14800	16.0	08/26/2019	ND	400	100	400	0.00	QM-07

Sample ID: TRENCH # 2 (3') (H902893-07)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2120	16.0	08/26/2019	ND	400	100	400	0.00	

Sample ID: TRENCH # 2 (4') (H902893-08)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3720	16.0	08/26/2019	ND	400	100	400	0.00		

Sample ID: TRENCH # 2 (5') (H902893-09)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2280	16.0	08/26/2019	ND	400	100	400	0.00	

Sample ID: TRENCH # 2 (6') (H902893-10)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3600	16.0	08/26/2019	ND	400	100	400	0.00	

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Analytical Results For:

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

Received:	08/22/2019	Sampling Date:	08/20/2019
Reported:	08/27/2019	Sampling Type:	Soil
Project Name:	JRS HORS FED 2 (2.4.19)	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01739	Sample Received By:	Tamara Oldaker
Project Location:	COG - EDDY CO NM		

Sample ID: TRENCH # 2 (7') (H902893-11)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5600	16.0	08/26/2019	ND	400	100	400	0.00	

Sample ID: TRENCH # 2 (8') (H902893-12)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4640	16.0	08/26/2019	ND	400	100	400	0.00	

Sample ID: TRENCH # 2 (10') (H902893-13)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1730	16.0	08/26/2019	ND	400	100	400	0.00	

Sample ID: TRENCH # 2 (12') (H902893-14)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4120	16.0	08/26/2019	ND	400	100	400	0.00	

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Analytical Results For:

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

Received: 08/22/2019
 Reported: 08/27/2019
 Project Name: JRS HORS FED 2 (2.4.19)
 Project Number: 212C-MD-01739
 Project Location: COG - EDDY CO NM

Sampling Date: 08/20/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: TRENCH # 3 (1') (H902893-15)

BTX 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	08/24/2019	ND	1.68	83.8	2.00	3.40		
Toluene*	<0.050	0.050	08/24/2019	ND	1.84	92.2	2.00	1.47		
Ethylbenzene*	<0.050	0.050	08/24/2019	ND	1.98	98.8	2.00	1.53		
Total Xylenes*	<0.150	0.150	08/24/2019	ND	5.90	98.3	6.00	1.11		
Total BTX	<0.300	0.300	08/24/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 92.9 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	800	16.0	08/26/2019	ND	400	100	400	0.00	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/24/2019	ND	191	95.6	200	3.67	
DRO >C10-C28*	<10.0	10.0	08/24/2019	ND	189	94.4	200	6.47	
EXT DRO >C28-C36	<10.0	10.0	08/24/2019	ND					

Surrogate: 1-Chlorooctane 107 % 41-142

Surrogate: 1-Chlorooctadecane 113 % 37.6-147

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Analytical Results For:

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

Received:	08/22/2019	Sampling Date:	08/20/2019
Reported:	08/27/2019	Sampling Type:	Soil
Project Name:	JRS HORS FED 2 (2.4.19)	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01739	Sample Received By:	Tamara Oldaker
Project Location:	COG - EDDY CO NM		

Sample ID: TRENCH # 3 (2') (H902893-16)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	992	16.0	08/26/2019	ND	400	100	400	0.00	

Sample ID: TRENCH # 3 (3') (H902893-17)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	736	16.0	08/26/2019	ND	400	100	400	0.00	

Sample ID: TRENCH # 3 (4') (H902893-18)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1180	16.0	08/26/2019	ND	400	100	400	0.00	

Sample ID: TRENCH # 3 (6') (H902893-19)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	992	16.0	08/26/2019	ND	400	100	400	0.00	

Sample ID: TRENCH # 3 (8') (H902893-20)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	432	16.0	08/26/2019	ND	400	100	400	0.00	

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Analytical Results For:

TETRA TECH
 MIKE CARMONA
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 MIDLAND TX, 79701
 Fax To: (432) 682-3946

Received:	08/22/2019	Sampling Date:	08/20/2019
Reported:	08/27/2019	Sampling Type:	Soil
Project Name:	JRS HORS FED 2 (2.4.19)	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01739	Sample Received By:	Tamara Oldaker
Project Location:	COG - EDDY CO NM		

Sample ID: TRENCH # 3 (10') (H902893-21)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	432	16.0	08/26/2019	ND	400	100	400	0.00	

Sample ID: TRENCH # 3 (12') (H902893-22)

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	08/26/2019	ND	400	100	400	0.00	

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Analytical Results For:

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 Fax To: (432) 682-3946

Received: 08/22/2019
 Reported: 08/27/2019
 Project Name: JRS HORS FED 2 (2.4.19)
 Project Number: 212C-MD-01739
 Project Location: COG - EDDY CO NM

Sampling Date: 08/20/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: TRENCH # 5 (1') (H902893-23)

BTX 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	08/24/2019	ND	1.68	83.8	2.00	3.40	
Toluene*	<0.050	0.050	08/24/2019	ND	1.84	92.2	2.00	1.47	
Ethylbenzene*	<0.050	0.050	08/24/2019	ND	1.98	98.8	2.00	1.53	
Total Xylenes*	<0.150	0.150	08/24/2019	ND	5.90	98.3	6.00	1.11	
Total BTX	<0.300	0.300	08/24/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 93.8 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1940	16.0	08/26/2019	ND	400	100	400	0.00		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/24/2019	ND	191	95.6	200	3.67	
DRO >C10-C28*	<10.0	10.0	08/24/2019	ND	189	94.4	200	6.47	
EXT DRO >C28-C36	<10.0	10.0	08/24/2019	ND					

Surrogate: 1-Chlorooctane 110 % 41-142

Surrogate: 1-Chlorooctadecane 117 % 37.6-147

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Analytical Results For:

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

Received:	08/22/2019	Sampling Date:	08/20/2019
Reported:	08/27/2019	Sampling Type:	Soil
Project Name:	JRS HORS FED 2 (2.4.19)	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01739	Sample Received By:	Tamara Oldaker
Project Location:	COG - EDDY CO NM		

Sample ID: TRENCH # 5 (2') (H902893-24)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	528	16.0	08/26/2019	ND	400	100	400	0.00	

Sample ID: TRENCH # 5 (3') (H902893-25)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/26/2019	ND	400	100	400	0.00	

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Analytical Results For:

TETRA TECH
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 Fax To: (432) 682-3946

Received: 08/22/2019
 Reported: 08/27/2019
 Project Name: JRS HORS FED 2 (2.4.19)
 Project Number: 212C-MD-01739
 Project Location: COG - EDDY CO NM

Sampling Date: 08/20/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: TRENCH # 6 (1') (H902893-26)

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	08/24/2019	ND	1.68	83.8	2.00	3.40		
Toluene*	<0.050	0.050	08/24/2019	ND	1.84	92.2	2.00	1.47		
Ethylbenzene*	<0.050	0.050	08/24/2019	ND	1.98	98.8	2.00	1.53		
Total Xylenes*	<0.150	0.150	08/24/2019	ND	5.90	98.3	6.00	1.11		
Total BTEx	<0.300	0.300	08/24/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 91.9 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2200	16.0	08/26/2019	ND	432	108	400	3.77	QM-07	

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	08/24/2019	ND	191	95.6	200	3.67	
DRO >C10-C28*	<10.0	10.0	08/24/2019	ND	189	94.4	200	6.47	
EXT DRO >C28-C36	<10.0	10.0	08/24/2019	ND					

Surrogate: 1-Chlorooctane 109 % 41-142

Surrogate: 1-Chlorooctadecane 116 % 37.6-147

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Analytical Results For:

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

Received: 08/22/2019
 Reported: 08/27/2019
 Project Name: JRS HORS FED 2 (2.4.19)
 Project Number: 212C-MD-01739
 Project Location: COG - EDDY CO NM

Sampling Date: 08/20/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: TRENCH # 6 (2') (H902893-27)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	4480	16.0	08/26/2019	ND	432	108	400	3.77		

Sample ID: TRENCH # 6 (3') (H902893-28)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5920	16.0	08/26/2019	ND	432	108	400	3.77		

Sample ID: TRENCH # 6 (4') (H902893-29)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1920	16.0	08/26/2019	ND	432	108	400	3.77	

Sample ID: TRENCH # 6 (5') (H902893-30)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	08/26/2019	ND	432	108	400	3.77	

Sample ID: TRENCH # 6 (8') (H902893-31)

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	08/26/2019	ND	432	108	400	3.77		

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Analytical Results For:

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 Fax To: (432) 682-3946

Received:	08/22/2019	Sampling Date:	08/20/2019
Reported:	08/27/2019	Sampling Type:	Soil
Project Name:	JRS HORS FED 2 (2.4.19)	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01739	Sample Received By:	Tamara Oldaker
Project Location:	COG - EDDY CO NM		

Sample ID: TRENCH # 6 (10') (H902893-32)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	1410	16.0	08/26/2019	ND	432	108	400	3.77		

Sample ID: TRENCH # 6 (12') (H902893-33)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	144	16.0	08/26/2019	ND	432	108	400	3.77	

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	08/22/2019	Sampling Date:	08/22/2019
Reported:	08/27/2019	Sampling Type:	Soil
Project Name:	JRS HORS FED 2 (2.4.19)	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01739	Sample Received By:	Tamara Oldaker
Project Location:	COG - EDDY CO NM		

Sample ID: AUGER HOLE # 7 (0-1') (H902893-34)

BTX 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	08/24/2019	ND	1.68	83.8	2.00	3.40		
Toluene*	<0.050	0.050	08/24/2019	ND	1.84	92.2	2.00	1.47		
Ethylbenzene*	<0.050	0.050	08/24/2019	ND	1.98	98.8	2.00	1.53		
Total Xylenes*	<0.150	0.150	08/24/2019	ND	5.90	98.3	6.00	1.11		
Total BTX	<0.300	0.300	08/24/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 90.8 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	2520	16.0	08/26/2019	ND	432	108	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/26/2019	ND	192	95.8	200	0.189	
DRO >C10-C28*	<10.0	10.0	08/26/2019	ND	190	95.0	200	4.12	
EXT DRO >C28-C36	<10.0	10.0	08/26/2019	ND					

Surrogate: 1-Chlorooctane 80.4 % 41-142

Surrogate: 1-Chlorooctadecane 87.6 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received: 08/22/2019
 Reported: 08/27/2019
 Project Name: JRS HORS FED 2 (2.4.19)
 Project Number: 212C-MD-01739
 Project Location: COG - EDDY CO NM

Sampling Date: 08/22/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: AUGER HOLE # 7 (1-1.5') (H902893-35)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5280	16.0	08/26/2019	ND	432	108	400	3.77		

Sample ID: AUGER HOLE # 7 (2-2.5') (H902893-36)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	7280	16.0	08/26/2019	ND	432	108	400	3.77		

Sample ID: AUGER HOLE # 7 (3-3.5') (H902893-37)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	5760	16.0	08/26/2019	ND	432	108	400	3.77		

Sample ID: AUGER HOLE # 7 (4-4.5') (H902893-38)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	3960	16.0	08/26/2019	ND	432	108	400	3.77		

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

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

Received: 08/22/2019
 Reported: 08/27/2019
 Project Name: JRS HORS FED 2 (2.4.19)
 Project Number: 212C-MD-01739
 Project Location: COG - EDDY CO NM

Sampling Date: 08/20/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: BACKGROUND (1') (H902893-39)

BTX 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	08/26/2019	ND	1.67	83.6	2.00	1.03	QR-03
Toluene*	<0.050	0.050	08/26/2019	ND	1.87	93.4	2.00	0.837	
Ethylbenzene*	<0.050	0.050	08/26/2019	ND	1.97	98.5	2.00	3.20	
Total Xylenes*	<0.150	0.150	08/26/2019	ND	6.13	102	6.00	2.59	
Total BTX	<0.300	0.300	08/26/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 93.6 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/26/2019	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/26/2019	ND	192	95.8	200	0.189	
DRO >C10-C28*	<10.0	10.0	08/26/2019	ND	190	95.0	200	4.12	
EXT DRO >C28-C36	<10.0	10.0	08/26/2019	ND					

Surrogate: 1-Chlorooctane 72.9 % 41-142

Surrogate: 1-Chlorooctadecane 78.0 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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

Analytical Results For:

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

Received:	08/22/2019	Sampling Date:	08/20/2019
Reported:	08/27/2019	Sampling Type:	Soil
Project Name:	JRS HORS FED 2 (2.4.19)	Sampling Condition:	Cool & Intact
Project Number:	212C-MD-01739	Sample Received By:	Tamara Oldaker
Project Location:	COG - EDDY CO NM		

Sample ID: BACKGROUND (2') (H902893-40)

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	08/26/2019	ND	432	108	400	3.77		

Sample ID: BACKGROUND (3') (H902893-41)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	16.0	16.0	08/26/2019	ND	432	108	400	3.77		

Sample ID: BACKGROUND (4') (H902893-42)

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	08/26/2019	ND	432	108	400	3.77	

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Notes and Definitions

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.
QR-02	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
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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A handwritten signature in black ink, appearing to read "Celey D. Keene".

Celey D. Keene, Lab Director/Quality Manager

42 fo 02 ege

Analysis Request of Custody Record

Page 1 of 5



Tetra Tech, Inc.

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

Client Name: Concho		Site Manager: Mike Carmona	
Project Name: JRS Hors Fed 2 (2.4.19)		Project #: 212C-MD-01739	
Project Location: Eddy Co, NM (county, state)		Project #: 212C-MD-01739	
Invoice to: COG - Ike Tavares		Sampler Signature: Conner Moehring	
Receiving Laboratory: Cardinal		Sampler Signature: Conner Moehring	
Comments:			

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING		MATRIX		PRESERVATIVE METHOD				# CONTAINERS	FILTERED (Y/N)	
		DATE	TIME	WATER	SOIL	HCL	HNO ₃	ICE	None			
												YEAR: 2019
1	TRENCH #1 (2')	8/22/19		X				X			1	2
2	1 (3')			X				X			1	2
3	1 (4')			X				X			1	2
4	1 (6')			X				X			1	2
5	TRENCH #2 (1')			X				X			1	2
6	2'			X				X			1	2
7	3'			X				X			1	2
8	4'			X				X			1	2
9	5'			X				X			1	2
10	6'			X				X			1	2

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

 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

ORIGINAL COPY

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

 LAB USE ONLY
 Sample Temperature
 3.3°C #47
 3.7°C
 REMARKS:

42 JO 12 egeD

Analysis Request of Chain of Custody Record

Page 2 of 5



Tetra Tech, Inc.

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

Client Name: Concho		Site Manager: Mike Carmona	
Project Name: JRS Hors Fed 2 (2.4.19)		Project #: 212C-MD-01739	
Project Location: Eddy Co, NM (county, state)		Invoice to: COG - Ike Tavaréz	
Receiving Laboratory: Cardinal		Sampler Signature: Conner Moehring	
Comments:			

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING		MATRIX		PRESERVATIVE METHOD			# CONTAINERS	FILTERED (Y/N)	ANALYSIS REQUEST (Circle or Specify Method No.)	
		DATE	TIME	WATER	SOIL	HCL	HNO ₃	ICE				None
11	TRENCH 2 7'	8/20/19		X				X		1	2	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
12	8'			X				X		1	2	
13	10'			X				X		1	2	
14	12'			X				X		1	2	
15	TRENCH 3 1'			X				X		1	2	
16	2'			X				X		1	2	
17	3'			X				X		1	2	
18	4'			X				X		1	2	
19	6'			X				X		1	2	
20	8'			X				X		1	2	

LAB USE ONLY	REMARKS:
☒ STANDARD ☐ RUSH: Same Day 24 hr 48 hr 72 hr ☐ Rush Charges Authorized ☐ Special Report Limits or TRRP Report	Sample Temperature 3.3e #47 3.7e Collected

Inquired by: <i>Ben Murphy</i> Date: 8/22/19 Time: 15:25 Received by: <i>Conner Moehring</i> Date: 8-22-19 Time: 15:25 Inquired by: Date: Time: Received by: Date: Time:	Date: Time: Date: Time:
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42 JO 22 egeD

Analysis Request of Custody Record

Page 3 of 5



Tetra Tech, Inc.

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

Client Name: Concho Site Manager: Mike Carmona

Project Name: JIRS Hors Fed 2 (2.4.19)

Project Location: Eddy Co, NM Project #: 212C-MD-01739

Invoice to:

COG - Ike Tavaréz

Receiving Laboratory:

Cardinal

Sampler Signature:

Conner Moehring

Comments:

ANALYSIS REQUEST

(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING		MATRIX		PRESERVATIVE METHOD				# CONTAINERS	FILTERED (Y/N)	ANALYSIS REQUEST
		DATE	TIME	WATER	SOIL	HCL	HNO ₃	ICE	None			
21	TENCH # 3 (10')	8/20/14		X				X		1	2	BTEX 8021B BTEX 8260B
22	TENCH # 2 (2')			X				X		1	2	TPH TX1005 (Ext to C35)
23	TENCH # 5 (1')			X				X		1	2	TPH 8015M (GRO - DRO - ORO - MRO)
24	TENCH # 2 (2')			X				X		1	2	PAH 8270C
25	TENCH # 3 (3')			X				X		1	2	Total Metals Ag As Ba Cd Cr Pb Se Hg
26	TENCH # 6 (1')			X				X		1	2	TCLP Metals Ag As Ba Cd Cr Pb Se Hg
27	TENCH # 2 (2')			X				X		1	2	TCLP Volatiles
28	TENCH # 3 (3')			X				X		1	2	TCLP Semi Volatiles
29	TENCH # 4 (4')			X				X		1	2	RCI
30	TENCH # 5 (5')			X				X		1	2	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

Requisitioned by: Date: Time: Received by: Date: Time:

Requisitioned by: Date: Time: Received by: Date: Time:

Requisitioned by: Date: Time: Received by: Date: Time:

Requisitioned by: Date: Time: Received by: Date: Time:

LAB USE ONLY

REMARKS:

STANDARD

Sample Temperature

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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42 JO 32 ebaD

Analysis Request of Chain of Custody Record

Page 4 of 5



Tetra Tech, Inc.

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

Client Name: Concho Site Manager: Mike Carmona

Project Name: JRS Hors Fed 2 (2.4.19)

Project Location: Eddy Co, NM Project #: 212C-MD-01739

Invoice to: COG - lke Tavaréz

Receiving Laboratory: Cardinal Sampler Signature: Conner Moehring

Comments:

 LAB # 4902893
 (LAB USE ONLY)

SAMPLE IDENTIFICATION

		DATE	TIME	WATER	SOIL	HCL	HNO ₃	ICE	None	# CONTAINERS	FILTERED (Y/N)
31	Trench 6 (5')	8/20/19		X	X	X	X	X	X	1	2
32	(10')			X	X	X	X	X	X	1	2
33	(12')			X	X	X	X	X	X	1	2
34	Pugw Hole # 7 (0-1')	8/22/19		X	X	X	X	X	X	1	2
35	(1-2.5')	8/22/19		X	X	X	X	X	X	1	2
36	(2-2.5')	8/22/19		X	X	X	X	X	X	1	2
37	(3-3.5')	8/22/19		X	X	X	X	X	X	1	2
38	(4-4.5')	8/22/19		X	X	X	X	X	X	1	2
39	Background (1')	8/20/19		X	X	X	X	X	X	1	2

Relinquished by: Date: 8/22/19 Time: Received by: Date: 8-22-19 15:25 Time:

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

 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

LAB USE ONLY

REMARKS: STANDARD

Sample Temperature

3.32 #47

3.72

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

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Page 24 of 24

Analysis Request of Chain of Custody Record

Page 5 of 5



Tetra Tech, Inc.

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

Client Name: Concho		Site Manager: Mike Carmona	
Project Name: JRS Hors Fed 2 (2.4.19)			
Project Location: Eddy Co. NM		Project #: 212C-MD-01739	
Invoice to: COG - Ike Tavaréz		Sampler Signature: Conner Moehring	
Receiving Laboratory: Cardinal		Comments:	
LAB # H902893 (LAB USE ONLY)			
SAMPLE IDENTIFICATION		SAMPLING	
YEAR: 2019		DATE	
TIME		WATER	
MATRIX		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			
LAB USE ONLY			
REMARKS:			
STANDARD			
RUSH: Same Day 24 hr 48 hr 72 hr			
Rush Charges Authorized			
Special Report Limits or TRRP Report			

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Analytical Report 640369

for
Tetra Tech- Midland

Project Manager: Mike Carmona

JRS HORZ FED 2H (2.4.19)

212C-MD-01739

22-OCT-19

Collected By: Client



**1089 N Canal Street
Carlsbad, NM 88220**

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Tampa: Florida (E87429), North Carolina (483)



22-OCT-19

Project Manager: **Mike Carmona**

Tetra Tech- Midland

901 West Wall ST

Midland, TX 79701

Reference: XENCO Report No(s): **640369**

JRS HORZ FED 2H (2.4.19)

Project Address: Eddy Co, NM

Mike Carmona:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 640369. 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. 640369 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,

A handwritten signature in black ink that reads 'Jessica Kramer'.

Jessica Kramer

Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

**Sample Cross Reference 640369****Tetra Tech- Midland, Midland, TX**

JRS HORZ FED 2H (2.4.19)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
AH#7 (0-1')	S	10-17-19 00:00	0 - 1 ft	640369-001
AH#7 (1-1.5')	S	10-17-19 00:00	1 - 1.5 ft	640369-002
AH#7 (2-2.5')	S	10-17-19 00:00	2 - 2.5 ft	640369-003
AH#7 (3-3.5')	S	10-17-19 00:00	3 - 3.5 ft	640369-004



Certificate of Analysis Summary 640369

Tetra Tech- Midland, Midland, TX

Project Name: JRS HORZ FED 2H (2.4.19)

Project Id: 212C-MD-01739

Contact: Mike Carmona

Project Location: Eddy Co, NM

Date Received in Lab: Thu Oct-17-19 04:35 pm

Report Date: 22-OCT-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	640369-001	640369-002	640369-003	640369-004		
	<i>Field Id:</i>	AH#7 (0-1')	AH#7 (1-1.5')	AH#7 (2-2.5')	AH#7 (3-3.5')		
	<i>Depth:</i>	0-1 ft	1-1.5 ft	2-2.5 ft	3-3.5 ft		
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL		
	<i>Sampled:</i>	Oct-17-19 00:00	Oct-17-19 00:00	Oct-17-19 00:00	Oct-17-19 00:00		
BTEX by EPA 8021B	<i>Extracted:</i>	Oct-17-19 17:10					
	<i>Analyzed:</i>	Oct-18-19 12:56					
	<i>Units/RL:</i>	mg/kg RL					
Benzene		<0.00100 0.00100					
Toluene		<0.00100 0.00100					
Ethylbenzene		<0.00100 0.00100					
m,p-Xylenes		<0.00200 0.00200					
o-Xylene		<0.00100 0.00100					
Total Xylenes		<0.00100 0.00100					
Total BTEX		<0.00100 0.00100					
Chloride by EPA 300	<i>Extracted:</i>	Oct-18-19 17:10	Oct-18-19 17:10	Oct-18-19 17:10	Oct-18-19 17:10		
	<i>Analyzed:</i>	Oct-18-19 20:18	Oct-18-19 20:25	Oct-18-19 20:46	Oct-18-19 20:52		
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL		
Chloride		895 99.8	1160 99.4	7310 501	11100 503		
TPH by SW8015 Mod	<i>Extracted:</i>	** ** *					
	<i>Analyzed:</i>	Oct-18-19 07:25					
	<i>Units/RL:</i>	mg/kg RL					
Gasoline Range Hydrocarbons (GRO)		<50.1 50.1					
Diesel Range Organics (DRO)		<50.1 50.1					
Motor Oil Range Hydrocarbons (MRO)		<50.1 50.1					
Total TPH		<50.1 50.1					

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.

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

Jessica Kramer
Project Assistant



CASE NARRATIVE

Client Name: Tetra Tech- Midland

Project Name: JRS HORZ FED 2H (2.4.19)

Project ID: 212C-MD-01739
Work Order Number(s): 640369

Report Date: 22-OCT-19
Date Received: 10/17/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3104782 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



Certificate of Analytical Results 640369

Tetra Tech- Midland, Midland, TX

JRS HORZ FED 2H (2.4.19)

Sample Id: AH#7 (0-1')

Matrix: Soil

Date Received: 10.17.19 16.35

Lab Sample Id: 640369-001

Date Collected: 10.17.19 00.00

Sample Depth: 0 - 1 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 10.18.19 17.10

Basis: Wet Weight

Seq Number: 3104897

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	895	99.8	mg/kg	10.18.19 20.18		10

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DTH

% Moisture:

Analyst: DTH

Date Prep: 10.17.19 16.30

Basis: Wet Weight

Seq Number: 3104747

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.1	50.1	mg/kg	10.18.19 07.25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.1	50.1	mg/kg	10.18.19 07.25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.1	50.1	mg/kg	10.18.19 07.25	U	1
Total TPH	PHC635	<50.1	50.1	mg/kg	10.18.19 07.25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	102	%	70-135	10.18.19 07.25	
o-Terphenyl	84-15-1	105	%	70-135	10.18.19 07.25	



Certificate of Analytical Results 640369

Tetra Tech- Midland, Midland, TX

JRS HORZ FED 2H (2.4.19)

Sample Id: AH#7 (0-1')

Matrix: Soil

Date Received: 10.17.19 16.35

Lab Sample Id: 640369-001

Date Collected: 10.17.19 00.00

Sample Depth: 0 - 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 10.17.19 17.10

Basis: Wet Weight

Seq Number: 3104782

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00100	0.00100	mg/kg	10.18.19 12.56	U	1
Toluene	108-88-3	<0.00100	0.00100	mg/kg	10.18.19 12.56	U	1
Ethylbenzene	100-41-4	<0.00100	0.00100	mg/kg	10.18.19 12.56	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	10.18.19 12.56	U	1
o-Xylene	95-47-6	<0.00100	0.00100	mg/kg	10.18.19 12.56	U	1
Total Xylenes	1330-20-7	<0.00100	0.00100	mg/kg	10.18.19 12.56	U	1
Total BTEX		<0.00100	0.00100	mg/kg	10.18.19 12.56	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	108	%	70-130	10.18.19 12.56		
4-Bromofluorobenzene	460-00-4	123	%	70-130	10.18.19 12.56		

**Certificate of Analytical Results 640369****Tetra Tech- Midland, Midland, TX**

JRS HORZ FED 2H (2.4.19)

Sample Id: **AH#7 (1-1.5')**

Matrix: Soil

Date Received: 10.17.19 16.35

Lab Sample Id: 640369-002

Date Collected: 10.17.19 00.00

Sample Depth: 1 - 1.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 10.18.19 17.10

Basis: Wet Weight

Seq Number: 3104897

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1160	99.4	mg/kg	10.18.19 20.25		10

**Certificate of Analytical Results 640369****Tetra Tech- Midland, Midland, TX**

JRS HORZ FED 2H (2.4.19)

Sample Id: **AH#7 (2-2.5')**

Matrix: Soil

Date Received: 10.17.19 16.35

Lab Sample Id: 640369-003

Date Collected: 10.17.19 00.00

Sample Depth: 2 - 2.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 10.18.19 17.10

Basis: Wet Weight

Seq Number: 3104897

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7310	501	mg/kg	10.18.19 20.46		50

**Certificate of Analytical Results 640369****Tetra Tech- Midland, Midland, TX**

JRS HORZ FED 2H (2.4.19)

Sample Id: **AH#7 (3-3.5')**

Matrix: Soil

Date Received: 10.17.19 16.35

Lab Sample Id: 640369-004

Date Collected: 10.17.19 00.00

Sample Depth: 3 - 3.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 10.18.19 17.10

Basis: Wet Weight

Seq Number: 3104897

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	11100	503	mg/kg	10.18.19 20.52		50



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



Tetra Tech- Midland
JRS HORZ FED 2H (2.4.19)

Analytical Method: Chloride by EPA 300

Seq Number: 3104897

MB Sample Id: 7688482-1-BLK

Matrix: Solid

LCS Sample Id: 7688482-1-BKS

Prep Method: E300P

Date Prep: 10.18.19

LCSD Sample Id: 7688482-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	249	100	245	98	90-110	2	20	mg/kg	10.18.19 18:30	

Analytical Method: Chloride by EPA 300

Seq Number: 3104897

Parent Sample Id: 640368-020

Matrix: Soil

MS Sample Id: 640368-020 S

Prep Method: E300P

Date Prep: 10.18.19

MSD Sample Id: 640368-020 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	7340	4020	12400	126	12300	124	90-110	1	20	mg/kg	10.18.19 18:50	X

Analytical Method: Chloride by EPA 300

Seq Number: 3104897

Parent Sample Id: 640369-002

Matrix: Solid

MS Sample Id: 640369-002 S

Prep Method: E300P

Date Prep: 10.18.19

MSD Sample Id: 640369-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1160	1990	3350	110	3280	107	90-110	2	20	mg/kg	10.18.19 20:32	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3104747

MB Sample Id: 7688441-1-BLK

Matrix: Solid

LCS Sample Id: 7688441-1-BKS

Prep Method: SW8015P

Date Prep: 10.17.19

LCSD Sample Id: 7688441-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1010	101	970	97	70-135	4	35	mg/kg	10.18.19 02:11	
Diesel Range Organics (DRO)	<50.0	1000	920	92	861	86	70-135	7	35	mg/kg	10.18.19 02:11	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	98		117		109		70-135	%	10.18.19 02:11
o-Terphenyl	101		112		109		70-135	%	10.18.19 02:11

Analytical Method: TPH by SW8015 Mod

Seq Number: 3104747

Matrix: Solid

MB Sample Id: 7688441-1-BLK

Prep Method: SW8015P

Date Prep: 10.17.19

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	10.18.19 01:52	

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

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

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

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



Tetra Tech- Midland
JRS HORZ FED 2H (2.4.19)

Analytical Method: TPH by SW8015 Mod

Seq Number: 3104747

Parent Sample Id: 640361-016

Matrix: Soil

MS Sample Id: 640361-016 S

Prep Method: SW8015P

Date Prep: 10.17.19

MSD Sample Id: 640361-016 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.1	1000	894	89	882	89	70-135	1	35	mg/kg	10.18.19 03:10	
Diesel Range Organics (DRO)	<50.1	1000	817	82	811	82	70-135	1	35	mg/kg	10.18.19 03:10	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	108		113		70-135	%	10.18.19 03:10
o-Terphenyl	107		116		70-135	%	10.18.19 03:10

Analytical Method: BTEX by EPA 8021B

Seq Number: 3104782

MB Sample Id: 7688433-1-BLK

Matrix: Solid

LCS Sample Id: 7688433-1-BKS

Prep Method: SW5030B

Date Prep: 10.17.19

LCSD Sample Id: 7688433-1-BSO

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.0939	94	0.0966	97	70-130	3	35	mg/kg	10.18.19 06:37	
Toluene	<0.00100	0.100	0.0927	93	0.0955	96	70-130	3	35	mg/kg	10.18.19 06:37	
Ethylbenzene	<0.00100	0.100	0.0930	93	0.0960	96	71-129	3	35	mg/kg	10.18.19 06:37	
m,p-Xylenes	<0.00200	0.200	0.202	101	0.209	105	70-135	3	35	mg/kg	10.18.19 06:37	
o-Xylene	<0.00100	0.100	0.102	102	0.106	106	71-133	4	35	mg/kg	10.18.19 06:37	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		105		105		70-130	%	10.18.19 06:37
4-Bromofluorobenzene	120		123		123		70-130	%	10.18.19 06:37

Analytical Method: BTEX by EPA 8021B

Seq Number: 3104782

Parent Sample Id: 640361-021

Matrix: Soil

MS Sample Id: 640361-021 S

Prep Method: SW5030B

Date Prep: 10.17.19

MSD Sample Id: 640361-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000982	0.0982	0.0837	85	0.0880	89	70-130	5	35	mg/kg	10.18.19 07:15	
Toluene	<0.000982	0.0982	0.0799	81	0.0841	85	70-130	5	35	mg/kg	10.18.19 07:15	
Ethylbenzene	<0.000982	0.0982	0.0775	79	0.0831	84	71-129	7	35	mg/kg	10.18.19 07:15	
m,p-Xylenes	<0.00196	0.196	0.162	83	0.176	89	70-135	8	35	mg/kg	10.18.19 07:15	
o-Xylene	<0.000982	0.0982	0.0845	86	0.0945	96	71-133	11	35	mg/kg	10.18.19 07:15	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		107		70-130	%	10.18.19 07:15
4-Bromofluorobenzene	123		125		70-130	%	10.18.19 07:15

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

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

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

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

Analysis Request of Chain of Custody Record



Tetra Tech, Inc.

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

Page 1 of 1

64103107

Client Name:

CONCHO

Site Manager:

MIKE CARMONA

Project Name:

JRS HOE2 FEB 2H (2.4.15)

Project Location:

Eddy Co, NM

Project #:

212C-WD-01739

Invoice to:

COCA - IKE TRAVEZ

Receiving Laboratory:

Kenco

Sampler Signature:

CONNER MOENHINA

Comments:

 Run deeper samples if C₁₀ + D₁₀ exceeds 100 mg/kg. Run deeper samples if benzene exceeds 50 mg/kg or Total BTEX exceeds 50 mg/kg.

 LAB #
 (LAB USE ONLY)

SAMPLE IDENTIFICATION

SAMPLING

YEAR: 2019

DATE

TIME

MATRIX

WATER

SOIL

HCL

HNO₃

ICE

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

 Inquired by: *Donna Mayberry*
 Date: 10/17/19 Time: 16:35

Received by:

10/17/19 16:35

Date: 10/17/19 Time: 16:35

Inquired by:

Date: Time:

Received by:

Date: Time:

Date: Time:

LAB USE ONLY

REMARKS:

STANDARD

Sample Temperature

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

Analytical Report 640370

for
Tetra Tech- Midland

Project Manager: Mike Carmona

JRS (2.4.19)

212C-MD-01739

22-OCT-19

Collected By: Client



**1089 N Canal Street
Carlsbad, NM 88220**

Xenco-Houston (EPA Lab Code: TX00122):

Texas (T104704215-19-30), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):

Texas (TX104704295-19-22), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16)

Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-21)

Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-19-19)

Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-19-5)

Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)

Xenco-Tampa: Florida (E87429), North Carolina (483)



22-OCT-19

Project Manager: **Mike Carmona**

Tetra Tech- Midland

901 West Wall ST

Midland, TX 79701

Reference: XENCO Report No(s): **640370**

JRS (2.4.19)

Project Address: Eddy Co, NM

Mike Carmona:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 640370. 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. 640370 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,

A handwritten signature in black ink that reads 'Jessica Kramer'.

Jessica Kramer

Project Assistant

Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.

Certified and approved by numerous States and Agencies.

A Small Business and Minority Status Company that delivers SERVICE and QUALITY

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

**Sample Cross Reference 640370****Tetra Tech- Midland, Midland, TX**

JRS (2.4.19)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Bore Hole#2 (0-1')	S	10-17-19 00:00	0 - 1 ft	640370-001
Bore Hole#2 (2-3')	S	10-17-19 00:00	2 - 3 ft	640370-002
Bore Hole#2 (4-5')	S	10-17-19 00:00	4 - 5 ft	640370-003
Bore Hole#2 (6-7')	S	10-17-19 00:00	6 - 7 ft	640370-004
Bore Hole#2 (9-10')	S	10-17-19 00:00	9 - 10 ft	640370-005
Bore Hole#2 (14-15')	S	10-17-19 00:00	14 - 15 ft	640370-006
Bore Hole#2 (19-20')	S	10-17-19 00:00	19 - 20 ft	640370-007

Certificate of Analysis Summary 640370



Tetra Tech- Midland, Midland, TX

Project Name: JRS (2.4.19)

Project Id: 212C-MD-01739

Contact: Mike Carmona

Project Location: Eddy Co, NM

Date Received in Lab: Thu Oct-17-19 04:35 pm

Report Date: 22-OCT-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	640370-001	640370-002	640370-003	640370-004	640370-005	640370-006
	<i>Field Id:</i>	Bore Hole#2 (0-1')	Bore Hole#2 (2-3')	Bore Hole#2 (4-5')	Bore Hole#2 (6-7')	Bore Hole#2 (9-10')	Bore Hole#2 (14-15')
	<i>Depth:</i>	0-1 ft	2-3 ft	4-5 ft	6-7 ft	9-10 ft	14-15 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Oct-17-19 00:00	Oct-17-19 00:00	Oct-17-19 00:00	Oct-17-19 00:00	Oct-17-19 00:00	Oct-17-19 00:00
BTEX by EPA 8021B	<i>Extracted:</i>	Oct-17-19 17:10					
	<i>Analyzed:</i>	Oct-18-19 12:37					
	<i>Units/RL:</i>	mg/kg RL					
Benzene		<0.000998 0.000998					
Toluene		<0.000998 0.000998					
Ethylbenzene		<0.000998 0.000998					
m,p-Xylenes		<0.00200 0.00200					
o-Xylene		<0.000998 0.000998					
Total Xylenes		<0.000998 0.000998					
Total BTEX		<0.000998 0.000998					
Chloride by EPA 300	<i>Extracted:</i>	Oct-18-19 17:10	Oct-18-19 17:10	Oct-18-19 17:10	Oct-18-19 17:10	Oct-18-19 17:10	Oct-18-19 17:10
	<i>Analyzed:</i>	Oct-18-19 21:13	Oct-18-19 21:19	Oct-18-19 21:26	Oct-18-19 21:33	Oct-18-19 21:40	Oct-18-19 21:46
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		1600 101	3490 D 202	273 D 50.1	147 D 50.1	218 202	135 50.1
TPH by SW8015 Mod	<i>Extracted:</i>	** ** *					
	<i>Analyzed:</i>	Oct-18-19 07:45					
	<i>Units/RL:</i>	mg/kg RL					
Gasoline Range Hydrocarbons (GRO)		<50.2 50.2					
Diesel Range Organics (DRO)		<50.2 50.2					
Motor Oil Range Hydrocarbons (MRO)		<50.2 50.2					
Total TPH		<50.2 50.2					

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.

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

Jessica Kramer
Project Assistant

Certificate of Analysis Summary 640370



Tetra Tech- Midland, Midland, TX

Project Name: JRS (2.4.19)

Project Id: 212C-MD-01739

Contact: Mike Carmona

Project Location: Eddy Co, NM

Date Received in Lab: Thu Oct-17-19 04:35 pm

Report Date: 22-OCT-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	640370-007					
	Field Id:	Bore Hole#2 (19-20')					
	Depth:	19-20 ft					
	Matrix:	SOIL					
	Sampled:	Oct-17-19 00:00					
Chloride by EPA 300	Extracted:	Oct-18-19 14:10					
	Analyzed:	Oct-18-19 18:04					
	Units/RL:	mg/kg RL					
Chloride		141 49.9					

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

Jessica Kramer
Project Assistant



CASE NARRATIVE

Client Name: Tetra Tech- Midland

Project Name: JRS (2.4.19)

Project ID: 212C-MD-01739
Work Order Number(s): 640370

Report Date: 22-OCT-19
Date Received: 10/17/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3104782 BTEX by EPA 8021B

Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



Certificate of Analytical Results 640370

Tetra Tech- Midland, Midland, TX

JRS (2.4.19)

Sample Id: **Bore Hole#2 (0-1')** Matrix: Soil Date Received: 10.17.19 16.35
 Lab Sample Id: 640370-001 Date Collected: 10.17.19 00.00 Sample Depth: 0 - 1 ft
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: MAB % Moisture:
 Analyst: MAB Date Prep: 10.18.19 17.10 Basis: Wet Weight
 Seq Number: 3104897

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1600	101	mg/kg	10.18.19 21.13		10

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DTH % Moisture:
 Analyst: DTH Date Prep: 10.17.19 16.30 Basis: Wet Weight
 Seq Number: 3104747

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.2	50.2	mg/kg	10.18.19 07.45	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.2	50.2	mg/kg	10.18.19 07.45	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.2	50.2	mg/kg	10.18.19 07.45	U	1
Total TPH	PHC635	<50.2	50.2	mg/kg	10.18.19 07.45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	103	%	70-135	10.18.19 07.45	
o-Terphenyl	84-15-1	106	%	70-135	10.18.19 07.45	



Certificate of Analytical Results 640370

Tetra Tech- Midland, Midland, TX

JRS (2.4.19)

Sample Id: **Bore Hole#2 (0-1')**

Matrix: Soil

Date Received: 10.17.19 16.35

Lab Sample Id: 640370-001

Date Collected: 10.17.19 00.00

Sample Depth: 0 - 1 ft

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5030B

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 10.17.19 17.10

Basis: Wet Weight

Seq Number: 3104782

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.000998	0.000998	mg/kg	10.18.19 12.37	U	1
Toluene	108-88-3	<0.000998	0.000998	mg/kg	10.18.19 12.37	U	1
Ethylbenzene	100-41-4	<0.000998	0.000998	mg/kg	10.18.19 12.37	U	1
m,p-Xylenes	179601-23-1	<0.00200	0.00200	mg/kg	10.18.19 12.37	U	1
o-Xylene	95-47-6	<0.000998	0.000998	mg/kg	10.18.19 12.37	U	1
Total Xylenes	1330-20-7	<0.000998	0.000998	mg/kg	10.18.19 12.37	U	1
Total BTEX		<0.000998	0.000998	mg/kg	10.18.19 12.37	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	107	%	70-130	10.18.19 12.37		
1,4-Difluorobenzene	540-36-3	93	%	70-130	10.18.19 12.37		



Certificate of Analytical Results 640370

Tetra Tech- Midland, Midland, TX

JRS (2.4.19)

Sample Id: **Bore Hole#2 (2-3')**

Matrix: Soil

Date Received: 10.17.19 16.35

Lab Sample Id: 640370-002

Date Collected: 10.17.19 00.00

Sample Depth: 2 - 3 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 10.18.19 17.10

Basis: Wet Weight

Seq Number: 3104897

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3490	202	mg/kg	10.21.19 16.15	D	20



Certificate of Analytical Results 640370

Tetra Tech- Midland, Midland, TX

JRS (2.4.19)

Sample Id: **Bore Hole#2 (4-5')** Matrix: Soil Date Received: 10.17.19 16.35
Lab Sample Id: 640370-003 Date Collected: 10.17.19 00.00 Sample Depth: 4 - 5 ft
Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 10.18.19 17.10 Basis: Wet Weight
Seq Number: 3104897

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	273	50.1	mg/kg	10.21.19 12.11	D	5



Certificate of Analytical Results 640370

Tetra Tech- Midland, Midland, TX

JRS (2.4.19)

Sample Id: **Bore Hole#2 (6-7')** Matrix: Soil Date Received: 10.17.19 16.35
Lab Sample Id: 640370-004 Date Collected: 10.17.19 00.00 Sample Depth: 6 - 7 ft
Analytical Method: Chloride by EPA 300 Prep Method: E300P
Tech: MAB % Moisture:
Analyst: MAB Date Prep: 10.18.19 17.10 Basis: Wet Weight
Seq Number: 3104897

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	147	50.1	mg/kg	10.21.19 12.17	D	5



Certificate of Analytical Results 640370

Tetra Tech- Midland, Midland, TX

JRS (2.4.19)

Sample Id: **Bore Hole#2 (9-10')**

Matrix: Soil

Date Received: 10.17.19 16.35

Lab Sample Id: 640370-005

Date Collected: 10.17.19 00.00

Sample Depth: 9 - 10 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 10.18.19 17.10

Basis: Wet Weight

Seq Number: 3104897

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	218	202	mg/kg	10.18.19 21.40		20



Certificate of Analytical Results 640370

Tetra Tech- Midland, Midland, TX

JRS (2.4.19)

Sample Id: **Bore Hole#2 (14-15')**

Matrix: Soil

Date Received: 10.17.19 16.35

Lab Sample Id: 640370-006

Date Collected: 10.17.19 00.00

Sample Depth: 14 - 15 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 10.18.19 17.10

Basis: Wet Weight

Seq Number: 3104897

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	135	50.1	mg/kg	10.18.19 21.46		5



Certificate of Analytical Results 640370

Tetra Tech- Midland, Midland, TX

JRS (2.4.19)

Sample Id: **Bore Hole#2 (19-20')**

Matrix: Soil

Date Received: 10.17.19 16.35

Lab Sample Id: 640370-007

Date Collected: 10.17.19 00.00

Sample Depth: 19 - 20 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: MAB

% Moisture:

Analyst: MAB

Date Prep: 10.18.19 14.10

Basis: Wet Weight

Seq Number: 3104896

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	141	49.9	mg/kg	10.18.19 18.04		5



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



Tetra Tech- Midland

JRS (2.4.19)

Analytical Method: Chloride by EPA 300

Seq Number: 3104896

MB Sample Id: 7688478-1-BLK

Matrix: Solid

LCS Sample Id: 7688478-1-BKS

Prep Method: E300P

Date Prep: 10.18.19

LCSD Sample Id: 7688478-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	253	101	253	101	90-110	0	20	mg/kg	10.18.19 13:14	

Analytical Method: Chloride by EPA 300

Seq Number: 3104897

MB Sample Id: 7688482-1-BLK

Matrix: Solid

LCS Sample Id: 7688482-1-BKS

Prep Method: E300P

Date Prep: 10.18.19

LCSD Sample Id: 7688482-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<10.0	250	249	100	245	98	90-110	2	20	mg/kg	10.18.19 18:30	

Analytical Method: Chloride by EPA 300

Seq Number: 3104896

Parent Sample Id: 640368-001

Matrix: Soil

MS Sample Id: 640368-001 S

Prep Method: E300P

Date Prep: 10.18.19

MSD Sample Id: 640368-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	26.5	200	224	99	225	99	90-110	0	20	mg/kg	10.18.19 15:22	

Analytical Method: Chloride by EPA 300

Seq Number: 3104896

Parent Sample Id: 640368-011

Matrix: Soil

MS Sample Id: 640368-011 S

Prep Method: E300P

Date Prep: 10.18.19

MSD Sample Id: 640368-011 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	32.2	994	985	96	996	97	90-110	1	20	mg/kg	10.18.19 16:49	

Analytical Method: Chloride by EPA 300

Seq Number: 3104897

Parent Sample Id: 640368-020

Matrix: Soil

MS Sample Id: 640368-020 S

Prep Method: E300P

Date Prep: 10.18.19

MSD Sample Id: 640368-020 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	7340	4020	12400	126	12300	124	90-110	1	20	mg/kg	10.18.19 18:50	X

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

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

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

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



Tetra Tech- Midland
JRS (2.4.19)

Analytical Method: Chloride by EPA 300

Seq Number: 3104897

Parent Sample Id: 640369-002

Matrix: Solid

MS Sample Id: 640369-002 S

Prep Method: E300P

Date Prep: 10.18.19

MSD Sample Id: 640369-002 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1160	1990	3350	110	3280	107	90-110	2	20	mg/kg	10.18.19 20:32	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3104747

MB Sample Id: 7688441-1-BLK

Matrix: Solid

LCS Sample Id: 7688441-1-BKS

Prep Method: SW8015P

Date Prep: 10.17.19

LCSD Sample Id: 7688441-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	1010	101	970	97	70-135	4	35	mg/kg	10.18.19 02:11	
Diesel Range Organics (DRO)	<50.0	1000	920	92	861	86	70-135	7	35	mg/kg	10.18.19 02:11	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	98		117		109		70-135	%	10.18.19 02:11
o-Terphenyl	101		112		109		70-135	%	10.18.19 02:11

Analytical Method: TPH by SW8015 Mod

Seq Number: 3104747

Matrix: Solid

MB Sample Id: 7688441-1-BLK

Prep Method: SW8015P

Date Prep: 10.17.19

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	10.18.19 01:52	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3104747

Matrix: Soil

Parent Sample Id: 640361-016

MS Sample Id: 640361-016 S

Prep Method: SW8015P

Date Prep: 10.17.19

MSD Sample Id: 640361-016 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.1	1000	894	89	882	89	70-135	1	35	mg/kg	10.18.19 03:10	
Diesel Range Organics (DRO)	<50.1	1000	817	82	811	82	70-135	1	35	mg/kg	10.18.19 03:10	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	108		113		70-135	%	10.18.19 03:10
o-Terphenyl	107		116		70-135	%	10.18.19 03:10

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

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

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

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



Tetra Tech- Midland
JRS (2.4.19)

Analytical Method: BTEX by EPA 8021B

Seq Number: 3104782

MB Sample Id: 7688433-1-BLK

Matrix: Solid

LCS Sample Id: 7688433-1-BKS

Prep Method: SW5030B

Date Prep: 10.17.19

LCSD Sample Id: 7688433-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00100	0.100	0.0939	94	0.0966	97	70-130	3	35	mg/kg	10.18.19 06:37	
Toluene	<0.00100	0.100	0.0927	93	0.0955	96	70-130	3	35	mg/kg	10.18.19 06:37	
Ethylbenzene	<0.00100	0.100	0.0930	93	0.0960	96	71-129	3	35	mg/kg	10.18.19 06:37	
m,p-Xylenes	<0.00200	0.200	0.202	101	0.209	105	70-135	3	35	mg/kg	10.18.19 06:37	
o-Xylene	<0.00100	0.100	0.102	102	0.106	106	71-133	4	35	mg/kg	10.18.19 06:37	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	100		105		105		70-130	%	10.18.19 06:37
4-Bromofluorobenzene	120		123		123		70-130	%	10.18.19 06:37

Analytical Method: BTEX by EPA 8021B

Seq Number: 3104782

Parent Sample Id: 640361-021

Matrix: Soil

MS Sample Id: 640361-021 S

Prep Method: SW5030B

Date Prep: 10.17.19

MSD Sample Id: 640361-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.000982	0.0982	0.0837	85	0.0880	89	70-130	5	35	mg/kg	10.18.19 07:15	
Toluene	<0.000982	0.0982	0.0799	81	0.0841	85	70-130	5	35	mg/kg	10.18.19 07:15	
Ethylbenzene	<0.000982	0.0982	0.0775	79	0.0831	84	71-129	7	35	mg/kg	10.18.19 07:15	
m,p-Xylenes	<0.00196	0.196	0.162	83	0.176	89	70-135	8	35	mg/kg	10.18.19 07:15	
o-Xylene	<0.000982	0.0982	0.0845	86	0.0945	96	71-133	11	35	mg/kg	10.18.19 07:15	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	108		107		70-130	%	10.18.19 07:15
4-Bromofluorobenzene	123		125		70-130	%	10.18.19 07:15

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

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

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

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

Analysis Request of Chain of Custody Record



Tetra Tech, Inc.

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

Page 1 of 1

Client Name:

CONCHO

Site Manager:

MIKE CARMONA

Project Name:

JRS HORZ (2.4.19)

Project Location:

Eddy County

Project #:

212C-WD-01739

Invoice to:

COA-LIKE TRAVEZ

Receiving Laboratory:

Fenceo

Sampler Signature:

CONNIE MOHRING

Comments:

RUN DEEPER SAMPLE IF CURED-DO exceeds 100 mg/kg. Run deeper sample if benzene exceeds 10 mg/kg or total BTEX exceeds 50 mg/kg.

SAMPLE IDENTIFICATION

LAB #
(LAB USE ONLY)

Bore Hole #2 (0-1')

DATE

TIME

WATER

SOIL

HCL

HNO₃

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

ANALYSIS REQUEST
(Circle or Specify Method No.)

Inquired by:

Jenna Meyer

Date:

Time:

10/17/19 16:35

Received by:

CONNIE MOHRING

DATE

TIME

10/17/19 16:35

Inquired by:

Jenna Meyer

Date:

Time:

10/17/19 16:35

Received by:

CONNIE MOHRING

DATE

TIME

10/17/19 16:35

Sample Temperature

0.2

LAB USE ONLY

REMARKS:

STANDARD

☒ RUSH: Same Day 24 hr 48 hr 72 hr

☐ Rush Charges Authorized

☐ Special Report Limits or TRRP Report

ORIGINAL COPY

(Circle) HAND DELIVERED FEDEX UPS Tracking #:

Certificate of Analysis Summary 669481



Tetra Tech- Midland, Midland, TX

Project Name: Concho JR's Horz Federal #002 (2.4.19)

Project Id: 212C-MD-02279
Contact: Mike Carmona
Project Location: Eddy County, New Mexico

Date Received in Lab: Fri 08.07.2020 10:22
Report Date: 08.10.2020 15:30
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i> <i>Field Id:</i> <i>Depth:</i> <i>Matrix:</i> <i>Sampled:</i>	669481-001 Bottomhole-1 Comp 4'	669481-002 Bottomhole-2 Comp 4'	669481-003 Bottomhole-3 Comp 4'	669481-004 Bottomhole-4 Comp 4'	669481-005 Bottomhole-5 Comp 4'	669481-006 Bottomhole-6 Comp 4'
BTEX by EPA 8021B	<i>Extracted:</i> <i>Analyzed:</i> <i>Units/RL:</i>	08.07.2020 11:00 08.07.2020 14:13 mg/kg RL	08.07.2020 11:00 08.07.2020 14:33 mg/kg RL	08.07.2020 11:00 08.07.2020 14:54 mg/kg RL	08.07.2020 11:00 08.07.2020 15:14 mg/kg RL	08.07.2020 11:00 08.07.2020 15:35 mg/kg RL	08.07.2020 11:00 08.07.2020 15:56 mg/kg RL
Benzene		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201	<0.00199 0.00199
Toluene		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201	<0.00199 0.00199
Ethylbenzene		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201	<0.00199 0.00199
m,p-Xylenes		<0.00400 0.00400	<0.00398 0.00398	<0.00399 0.00399	<0.00398 0.00398	<0.00402 0.00402	<0.00398 0.00398
o-Xylene		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201	<0.00199 0.00199
Total Xylenes		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201	<0.00199 0.00199
Total BTEX		<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00201 0.00201	<0.00199 0.00199
Chloride by EPA 300	<i>Extracted:</i> <i>Analyzed:</i> <i>Units/RL:</i>	08.07.2020 12:35 08.07.2020 14:33 mg/kg RL	08.07.2020 12:35 08.07.2020 14:38 mg/kg RL	08.07.2020 12:35 08.07.2020 14:43 mg/kg RL	08.07.2020 12:35 08.07.2020 14:49 mg/kg RL	08.07.2020 12:35 08.07.2020 15:04 mg/kg RL	08.07.2020 12:35 08.07.2020 15:10 mg/kg RL
Chloride		8.35 4.98	7.95 4.99	7.71 5.02	8.21 4.96	7.61 4.98	7.73 4.97
TPH by SW8015 Mod	<i>Extracted:</i> <i>Analyzed:</i> <i>Units/RL:</i>	08.07.2020 12:00 08.07.2020 13:00 mg/kg RL	08.07.2020 12:00 08.07.2020 13:56 mg/kg RL	08.07.2020 12:00 08.07.2020 14:15 mg/kg RL	08.07.2020 12:00 08.07.2020 14:34 mg/kg RL	08.07.2020 12:00 08.07.2020 14:53 mg/kg RL	08.07.2020 12:00 08.07.2020 15:12 mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<49.8 49.8	<49.9 49.9	<49.8 49.8	<49.9 49.9	<50.0 50.0
Diesel Range Organics (DRO)		<50.0 50.0	<49.8 49.8	<49.9 49.9	<49.8 49.8	<49.9 49.9	<50.0 50.0
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<49.8 49.8	<49.9 49.9	<49.8 49.8	<49.9 49.9	<50.0 50.0
Total TPH		<50.0 50.0	<49.8 49.8	<49.9 49.9	<49.8 49.8	<49.9 49.9	<50.0 50.0

BRL - Below Reporting Limit

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

Certificate of Analysis Summary 669481



Tetra Tech- Midland, Midland, TX

Project Name: Concho JR's Horz Federal #002 (2.4.19)

Project Id: 212C-MD-02279
Contact: Mike Carmona
Project Location: Eddy County, New Mexico

Date Received in Lab: Fri 08.07.2020 10:22
Report Date: 08.10.2020 15:30
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	669481-007	669481-008	669481-009	669481-010	669481-011	669481-012
	<i>Field Id:</i>	Bottomhole-7 Comp 1'	Bottomhole-8 Comp 1'	Bottomhole-9 Comp 4'	Bottomhole-10 Comp 4'	Bottomhole-11 Comp 4'	Bottomhole-12 Comp 4'
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	08.01.2020 00:00	08.01.2020 00:00	08.01.2020 00:00	08.04.2020 00:00	08.04.2020 00:00	08.04.2020 00:00
BTEX by EPA 8021B	<i>Extracted:</i>	08.07.2020 11:00	08.07.2020 11:00	08.07.2020 11:00	08.07.2020 11:00	08.07.2020 11:00	08.07.2020 11:00
	<i>Analyzed:</i>	08.07.2020 16:16	08.07.2020 16:37	08.07.2020 16:57	08.07.2020 17:18	08.07.2020 18:39	08.07.2020 19:00
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00198 0.00198	<0.00199 0.00199
Toluene		<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00198 0.00198	<0.00199 0.00199
Ethylbenzene		<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00198 0.00198	<0.00199 0.00199
m,p-Xylenes		<0.00396 0.00396	<0.00400 0.00400	<0.00400 0.00400	<0.00402 0.00402	<0.00397 0.00397	<0.00398 0.00398
o-Xylene		<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00198 0.00198	<0.00199 0.00199
Total Xylenes		<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00198 0.00198	<0.00199 0.00199
Total BTEX		<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00201 0.00201	<0.00198 0.00198	<0.00199 0.00199
Chloride by EPA 300	<i>Extracted:</i>	08.07.2020 12:35	08.07.2020 12:35	08.07.2020 12:35	08.07.2020 12:35	08.07.2020 12:35	08.07.2020 12:35
	<i>Analyzed:</i>	08.07.2020 15:15	08.07.2020 15:20	08.07.2020 15:25	08.07.2020 15:31	08.07.2020 15:47	08.07.2020 15:52
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		8.18 4.95	8.20 4.95	8.75 5.05	9.74 5.00	8.61 5.04	8.06 4.96
TPH by SW8015 Mod	<i>Extracted:</i>	08.07.2020 12:00	08.07.2020 12:00	08.07.2020 12:00	08.07.2020 12:00	08.07.2020 12:00	08.07.2020 12:00
	<i>Analyzed:</i>	08.07.2020 15:36	08.07.2020 15:54	08.07.2020 16:13	08.07.2020 16:32	08.07.2020 17:10	08.07.2020 17:29
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.9 49.9
Diesel Range Organics (DRO)		<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.9 49.9
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.9 49.9
Total TPH		<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.9 49.9

BRL - Below Reporting Limit

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Certificate of Analysis Summary 669481



Tetra Tech- Midland, Midland, TX

Project Name: Concho JR's Horz Federal #002 (2.4.19)

Project Id: 212C-MD-02279
Contact: Mike Carmona
Project Location: Eddy County, New Mexico

Date Received in Lab: Fri 08.07.2020 10:22
Report Date: 08.10.2020 15:30
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	669481-013	669481-014	669481-015	669481-016	669481-017	669481-018
	<i>Field Id:</i>	Bottomhole-13 Comp 4'	Bottomhole-14 Comp 4'	Bottomhole-15 Comp 4'	Bottomhole-16 Comp 4'	Bottomhole-17 Comp 4'	Bottomhole-18 Comp 6'
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	08.04.2020 00:00	08.04.2020 00:00	08.01.2020 00:00	08.04.2020 00:00	08.04.2020 00:00	08.04.2020 00:00
BTEX by EPA 8021B	<i>Extracted:</i>	08.07.2020 11:00	08.07.2020 11:00	08.07.2020 11:00	08.07.2020 11:00	08.07.2020 11:00	08.07.2020 11:00
	<i>Analyzed:</i>	08.07.2020 19:20	08.07.2020 19:41	08.07.2020 20:01	08.07.2020 20:22	08.07.2020 20:42	08.07.2020 21:03
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00202 0.00202	<0.00198 0.00198	<0.00200 0.00200	<0.00201 0.00201	<0.00201 0.00201
Toluene		<0.00200 0.00200	<0.00202 0.00202	<0.00198 0.00198	<0.00200 0.00200	<0.00201 0.00201	<0.00201 0.00201
Ethylbenzene		<0.00200 0.00200	<0.00202 0.00202	<0.00198 0.00198	<0.00200 0.00200	<0.00201 0.00201	<0.00201 0.00201
m,p-Xylenes		<0.00399 0.00399	<0.00403 0.00403	<0.00396 0.00396	<0.00401 0.00401	<0.00402 0.00402	<0.00402 0.00402
o-Xylene		<0.00200 0.00200	<0.00202 0.00202	<0.00198 0.00198	<0.00200 0.00200	<0.00201 0.00201	<0.00201 0.00201
Total Xylenes		<0.00200 0.00200	<0.00202 0.00202	<0.00198 0.00198	<0.00200 0.00200	<0.00201 0.00201	<0.00201 0.00201
Total BTEX		<0.00200 0.00200	<0.00202 0.00202	<0.00198 0.00198	<0.00200 0.00200	<0.00201 0.00201	<0.00201 0.00201
Chloride by EPA 300	<i>Extracted:</i>	08.07.2020 12:35	08.07.2020 12:35	08.07.2020 12:35	08.07.2020 12:35	08.07.2020 12:35	08.07.2020 12:35
	<i>Analyzed:</i>	08.07.2020 16:08	08.07.2020 16:13	08.07.2020 16:18	08.07.2020 16:23	08.07.2020 16:29	08.07.2020 16:34
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		8.76 4.98	8.17 4.95	8.44 4.99	8.00 5.03	8.38 5.02	8.50 4.96
TPH by SW8015 Mod	<i>Extracted:</i>	08.07.2020 12:00	08.07.2020 12:00	08.07.2020 12:00	08.07.2020 12:00	08.07.2020 12:00	08.07.2020 12:00
	<i>Analyzed:</i>	08.07.2020 17:48	08.07.2020 18:07	08.07.2020 18:25	08.07.2020 18:44	08.07.2020 19:03	08.07.2020 19:21
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<49.8 49.8	<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.8 49.8	<50.0 50.0
Diesel Range Organics (DRO)		<49.8 49.8	<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.8 49.8	<50.0 50.0
Motor Oil Range Hydrocarbons (MRO)		<49.8 49.8	<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.8 49.8	<50.0 50.0
Total TPH		<49.8 49.8	<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.8 49.8	<50.0 50.0

BRL - Below Reporting Limit

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

Certificate of Analysis Summary 669481



Tetra Tech- Midland, Midland, TX

Project Name: Concho JR's Horz Federal #002 (2.4.19)

Project Id: 212C-MD-02279
Contact: Mike Carmona
Project Location: Eddy County, New Mexico

Date Received in Lab: Fri 08.07.2020 10:22
Report Date: 08.10.2020 15:30
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i> <i>Field Id:</i> <i>Depth:</i> <i>Matrix:</i> <i>Sampled:</i>	669481-019 Bottomhole-19 Comp 6'	669481-020 Bottomhole-20 Comp 6'	669481-021 Bottomhole-21 Comp 6'	669481-022 Bottomhole-22 Comp 6'	669481-023 Bottomhole-23 Comp 6'	669481-024 Bottomhole-24 Comp 6'
BTEX by EPA 8021B	<i>Extracted:</i> <i>Analyzed:</i> <i>Units/RL:</i>	08.07.2020 11:00 08.07.2020 21:23 mg/kg RL	08.07.2020 11:00 08.07.2020 21:44 mg/kg RL	08.07.2020 13:00 08.07.2020 16:37 mg/kg RL	08.07.2020 13:00 08.07.2020 16:58 mg/kg RL	08.07.2020 13:00 08.07.2020 17:18 mg/kg RL	08.07.2020 13:00 08.07.2020 17:39 mg/kg RL
Benzene		<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200
Toluene		<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200
Ethylbenzene		<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200
m,p-Xylenes		<0.00402 0.00402	<0.00399 0.00399	<0.00396 0.00396	<0.00399 0.00399	<0.00397 0.00397	<0.00399 0.00399
o-Xylene		<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200
Total Xylenes		<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200
Total BTEX		<0.00201 0.00201	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200	<0.00198 0.00198	<0.00200 0.00200
Chloride by EPA 300	<i>Extracted:</i> <i>Analyzed:</i> <i>Units/RL:</i>	08.07.2020 12:35 08.07.2020 16:39 mg/kg RL	08.07.2020 13:25 08.07.2020 14:15 mg/kg RL	08.07.2020 13:25 08.07.2020 14:34 mg/kg RL	08.07.2020 13:25 08.07.2020 14:41 mg/kg RL	08.07.2020 13:25 08.07.2020 14:47 mg/kg RL	08.07.2020 13:25 08.07.2020 14:53 mg/kg RL
Chloride		8.03 4.98	<5.02 5.02	<4.97 4.97	<4.95 4.95	<4.95 4.95	<4.95 4.95
TPH by SW8015 Mod	<i>Extracted:</i> <i>Analyzed:</i> <i>Units/RL:</i>	08.07.2020 12:00 08.07.2020 19:40 mg/kg RL	08.07.2020 12:00 08.07.2020 19:59 mg/kg RL	08.07.2020 17:00 08.07.2020 21:32 mg/kg RL	08.07.2020 17:00 08.07.2020 22:28 mg/kg RL	08.07.2020 17:00 08.07.2020 22:46 mg/kg RL	08.07.2020 17:00 08.07.2020 23:05 mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0
Diesel Range Organics (DRO)		<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0
Total TPH		<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0

BRL - Below Reporting Limit

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Certificate of Analysis Summary 669481



Tetra Tech- Midland, Midland, TX

Project Name: Concho JR's Horz Federal #002 (2.4.19)

Project Id: 212C-MD-02279
Contact: Mike Carmona
Project Location: Eddy County, New Mexico

Date Received in Lab: Fri 08.07.2020 10:22
Report Date: 08.10.2020 15:30
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	669481-025	669481-026	669481-027	669481-028	669481-029	669481-030
	<i>Field Id:</i>	Bottomhole-25 Comp 6'	Bottomhole-26 Comp 6'	Bottomhole-27 Comp 6'	Bottomhole-28 Comp 6'	Bottomhole-29 Comp 6'	Bottomhole-30 Comp 1.5'
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	08.04.2020 00:00	08.04.2020 00:00	08.04.2020 00:00	08.04.2020 00:00	08.04.2020 00:00	08.04.2020 00:00
BTEX by EPA 8021B	<i>Extracted:</i>	08.07.2020 13:00	08.07.2020 13:00	08.07.2020 13:00	08.07.2020 13:00	08.07.2020 13:00	08.07.2020 13:00
	<i>Analyzed:</i>	08.07.2020 17:59	08.07.2020 18:19	08.07.2020 18:40	08.07.2020 19:00	08.07.2020 19:21	08.07.2020 19:41
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199
Toluene		<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199
Ethylbenzene		<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199
m,p-Xylenes		<0.00396 0.00396	<0.00400 0.00400	<0.00398 0.00398	<0.00401 0.00401	<0.00398 0.00398	<0.00398 0.00398
o-Xylene		<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199
Total Xylenes		<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199
Total BTEX		<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199	<0.00200 0.00200	<0.00199 0.00199	<0.00199 0.00199
Chloride by EPA 300	<i>Extracted:</i>	08.07.2020 13:25	08.07.2020 13:25	08.07.2020 13:25	08.07.2020 13:25	08.07.2020 13:25	08.07.2020 13:25
	<i>Analyzed:</i>	08.07.2020 15:12	08.07.2020 15:19	08.07.2020 15:25	08.07.2020 15:31	08.07.2020 15:38	08.07.2020 15:44
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		<5.04 5.04	<5.00 5.00	<4.99 4.99	<4.96 4.96	<4.98 4.98	<4.99 4.99
TPH by SW8015 Mod	<i>Extracted:</i>	08.07.2020 17:00	08.07.2020 17:00	08.07.2020 17:00	08.07.2020 17:00	08.07.2020 17:00	08.07.2020 17:00
	<i>Analyzed:</i>	08.07.2020 23:24	08.07.2020 23:42	08.08.2020 00:01	08.08.2020 00:19	08.08.2020 00:38	08.08.2020 00:56
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<49.9 49.9	<50.0 50.0	<50.0 50.0	<50.0 50.0	<49.8 49.8	<49.9 49.9
Diesel Range Organics (DRO)		<49.9 49.9	<50.0 50.0	<50.0 50.0	<50.0 50.0	<49.8 49.8	<49.9 49.9
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<50.0 50.0	<50.0 50.0	<50.0 50.0	<49.8 49.8	<49.9 49.9
Total TPH		<49.9 49.9	<50.0 50.0	<50.0 50.0	<50.0 50.0	<49.8 49.8	<49.9 49.9

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Certificate of Analysis Summary 669481



Tetra Tech- Midland, Midland, TX

Project Name: Concho JR's Horz Federal #002 (2.4.19)

Project Id: 212C-MD-02279
Contact: Mike Carmona
Project Location: Eddy County, New Mexico

Date Received in Lab: Fri 08.07.2020 10:22
Report Date: 08.10.2020 15:30
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	669481-031	669481-032	669481-033	669481-034	669481-035	669481-036
	<i>Field Id:</i>	Bottomhole-31 Comp 1.5'	Bottomhole-32 Comp 1.5'	Bottomhole-33 Comp 1.5'	Bottomhole-34 Comp 1.5'	Bottomhole-35 Comp 1.5'	Bottomhole-36 Comp 1.5'
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	08.04.2020 00:00	08.04.2020 00:00	08.04.2020 00:00	08.04.2020 00:00	08.04.2020 00:00	08.04.2020 00:00
BTEX by EPA 8021B	<i>Extracted:</i>	08.07.2020 13:00	08.07.2020 13:00	08.07.2020 13:00	08.07.2020 13:00	08.07.2020 13:00	08.07.2020 13:00
	<i>Analyzed:</i>	08.07.2020 21:04	08.07.2020 21:25	08.07.2020 21:45	08.07.2020 22:06	08.07.2020 22:26	08.07.2020 22:46
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200
Toluene		<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200
Ethylbenzene		<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200
m,p-Xylenes		<0.00398 0.00398	<0.00399 0.00399	<0.00402 0.00402	<0.00403 0.00403	<0.00398 0.00398	<0.00401 0.00401
o-Xylene		<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200
Total Xylenes		<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200
Total BTEX		<0.00199 0.00199	<0.00200 0.00200	<0.00201 0.00201	<0.00202 0.00202	<0.00199 0.00199	<0.00200 0.00200
Chloride by EPA 300	<i>Extracted:</i>	08.07.2020 13:25	08.07.2020 13:25	08.07.2020 13:25	08.07.2020 13:25	08.07.2020 13:25	08.07.2020 13:25
	<i>Analyzed:</i>	08.07.2020 16:03	08.07.2020 16:09	08.07.2020 16:29	08.07.2020 16:35	08.07.2020 16:41	08.07.2020 16:48
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		<5.03 5.03	<5.00 5.00	<4.96 4.96	<4.99 4.99	<4.98 4.98	<4.95 4.95
TPH by SW8015 Mod	<i>Extracted:</i>	08.07.2020 17:00	08.07.2020 17:00	08.07.2020 17:00	08.07.2020 17:00	08.07.2020 17:00	08.07.2020 17:00
	<i>Analyzed:</i>	08.08.2020 01:33	08.08.2020 01:52	08.08.2020 02:10	08.08.2020 08:04	08.08.2020 02:47	08.08.2020 03:05
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<49.8 49.8	<50.0 50.0	<49.9 49.9	<49.9 49.9	<49.8 49.8
Diesel Range Organics (DRO)		<50.0 50.0	<49.8 49.8	<50.0 50.0	<49.9 49.9	<49.9 49.9	<49.8 49.8
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<49.8 49.8	<50.0 50.0	<49.9 49.9	<49.9 49.9	<49.8 49.8
Total TPH		<50.0 50.0	<49.8 49.8	<50.0 50.0	<49.9 49.9	<49.9 49.9	<49.8 49.8

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Certificate of Analysis Summary 669481



Tetra Tech- Midland, Midland, TX

Project Name: Concho JR's Horz Federal #002 (2.4.19)

Project Id: 212C-MD-02279
Contact: Mike Carmona
Project Location: Eddy County, New Mexico

Date Received in Lab: Fri 08.07.2020 10:22
Report Date: 08.10.2020 15:30
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	669481-037	669481-038	669481-039	669481-040	669481-041	669481-042
	<i>Field Id:</i>	Bottomhole-37 Comp 1.5'	Sidewall-1 Comp 4'	Sidewall-2 Comp 4'	Sidewall-3 Comp 4'	Sidewall-4 Comp 4'	Sidewall-5 Comp 4'
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	08.04.2020 00:00	08.01.2020 00:00	08.01.2020 00:00	08.01.2020 00:00	08.01.2020 00:00	08.01.2020 00:00
BTEX by EPA 8021B	<i>Extracted:</i>	08.07.2020 13:00	08.07.2020 13:00	08.07.2020 13:00	08.07.2020 13:00	08.07.2020 12:30	08.07.2020 12:30
	<i>Analyzed:</i>	08.07.2020 23:07	08.07.2020 23:27	08.07.2020 23:48	08.08.2020 00:08	08.08.2020 01:07	08.08.2020 01:28
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00199 0.00199	<0.00198 0.00198	<0.00198 0.00198	<0.00198 0.00198	<0.00202 0.00202	<0.00199 0.00199
Toluene		<0.00199 0.00199	<0.00198 0.00198	<0.00198 0.00198	<0.00198 0.00198	<0.00202 0.00202	<0.00199 0.00199
Ethylbenzene		<0.00199 0.00199	<0.00198 0.00198	<0.00198 0.00198	<0.00198 0.00198	<0.00202 0.00202	<0.00199 0.00199
m,p-Xylenes		<0.00398 0.00398	<0.00397 0.00397	<0.00397 0.00397	<0.00397 0.00397	<0.00403 0.00403	<0.00398 0.00398
o-Xylene		<0.00199 0.00199	<0.00198 0.00198	<0.00198 0.00198	<0.00198 0.00198	<0.00202 0.00202	<0.00199 0.00199
Total Xylenes		<0.00199 0.00199	<0.00198 0.00198	<0.00198 0.00198	<0.00198 0.00198	<0.00202 0.00202	<0.00199 0.00199
Total BTEX		<0.00199 0.00199	<0.00198 0.00198	<0.00198 0.00198	<0.00198 0.00198	<0.00202 0.00202	<0.00199 0.00199
Chloride by EPA 300	<i>Extracted:</i>	08.07.2020 13:25	08.07.2020 13:25	08.07.2020 13:25	08.07.2020 13:35	08.07.2020 13:35	08.07.2020 13:35
	<i>Analyzed:</i>	08.07.2020 16:54	08.07.2020 17:00	08.07.2020 17:07	08.08.2020 18:29	08.08.2020 18:45	08.08.2020 18:50
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		<5.05 5.05	<5.05 5.05	<4.96 4.96	7.73 5.00	8.31 4.96	8.34 4.99
TPH by SW8015 Mod	<i>Extracted:</i>	08.07.2020 17:00	08.07.2020 17:00	08.07.2020 17:00	08.07.2020 17:00	08.07.2020 16:00	08.07.2020 16:00
	<i>Analyzed:</i>	08.08.2020 03:23	08.08.2020 03:42	08.08.2020 04:00	08.08.2020 04:18	08.07.2020 22:20	08.07.2020 23:23
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<49.9 49.9	<50.0 50.0	<49.9 49.9	<49.8 49.8	<50.0 50.0	<50.0 50.0
Diesel Range Organics (DRO)		<49.9 49.9	<50.0 50.0	<49.9 49.9	<49.8 49.8	<50.0 50.0	<50.0 50.0
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<50.0 50.0	<49.9 49.9	<49.8 49.8	<50.0 50.0	<50.0 50.0
Total TPH		<49.9 49.9	<50.0 50.0	<49.9 49.9	<49.8 49.8	<50.0 50.0	<50.0 50.0

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Certificate of Analysis Summary 669481



Tetra Tech- Midland, Midland, TX

Project Name: Concho JR's Horz Federal #002 (2.4.19)

Project Id: 212C-MD-02279
Contact: Mike Carmona
Project Location: Eddy County, New Mexico

Date Received in Lab: Fri 08.07.2020 10:22
Report Date: 08.10.2020 15:30
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	669481-043	669481-044	669481-045	669481-046	669481-047	669481-048
	<i>Field Id:</i>	Sidewall-6 Comp 4'	Sidewall-7 Comp 4'	Sidewall-8 Comp 4'	Sidewall-9 Comp 4'	Sidewall-10 Comp 4'	Sidewall-11 Comp 4'
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	08.01.2020 00:00	08.01.2020 00:00	08.01.2020 00:00	08.01.2020 00:00	08.01.2020 00:00	08.01.2020 00:00
BTEX by EPA 8021B	<i>Extracted:</i>	08.07.2020 12:30	08.07.2020 12:30	08.07.2020 12:30	08.07.2020 12:30	08.07.2020 12:30	08.07.2020 12:30
	<i>Analyzed:</i>	08.08.2020 01:48	08.08.2020 02:09	08.08.2020 02:29	08.08.2020 02:50	08.08.2020 03:10	08.08.2020 03:30
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198
Toluene		<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198
Ethylbenzene		<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198
m,p-Xylenes		<0.00398 0.00398	<0.00402 0.00402	<0.00399 0.00399	<0.00400 0.00400	<0.00398 0.00398	<0.00397 0.00397
o-Xylene		<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198
Total Xylenes		<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198
Total BTEX		<0.00199 0.00199	<0.00201 0.00201	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198
Chloride by EPA 300	<i>Extracted:</i>	08.07.2020 13:35	08.07.2020 13:35	08.07.2020 13:35	08.07.2020 13:35	08.07.2020 13:35	08.07.2020 13:35
	<i>Analyzed:</i>	08.08.2020 18:55	08.08.2020 19:00	08.08.2020 19:16	08.08.2020 19:22	08.08.2020 19:27	08.08.2020 19:32
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		6.27 5.02	8.37 4.98	8.66 5.04	8.77 5.00	7.68 5.00	9.52 5.00
TPH by SW8015 Mod	<i>Extracted:</i>	08.07.2020 16:00	08.07.2020 16:00	08.07.2020 16:00	08.07.2020 16:00	08.07.2020 16:00	08.07.2020 16:00
	<i>Analyzed:</i>	08.07.2020 23:44	08.08.2020 00:05	08.08.2020 00:26	08.08.2020 00:47	08.08.2020 01:07	08.08.2020 01:28
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0
Diesel Range Organics (DRO)		<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0
Total TPH		<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0

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Certificate of Analysis Summary 669481



Tetra Tech- Midland, Midland, TX

Project Name: Concho JR's Horz Federal #002 (2.4.19)

Project Id: 212C-MD-02279
Contact: Mike Carmona
Project Location: Eddy County, New Mexico

Date Received in Lab: Fri 08.07.2020 10:22
Report Date: 08.10.2020 15:30
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	669481-049	669481-050	669481-051	669481-052	669481-053	669481-054
	<i>Field Id:</i>	Sidewall-12 Comp 4'	Sidewall-13 Comp 4'	Sidewall-14 Comp 1'	Sidewall-15 Comp 4'	Sidewall-16 Comp 4'	Sidewall-17 Comp 4'
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	08.01.2020 00:00	08.01.2020 00:00	08.01.2020 00:00	08.04.2020 00:00	08.04.2020 00:00	08.04.2020 00:00
BTEX by EPA 8021B	<i>Extracted:</i>	08.07.2020 12:30	08.07.2020 12:30	08.07.2020 12:30	08.07.2020 12:30	08.07.2020 12:30	08.07.2020 12:30
	<i>Analyzed:</i>	08.08.2020 03:51	08.08.2020 04:11	08.08.2020 05:34	08.08.2020 05:54	08.08.2020 06:14	08.08.2020 06:35
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00200 0.00200	<0.00201 0.00201	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
Toluene		<0.00200 0.00200	<0.00201 0.00201	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
Ethylbenzene		<0.00200 0.00200	<0.00201 0.00201	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
m,p-Xylenes		<0.00399 0.00399	<0.00402 0.00402	<0.00404 0.00404	<0.00401 0.00401	<0.00401 0.00401	<0.00398 0.00398
o-Xylene		<0.00200 0.00200	<0.00201 0.00201	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
Total Xylenes		<0.00200 0.00200	<0.00201 0.00201	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
Total BTEX		<0.00200 0.00200	<0.00201 0.00201	<0.00202 0.00202	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199
Chloride by EPA 300	<i>Extracted:</i>	08.07.2020 13:35	08.07.2020 13:35	08.07.2020 13:35	08.07.2020 13:35	08.07.2020 13:35	08.07.2020 13:35
	<i>Analyzed:</i>	08.08.2020 19:37	08.08.2020 19:43	08.08.2020 19:58	08.08.2020 20:04	08.08.2020 20:19	08.08.2020 20:25
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		8.24 5.03	9.03 5.05	8.48 4.98	9.61 5.00	9.05 4.96	9.15 4.98
TPH by SW8015 Mod	<i>Extracted:</i>	08.07.2020 16:00	08.07.2020 16:00	08.07.2020 16:00	08.07.2020 16:00	08.07.2020 16:00	08.07.2020 16:00
	<i>Analyzed:</i>	08.08.2020 01:49	08.08.2020 02:10	08.08.2020 02:52	08.08.2020 03:12	08.08.2020 03:33	08.08.2020 03:54
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<49.8 49.8	<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.9 49.9	<49.8 49.8
Diesel Range Organics (DRO)		<49.8 49.8	<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.9 49.9	<49.8 49.8
Motor Oil Range Hydrocarbons (MRO)		<49.8 49.8	<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.9 49.9	<49.8 49.8
Total TPH		<49.8 49.8	<50.0 50.0	<49.9 49.9	<50.0 50.0	<49.9 49.9	<49.8 49.8

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Certificate of Analysis Summary 669481



Tetra Tech- Midland, Midland, TX

Project Name: Concho JR's Horz Federal #002 (2.4.19)

Project Id: 212C-MD-02279
Contact: Mike Carmona
Project Location: Eddy County, New Mexico

Date Received in Lab: Fri 08.07.2020 10:22
Report Date: 08.10.2020 15:30
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	669481-055	669481-056	669481-057	669481-058	669481-059	669481-060
	<i>Field Id:</i>	Sidewall-18 Comp 4'	Sidewall-19 Comp 4'	Sidewall-20 Comp 4'	Sidewall-21 Comp 6'	Sidewall-22 Comp 6'	Sidewall-23 Comp 6'
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	08.04.2020 00:00	08.04.2020 00:00	08.04.2020 00:00	08.04.2020 00:00	08.04.2020 00:00	08.04.2020 00:00
BTEX by EPA 8021B	<i>Extracted:</i>	08.07.2020 12:30	08.07.2020 12:30	08.07.2020 12:30	08.07.2020 12:30	08.07.2020 12:30	08.07.2020 12:30
	<i>Analyzed:</i>	08.08.2020 06:55	08.08.2020 07:16	08.08.2020 07:36	08.08.2020 07:56	08.08.2020 08:17	08.08.2020 08:37
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00202 0.00202	<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198
Toluene		<0.00202 0.00202	<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198
Ethylbenzene		<0.00202 0.00202	<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198
m,p-Xylenes		<0.00404 0.00404	<0.00397 0.00397	<0.00397 0.00397	<0.00400 0.00400	<0.00398 0.00398	<0.00396 0.00396
o-Xylene		<0.00202 0.00202	<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198
Total Xylenes		<0.00202 0.00202	<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198
Total BTEX		<0.00202 0.00202	<0.00198 0.00198	<0.00198 0.00198	<0.00200 0.00200	<0.00199 0.00199	<0.00198 0.00198
Chloride by EPA 300	<i>Extracted:</i>	08.07.2020 13:35	08.07.2020 13:35	08.07.2020 13:35	08.07.2020 13:35	08.07.2020 13:35	08.07.2020 13:50
	<i>Analyzed:</i>	08.08.2020 20:30	08.08.2020 20:35	08.08.2020 20:41	08.08.2020 20:46	08.08.2020 20:51	08.08.2020 21:28
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		8.82 4.97	9.10 4.95	9.01 5.04	8.29 5.00	9.43 4.97	9.09 4.98
TPH by SW8015 Mod	<i>Extracted:</i>	08.07.2020 16:00	08.07.2020 16:00	08.07.2020 16:00	08.07.2020 16:00	08.07.2020 16:00	08.07.2020 16:00
	<i>Analyzed:</i>	08.08.2020 04:14	08.08.2020 04:35	08.08.2020 04:56	08.08.2020 05:16	08.08.2020 05:37	08.08.2020 05:58
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0
Diesel Range Organics (DRO)		<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0
Total TPH		<49.9 49.9	<49.8 49.8	<50.0 50.0	<49.9 49.9	<50.0 50.0	<50.0 50.0

BRL - Below Reporting Limit

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

Certificate of Analysis Summary 669481



Tetra Tech- Midland, Midland, TX

Project Name: Concho JR's Horz Federal #002 (2.4.19)

Project Id: 212C-MD-02279
Contact: Mike Carmona
Project Location: Eddy County, New Mexico

Date Received in Lab: Fri 08.07.2020 10:22**Report Date:** 08.10.2020 15:30**Project Manager:** Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	669481-061	669481-062	669481-063	669481-064	669481-065	669481-066
	<i>Field Id:</i>	Sidewall-24 Comp 6'	Sidewall-25 Comp 6'	Sidewall-26 Comp 6'	Sidewall-27 Comp 6'	Sidewall-28 Comp 6'	Sidewall-29 Comp 6'
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	08.04.2020 00:00	08.04.2020 00:00	08.04.2020 00:00	08.04.2020 00:00	08.04.2020 00:00	08.04.2020 00:00
BTEX by EPA 8021B	<i>Extracted:</i>	08.07.2020 14:00	08.07.2020 14:00	08.07.2020 14:00	08.07.2020 14:00	08.07.2020 14:00	08.07.2020 14:00
	<i>Analyzed:</i>	08.08.2020 03:32	08.08.2020 03:53	08.08.2020 04:13	08.08.2020 04:33	08.08.2020 04:54	08.08.2020 05:14
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Benzene		<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200
Toluene		<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200
Ethylbenzene		<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200
m,p-Xylenes		<0.00398 0.00398	<0.00398 0.00398	<0.00400 0.00400	<0.00397 0.00397	<0.00398 0.00398	<0.00401 0.00401
o-Xylene		<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200
Total Xylenes		<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200
Total BTEX		<0.00199 0.00199	<0.00199 0.00199	<0.00200 0.00200	<0.00198 0.00198	<0.00199 0.00199	<0.00200 0.00200
Chloride by EPA 300	<i>Extracted:</i>	08.07.2020 13:50	08.07.2020 13:50	08.07.2020 13:50	08.07.2020 13:50	08.07.2020 13:50	08.07.2020 13:50
	<i>Analyzed:</i>	08.08.2020 21:47	08.08.2020 21:53	08.08.2020 21:59	08.08.2020 22:05	08.08.2020 22:24	08.08.2020 22:31
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		8.70 5.03	8.77 4.96	8.27 4.98	8.54 5.04	8.28 4.95	8.91 5.00
TPH by SW8015 Mod	<i>Extracted:</i>	08.07.2020 16:00	08.07.2020 16:00	08.07.2020 16:00	08.07.2020 16:00	08.07.2020 16:00	08.07.2020 16:00
	<i>Analyzed:</i>	08.07.2020 22:20	08.07.2020 23:23	08.07.2020 23:44	08.08.2020 00:05	08.08.2020 00:26	08.08.2020 00:47
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Gasoline Range Hydrocarbons (GRO)		<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.8 49.8	<50.0 50.0	<50.0 50.0
Diesel Range Organics (DRO)		<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.8 49.8	<50.0 50.0	<50.0 50.0
Motor Oil Range Hydrocarbons (MRO)		<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.8 49.8	<50.0 50.0	<50.0 50.0
Total TPH		<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.8 49.8	<50.0 50.0	<50.0 50.0

BRL - Below Reporting Limit

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

Certificate of Analysis Summary 669481



Tetra Tech- Midland, Midland, TX

Project Name: Concho JR's Horz Federal #002 (2.4.19)

Project Id: 212C-MD-02279
Contact: Mike Carmona
Project Location: Eddy County, New Mexico

Date Received in Lab: Fri 08.07.2020 10:22
Report Date: 08.10.2020 15:30
Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	669481-067	669481-068	669481-069	669481-070	669481-071	
	<i>Field Id:</i>	Sidewall-30 Comp 6'	Sidewall-31 Comp 1.5'	Sidewall-32 Comp 1.5'	Sidewall-33 Comp 1.5'	Sidewall-34 Comp 1.5'	
	<i>Depth:</i>						
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	
	<i>Sampled:</i>	08.04.2020 00:00	08.04.2020 00:00	08.04.2020 00:00	08.04.2020 00:00	08.04.2020 00:00	
BTEX by EPA 8021B	<i>Extracted:</i>	08.07.2020 14:00	08.07.2020 14:00	08.07.2020 14:00	08.07.2020 14:00	08.07.2020 14:00	
	<i>Analyzed:</i>	08.08.2020 05:35	08.08.2020 05:55	08.08.2020 06:15	08.08.2020 06:36	08.08.2020 07:58	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Benzene		<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	
Toluene		<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	
Ethylbenzene		<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	
m,p-Xylenes		<0.00398 0.00398	<0.00396 0.00396	<0.00399 0.00399	<0.00400 0.00400	<0.00398 0.00398	
o-Xylene		<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	
Total Xylenes		<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	
Total BTEX		<0.00199 0.00199	<0.00198 0.00198	<0.00200 0.00200	<0.00200 0.00200	<0.00199 0.00199	
Chloride by EPA 300	<i>Extracted:</i>	08.07.2020 13:50	08.07.2020 13:50	08.07.2020 13:50	08.07.2020 13:50	08.07.2020 13:50	
	<i>Analyzed:</i>	08.08.2020 22:37	08.08.2020 22:43	08.08.2020 22:49	08.08.2020 22:56	08.08.2020 23:14	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Chloride		<4.99 4.99	7.95 4.96	8.68 5.04	7.99 4.95	8.16 4.99	
TPH by SW8015 Mod	<i>Extracted:</i>	08.07.2020 16:00	08.07.2020 16:00	08.07.2020 16:00	08.07.2020 16:00	08.07.2020 16:00	
	<i>Analyzed:</i>	08.08.2020 01:07	08.08.2020 01:28	08.08.2020 01:49	08.08.2020 02:10	08.08.2020 02:52	
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	
Gasoline Range Hydrocarbons (GRO)		<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.8 49.8	
Diesel Range Organics (DRO)		<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.8 49.8	
Motor Oil Range Hydrocarbons (MRO)		<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.8 49.8	
Total TPH		<49.9 49.9	<50.0 50.0	<50.0 50.0	<49.9 49.9	<49.8 49.8	

BRL - Below Reporting Limit

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

Analytical Report 669481

for

Tetra Tech- Midland

Project Manager: Mike Carmona

Concho JR's Horz Federal #002 (2.4.19)

212C-MD-02279

08.10.2020

Collected By: Client



**1211 W. Florida Ave
Midland TX 79701**

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

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

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



08.10.2020

Project Manager: **Mike Carmona**

Tetra Tech- Midland

901 West Wall ST

Midland, TX 79701

Reference: Eurofins Xenco, LLC Report No(s): **669481**

Concho JR's Horz Federal #002 (2.4.19)

Project Address: Eddy County, New Mexico

Mike Carmona:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the Eurofins Xenco, LLC Report Number(s) 669481. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

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

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by Eurofins Xenco, LLC. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 669481 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

A handwritten signature in black ink that reads "Jessica Kramer".

Jessica Kramer

Project Manager

A Small Business and Minority Company

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



Sample Cross Reference 669481

Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
Bottomhole-1 Comp 4'	S	08.01.2020 00:00		669481-001
Bottomhole-2 Comp 4'	S	08.01.2020 00:00		669481-002
Bottomhole-3 Comp 4'	S	08.01.2020 00:00		669481-003
Bottomhole-4 Comp 4'	S	08.01.2020 00:00		669481-004
Bottomhole-5 Comp 4'	S	08.01.2020 00:00		669481-005
Bottomhole-6 Comp 4'	S	08.01.2020 00:00		669481-006
Bottomhole-7 Comp 1'	S	08.01.2020 00:00		669481-007
Bottomhole-8 Comp 1'	S	08.01.2020 00:00		669481-008
Bottomhole-9 Comp 4'	S	08.01.2020 00:00		669481-009
Bottomhole-10 Comp 4'	S	08.04.2020 00:00		669481-010
Bottomhole-11 Comp 4'	S	08.04.2020 00:00		669481-011
Bottomhole-12 Comp 4'	S	08.04.2020 00:00		669481-012
Bottomhole-13 Comp 4'	S	08.04.2020 00:00		669481-013
Bottomhole-14 Comp 4'	S	08.04.2020 00:00		669481-014
Bottomhole-15 Comp 4'	S	08.01.2020 00:00		669481-015
Bottomhole-16 Comp 4'	S	08.04.2020 00:00		669481-016
Bottomhole-17 Comp 4'	S	08.04.2020 00:00		669481-017
Bottomhole-18 Comp 6'	S	08.04.2020 00:00		669481-018
Bottomhole-19 Comp 6'	S	08.04.2020 00:00		669481-019
Bottomhole-20 Comp 6'	S	08.04.2020 00:00		669481-020
Bottomhole-21 Comp 6'	S	08.04.2020 00:00		669481-021
Bottomhole-22 Comp 6'	S	08.04.2020 00:00		669481-022
Bottomhole-23 Comp 6'	S	08.04.2020 00:00		669481-023
Bottomhole-24 Comp 6'	S	08.04.2020 00:00		669481-024
Bottomhole-25 Comp 6'	S	08.04.2020 00:00		669481-025
Bottomhole-26 Comp 6'	S	08.04.2020 00:00		669481-026
Bottomhole-27 Comp 6'	S	08.04.2020 00:00		669481-027
Bottomhole-28 Comp 6'	S	08.04.2020 00:00		669481-028
Bottomhole-29 Comp 6'	S	08.04.2020 00:00		669481-029
Bottomhole-30 Comp 1.5'	S	08.04.2020 00:00		669481-030
Bottomhole-31 Comp 1.5'	S	08.04.2020 00:00		669481-031
Bottomhole-32 Comp 1.5'	S	08.04.2020 00:00		669481-032
Bottomhole-33 Comp 1.5'	S	08.04.2020 00:00		669481-033
Bottomhole-34 Comp 1.5'	S	08.04.2020 00:00		669481-034
Bottomhole-35 Comp 1.5'	S	08.04.2020 00:00		669481-035
Bottomhole-36 Comp 1.5'	S	08.04.2020 00:00		669481-036
Bottomhole-37 Comp 1.5'	S	08.04.2020 00:00		669481-037
Sidewall-1 Comp 4'	S	08.01.2020 00:00		669481-038
Sidewall-2 Comp 4'	S	08.01.2020 00:00		669481-039
Sidewall-3 Comp 4'	S	08.01.2020 00:00		669481-040
Sidewall-4 Comp 4'	S	08.01.2020 00:00		669481-041
Sidewall-5 Comp 4'	S	08.01.2020 00:00		669481-042
Sidewall-6 Comp 4'	S	08.01.2020 00:00		669481-043



Sample Cross Reference 669481

Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sidewall-7 Comp 4'	S	08.01.2020 00:00	669481-044
Sidewall-8 Comp 4'	S	08.01.2020 00:00	669481-045
Sidewall-9 Comp 4'	S	08.01.2020 00:00	669481-046
Sidewall-10 Comp 4'	S	08.01.2020 00:00	669481-047
Sidewall-11 Comp 4'	S	08.01.2020 00:00	669481-048
Sidewall-12 Comp 4'	S	08.01.2020 00:00	669481-049
Sidewall-13 Comp 4'	S	08.01.2020 00:00	669481-050
Sidewall-14 Comp 1'	S	08.01.2020 00:00	669481-051
Sidewall-15 Comp 4'	S	08.04.2020 00:00	669481-052
Sidewall-16 Comp 4'	S	08.04.2020 00:00	669481-053
Sidewall-17 Comp 4'	S	08.04.2020 00:00	669481-054
Sidewall-18 Comp 4'	S	08.04.2020 00:00	669481-055
Sidewall-19 Comp 4'	S	08.04.2020 00:00	669481-056
Sidewall-20 Comp 4'	S	08.04.2020 00:00	669481-057
Sidewall-21 Comp 6'	S	08.04.2020 00:00	669481-058
Sidewall-22 Comp 6'	S	08.04.2020 00:00	669481-059
Sidewall-23 Comp 6'	S	08.04.2020 00:00	669481-060
Sidewall-24 Comp 6'	S	08.04.2020 00:00	669481-061
Sidewall-25 Comp 6'	S	08.04.2020 00:00	669481-062
Sidewall-26 Comp 6'	S	08.04.2020 00:00	669481-063
Sidewall-27 Comp 6'	S	08.04.2020 00:00	669481-064
Sidewall-28 Comp 6'	S	08.04.2020 00:00	669481-065
Sidewall-29 Comp 6'	S	08.04.2020 00:00	669481-066
Sidewall-30 Comp 6'	S	08.04.2020 00:00	669481-067
Sidewall-31 Comp 1.5'	S	08.04.2020 00:00	669481-068
Sidewall-32 Comp 1.5'	S	08.04.2020 00:00	669481-069
Sidewall-33 Comp 1.5'	S	08.04.2020 00:00	669481-070
Sidewall-34 Comp 1.5'	S	08.04.2020 00:00	669481-071

**CASE NARRATIVE****Client Name: Tetra Tech- Midland****Project Name: Concho JR's Horz Federal #002 (2.4.19)**

Project ID: 212C-MD-02279
Work Order Number(s): 669481

Report Date: 08.10.2020
Date Received: 08.07.2020

Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3133948 BTEX by EPA 8021B

Lab Sample ID 669481-041 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Benzene, Ethylbenzene, Toluene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 669481-041, -042, -043, -044, -045, -046, -047, -048, -049, -050, -051, -052, -053, -054, -055, -056, -057, -058, -059, -060.

The Laboratory Control Sample for Toluene, Benzene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3133950 BTEX by EPA 8021B

Lab Sample ID 669481-021 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Ethylbenzene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 669481-021, -022, -023, -024, -025, -026, -027, -028, -029, -030, -031, -032, -033, -034, -035, -036, -037, -038, -039, -040.

The Laboratory Control Sample for m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3133951 BTEX by EPA 8021B

Lab Sample ID 669481-061 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Ethylbenzene, m,p-Xylenes, o-Xylene recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Benzene, Toluene recovered below QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 669481-061, -062, -063, -064, -065, -066, -067, -068, -069, -070, -071.

The Laboratory Control Sample for Toluene, Benzene, m,p-Xylenes, Ethylbenzene, o-Xylene is within laboratory Control Limits, therefore the data was accepted.



Certificate of Analytical Results 669481

Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-1 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-001

Date Collected: 08.01.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 12:35

Basis: Wet Weight

Seq Number: 3133965

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.35	4.98	mg/kg	08.07.2020 14:33		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 12:00

Basis: Wet Weight

Seq Number: 3134008

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.07.2020 13:00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.07.2020 13:00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.07.2020 13:00	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.07.2020 13:00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-130	08.07.2020 13:00	
o-Terphenyl	84-15-1	111	%	70-130	08.07.2020 13:00	



Certificate of Analytical Results 669481

Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-1 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-001

Date Collected: 08.01.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 11:00

Basis: Wet Weight

Seq Number: 3133947

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.07.2020 14:13	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.07.2020 14:13	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.07.2020 14:13	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.07.2020 14:13	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.07.2020 14:13	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.07.2020 14:13	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.07.2020 14:13	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	101	%	70-130	08.07.2020 14:13		
1,4-Difluorobenzene	540-36-3	116	%	70-130	08.07.2020 14:13		



Certificate of Analytical Results 669481

Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-2 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-002

Date Collected: 08.01.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 12:35

Basis: Wet Weight

Seq Number: 3133965

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7.95	4.99	mg/kg	08.07.2020 14:38		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 12:00

Basis: Wet Weight

Seq Number: 3134008

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.07.2020 13:56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.07.2020 13:56	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.07.2020 13:56	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.07.2020 13:56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-130	08.07.2020 13:56	
o-Terphenyl	84-15-1	108	%	70-130	08.07.2020 13:56	



Certificate of Analytical Results 669481

Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-2 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-002

Date Collected: 08.01.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 11:00

Basis: Wet Weight

Seq Number: 3133947

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.07.2020 14:33	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.07.2020 14:33	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.07.2020 14:33	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.07.2020 14:33	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.07.2020 14:33	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.07.2020 14:33	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.07.2020 14:33	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	114	%	70-130	08.07.2020 14:33		
1,4-Difluorobenzene	540-36-3	114	%	70-130	08.07.2020 14:33		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-3 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-003

Date Collected: 08.01.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 12:35

Basis: Wet Weight

Seq Number: 3133965

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7.71	5.02	mg/kg	08.07.2020 14:43		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 12:00

Basis: Wet Weight

Seq Number: 3134008

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.07.2020 14:15	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.07.2020 14:15	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.07.2020 14:15	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.07.2020 14:15	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-130	08.07.2020 14:15	
o-Terphenyl	84-15-1	110	%	70-130	08.07.2020 14:15	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-3 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-003

Date Collected: 08.01.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 11:00

Basis: Wet Weight

Seq Number: 3133947

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.07.2020 14:54	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.07.2020 14:54	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.07.2020 14:54	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.07.2020 14:54	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.07.2020 14:54	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.07.2020 14:54	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.07.2020 14:54	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	96	%	70-130	08.07.2020 14:54		
1,4-Difluorobenzene	540-36-3	117	%	70-130	08.07.2020 14:54		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-4 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-004

Date Collected: 08.01.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 12:35

Basis: Wet Weight

Seq Number: 3133965

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.21	4.96	mg/kg	08.07.2020 14:49		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 12:00

Basis: Wet Weight

Seq Number: 3134008

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.07.2020 14:34	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.07.2020 14:34	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.07.2020 14:34	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.07.2020 14:34	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-130	08.07.2020 14:34	
o-Terphenyl	84-15-1	113	%	70-130	08.07.2020 14:34	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-4 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-004

Date Collected: 08.01.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 11:00

Basis: Wet Weight

Seq Number: 3133947

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.07.2020 15:14	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.07.2020 15:14	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.07.2020 15:14	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.07.2020 15:14	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.07.2020 15:14	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.07.2020 15:14	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.07.2020 15:14	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	118	%	70-130	08.07.2020 15:14		
4-Bromofluorobenzene	460-00-4	100	%	70-130	08.07.2020 15:14		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-5 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-005

Date Collected: 08.01.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 12:35

Basis: Wet Weight

Seq Number: 3133965

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7.61	4.98	mg/kg	08.07.2020 15:04		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 12:00

Basis: Wet Weight

Seq Number: 3134008

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.07.2020 14:53	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.07.2020 14:53	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.07.2020 14:53	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.07.2020 14:53	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	124	%	70-130	08.07.2020 14:53	
o-Terphenyl	84-15-1	123	%	70-130	08.07.2020 14:53	



Certificate of Analytical Results 669481

Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-5 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-005

Date Collected: 08.01.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 11:00

Basis: Wet Weight

Seq Number: 3133947

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.07.2020 15:35	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.07.2020 15:35	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.07.2020 15:35	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.07.2020 15:35	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.07.2020 15:35	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.07.2020 15:35	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.07.2020 15:35	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	118	%	70-130	08.07.2020 15:35		
4-Bromofluorobenzene	460-00-4	99	%	70-130	08.07.2020 15:35		



Certificate of Analytical Results 669481

Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-6 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-006

Date Collected: 08.01.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 12:35

Basis: Wet Weight

Seq Number: 3133965

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7.73	4.97	mg/kg	08.07.2020 15:10		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 12:00

Basis: Wet Weight

Seq Number: 3134008

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.07.2020 15:12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.07.2020 15:12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.07.2020 15:12	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.07.2020 15:12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-130	08.07.2020 15:12	
o-Terphenyl	84-15-1	105	%	70-130	08.07.2020 15:12	



Certificate of Analytical Results 669481

Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-6 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-006

Date Collected: 08.01.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 11:00

Basis: Wet Weight

Seq Number: 3133947

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.07.2020 15:56	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.07.2020 15:56	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.07.2020 15:56	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.07.2020 15:56	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.07.2020 15:56	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.07.2020 15:56	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.07.2020 15:56	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	118	%	70-130	08.07.2020 15:56		
4-Bromofluorobenzene	460-00-4	104	%	70-130	08.07.2020 15:56		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-7 Comp 1'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-007

Date Collected: 08.01.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 12:35

Basis: Wet Weight

Seq Number: 3133965

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.18	4.95	mg/kg	08.07.2020 15:15		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 12:00

Basis: Wet Weight

Seq Number: 3134008

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.07.2020 15:36	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.07.2020 15:36	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.07.2020 15:36	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.07.2020 15:36	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-130	08.07.2020 15:36	
o-Terphenyl	84-15-1	104	%	70-130	08.07.2020 15:36	



Certificate of Analytical Results 669481

Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-7 Comp 1'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-007

Date Collected: 08.01.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 11:00

Basis: Wet Weight

Seq Number: 3133947

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.07.2020 16:16	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.07.2020 16:16	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.07.2020 16:16	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	08.07.2020 16:16	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.07.2020 16:16	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.07.2020 16:16	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.07.2020 16:16	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	100	%	70-130	08.07.2020 16:16		
1,4-Difluorobenzene	540-36-3	117	%	70-130	08.07.2020 16:16		



Certificate of Analytical Results 669481

Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-8 Comp 1'** Matrix: Soil Date Received: 08.07.2020 10:22
 Lab Sample Id: 669481-008 Date Collected: 08.01.2020 00:00
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.07.2020 12:35 Basis: Wet Weight
 Seq Number: 3133965

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.20	4.95	mg/kg	08.07.2020 15:20		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.07.2020 12:00 Basis: Wet Weight
 Seq Number: 3134008

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.07.2020 15:54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.07.2020 15:54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.07.2020 15:54	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.07.2020 15:54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-130	08.07.2020 15:54	
o-Terphenyl	84-15-1	110	%	70-130	08.07.2020 15:54	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-8 Comp 1'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-008

Date Collected: 08.01.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 11:00

Basis: Wet Weight

Seq Number: 3133947

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.07.2020 16:37	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.07.2020 16:37	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.07.2020 16:37	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.07.2020 16:37	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.07.2020 16:37	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.07.2020 16:37	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.07.2020 16:37	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	98	%	70-130	08.07.2020 16:37		
1,4-Difluorobenzene	540-36-3	117	%	70-130	08.07.2020 16:37		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-9 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-009

Date Collected: 08.01.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 12:35

Basis: Wet Weight

Seq Number: 3133965

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.75	5.05	mg/kg	08.07.2020 15:25		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 12:00

Basis: Wet Weight

Seq Number: 3134008

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.07.2020 16:13	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.07.2020 16:13	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.07.2020 16:13	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.07.2020 16:13	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-130	08.07.2020 16:13	
o-Terphenyl	84-15-1	105	%	70-130	08.07.2020 16:13	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-9 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-009

Date Collected: 08.01.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 11:00

Basis: Wet Weight

Seq Number: 3133947

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.07.2020 16:57	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.07.2020 16:57	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.07.2020 16:57	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.07.2020 16:57	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.07.2020 16:57	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.07.2020 16:57	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.07.2020 16:57	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	101	%	70-130	08.07.2020 16:57		
1,4-Difluorobenzene	540-36-3	117	%	70-130	08.07.2020 16:57		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-10 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-010

Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 12:35

Basis: Wet Weight

Seq Number: 3133965

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	9.74	5.00	mg/kg	08.07.2020 15:31		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 12:00

Basis: Wet Weight

Seq Number: 3134008

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.07.2020 16:32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.07.2020 16:32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.07.2020 16:32	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.07.2020 16:32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-130	08.07.2020 16:32	
o-Terphenyl	84-15-1	108	%	70-130	08.07.2020 16:32	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-10 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-010

Date Collected: 08.04.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 11:00

Basis: Wet Weight

Seq Number: 3133947

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.07.2020 17:18	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.07.2020 17:18	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.07.2020 17:18	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.07.2020 17:18	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.07.2020 17:18	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.07.2020 17:18	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.07.2020 17:18	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	107	%	70-130	08.07.2020 17:18		
1,4-Difluorobenzene	540-36-3	116	%	70-130	08.07.2020 17:18		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-11 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-011

Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 12:35

Basis: Wet Weight

Seq Number: 3133965

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.61	5.04	mg/kg	08.07.2020 15:47		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 12:00

Basis: Wet Weight

Seq Number: 3134008

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.07.2020 17:10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.07.2020 17:10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.07.2020 17:10	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.07.2020 17:10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-130	08.07.2020 17:10	
o-Terphenyl	84-15-1	108	%	70-130	08.07.2020 17:10	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-11 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-011

Date Collected: 08.04.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 11:00

Basis: Wet Weight

Seq Number: 3133947

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.07.2020 18:39	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.07.2020 18:39	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.07.2020 18:39	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	08.07.2020 18:39	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.07.2020 18:39	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.07.2020 18:39	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.07.2020 18:39	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	95	%	70-130	08.07.2020 18:39		
1,4-Difluorobenzene	540-36-3	112	%	70-130	08.07.2020 18:39		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-12 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-012

Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 12:35

Basis: Wet Weight

Seq Number: 3133965

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.06	4.96	mg/kg	08.07.2020 15:52		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 12:00

Basis: Wet Weight

Seq Number: 3134008

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.07.2020 17:29	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.07.2020 17:29	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.07.2020 17:29	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.07.2020 17:29	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-130	08.07.2020 17:29	
o-Terphenyl	84-15-1	104	%	70-130	08.07.2020 17:29	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-12 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-012

Date Collected: 08.04.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 11:00

Basis: Wet Weight

Seq Number: 3133947

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.07.2020 19:00	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.07.2020 19:00	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.07.2020 19:00	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.07.2020 19:00	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.07.2020 19:00	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.07.2020 19:00	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.07.2020 19:00	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	101	%	70-130	08.07.2020 19:00		
1,4-Difluorobenzene	540-36-3	115	%	70-130	08.07.2020 19:00		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-13 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-013

Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 12:35

Basis: Wet Weight

Seq Number: 3133965

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.76	4.98	mg/kg	08.07.2020 16:08		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 12:00

Basis: Wet Weight

Seq Number: 3134008

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.07.2020 17:48	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.07.2020 17:48	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.07.2020 17:48	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.07.2020 17:48	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-130	08.07.2020 17:48	
o-Terphenyl	84-15-1	105	%	70-130	08.07.2020 17:48	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-13 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-013

Date Collected: 08.04.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 11:00

Basis: Wet Weight

Seq Number: 3133947

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.07.2020 19:20	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.07.2020 19:20	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.07.2020 19:20	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.07.2020 19:20	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.07.2020 19:20	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.07.2020 19:20	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.07.2020 19:20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	102	%	70-130	08.07.2020 19:20	
1,4-Difluorobenzene	540-36-3	114	%	70-130	08.07.2020 19:20	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-14 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-014

Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 12:35

Basis: Wet Weight

Seq Number: 3133965

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.17	4.95	mg/kg	08.07.2020 16:13		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 12:00

Basis: Wet Weight

Seq Number: 3134008

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.07.2020 18:07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.07.2020 18:07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.07.2020 18:07	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.07.2020 18:07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-130	08.07.2020 18:07	
o-Terphenyl	84-15-1	107	%	70-130	08.07.2020 18:07	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-14 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-014

Date Collected: 08.04.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 11:00

Basis: Wet Weight

Seq Number: 3133947

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.07.2020 19:41	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.07.2020 19:41	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.07.2020 19:41	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	08.07.2020 19:41	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.07.2020 19:41	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.07.2020 19:41	U	1
Total BTEX		<0.00202	0.00202	mg/kg	08.07.2020 19:41	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	115	%	70-130	08.07.2020 19:41		
1,4-Difluorobenzene	540-36-3	111	%	70-130	08.07.2020 19:41		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-15 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-015

Date Collected: 08.01.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 12:35

Basis: Wet Weight

Seq Number: 3133965

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.44	4.99	mg/kg	08.07.2020 16:18		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 12:00

Basis: Wet Weight

Seq Number: 3134008

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.07.2020 18:25	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.07.2020 18:25	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.07.2020 18:25	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.07.2020 18:25	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-130	08.07.2020 18:25	
o-Terphenyl	84-15-1	108	%	70-130	08.07.2020 18:25	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-15 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-015

Date Collected: 08.01.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 11:00

Basis: Wet Weight

Seq Number: 3133947

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.07.2020 20:01	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.07.2020 20:01	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.07.2020 20:01	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	08.07.2020 20:01	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.07.2020 20:01	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.07.2020 20:01	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.07.2020 20:01	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	118	%	70-130	08.07.2020 20:01		
4-Bromofluorobenzene	460-00-4	101	%	70-130	08.07.2020 20:01		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-16 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-016

Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 12:35

Basis: Wet Weight

Seq Number: 3133965

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.00	5.03	mg/kg	08.07.2020 16:23		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 12:00

Basis: Wet Weight

Seq Number: 3134008

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.07.2020 18:44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.07.2020 18:44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.07.2020 18:44	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.07.2020 18:44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	105	%	70-130	08.07.2020 18:44	
o-Terphenyl	84-15-1	103	%	70-130	08.07.2020 18:44	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-16 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-016

Date Collected: 08.04.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 11:00

Basis: Wet Weight

Seq Number: 3133947

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.07.2020 20:22	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.07.2020 20:22	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.07.2020 20:22	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.07.2020 20:22	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.07.2020 20:22	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.07.2020 20:22	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.07.2020 20:22	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	106	%	70-130	08.07.2020 20:22		
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.07.2020 20:22		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-17 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-017

Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 12:35

Basis: Wet Weight

Seq Number: 3133965

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.38	5.02	mg/kg	08.07.2020 16:29		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 12:00

Basis: Wet Weight

Seq Number: 3134008

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.07.2020 19:03	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.07.2020 19:03	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.07.2020 19:03	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.07.2020 19:03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-130	08.07.2020 19:03	
o-Terphenyl	84-15-1	107	%	70-130	08.07.2020 19:03	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-17 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-017

Date Collected: 08.04.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 11:00

Basis: Wet Weight

Seq Number: 3133947

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.07.2020 20:42	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.07.2020 20:42	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.07.2020 20:42	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.07.2020 20:42	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.07.2020 20:42	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.07.2020 20:42	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.07.2020 20:42	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	88	%	70-130	08.07.2020 20:42		
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.07.2020 20:42		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-18 Comp 6'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-018

Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 12:35

Basis: Wet Weight

Seq Number: 3133965

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.50	4.96	mg/kg	08.07.2020 16:34		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 12:00

Basis: Wet Weight

Seq Number: 3134008

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.07.2020 19:21	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.07.2020 19:21	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.07.2020 19:21	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.07.2020 19:21	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-130	08.07.2020 19:21	
o-Terphenyl	84-15-1	105	%	70-130	08.07.2020 19:21	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-18 Comp 6'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-018

Date Collected: 08.04.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 11:00

Basis: Wet Weight

Seq Number: 3133947

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.07.2020 21:03	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.07.2020 21:03	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.07.2020 21:03	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.07.2020 21:03	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.07.2020 21:03	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.07.2020 21:03	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.07.2020 21:03	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	114	%	70-130	08.07.2020 21:03	
4-Bromofluorobenzene	460-00-4	99	%	70-130	08.07.2020 21:03	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-19 Comp 6'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-019

Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 12:35

Basis: Wet Weight

Seq Number: 3133965

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.03	4.98	mg/kg	08.07.2020 16:39		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 12:00

Basis: Wet Weight

Seq Number: 3134008

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.07.2020 19:40	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.07.2020 19:40	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.07.2020 19:40	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.07.2020 19:40	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-130	08.07.2020 19:40	
o-Terphenyl	84-15-1	107	%	70-130	08.07.2020 19:40	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-19 Comp 6'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-019

Date Collected: 08.04.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 11:00

Basis: Wet Weight

Seq Number: 3133947

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.07.2020 21:23	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.07.2020 21:23	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.07.2020 21:23	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.07.2020 21:23	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.07.2020 21:23	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.07.2020 21:23	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.07.2020 21:23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	08.07.2020 21:23	
1,4-Difluorobenzene	540-36-3	116	%	70-130	08.07.2020 21:23	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-20 Comp 6'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-020

Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 13:25

Basis: Wet Weight

Seq Number: 3134042

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.02	5.02	mg/kg	08.07.2020 14:15	U	1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 12:00

Basis: Wet Weight

Seq Number: 3134008

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.07.2020 19:59	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.07.2020 19:59	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.07.2020 19:59	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.07.2020 19:59	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-130	08.07.2020 19:59	
o-Terphenyl	84-15-1	105	%	70-130	08.07.2020 19:59	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-20 Comp 6'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-020

Date Collected: 08.04.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 11:00

Basis: Wet Weight

Seq Number: 3133947

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.07.2020 21:44	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.07.2020 21:44	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.07.2020 21:44	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.07.2020 21:44	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.07.2020 21:44	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.07.2020 21:44	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.07.2020 21:44	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	105	%	70-130	08.07.2020 21:44		
1,4-Difluorobenzene	540-36-3	117	%	70-130	08.07.2020 21:44		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-21 Comp 6'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-021

Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 13:25

Basis: Wet Weight

Seq Number: 3134042

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.97	4.97	mg/kg	08.07.2020 14:34	U	1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 17:00

Basis: Wet Weight

Seq Number: 3134009

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.07.2020 21:32	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.07.2020 21:32	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.07.2020 21:32	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.07.2020 21:32	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	106	%	70-130	08.07.2020 21:32	
o-Terphenyl	84-15-1	107	%	70-130	08.07.2020 21:32	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-21 Comp 6'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-021

Date Collected: 08.04.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 13:00

Basis: Wet Weight

Seq Number: 3133950

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.07.2020 16:37	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.07.2020 16:37	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.07.2020 16:37	UX	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	08.07.2020 16:37	UX	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.07.2020 16:37	UX	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.07.2020 16:37	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.07.2020 16:37	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	104	%	70-130	08.07.2020 16:37		
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.07.2020 16:37		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-22 Comp 6'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-022

Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 13:25

Basis: Wet Weight

Seq Number: 3134042

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	08.07.2020 14:41	U	1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 17:00

Basis: Wet Weight

Seq Number: 3134009

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.07.2020 22:28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.07.2020 22:28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.07.2020 22:28	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.07.2020 22:28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-130	08.07.2020 22:28	
o-Terphenyl	84-15-1	113	%	70-130	08.07.2020 22:28	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-22 Comp 6'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-022

Date Collected: 08.04.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 13:00

Basis: Wet Weight

Seq Number: 3133950

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.07.2020 16:58	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.07.2020 16:58	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.07.2020 16:58	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.07.2020 16:58	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.07.2020 16:58	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.07.2020 16:58	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.07.2020 16:58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	103	%	70-130	08.07.2020 16:58	
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.07.2020 16:58	



Certificate of Analytical Results 669481

Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-23 Comp 6'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-023

Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 13:25

Basis: Wet Weight

Seq Number: 3134042

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	08.07.2020 14:47	U	1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 17:00

Basis: Wet Weight

Seq Number: 3134009

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.07.2020 22:46	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.07.2020 22:46	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.07.2020 22:46	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.07.2020 22:46	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-130	08.07.2020 22:46	
o-Terphenyl	84-15-1	109	%	70-130	08.07.2020 22:46	



Certificate of Analytical Results 669481

Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-23 Comp 6'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-023

Date Collected: 08.04.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 13:00

Basis: Wet Weight

Seq Number: 3133950

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.07.2020 17:18	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.07.2020 17:18	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.07.2020 17:18	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	08.07.2020 17:18	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.07.2020 17:18	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.07.2020 17:18	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.07.2020 17:18	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	104	%	70-130	08.07.2020 17:18		
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.07.2020 17:18		



Certificate of Analytical Results 669481

Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-24 Comp 6'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-024

Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 13:25

Basis: Wet Weight

Seq Number: 3134042

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	08.07.2020 14:53	U	1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 17:00

Basis: Wet Weight

Seq Number: 3134009

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.07.2020 23:05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.07.2020 23:05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.07.2020 23:05	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.07.2020 23:05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	113	%	70-130	08.07.2020 23:05	
o-Terphenyl	84-15-1	112	%	70-130	08.07.2020 23:05	



Certificate of Analytical Results 669481

Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-24 Comp 6'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-024

Date Collected: 08.04.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 13:00

Basis: Wet Weight

Seq Number: 3133950

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.07.2020 17:39	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.07.2020 17:39	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.07.2020 17:39	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.07.2020 17:39	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.07.2020 17:39	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.07.2020 17:39	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.07.2020 17:39	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	91	%	70-130	08.07.2020 17:39		
4-Bromofluorobenzene	460-00-4	106	%	70-130	08.07.2020 17:39		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-25 Comp 6'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-025

Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 13:25

Basis: Wet Weight

Seq Number: 3134042

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.04	5.04	mg/kg	08.07.2020 15:12	U	1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 17:00

Basis: Wet Weight

Seq Number: 3134009

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.07.2020 23:24	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.07.2020 23:24	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.07.2020 23:24	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.07.2020 23:24	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	108	%	70-130	08.07.2020 23:24	
o-Terphenyl	84-15-1	108	%	70-130	08.07.2020 23:24	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-25 Comp 6'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-025

Date Collected: 08.04.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 13:00

Basis: Wet Weight

Seq Number: 3133950

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.07.2020 17:59	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.07.2020 17:59	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.07.2020 17:59	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	08.07.2020 17:59	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.07.2020 17:59	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.07.2020 17:59	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.07.2020 17:59	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	106	%	70-130	08.07.2020 17:59		
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.07.2020 17:59		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-26 Comp 6'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-026

Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 13:25

Basis: Wet Weight

Seq Number: 3134042

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	08.07.2020 15:19	U	1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 17:00

Basis: Wet Weight

Seq Number: 3134009

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.07.2020 23:42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.07.2020 23:42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.07.2020 23:42	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.07.2020 23:42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-130	08.07.2020 23:42	
o-Terphenyl	84-15-1	108	%	70-130	08.07.2020 23:42	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-26 Comp 6'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-026

Date Collected: 08.04.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 13:00

Basis: Wet Weight

Seq Number: 3133950

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.07.2020 18:19	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.07.2020 18:19	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.07.2020 18:19	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.07.2020 18:19	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.07.2020 18:19	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.07.2020 18:19	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.07.2020 18:19	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	105	%	70-130	08.07.2020 18:19		
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.07.2020 18:19		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-27 Comp 6'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-027

Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 13:25

Basis: Wet Weight

Seq Number: 3134042

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	08.07.2020 15:25	U	1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 17:00

Basis: Wet Weight

Seq Number: 3134009

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.08.2020 00:01	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.08.2020 00:01	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.08.2020 00:01	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.08.2020 00:01	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-130	08.08.2020 00:01	
o-Terphenyl	84-15-1	112	%	70-130	08.08.2020 00:01	



Certificate of Analytical Results 669481

Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-27 Comp 6'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-027

Date Collected: 08.04.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 13:00

Basis: Wet Weight

Seq Number: 3133950

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.07.2020 18:40	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.07.2020 18:40	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.07.2020 18:40	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.07.2020 18:40	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.07.2020 18:40	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.07.2020 18:40	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.07.2020 18:40	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	103	%	70-130	08.07.2020 18:40		
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.07.2020 18:40		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-28 Comp 6'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-028

Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 13:25

Basis: Wet Weight

Seq Number: 3134042

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	08.07.2020 15:31	U	1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 17:00

Basis: Wet Weight

Seq Number: 3134009

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.08.2020 00:19	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.08.2020 00:19	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.08.2020 00:19	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.08.2020 00:19	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-130	08.08.2020 00:19	
o-Terphenyl	84-15-1	108	%	70-130	08.08.2020 00:19	



Certificate of Analytical Results 669481

Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-28 Comp 6'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-028

Date Collected: 08.04.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 13:00

Basis: Wet Weight

Seq Number: 3133950

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.07.2020 19:00	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.07.2020 19:00	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.07.2020 19:00	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.07.2020 19:00	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.07.2020 19:00	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.07.2020 19:00	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.07.2020 19:00	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	101	%	70-130	08.07.2020 19:00		
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.07.2020 19:00		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-29 Comp 6'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-029

Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 13:25

Basis: Wet Weight

Seq Number: 3134042

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.98	4.98	mg/kg	08.07.2020 15:38	U	1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 17:00

Basis: Wet Weight

Seq Number: 3134009

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.08.2020 00:38	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.08.2020 00:38	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.08.2020 00:38	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.08.2020 00:38	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-130	08.08.2020 00:38	
o-Terphenyl	84-15-1	111	%	70-130	08.08.2020 00:38	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-29 Comp 6'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-029

Date Collected: 08.04.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 13:00

Basis: Wet Weight

Seq Number: 3133950

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.07.2020 19:21	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.07.2020 19:21	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.07.2020 19:21	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.07.2020 19:21	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.07.2020 19:21	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.07.2020 19:21	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.07.2020 19:21	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.07.2020 19:21		
4-Bromofluorobenzene	460-00-4	104	%	70-130	08.07.2020 19:21		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-30 Comp 1.5'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-030

Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 13:25

Basis: Wet Weight

Seq Number: 3134042

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	08.07.2020 15:44	U	1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 17:00

Basis: Wet Weight

Seq Number: 3134009

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.08.2020 00:56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.08.2020 00:56	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.08.2020 00:56	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.08.2020 00:56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-130	08.08.2020 00:56	
o-Terphenyl	84-15-1	113	%	70-130	08.08.2020 00:56	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-30 Comp 1.5'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-030

Date Collected: 08.04.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 13:00

Basis: Wet Weight

Seq Number: 3133950

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.07.2020 19:41	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.07.2020 19:41	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.07.2020 19:41	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.07.2020 19:41	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.07.2020 19:41	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.07.2020 19:41	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.07.2020 19:41	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	105	%	70-130	08.07.2020 19:41		
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.07.2020 19:41		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-31 Comp 1.5'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-031

Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 13:25

Basis: Wet Weight

Seq Number: 3134042

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.03	5.03	mg/kg	08.07.2020 16:03	U	1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 17:00

Basis: Wet Weight

Seq Number: 3134009

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.08.2020 01:33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.08.2020 01:33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.08.2020 01:33	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.08.2020 01:33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	116	%	70-130	08.08.2020 01:33	
o-Terphenyl	84-15-1	114	%	70-130	08.08.2020 01:33	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-31 Comp 1.5'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-031

Date Collected: 08.04.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 13:00

Basis: Wet Weight

Seq Number: 3133950

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.07.2020 21:04	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.07.2020 21:04	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.07.2020 21:04	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.07.2020 21:04	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.07.2020 21:04	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.07.2020 21:04	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.07.2020 21:04	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	104	%	70-130	08.07.2020 21:04		
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.07.2020 21:04		



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Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-32 Comp 1.5**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-032

Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 13:25

Basis: Wet Weight

Seq Number: 3134042

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	08.07.2020 16:09	U	1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 17:00

Basis: Wet Weight

Seq Number: 3134009

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.08.2020 01:52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.08.2020 01:52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.08.2020 01:52	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.08.2020 01:52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-130	08.08.2020 01:52	
o-Terphenyl	84-15-1	102	%	70-130	08.08.2020 01:52	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-32 Comp 1.5**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-032

Date Collected: 08.04.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 13:00

Basis: Wet Weight

Seq Number: 3133950

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.07.2020 21:25	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.07.2020 21:25	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.07.2020 21:25	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.07.2020 21:25	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.07.2020 21:25	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.07.2020 21:25	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.07.2020 21:25	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	105	%	70-130	08.07.2020 21:25		
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.07.2020 21:25		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-33 Comp 1.5'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-033

Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 13:25

Basis: Wet Weight

Seq Number: 3134042

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	08.07.2020 16:29	U	1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 17:00

Basis: Wet Weight

Seq Number: 3134009

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.08.2020 02:10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.08.2020 02:10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.08.2020 02:10	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.08.2020 02:10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	109	%	70-130	08.08.2020 02:10	
o-Terphenyl	84-15-1	105	%	70-130	08.08.2020 02:10	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-33 Comp 1.5'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-033

Date Collected: 08.04.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 13:00

Basis: Wet Weight

Seq Number: 3133950

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.07.2020 21:45	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.07.2020 21:45	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.07.2020 21:45	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.07.2020 21:45	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.07.2020 21:45	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.07.2020 21:45	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.07.2020 21:45	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.07.2020 21:45	
4-Bromofluorobenzene	460-00-4	104	%	70-130	08.07.2020 21:45	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-34 Comp 1.5'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-034

Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 13:25

Basis: Wet Weight

Seq Number: 3134042

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	08.07.2020 16:35	U	1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 17:00

Basis: Wet Weight

Seq Number: 3134009

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.08.2020 08:04	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.08.2020 08:04	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.08.2020 08:04	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.08.2020 08:04	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-130	08.08.2020 08:04	
o-Terphenyl	84-15-1	108	%	70-130	08.08.2020 08:04	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-34 Comp 1.5'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-034

Date Collected: 08.04.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 13:00

Basis: Wet Weight

Seq Number: 3133950

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.07.2020 22:06	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.07.2020 22:06	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.07.2020 22:06	U	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	08.07.2020 22:06	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.07.2020 22:06	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.07.2020 22:06	U	1
Total BTEX		<0.00202	0.00202	mg/kg	08.07.2020 22:06	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	104	%	70-130	08.07.2020 22:06		
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.07.2020 22:06		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-35 Comp 1.5'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-035

Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 13:25

Basis: Wet Weight

Seq Number: 3134042

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.98	4.98	mg/kg	08.07.2020 16:41	U	1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 17:00

Basis: Wet Weight

Seq Number: 3134009

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.08.2020 02:47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.08.2020 02:47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.08.2020 02:47	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.08.2020 02:47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	114	%	70-130	08.08.2020 02:47	
o-Terphenyl	84-15-1	112	%	70-130	08.08.2020 02:47	



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Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-35 Comp 1.5'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-035

Date Collected: 08.04.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 13:00

Basis: Wet Weight

Seq Number: 3133950

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.07.2020 22:26	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.07.2020 22:26	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.07.2020 22:26	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.07.2020 22:26	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.07.2020 22:26	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.07.2020 22:26	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.07.2020 22:26	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.07.2020 22:26		
4-Bromofluorobenzene	460-00-4	103	%	70-130	08.07.2020 22:26		



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Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-36 Comp 1.5'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-036

Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 13:25

Basis: Wet Weight

Seq Number: 3134042

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	08.07.2020 16:48	U	1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 17:00

Basis: Wet Weight

Seq Number: 3134009

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.08.2020 03:05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.08.2020 03:05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.08.2020 03:05	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.08.2020 03:05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-130	08.08.2020 03:05	
o-Terphenyl	84-15-1	107	%	70-130	08.08.2020 03:05	



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Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-36 Comp 1.5'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-036

Date Collected: 08.04.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 13:00

Basis: Wet Weight

Seq Number: 3133950

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.07.2020 22:46	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.07.2020 22:46	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.07.2020 22:46	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.07.2020 22:46	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.07.2020 22:46	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.07.2020 22:46	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.07.2020 22:46	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	103	%	70-130	08.07.2020 22:46		
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.07.2020 22:46		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-37 Comp 1.5'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-037

Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 13:25

Basis: Wet Weight

Seq Number: 3134042

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.05	5.05	mg/kg	08.07.2020 16:54	U	1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 17:00

Basis: Wet Weight

Seq Number: 3134009

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.08.2020 03:23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.08.2020 03:23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.08.2020 03:23	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.08.2020 03:23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	111	%	70-130	08.08.2020 03:23	
o-Terphenyl	84-15-1	106	%	70-130	08.08.2020 03:23	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Bottomhole-37 Comp 1.5'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-037

Date Collected: 08.04.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 13:00

Basis: Wet Weight

Seq Number: 3133950

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.07.2020 23:07	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.07.2020 23:07	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.07.2020 23:07	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.07.2020 23:07	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.07.2020 23:07	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.07.2020 23:07	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.07.2020 23:07	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	104	%	70-130	08.07.2020 23:07		
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.07.2020 23:07		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-1 Comp 4'** Matrix: Soil Date Received: 08.07.2020 10:22
 Lab Sample Id: 669481-038 Date Collected: 08.01.2020 00:00
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.07.2020 13:25 Basis: Wet Weight
 Seq Number: 3134042

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.05	5.05	mg/kg	08.07.2020 17:00	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.07.2020 17:00 Basis: Wet Weight
 Seq Number: 3134009

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.08.2020 03:42	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.08.2020 03:42	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.08.2020 03:42	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.08.2020 03:42	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-130	08.08.2020 03:42	
o-Terphenyl	84-15-1	109	%	70-130	08.08.2020 03:42	



Certificate of Analytical Results 669481

Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-1 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-038

Date Collected: 08.01.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 13:00

Basis: Wet Weight

Seq Number: 3133950

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.07.2020 23:27	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.07.2020 23:27	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.07.2020 23:27	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	08.07.2020 23:27	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.07.2020 23:27	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.07.2020 23:27	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.07.2020 23:27	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	106	%	70-130	08.07.2020 23:27		
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.07.2020 23:27		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-2 Comp 4'** Matrix: Soil Date Received: 08.07.2020 10:22
 Lab Sample Id: 669481-039 Date Collected: 08.01.2020 00:00
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.07.2020 13:25 Basis: Wet Weight
 Seq Number: 3134042

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	08.07.2020 17:07	U	1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.07.2020 17:00 Basis: Wet Weight
 Seq Number: 3134009

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.08.2020 04:00	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.08.2020 04:00	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.08.2020 04:00	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.08.2020 04:00	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	110	%	70-130	08.08.2020 04:00	
o-Terphenyl	84-15-1	109	%	70-130	08.08.2020 04:00	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-2 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-039

Date Collected: 08.01.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 13:00

Basis: Wet Weight

Seq Number: 3133950

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.07.2020 23:48	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.07.2020 23:48	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.07.2020 23:48	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	08.07.2020 23:48	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.07.2020 23:48	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.07.2020 23:48	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.07.2020 23:48	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	106	%	70-130	08.07.2020 23:48		
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.07.2020 23:48		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-3 Comp 4'** Matrix: Soil Date Received: 08.07.2020 10:22
 Lab Sample Id: 669481-040 Date Collected: 08.01.2020 00:00
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.07.2020 13:35 Basis: Wet Weight
 Seq Number: 3133969

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7.73	5.00	mg/kg	08.08.2020 18:29		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.07.2020 17:00 Basis: Wet Weight
 Seq Number: 3134009

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.08.2020 04:18	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.08.2020 04:18	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.08.2020 04:18	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.08.2020 04:18	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	107	%	70-130	08.08.2020 04:18	
o-Terphenyl	84-15-1	103	%	70-130	08.08.2020 04:18	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-3 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-040

Date Collected: 08.01.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 13:00

Basis: Wet Weight

Seq Number: 3133950

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.08.2020 00:08	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.08.2020 00:08	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.08.2020 00:08	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	08.08.2020 00:08	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.08.2020 00:08	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.08.2020 00:08	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.08.2020 00:08	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	107	%	70-130	08.08.2020 00:08		
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.08.2020 00:08		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-4 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-041

Date Collected: 08.01.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 13:35

Basis: Wet Weight

Seq Number: 3133969

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.31	4.96	mg/kg	08.08.2020 18:45		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 16:00

Basis: Wet Weight

Seq Number: 3134013

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.07.2020 22:20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.07.2020 22:20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.07.2020 22:20	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.07.2020 22:20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-130	08.07.2020 22:20	
o-Terphenyl	84-15-1	95	%	70-130	08.07.2020 22:20	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-4 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-041

Date Collected: 08.01.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 12:30

Basis: Wet Weight

Seq Number: 3133948

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.08.2020 01:07	UX	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.08.2020 01:07	UX	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.08.2020 01:07	UX	1
m,p-Xylenes	179601-23-1	<0.00403	0.00403	mg/kg	08.08.2020 01:07	UX	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.08.2020 01:07	UX	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.08.2020 01:07	U	1
Total BTEX		<0.00202	0.00202	mg/kg	08.08.2020 01:07	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	103	%	70-130	08.08.2020 01:07		
1,4-Difluorobenzene	540-36-3	112	%	70-130	08.08.2020 01:07		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: Sidewall-5 Comp 4'

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-042

Date Collected: 08.01.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 13:35

Basis: Wet Weight

Seq Number: 3133969

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.34	4.99	mg/kg	08.08.2020 18:50		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 16:00

Basis: Wet Weight

Seq Number: 3134013

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.07.2020 23:23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.07.2020 23:23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.07.2020 23:23	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.07.2020 23:23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-130	08.07.2020 23:23	
o-Terphenyl	84-15-1	90	%	70-130	08.07.2020 23:23	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-5 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-042

Date Collected: 08.01.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 12:30

Basis: Wet Weight

Seq Number: 3133948

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.08.2020 01:28	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.08.2020 01:28	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.08.2020 01:28	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.08.2020 01:28	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.08.2020 01:28	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.08.2020 01:28	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.08.2020 01:28	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	118	%	70-130	08.08.2020 01:28		
4-Bromofluorobenzene	460-00-4	115	%	70-130	08.08.2020 01:28		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-6 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-043

Date Collected: 08.01.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 13:35

Basis: Wet Weight

Seq Number: 3133969

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6.27	5.02	mg/kg	08.08.2020 18:55		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 16:00

Basis: Wet Weight

Seq Number: 3134013

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.07.2020 23:44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.07.2020 23:44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.07.2020 23:44	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.07.2020 23:44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	100	%	70-130	08.07.2020 23:44	
o-Terphenyl	84-15-1	97	%	70-130	08.07.2020 23:44	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-6 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-043

Date Collected: 08.01.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 12:30

Basis: Wet Weight

Seq Number: 3133948

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.08.2020 01:48	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.08.2020 01:48	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.08.2020 01:48	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.08.2020 01:48	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.08.2020 01:48	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.08.2020 01:48	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.08.2020 01:48	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	116	%	70-130	08.08.2020 01:48		
4-Bromofluorobenzene	460-00-4	111	%	70-130	08.08.2020 01:48		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-7 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-044

Date Collected: 08.01.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 13:35

Basis: Wet Weight

Seq Number: 3133969

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.37	4.98	mg/kg	08.08.2020 19:00		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 16:00

Basis: Wet Weight

Seq Number: 3134013

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.08.2020 00:05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.08.2020 00:05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.08.2020 00:05	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.08.2020 00:05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-130	08.08.2020 00:05	
o-Terphenyl	84-15-1	92	%	70-130	08.08.2020 00:05	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-7 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-044

Date Collected: 08.01.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 12:30

Basis: Wet Weight

Seq Number: 3133948

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.08.2020 02:09	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.08.2020 02:09	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.08.2020 02:09	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.08.2020 02:09	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.08.2020 02:09	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.08.2020 02:09	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.08.2020 02:09	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	111	%	70-130	08.08.2020 02:09		
4-Bromofluorobenzene	460-00-4	127	%	70-130	08.08.2020 02:09		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-8 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-045

Date Collected: 08.01.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 13:35

Basis: Wet Weight

Seq Number: 3133969

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.66	5.04	mg/kg	08.08.2020 19:16		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 16:00

Basis: Wet Weight

Seq Number: 3134013

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.08.2020 00:26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.08.2020 00:26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.08.2020 00:26	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.08.2020 00:26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-130	08.08.2020 00:26	
o-Terphenyl	84-15-1	95	%	70-130	08.08.2020 00:26	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-8 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-045

Date Collected: 08.01.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 12:30

Basis: Wet Weight

Seq Number: 3133948

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.08.2020 02:29	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.08.2020 02:29	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.08.2020 02:29	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.08.2020 02:29	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.08.2020 02:29	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.08.2020 02:29	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.08.2020 02:29	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	117	%	70-130	08.08.2020 02:29		
4-Bromofluorobenzene	460-00-4	106	%	70-130	08.08.2020 02:29		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-9 Comp 4'** Matrix: Soil Date Received: 08.07.2020 10:22
 Lab Sample Id: 669481-046 Date Collected: 08.01.2020 00:00
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.07.2020 13:35 Basis: Wet Weight
 Seq Number: 3133969

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.77	5.00	mg/kg	08.08.2020 19:22		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.07.2020 16:00 Basis: Wet Weight
 Seq Number: 3134013

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.08.2020 00:47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.08.2020 00:47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.08.2020 00:47	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.08.2020 00:47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-130	08.08.2020 00:47	
o-Terphenyl	84-15-1	91	%	70-130	08.08.2020 00:47	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-9 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-046

Date Collected: 08.01.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 12:30

Basis: Wet Weight

Seq Number: 3133948

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.08.2020 02:50	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.08.2020 02:50	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.08.2020 02:50	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.08.2020 02:50	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.08.2020 02:50	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.08.2020 02:50	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.08.2020 02:50	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	109	%	70-130	08.08.2020 02:50		
1,4-Difluorobenzene	540-36-3	116	%	70-130	08.08.2020 02:50		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-10 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-047

Date Collected: 08.01.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 13:35

Basis: Wet Weight

Seq Number: 3133969

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7.68	5.00	mg/kg	08.08.2020 19:27		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 16:00

Basis: Wet Weight

Seq Number: 3134013

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.08.2020 01:07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.08.2020 01:07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.08.2020 01:07	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.08.2020 01:07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	95	%	70-130	08.08.2020 01:07	
o-Terphenyl	84-15-1	94	%	70-130	08.08.2020 01:07	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-10 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-047

Date Collected: 08.01.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 12:30

Basis: Wet Weight

Seq Number: 3133948

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.08.2020 03:10	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.08.2020 03:10	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.08.2020 03:10	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.08.2020 03:10	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.08.2020 03:10	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.08.2020 03:10	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.08.2020 03:10	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	110	%	70-130	08.08.2020 03:10		
1,4-Difluorobenzene	540-36-3	115	%	70-130	08.08.2020 03:10		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-11 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-048

Date Collected: 08.01.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 13:35

Basis: Wet Weight

Seq Number: 3133969

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	9.52	5.00	mg/kg	08.08.2020 19:32		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 16:00

Basis: Wet Weight

Seq Number: 3134013

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.08.2020 01:28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.08.2020 01:28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.08.2020 01:28	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.08.2020 01:28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-130	08.08.2020 01:28	
o-Terphenyl	84-15-1	94	%	70-130	08.08.2020 01:28	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-11 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-048

Date Collected: 08.01.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 12:30

Basis: Wet Weight

Seq Number: 3133948

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.08.2020 03:30	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.08.2020 03:30	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.08.2020 03:30	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	08.08.2020 03:30	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.08.2020 03:30	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.08.2020 03:30	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.08.2020 03:30	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	110	%	70-130	08.08.2020 03:30		
1,4-Difluorobenzene	540-36-3	115	%	70-130	08.08.2020 03:30		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-12 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-049

Date Collected: 08.01.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 13:35

Basis: Wet Weight

Seq Number: 3133969

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.24	5.03	mg/kg	08.08.2020 19:37		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 16:00

Basis: Wet Weight

Seq Number: 3134013

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.08.2020 01:49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.08.2020 01:49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.08.2020 01:49	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.08.2020 01:49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	97	%	70-130	08.08.2020 01:49	
o-Terphenyl	84-15-1	96	%	70-130	08.08.2020 01:49	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-12 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-049

Date Collected: 08.01.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 12:30

Basis: Wet Weight

Seq Number: 3133948

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.08.2020 03:51	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.08.2020 03:51	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.08.2020 03:51	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.08.2020 03:51	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.08.2020 03:51	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.08.2020 03:51	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.08.2020 03:51	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	115	%	70-130	08.08.2020 03:51		
4-Bromofluorobenzene	460-00-4	105	%	70-130	08.08.2020 03:51		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-13 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-050

Date Collected: 08.01.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 13:35

Basis: Wet Weight

Seq Number: 3133969

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	9.03	5.05	mg/kg	08.08.2020 19:43		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 16:00

Basis: Wet Weight

Seq Number: 3134013

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.08.2020 02:10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.08.2020 02:10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.08.2020 02:10	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.08.2020 02:10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-130	08.08.2020 02:10	
o-Terphenyl	84-15-1	91	%	70-130	08.08.2020 02:10	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-13 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-050

Date Collected: 08.01.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 12:30

Basis: Wet Weight

Seq Number: 3133948

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00201	0.00201	mg/kg	08.08.2020 04:11	U	1
Toluene	108-88-3	<0.00201	0.00201	mg/kg	08.08.2020 04:11	U	1
Ethylbenzene	100-41-4	<0.00201	0.00201	mg/kg	08.08.2020 04:11	U	1
m,p-Xylenes	179601-23-1	<0.00402	0.00402	mg/kg	08.08.2020 04:11	U	1
o-Xylene	95-47-6	<0.00201	0.00201	mg/kg	08.08.2020 04:11	U	1
Total Xylenes	1330-20-7	<0.00201	0.00201	mg/kg	08.08.2020 04:11	U	1
Total BTEX		<0.00201	0.00201	mg/kg	08.08.2020 04:11	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	114	%	70-130	08.08.2020 04:11		
4-Bromofluorobenzene	460-00-4	116	%	70-130	08.08.2020 04:11		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-14 Comp 1'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-051

Date Collected: 08.01.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 13:35

Basis: Wet Weight

Seq Number: 3133969

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.48	4.98	mg/kg	08.08.2020 19:58		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 16:00

Basis: Wet Weight

Seq Number: 3134013

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.08.2020 02:52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.08.2020 02:52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.08.2020 02:52	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.08.2020 02:52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	96	%	70-130	08.08.2020 02:52	
o-Terphenyl	84-15-1	97	%	70-130	08.08.2020 02:52	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-14 Comp 1'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-051

Date Collected: 08.01.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 12:30

Basis: Wet Weight

Seq Number: 3133948

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.08.2020 05:34	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.08.2020 05:34	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.08.2020 05:34	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	08.08.2020 05:34	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.08.2020 05:34	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.08.2020 05:34	U	1
Total BTEX		<0.00202	0.00202	mg/kg	08.08.2020 05:34	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.08.2020 05:34		
4-Bromofluorobenzene	460-00-4	115	%	70-130	08.08.2020 05:34		



Certificate of Analytical Results 669481

Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-15 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-052

Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 13:35

Basis: Wet Weight

Seq Number: 3133969

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	9.61	5.00	mg/kg	08.08.2020 20:04		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 16:00

Basis: Wet Weight

Seq Number: 3134013

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.08.2020 03:12	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.08.2020 03:12	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.08.2020 03:12	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.08.2020 03:12	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-130	08.08.2020 03:12	
o-Terphenyl	84-15-1	93	%	70-130	08.08.2020 03:12	



Certificate of Analytical Results 669481

Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-15 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-052

Date Collected: 08.04.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 12:30

Basis: Wet Weight

Seq Number: 3133948

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.08.2020 05:54	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.08.2020 05:54	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.08.2020 05:54	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.08.2020 05:54	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.08.2020 05:54	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.08.2020 05:54	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.08.2020 05:54	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	114	%	70-130	08.08.2020 05:54		
4-Bromofluorobenzene	460-00-4	110	%	70-130	08.08.2020 05:54		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-16 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-053

Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 13:35

Basis: Wet Weight

Seq Number: 3133969

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	9.05	4.96	mg/kg	08.08.2020 20:19		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 16:00

Basis: Wet Weight

Seq Number: 3134013

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.08.2020 03:33	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.08.2020 03:33	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.08.2020 03:33	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.08.2020 03:33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-130	08.08.2020 03:33	
o-Terphenyl	84-15-1	93	%	70-130	08.08.2020 03:33	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-16 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-053

Date Collected: 08.04.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 12:30

Basis: Wet Weight

Seq Number: 3133948

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.08.2020 06:14	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.08.2020 06:14	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.08.2020 06:14	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.08.2020 06:14	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.08.2020 06:14	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.08.2020 06:14	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.08.2020 06:14	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	115	%	70-130	08.08.2020 06:14		
4-Bromofluorobenzene	460-00-4	111	%	70-130	08.08.2020 06:14		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-17 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-054

Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 13:35

Basis: Wet Weight

Seq Number: 3133969

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	9.15	4.98	mg/kg	08.08.2020 20:25		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 16:00

Basis: Wet Weight

Seq Number: 3134013

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.08.2020 03:54	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.08.2020 03:54	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.08.2020 03:54	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.08.2020 03:54	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	98	%	70-130	08.08.2020 03:54	
o-Terphenyl	84-15-1	98	%	70-130	08.08.2020 03:54	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-17 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-054

Date Collected: 08.04.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 12:30

Basis: Wet Weight

Seq Number: 3133948

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.08.2020 06:35	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.08.2020 06:35	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.08.2020 06:35	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.08.2020 06:35	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.08.2020 06:35	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.08.2020 06:35	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.08.2020 06:35	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	116	%	70-130	08.08.2020 06:35		
1,4-Difluorobenzene	540-36-3	113	%	70-130	08.08.2020 06:35		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-18 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-055

Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 13:35

Basis: Wet Weight

Seq Number: 3133969

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.82	4.97	mg/kg	08.08.2020 20:30		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 16:00

Basis: Wet Weight

Seq Number: 3134013

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.08.2020 04:14	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.08.2020 04:14	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.08.2020 04:14	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.08.2020 04:14	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	89	%	70-130	08.08.2020 04:14	
o-Terphenyl	84-15-1	92	%	70-130	08.08.2020 04:14	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-18 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-055

Date Collected: 08.04.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 12:30

Basis: Wet Weight

Seq Number: 3133948

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00202	0.00202	mg/kg	08.08.2020 06:55	U	1
Toluene	108-88-3	<0.00202	0.00202	mg/kg	08.08.2020 06:55	U	1
Ethylbenzene	100-41-4	<0.00202	0.00202	mg/kg	08.08.2020 06:55	U	1
m,p-Xylenes	179601-23-1	<0.00404	0.00404	mg/kg	08.08.2020 06:55	U	1
o-Xylene	95-47-6	<0.00202	0.00202	mg/kg	08.08.2020 06:55	U	1
Total Xylenes	1330-20-7	<0.00202	0.00202	mg/kg	08.08.2020 06:55	U	1
Total BTEX		<0.00202	0.00202	mg/kg	08.08.2020 06:55	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	112	%	70-130	08.08.2020 06:55		
4-Bromofluorobenzene	460-00-4	115	%	70-130	08.08.2020 06:55		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-19 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-056

Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 13:35

Basis: Wet Weight

Seq Number: 3133969

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	9.10	4.95	mg/kg	08.08.2020 20:35		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 16:00

Basis: Wet Weight

Seq Number: 3134013

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.08.2020 04:35	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.08.2020 04:35	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.08.2020 04:35	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.08.2020 04:35	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	91	%	70-130	08.08.2020 04:35	
o-Terphenyl	84-15-1	94	%	70-130	08.08.2020 04:35	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-19 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-056

Date Collected: 08.04.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 12:30

Basis: Wet Weight

Seq Number: 3133948

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.08.2020 07:16	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.08.2020 07:16	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.08.2020 07:16	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	08.08.2020 07:16	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.08.2020 07:16	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.08.2020 07:16	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.08.2020 07:16	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	112	%	70-130	08.08.2020 07:16		
1,4-Difluorobenzene	540-36-3	116	%	70-130	08.08.2020 07:16		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-20 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-057

Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 13:35

Basis: Wet Weight

Seq Number: 3133969

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	9.01	5.04	mg/kg	08.08.2020 20:41		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 16:00

Basis: Wet Weight

Seq Number: 3134013

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.08.2020 04:56	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.08.2020 04:56	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.08.2020 04:56	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.08.2020 04:56	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-130	08.08.2020 04:56	
o-Terphenyl	84-15-1	95	%	70-130	08.08.2020 04:56	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-20 Comp 4'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-057

Date Collected: 08.04.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 12:30

Basis: Wet Weight

Seq Number: 3133948

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.08.2020 07:36	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.08.2020 07:36	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.08.2020 07:36	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	08.08.2020 07:36	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.08.2020 07:36	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.08.2020 07:36	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.08.2020 07:36	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	114	%	70-130	08.08.2020 07:36		
4-Bromofluorobenzene	460-00-4	116	%	70-130	08.08.2020 07:36		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-21 Comp 6'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-058

Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 13:35

Basis: Wet Weight

Seq Number: 3133969

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.29	5.00	mg/kg	08.08.2020 20:46		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 16:00

Basis: Wet Weight

Seq Number: 3134013

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.08.2020 05:16	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.08.2020 05:16	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.08.2020 05:16	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.08.2020 05:16	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	94	%	70-130	08.08.2020 05:16	
o-Terphenyl	84-15-1	94	%	70-130	08.08.2020 05:16	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-21 Comp 6'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-058

Date Collected: 08.04.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 12:30

Basis: Wet Weight

Seq Number: 3133948

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.08.2020 07:56	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.08.2020 07:56	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.08.2020 07:56	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.08.2020 07:56	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.08.2020 07:56	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.08.2020 07:56	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.08.2020 07:56	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	114	%	70-130	08.08.2020 07:56		
4-Bromofluorobenzene	460-00-4	110	%	70-130	08.08.2020 07:56		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-22 Comp 6'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-059

Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 13:35

Basis: Wet Weight

Seq Number: 3133969

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	9.43	4.97	mg/kg	08.08.2020 20:51		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 16:00

Basis: Wet Weight

Seq Number: 3134013

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.08.2020 05:37	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.08.2020 05:37	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.08.2020 05:37	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.08.2020 05:37	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	92	%	70-130	08.08.2020 05:37	
o-Terphenyl	84-15-1	93	%	70-130	08.08.2020 05:37	



Certificate of Analytical Results 669481

Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-22 Comp 6'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-059

Date Collected: 08.04.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 12:30

Basis: Wet Weight

Seq Number: 3133948

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.08.2020 08:17	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.08.2020 08:17	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.08.2020 08:17	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.08.2020 08:17	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.08.2020 08:17	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.08.2020 08:17	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.08.2020 08:17	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	110	%	70-130	08.08.2020 08:17		
1,4-Difluorobenzene	540-36-3	114	%	70-130	08.08.2020 08:17		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-23 Comp 6'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-060

Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 13:50

Basis: Wet Weight

Seq Number: 3133971

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	9.09	4.98	mg/kg	08.08.2020 21:28		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 16:00

Basis: Wet Weight

Seq Number: 3134013

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.08.2020 05:58	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.08.2020 05:58	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.08.2020 05:58	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.08.2020 05:58	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	93	%	70-130	08.08.2020 05:58	
o-Terphenyl	84-15-1	93	%	70-130	08.08.2020 05:58	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-23 Comp 6'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-060

Date Collected: 08.04.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 12:30

Basis: Wet Weight

Seq Number: 3133948

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.08.2020 08:37	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.08.2020 08:37	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.08.2020 08:37	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	08.08.2020 08:37	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.08.2020 08:37	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.08.2020 08:37	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.08.2020 08:37	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	112	%	70-130	08.08.2020 08:37		
1,4-Difluorobenzene	540-36-3	113	%	70-130	08.08.2020 08:37		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-24 Comp 6'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-061

Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 13:50

Basis: Wet Weight

Seq Number: 3133971

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.70	5.03	mg/kg	08.08.2020 21:47		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 16:00

Basis: Wet Weight

Seq Number: 3134015

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.07.2020 22:20	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.07.2020 22:20	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.07.2020 22:20	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.07.2020 22:20	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	121	%	70-130	08.07.2020 22:20	
o-Terphenyl	84-15-1	107	%	70-130	08.07.2020 22:20	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-24 Comp 6'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-061

Date Collected: 08.04.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 14:00

Basis: Wet Weight

Seq Number: 3133951

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.08.2020 03:32	UX	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.08.2020 03:32	UX	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.08.2020 03:32	UX	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.08.2020 03:32	UX	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.08.2020 03:32	UX	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.08.2020 03:32	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.08.2020 03:32	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	106	%	70-130	08.08.2020 03:32		
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.08.2020 03:32		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-25 Comp 6'** Matrix: Soil Date Received: 08.07.2020 10:22
 Lab Sample Id: 669481-062 Date Collected: 08.04.2020 00:00
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.07.2020 13:50 Basis: Wet Weight
 Seq Number: 3133971

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.77	4.96	mg/kg	08.08.2020 21:53		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.07.2020 16:00 Basis: Wet Weight
 Seq Number: 3134015

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.07.2020 23:23	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.07.2020 23:23	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.07.2020 23:23	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.07.2020 23:23	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	112	%	70-130	08.07.2020 23:23	
o-Terphenyl	84-15-1	97	%	70-130	08.07.2020 23:23	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-25 Comp 6'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-062

Date Collected: 08.04.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 14:00

Basis: Wet Weight

Seq Number: 3133951

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.08.2020 03:53	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.08.2020 03:53	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.08.2020 03:53	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.08.2020 03:53	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.08.2020 03:53	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.08.2020 03:53	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.08.2020 03:53	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	106	%	70-130	08.08.2020 03:53		
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.08.2020 03:53		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-26 Comp 6'** Matrix: Soil Date Received: 08.07.2020 10:22
 Lab Sample Id: 669481-063 Date Collected: 08.04.2020 00:00
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.07.2020 13:50 Basis: Wet Weight
 Seq Number: 3133971

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.27	4.98	mg/kg	08.08.2020 21:59		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.07.2020 16:00 Basis: Wet Weight
 Seq Number: 3134015

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.07.2020 23:44	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.07.2020 23:44	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.07.2020 23:44	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.07.2020 23:44	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	125	%	70-130	08.07.2020 23:44	
o-Terphenyl	84-15-1	102	%	70-130	08.07.2020 23:44	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-26 Comp 6'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-063

Date Collected: 08.04.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 14:00

Basis: Wet Weight

Seq Number: 3133951

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.08.2020 04:13	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.08.2020 04:13	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.08.2020 04:13	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.08.2020 04:13	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.08.2020 04:13	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.08.2020 04:13	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.08.2020 04:13	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.08.2020 04:13		
4-Bromofluorobenzene	460-00-4	106	%	70-130	08.08.2020 04:13		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-27 Comp 6'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-064

Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 13:50

Basis: Wet Weight

Seq Number: 3133971

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.54	5.04	mg/kg	08.08.2020 22:05		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 16:00

Basis: Wet Weight

Seq Number: 3134015

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.08.2020 00:05	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.08.2020 00:05	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.08.2020 00:05	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.08.2020 00:05	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	130	%	70-130	08.08.2020 00:05	
o-Terphenyl	84-15-1	108	%	70-130	08.08.2020 00:05	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-27 Comp 6'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-064

Date Collected: 08.04.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 14:00

Basis: Wet Weight

Seq Number: 3133951

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.08.2020 04:33	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.08.2020 04:33	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.08.2020 04:33	U	1
m,p-Xylenes	179601-23-1	<0.00397	0.00397	mg/kg	08.08.2020 04:33	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.08.2020 04:33	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.08.2020 04:33	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.08.2020 04:33	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
4-Bromofluorobenzene	460-00-4	105	%	70-130	08.08.2020 04:33	
1,4-Difluorobenzene	540-36-3	103	%	70-130	08.08.2020 04:33	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-28 Comp 6'** Matrix: Soil Date Received: 08.07.2020 10:22
 Lab Sample Id: 669481-065 Date Collected: 08.04.2020 00:00
 Analytical Method: Chloride by EPA 300 Prep Method: E300P
 Tech: CHE % Moisture:
 Analyst: CHE Date Prep: 08.07.2020 13:50 Basis: Wet Weight
 Seq Number: 3133971

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.28	4.95	mg/kg	08.08.2020 22:24		1

Analytical Method: TPH by SW8015 Mod Prep Method: SW8015P
 Tech: DVM % Moisture:
 Analyst: ARM Date Prep: 08.07.2020 16:00 Basis: Wet Weight
 Seq Number: 3134015

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.08.2020 00:26	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.08.2020 00:26	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.08.2020 00:26	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.08.2020 00:26	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	127	%	70-130	08.08.2020 00:26	
o-Terphenyl	84-15-1	100	%	70-130	08.08.2020 00:26	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-28 Comp 6'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-065

Date Collected: 08.04.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 14:00

Basis: Wet Weight

Seq Number: 3133951

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.08.2020 04:54	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.08.2020 04:54	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.08.2020 04:54	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.08.2020 04:54	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.08.2020 04:54	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.08.2020 04:54	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.08.2020 04:54	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	105	%	70-130	08.08.2020 04:54		
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.08.2020 04:54		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-29 Comp 6'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-066

Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 13:50

Basis: Wet Weight

Seq Number: 3133971

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.91	5.00	mg/kg	08.08.2020 22:31		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 16:00

Basis: Wet Weight

Seq Number: 3134015

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.08.2020 00:47	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.08.2020 00:47	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.08.2020 00:47	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.08.2020 00:47	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-130	08.08.2020 00:47	
o-Terphenyl	84-15-1	100	%	70-130	08.08.2020 00:47	



Certificate of Analytical Results 669481

Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-29 Comp 6'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-066

Date Collected: 08.04.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 14:00

Basis: Wet Weight

Seq Number: 3133951

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.08.2020 05:14	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.08.2020 05:14	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.08.2020 05:14	U	1
m,p-Xylenes	179601-23-1	<0.00401	0.00401	mg/kg	08.08.2020 05:14	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.08.2020 05:14	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.08.2020 05:14	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.08.2020 05:14	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	106	%	70-130	08.08.2020 05:14		
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.08.2020 05:14		



Certificate of Analytical Results 669481

Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-30 Comp 6'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-067

Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 13:50

Basis: Wet Weight

Seq Number: 3133971

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	08.08.2020 22:37	U	1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 16:00

Basis: Wet Weight

Seq Number: 3134015

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.08.2020 01:07	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.08.2020 01:07	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.08.2020 01:07	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.08.2020 01:07	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	117	%	70-130	08.08.2020 01:07	
o-Terphenyl	84-15-1	98	%	70-130	08.08.2020 01:07	



Certificate of Analytical Results 669481

Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-30 Comp 6'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-067

Date Collected: 08.04.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 14:00

Basis: Wet Weight

Seq Number: 3133951

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.08.2020 05:35	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.08.2020 05:35	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.08.2020 05:35	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.08.2020 05:35	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.08.2020 05:35	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.08.2020 05:35	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.08.2020 05:35	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.08.2020 05:35		
4-Bromofluorobenzene	460-00-4	105	%	70-130	08.08.2020 05:35		



Certificate of Analytical Results 669481

Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-31 Comp 1.5'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-068

Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 13:50

Basis: Wet Weight

Seq Number: 3133971

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7.95	4.96	mg/kg	08.08.2020 22:43		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 16:00

Basis: Wet Weight

Seq Number: 3134015

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.08.2020 01:28	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.08.2020 01:28	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.08.2020 01:28	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.08.2020 01:28	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	118	%	70-130	08.08.2020 01:28	
o-Terphenyl	84-15-1	101	%	70-130	08.08.2020 01:28	



Certificate of Analytical Results 669481

Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-31 Comp 1.5'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-068

Date Collected: 08.04.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 14:00

Basis: Wet Weight

Seq Number: 3133951

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00198	0.00198	mg/kg	08.08.2020 05:55	U	1
Toluene	108-88-3	<0.00198	0.00198	mg/kg	08.08.2020 05:55	U	1
Ethylbenzene	100-41-4	<0.00198	0.00198	mg/kg	08.08.2020 05:55	U	1
m,p-Xylenes	179601-23-1	<0.00396	0.00396	mg/kg	08.08.2020 05:55	U	1
o-Xylene	95-47-6	<0.00198	0.00198	mg/kg	08.08.2020 05:55	U	1
Total Xylenes	1330-20-7	<0.00198	0.00198	mg/kg	08.08.2020 05:55	U	1
Total BTEX		<0.00198	0.00198	mg/kg	08.08.2020 05:55	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.08.2020 05:55		
4-Bromofluorobenzene	460-00-4	107	%	70-130	08.08.2020 05:55		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: Sidewall-32 Comp 1.5'

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-069

Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 13:50

Basis: Wet Weight

Seq Number: 3133971

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.68	5.04	mg/kg	08.08.2020 22:49		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 16:00

Basis: Wet Weight

Seq Number: 3134015

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<50.0	50.0	mg/kg	08.08.2020 01:49	U	1
Diesel Range Organics (DRO)	C10C28DRO	<50.0	50.0	mg/kg	08.08.2020 01:49	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<50.0	50.0	mg/kg	08.08.2020 01:49	U	1
Total TPH	PHC635	<50.0	50.0	mg/kg	08.08.2020 01:49	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	122	%	70-130	08.08.2020 01:49	
o-Terphenyl	84-15-1	101	%	70-130	08.08.2020 01:49	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-32 Comp 1.5'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-069

Date Collected: 08.04.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 14:00

Basis: Wet Weight

Seq Number: 3133951

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.08.2020 06:15	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.08.2020 06:15	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.08.2020 06:15	U	1
m,p-Xylenes	179601-23-1	<0.00399	0.00399	mg/kg	08.08.2020 06:15	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.08.2020 06:15	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.08.2020 06:15	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.08.2020 06:15	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	104	%	70-130	08.08.2020 06:15		
1,4-Difluorobenzene	540-36-3	104	%	70-130	08.08.2020 06:15		



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: Sidewall-33 Comp 1.5'

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-070

Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 13:50

Basis: Wet Weight

Seq Number: 3133971

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	7.99	4.95	mg/kg	08.08.2020 22:56		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 16:00

Basis: Wet Weight

Seq Number: 3134015

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.9	49.9	mg/kg	08.08.2020 02:10	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.9	49.9	mg/kg	08.08.2020 02:10	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.9	49.9	mg/kg	08.08.2020 02:10	U	1
Total TPH	PHC635	<49.9	49.9	mg/kg	08.08.2020 02:10	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	119	%	70-130	08.08.2020 02:10	
o-Terphenyl	84-15-1	101	%	70-130	08.08.2020 02:10	



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Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-33 Comp 1.5'**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-070

Date Collected: 08.04.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 14:00

Basis: Wet Weight

Seq Number: 3133951

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00200	0.00200	mg/kg	08.08.2020 06:36	U	1
Toluene	108-88-3	<0.00200	0.00200	mg/kg	08.08.2020 06:36	U	1
Ethylbenzene	100-41-4	<0.00200	0.00200	mg/kg	08.08.2020 06:36	U	1
m,p-Xylenes	179601-23-1	<0.00400	0.00400	mg/kg	08.08.2020 06:36	U	1
o-Xylene	95-47-6	<0.00200	0.00200	mg/kg	08.08.2020 06:36	U	1
Total Xylenes	1330-20-7	<0.00200	0.00200	mg/kg	08.08.2020 06:36	U	1
Total BTEX		<0.00200	0.00200	mg/kg	08.08.2020 06:36	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	105	%	70-130	08.08.2020 06:36		
1,4-Difluorobenzene	540-36-3	105	%	70-130	08.08.2020 06:36		



Certificate of Analytical Results 669481

Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-34 Comp 1.5**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-071

Date Collected: 08.04.2020 00:00

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 08.07.2020 13:50

Basis: Wet Weight

Seq Number: 3133971

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	8.16	4.99	mg/kg	08.08.2020 23:14		1

Analytical Method: TPH by SW8015 Mod

Prep Method: SW8015P

Tech: DVM

% Moisture:

Analyst: ARM

Date Prep: 08.07.2020 16:00

Basis: Wet Weight

Seq Number: 3134015

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Gasoline Range Hydrocarbons (GRO)	PHC610	<49.8	49.8	mg/kg	08.08.2020 02:52	U	1
Diesel Range Organics (DRO)	C10C28DRO	<49.8	49.8	mg/kg	08.08.2020 02:52	U	1
Motor Oil Range Hydrocarbons (MRO)	PHCG2835	<49.8	49.8	mg/kg	08.08.2020 02:52	U	1
Total TPH	PHC635	<49.8	49.8	mg/kg	08.08.2020 02:52	U	1

Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag
1-Chlorooctane	111-85-3	115	%	70-130	08.08.2020 02:52	
o-Terphenyl	84-15-1	96	%	70-130	08.08.2020 02:52	



Certificate of Analytical Results 669481

Tetra Tech- Midland, Midland, TX

Concho JR's Horz Federal #002 (2.4.19)

Sample Id: **Sidewall-34 Comp 1.5**

Matrix: Soil

Date Received: 08.07.2020 10:22

Lab Sample Id: 669481-071

Date Collected: 08.04.2020 00:00

Analytical Method: BTEX by EPA 8021B

Prep Method: SW5035A

Tech: KTL

% Moisture:

Analyst: KTL

Date Prep: 08.07.2020 14:00

Basis: Wet Weight

Seq Number: 3133951

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Benzene	71-43-2	<0.00199	0.00199	mg/kg	08.08.2020 07:58	U	1
Toluene	108-88-3	<0.00199	0.00199	mg/kg	08.08.2020 07:58	U	1
Ethylbenzene	100-41-4	<0.00199	0.00199	mg/kg	08.08.2020 07:58	U	1
m,p-Xylenes	179601-23-1	<0.00398	0.00398	mg/kg	08.08.2020 07:58	U	1
o-Xylene	95-47-6	<0.00199	0.00199	mg/kg	08.08.2020 07:58	U	1
Total Xylenes	1330-20-7	<0.00199	0.00199	mg/kg	08.08.2020 07:58	U	1
Total BTEX		<0.00199	0.00199	mg/kg	08.08.2020 07:58	U	1
Surrogate	Cas Number	% Recovery	Units	Limits	Analysis Date	Flag	
4-Bromofluorobenzene	460-00-4	100	%	70-130	08.08.2020 07:58		
1,4-Difluorobenzene	540-36-3	102	%	70-130	08.08.2020 07:58		

Flagging Criteria

- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

** Surrogate recovered outside laboratory control limit.

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

RL Reporting Limit

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

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

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample **BLK** Method Blank

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

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

+ NELAC certification not offered for this compound.

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



Tetra Tech- Midland

Concho JR's Horz Federal #002 (2.4.19)

Analytical Method: Chloride by EPA 300

Seq Number: 3133965

MB Sample Id: 7708966-1-BLK

Matrix: Solid

LCS Sample Id: 7708966-1-BKS

Prep Method: E300P

Date Prep: 08.07.2020

LCSD Sample Id: 7708966-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	253	101	251	100	90-110	1	20	mg/kg	08.07.2020 14:06	

Analytical Method: Chloride by EPA 300

Seq Number: 3134042

MB Sample Id: 7708975-1-BLK

Matrix: Solid

LCS Sample Id: 7708975-1-BKS

Prep Method: E300P

Date Prep: 08.07.2020

LCSD Sample Id: 7708975-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	248	99	248	99	90-110	0	20	mg/kg	08.07.2020 14:03	

Analytical Method: Chloride by EPA 300

Seq Number: 3133969

MB Sample Id: 7708976-1-BLK

Matrix: Solid

LCS Sample Id: 7708976-1-BKS

Prep Method: E300P

Date Prep: 08.07.2020

LCSD Sample Id: 7708976-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	257	103	257	103	90-110	0	20	mg/kg	08.08.2020 18:18	

Analytical Method: Chloride by EPA 300

Seq Number: 3133971

MB Sample Id: 7708977-1-BLK

Matrix: Solid

LCS Sample Id: 7708977-1-BKS

Prep Method: E300P

Date Prep: 08.07.2020

LCSD Sample Id: 7708977-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	258	103	258	103	90-110	0	20	mg/kg	08.08.2020 21:15	

Analytical Method: Chloride by EPA 300

Seq Number: 3133965

Parent Sample Id: 669427-019

Matrix: Soil

MS Sample Id: 669427-019 S

Prep Method: E300P

Date Prep: 08.07.2020

MSD Sample Id: 669427-019 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	33.6	253	302	106	304	107	90-110	1	20	mg/kg	08.07.2020 14:22	

Analytical Method: Chloride by EPA 300

Seq Number: 3133965

Parent Sample Id: 669481-010

Matrix: Soil

MS Sample Id: 669481-010 S

Prep Method: E300P

Date Prep: 08.07.2020

MSD Sample Id: 669481-010 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	9.74	250	277	107	279	108	90-110	1	20	mg/kg	08.07.2020 15:36	

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

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

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

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



Tetra Tech- Midland

Concho JR's Horz Federal #002 (2.4.19)

Analytical Method: Chloride by EPA 300

Seq Number: 3134042

Parent Sample Id: 669481-020

Matrix: Soil

MS Sample Id: 669481-020 S

Prep Method: E300P

Date Prep: 08.07.2020

MSD Sample Id: 669481-020 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.02	251	256	102	257	102	90-110	0	20	mg/kg	08.07.2020 14:22	

Analytical Method: Chloride by EPA 300

Seq Number: 3134042

Parent Sample Id: 669481-030

Matrix: Soil

MS Sample Id: 669481-030 S

Prep Method: E300P

Date Prep: 08.07.2020

MSD Sample Id: 669481-030 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<4.99	250	258	103	259	104	90-110	0	20	mg/kg	08.07.2020 15:50	

Analytical Method: Chloride by EPA 300

Seq Number: 3133969

Parent Sample Id: 669481-040

Matrix: Soil

MS Sample Id: 669481-040 S

Prep Method: E300P

Date Prep: 08.07.2020

MSD Sample Id: 669481-040 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	7.73	250	264	103	262	102	90-110	1	20	mg/kg	08.08.2020 18:34	

Analytical Method: Chloride by EPA 300

Seq Number: 3133969

Parent Sample Id: 669481-050

Matrix: Soil

MS Sample Id: 669481-050 S

Prep Method: E300P

Date Prep: 08.07.2020

MSD Sample Id: 669481-050 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	9.03	253	259	99	260	99	90-110	0	20	mg/kg	08.08.2020 19:48	

Analytical Method: Chloride by EPA 300

Seq Number: 3133971

Parent Sample Id: 669481-060

Matrix: Soil

MS Sample Id: 669481-060 S

Prep Method: E300P

Date Prep: 08.07.2020

MSD Sample Id: 669481-060 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	9.09	249	260	101	261	101	90-110	0	20	mg/kg	08.08.2020 21:34	

Analytical Method: Chloride by EPA 300

Seq Number: 3133971

Parent Sample Id: 669481-070

Matrix: Soil

MS Sample Id: 669481-070 S

Prep Method: E300P

Date Prep: 08.07.2020

MSD Sample Id: 669481-070 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	7.99	248	243	95	243	95	90-110	0	20	mg/kg	08.08.2020 23:02	

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

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

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

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



Tetra Tech- Midland
Concho JR's Horz Federal #002 (2.4.19)

Analytical Method: TPH by SW8015 Mod

Seq Number: 3134008

MB Sample Id: 7709034-1-BLK

Matrix: Solid

LCS Sample Id: 7709034-1-BKS

Prep Method: SW8015P

Date Prep: 08.07.2020

LCSD Sample Id: 7709034-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	910	91	880	88	70-130	3	20	mg/kg	08.07.2020 12:23	
Diesel Range Organics (DRO)	<50.0	1000	929	93	894	89	70-130	4	20	mg/kg	08.07.2020 12:23	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	123		130		128		70-130	%	08.07.2020 12:23
o-Terphenyl	109		126		117		70-130	%	08.07.2020 12:23

Analytical Method: TPH by SW8015 Mod

Seq Number: 3134013

MB Sample Id: 7709035-1-BLK

Matrix: Solid

LCS Sample Id: 7709035-1-BKS

Prep Method: SW8015P

Date Prep: 08.07.2020

LCSD Sample Id: 7709035-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	895	90	886	89	70-130	1	20	mg/kg	08.07.2020 21:38	
Diesel Range Organics (DRO)	<50.0	1000	945	95	956	96	70-130	1	20	mg/kg	08.07.2020 21:38	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	104		108		112		70-130	%	08.07.2020 21:38
o-Terphenyl	107		103		109		70-130	%	08.07.2020 21:38

Analytical Method: TPH by SW8015 Mod

Seq Number: 3134015

MB Sample Id: 7709036-1-BLK

Matrix: Solid

LCS Sample Id: 7709036-1-BKS

Prep Method: SW8015P

Date Prep: 08.07.2020

LCSD Sample Id: 7709036-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	944	94	952	95	70-130	1	20	mg/kg	08.07.2020 21:38	
Diesel Range Organics (DRO)	<50.0	1000	950	95	955	96	70-130	1	20	mg/kg	08.07.2020 21:38	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	126		123		125		70-130	%	08.07.2020 21:38
o-Terphenyl	114		110		116		70-130	%	08.07.2020 21:38

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

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

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

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



Tetra Tech- Midland

Concho JR's Horz Federal #002 (2.4.19)

Analytical Method: TPH by SW8015 Mod

Seq Number: 3134009

MB Sample Id: 7709041-1-BLK

Matrix: Solid

LCS Sample Id: 7709041-1-BKS

Prep Method: SW8015P

Date Prep: 08.07.2020

LCSD Sample Id: 7709041-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	1000	880	88	905	91	70-130	3	20	mg/kg	08.07.2020 20:55	
Diesel Range Organics (DRO)	<50.0	1000	904	90	936	94	70-130	3	20	mg/kg	08.07.2020 20:55	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	115		129		130		70-130	%	08.07.2020 20:55
o-Terphenyl	125		122		127		70-130	%	08.07.2020 20:55

Analytical Method: TPH by SW8015 Mod

Seq Number: 3134008

Matrix: Solid

MB Sample Id: 7709034-1-BLK

Prep Method: SW8015P

Date Prep: 08.07.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	08.07.2020 12:04	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3134013

Matrix: Solid

MB Sample Id: 7709035-1-BLK

Prep Method: SW8015P

Date Prep: 08.07.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	08.07.2020 21:17	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3134015

Matrix: Solid

MB Sample Id: 7709036-1-BLK

Prep Method: SW8015P

Date Prep: 08.07.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	08.07.2020 21:17	

Analytical Method: TPH by SW8015 Mod

Seq Number: 3134009

Matrix: Solid

MB Sample Id: 7709041-1-BLK

Prep Method: SW8015P

Date Prep: 08.07.2020

Parameter	MB Result	Units	Analysis Date	Flag
Motor Oil Range Hydrocarbons (MRO)	<50.0	mg/kg	08.07.2020 20:36	

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

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

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

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



Tetra Tech- Midland

Concho JR's Horz Federal #002 (2.4.19)

Analytical Method: TPH by SW8015 Mod

Seq Number: 3134008

Parent Sample Id: 669481-001

Matrix: Soil

MS Sample Id: 669481-001 S

Prep Method: SW8015P

Date Prep: 08.07.2020

MSD Sample Id: 669481-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<50.0	999	885	89	891	89	70-130	1	20	mg/kg	08.07.2020 13:19	
Diesel Range Organics (DRO)	<50.0	999	917	92	935	94	70-130	2	20	mg/kg	08.07.2020 13:19	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	126		126		70-130	%	08.07.2020 13:19
o-Terphenyl	114		114		70-130	%	08.07.2020 13:19

Analytical Method: TPH by SW8015 Mod

Seq Number: 3134013

Parent Sample Id: 669481-041

Matrix: Soil

MS Sample Id: 669481-041 S

Prep Method: SW8015P

Date Prep: 08.07.2020

MSD Sample Id: 669481-041 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.9	997	860	86	890	89	70-130	3	20	mg/kg	08.07.2020 22:41	
Diesel Range Organics (DRO)	<49.9	997	889	89	898	90	70-130	1	20	mg/kg	08.07.2020 22:41	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	101		100		70-130	%	08.07.2020 22:41
o-Terphenyl	97		94		70-130	%	08.07.2020 22:41

Analytical Method: TPH by SW8015 Mod

Seq Number: 3134015

Parent Sample Id: 669481-061

Matrix: Soil

MS Sample Id: 669481-061 S

Prep Method: SW8015P

Date Prep: 08.07.2020

MSD Sample Id: 669481-061 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.9	997	880	88	903	91	70-130	3	20	mg/kg	08.07.2020 22:41	
Diesel Range Organics (DRO)	<49.9	997	832	83	952	96	70-130	13	20	mg/kg	08.07.2020 22:41	

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	112		113		70-130	%	08.07.2020 22:41
o-Terphenyl	101		103		70-130	%	08.07.2020 22:41

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

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

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

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



Tetra Tech- Midland

Concho JR's Horz Federal #002 (2.4.19)

Analytical Method: TPH by SW8015 Mod

Seq Number: 3134009

Parent Sample Id: 669481-021

Matrix: Soil

MS Sample Id: 669481-021 S

Prep Method: SW8015P

Date Prep: 08.07.2020

MSD Sample Id: 669481-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Gasoline Range Hydrocarbons (GRO)	<49.9	997	778	78	806	81	70-130	4	20	mg/kg	08.07.2020 21:51	
Diesel Range Organics (DRO)	<49.9	997	798	80	824	83	70-130	3	20	mg/kg	08.07.2020 21:51	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1-Chlorooctane	122		122		70-130	%	08.07.2020 21:51
o-Terphenyl	113		115		70-130	%	08.07.2020 21:51

Analytical Method: BTEX by EPA 8021B

Seq Number: 3133947

MB Sample Id: 7709014-1-BLK

Matrix: Solid

LCS Sample Id: 7709014-1-BKS

Prep Method: SW5035A

Date Prep: 08.07.2020

LCSD Sample Id: 7709014-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.104	104	0.0929	93	70-130	11	35	mg/kg	08.07.2020 11:51	
Toluene	<0.00200	0.100	0.0981	98	0.0894	89	70-130	9	35	mg/kg	08.07.2020 11:51	
Ethylbenzene	<0.00200	0.100	0.0986	99	0.0894	89	70-130	10	35	mg/kg	08.07.2020 11:51	
m,p-Xylenes	<0.00400	0.200	0.196	98	0.177	89	70-130	10	35	mg/kg	08.07.2020 11:51	
o-Xylene	<0.00200	0.100	0.0954	95	0.0863	86	70-130	10	35	mg/kg	08.07.2020 11:51	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	107		101		99		70-130	%	08.07.2020 11:51
4-Bromofluorobenzene	100		99		96		70-130	%	08.07.2020 11:51

Analytical Method: BTEX by EPA 8021B

Seq Number: 3133948

MB Sample Id: 7709015-1-BLK

Matrix: Solid

LCS Sample Id: 7709015-1-BKS

Prep Method: SW5035A

Date Prep: 08.07.2020

LCSD Sample Id: 7709015-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0852	85	0.0876	88	70-130	3	35	mg/kg	08.07.2020 22:46	
Toluene	<0.00200	0.100	0.0843	84	0.0859	86	70-130	2	35	mg/kg	08.07.2020 22:46	
Ethylbenzene	<0.00200	0.100	0.0847	85	0.0859	86	70-130	1	35	mg/kg	08.07.2020 22:46	
m,p-Xylenes	<0.00400	0.200	0.169	85	0.171	86	70-130	1	35	mg/kg	08.07.2020 22:46	
o-Xylene	<0.00200	0.100	0.0857	86	0.0870	87	70-130	2	35	mg/kg	08.07.2020 22:46	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	104		100		99		70-130	%	08.07.2020 22:46
4-Bromofluorobenzene	108		103		100		70-130	%	08.07.2020 22:46

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

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

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

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



Tetra Tech- Midland
Concho JR's Horz Federal #002 (2.4.19)

Analytical Method: BTEX by EPA 8021B

Seq Number: 3133950

Matrix: Solid

Prep Method: SW5035A

Date Prep: 08.07.2020

MB Sample Id: 7709016-1-BLK

LCS Sample Id: 7709016-1-BKS

LCSD Sample Id: 7709016-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0814	81	0.0866	87	70-130	6	35	mg/kg	08.07.2020 14:14	
Toluene	<0.00200	0.100	0.0808	81	0.0874	87	70-130	8	35	mg/kg	08.07.2020 14:14	
Ethylbenzene	<0.00200	0.100	0.0818	82	0.0880	88	70-130	7	35	mg/kg	08.07.2020 14:14	
m,p-Xylenes	<0.00400	0.200	0.165	83	0.178	89	70-130	8	35	mg/kg	08.07.2020 14:14	
o-Xylene	<0.00200	0.100	0.0826	83	0.0893	89	70-130	8	35	mg/kg	08.07.2020 14:14	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		99		100		70-130	%	08.07.2020 14:14
4-Bromofluorobenzene	99		97		99		70-130	%	08.07.2020 14:14

Analytical Method: BTEX by EPA 8021B

Seq Number: 3133951

Matrix: Solid

Prep Method: SW5035A

Date Prep: 08.07.2020

MB Sample Id: 7709017-1-BLK

LCS Sample Id: 7709017-1-BKS

LCSD Sample Id: 7709017-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0849	85	0.0829	83	70-130	2	35	mg/kg	08.08.2020 01:10	
Toluene	<0.00200	0.100	0.0857	86	0.0838	84	70-130	2	35	mg/kg	08.08.2020 01:10	
Ethylbenzene	<0.00200	0.100	0.0835	84	0.0808	81	70-130	3	35	mg/kg	08.08.2020 01:10	
m,p-Xylenes	<0.00400	0.200	0.167	84	0.162	81	70-130	3	35	mg/kg	08.08.2020 01:10	
o-Xylene	<0.00200	0.100	0.0859	86	0.0832	83	70-130	3	35	mg/kg	08.08.2020 01:10	

Surrogate	MB %Rec	MB Flag	LCS %Rec	LCS Flag	LCSD %Rec	LCSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	103		101		100		70-130	%	08.08.2020 01:10
4-Bromofluorobenzene	103		101		100		70-130	%	08.08.2020 01:10

Analytical Method: BTEX by EPA 8021B

Seq Number: 3133947

Matrix: Soil

Prep Method: SW5035A

Date Prep: 08.07.2020

Parent Sample Id: 669481-001

MS Sample Id: 669481-001 S

MSD Sample Id: 669481-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0996	0.0826	83	0.0865	87	70-130	5	35	mg/kg	08.07.2020 12:32	
Toluene	<0.00199	0.0996	0.0788	79	0.0848	86	70-130	7	35	mg/kg	08.07.2020 12:32	
Ethylbenzene	<0.00199	0.0996	0.0753	76	0.0829	84	70-130	10	35	mg/kg	08.07.2020 12:32	
m,p-Xylenes	<0.00398	0.199	0.150	75	0.167	84	70-130	11	35	mg/kg	08.07.2020 12:32	
o-Xylene	<0.00199	0.0996	0.0740	74	0.0824	83	70-130	11	35	mg/kg	08.07.2020 12:32	

Surrogate	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	99		100		70-130	%	08.07.2020 12:32
4-Bromofluorobenzene	97		105		70-130	%	08.07.2020 12:32

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

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

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

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



Tetra Tech- Midland

Concho JR's Horz Federal #002 (2.4.19)

Analytical Method: BTEX by EPA 8021B

Seq Number: 3133948

Parent Sample Id: 669481-041

Matrix: Soil

MS Sample Id: 669481-041 S

Prep Method: SW5035A

Date Prep: 08.07.2020

MSD Sample Id: 669481-041 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.100	0.0737	74	0.0691	69	70-130	6	35	mg/kg	08.07.2020 23:27	X
Toluene	<0.00200	0.100	0.0716	72	0.0663	66	70-130	8	35	mg/kg	08.07.2020 23:27	X
Ethylbenzene	<0.00200	0.100	0.0737	74	0.0665	67	70-130	10	35	mg/kg	08.07.2020 23:27	X
m,p-Xylenes	<0.00401	0.200	0.147	74	0.131	66	70-130	12	35	mg/kg	08.07.2020 23:27	X
o-Xylene	<0.00200	0.100	0.0739	74	0.0672	67	70-130	9	35	mg/kg	08.07.2020 23:27	X

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		99		70-130	%	08.07.2020 23:27
4-Bromofluorobenzene	110		104		70-130	%	08.07.2020 23:27

Analytical Method: BTEX by EPA 8021B

Seq Number: 3133950

Parent Sample Id: 669481-021

Matrix: Soil

MS Sample Id: 669481-021 S

Prep Method: SW5035A

Date Prep: 08.07.2020

MSD Sample Id: 669481-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00199	0.0994	0.0805	81	0.0794	80	70-130	1	35	mg/kg	08.07.2020 14:55	
Toluene	<0.00199	0.0994	0.0779	78	0.0780	78	70-130	0	35	mg/kg	08.07.2020 14:55	
Ethylbenzene	<0.00199	0.0994	0.0681	69	0.0677	68	70-130	1	35	mg/kg	08.07.2020 14:55	X
m,p-Xylenes	<0.00398	0.199	0.135	68	0.134	67	70-130	1	35	mg/kg	08.07.2020 14:55	X
o-Xylene	<0.00199	0.0994	0.0689	69	0.0683	68	70-130	1	35	mg/kg	08.07.2020 14:55	X

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	101		100		70-130	%	08.07.2020 14:55
4-Bromofluorobenzene	103		102		70-130	%	08.07.2020 14:55

Analytical Method: BTEX by EPA 8021B

Seq Number: 3133951

Parent Sample Id: 669481-061

Matrix: Soil

MS Sample Id: 669481-061 S

Prep Method: SW5035A

Date Prep: 08.07.2020

MSD Sample Id: 669481-061 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Benzene	<0.00200	0.0998	0.0728	73	0.0685	69	70-130	6	35	mg/kg	08.08.2020 01:51	X
Toluene	<0.00200	0.0998	0.0703	70	0.0659	66	70-130	6	35	mg/kg	08.08.2020 01:51	X
Ethylbenzene	<0.00200	0.0998	0.0680	68	0.0643	65	70-130	6	35	mg/kg	08.08.2020 01:51	X
m,p-Xylenes	<0.00399	0.200	0.133	67	0.125	63	70-130	6	35	mg/kg	08.08.2020 01:51	X
o-Xylene	<0.00200	0.0998	0.0681	68	0.0645	65	70-130	5	35	mg/kg	08.08.2020 01:51	X

Surrogate

	MS %Rec	MS Flag	MSD %Rec	MSD Flag	Limits	Units	Analysis Date
1,4-Difluorobenzene	102		102		70-130	%	08.08.2020 01:51
4-Bromofluorobenzene	103		102		70-130	%	08.08.2020 01:51

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

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

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

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

Analysis Request of Chain of Custody Record

Page 1 of 8



Tetra Tech, Inc.

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

Mike Carmona

Site Manager:

Concho

Client Name:

JR's Horz Federal #002 (2.4.19)

Project Name:

Project Location:
(county, state) Eddy County, New Mexico

Project #:

212C-MD-02279

Invoice to:

Ike Tavarez

Receiving Laboratory:

Xenco

Sampler Signature:

Devin Dominguez

Comments:

SAMPLE IDENTIFICATION

LAB #
(LAB USE ONLY)

SAMPLING

YEAR: 2020

DATE

TIME

MATRIX

PRESERVATIVE METHOD

 WATER
 SOIL
 HCL
 HNO₃
 ICE
 None

CONTAINERS

FILTERED (Y/N)

Bottomhole-1 comp 4'	8/1/2020		X							1	N
Bottomhole-2 comp 4'	8/1/2020		X							1	N
Bottomhole-3 comp 4'	8/1/2020		X							1	N
Bottomhole-4 comp 4'	8/1/2020		X							1	N
Bottomhole-5 comp 4'	8/1/2020		X							1	N
Bottomhole-6 comp 4'	8/1/2020		X							1	N
Bottomhole-7 comp 1'	8/1/2020		X							1	N
Bottomhole-8 comp 1'	8/1/2020		X							1	N
Bottomhole-9 comp 1'	8/1/2020		X							1	N
Bottomhole-10 comp 4'	8/4/2020		X							1	N

Relinquished by:

Date: Time:

Relinquished by:

Date: Time:

Relinquished by:

Date: Time:

Received by:

Date: Time:

Received by:

Date: Time:

Received by:

Date: Time:

ANALYSIS REQUEST

(Circle or Specify Method No.)

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

Hold

LAB USE ONLY

REMARKS:

STANDARD

Sample Temperature

☒ RUSH: Same Day (24 hr) 48 hr 72 hr
☐ Push Charges Authorized
☐ Special Report Limits or TRRP Report
2.0/2.2
-0.4

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Analysis Request of Custody Record



Tetra Tech, Inc.

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

Page 2 of 8

Client Name: Concho		Site Manager: Mike Carmona	
Project Name: JR's Horiz Federal #002 (2.4.19)		Project #: 212C-MD-02279	
Project Location: Eddy County, New Mexico		Project #: 212C-MD-02279	
Invoice to: Ike Tavarez		Sampler Signature: Devin Dominguez	
Receiving Laboratory: Xenico		Sampler Signature: Devin Dominguez	
Comments:			

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING		MATRIX		PRESERVATIVE METHOD		# CONTAINERS	FILTERED (Y/N)		
		DATE	TIME	WATER	SOIL	HCL	HNO ₃			ICE	None
	Bottomhole-11 comp 4'	8/4/2020		X				X		1	N
	Bottomhole-12 comp 4'	8/4/2020		X				X		1	N
	Bottomhole-13 comp 4'	8/4/2020		X				X		1	N
	Bottomhole-14 comp 4'	8/4/2020		X				X		1	N
	Bottomhole-15 comp 4'	8/4/2020		X				X		1	N
	Bottomhole-16 comp 4'	8/4/2020		X				X		1	N
	Bottomhole-17 comp 4'	8/4/2020		X				X		1	N
	Bottomhole-18 comp 6'	8/4/2020		X				X		1	N
	Bottomhole-19 comp 6'	8/4/2020		X				X		1	N
	Bottomhole-20 comp 6'	8/4/2020		X				X		1	N

LAB USE ONLY	REMARKS:
☐ STANDARD ☒ RUSH: Same Day (24 hr) 48 hr 72 hr ☐ Rush Charges Authorized ☐ Special Report Limits or TRRP Report	ANALYSIS REQUEST (Circle or Specify Method No.) BTEX 8021B BTEX 8260B TPH TX1005 (Ext to C35) TPH 8015M (GRO - DRO - ORO - MRO) PAH 8270C Total Metals Ag As Ba Cd Cr Pb Se Hg TCLP Metals Ag As Ba Cd Cr Pb Se Hg TCLP Volatiles TCLP Semi Volatiles RCI GC/MS Vol. 8260B / 624 GC/MS Semi. Vol. 8270C/625 PCB's 8082 / 608 NORM PLM (Asbestos) Chloride Chloride Sulfate TDS General Water Chemistry (see attached list) Anion/Cation Balance TPH 8015R Hold

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Analysis Request of Chain of Custody Record

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Tetra Tech, Inc.

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

Client Name:

Concho

Site Manager:

Mike Carmona

Project Name:

JR's Horz Federal #002 (2.4.19)

Project Location:

Eddy County, New Mexico

Project #:

212C-MD-02279

Invoice to:

Ike Tavaréz

Receiving Laboratory:

Xenco

Sampler Signature:

Devin Dominguez

Comments:

SAMPLE IDENTIFICATION

LAB #
(LAB USE ONLY)

YEAR: 2020	SAMPLING		MATRIX	PRESERVATIVE METHOD					# CONTAINERS	FILTERED (Y/N)
	DATE	TIME		WATER	SOIL	HCL	HNO ₃	ICE	None	

Bottomhole-21 comp 6'	8/4/2020		X					X		1	N
Bottomhole-22 comp 6'	8/4/2020		X					X		1	N
Bottomhole-23 comp 6'	8/4/2020		X					X		1	N
Bottomhole-24 comp 6'	8/4/2020		X					X		1	N
Bottomhole-25 comp 6'	8/4/2020		X					X		1	N
Bottomhole-26 comp 6'	8/4/2020		X					X		1	N
Bottomhole-27 comp 6'	8/4/2020		X					X		1	N
Bottomhole-28 comp 6'	8/4/2020		X					X		1	N
Bottomhole-29 comp 6'	8/4/2020		X					X		1	N
Bottomhole-30 comp 1.5'	8/4/2020		X					X		1	N

Relinquished by:

Date: Time:

Relinquished by:

Date: Time:

Relinquished by:

Date: Time:

Received by:

Date: Time:

Received by:

Date: Time:

ANALYSIS REQUEST

(Circle or Specify Method No.)

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

Hold

LAB USE ONLY

REMARKS:

STANDARD

☒ RUSH: Same Day 24 hr 48 hr 72 hr

☐ Rush Charges Authorized

☐ Special Report Limits or TRAP Report

Sample Temperature

24.0.2

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Analysis Request of Chain of Custody Record



Tetra Tech, Inc.

 900 West Wall Street, Ste 100
 Midland, Texas 79701
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Page 4 of 8

Client Name:		Concho		Site Manager:		Mike Carmona	
Project Name:		JR's Horz Federal #002 (2.4.19)					
Project Location: (county, state)		Eddy County, New Mexico		Project #:		212C-MD-02279	
Invoice to:		Ike Tavarez					
Receiving Laboratory:		Xenco		Sampler Signature:		Devin Dominguez	
Comments:							

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING		MATRIX		PRESERVATIVE METHOD		# CONTAINERS	FILTERED (Y/N)		
		DATE	TIME	WATER	SOIL	HCL	HNO ₃			ICE	None
	Bottomhole-31 comp 1.5'	8/4/2020		X				X		1	N
	Bottomhole-32 comp 1.5'	8/4/2020		X				X		1	N
	Bottomhole-33 comp 1.5'	8/4/2020		X				X		1	N
	Bottomhole-34 comp 1.5'	8/4/2020		X				X		1	N
	Bottomhole-35 comp 1.5'	8/4/2020		X				X		1	N
	Bottomhole-36 comp 1.5'	8/4/2020		X				X		1	N
	Bottomhole-37 comp 1.5'	8/4/2020		X				X		1	N
	Sidewall-1 comp 4'	8/1/2020		X				X		1	N
	Sidewall-2 comp 4'	8/1/2020		X				X		1	N
	Sidewall-3 comp 4'	8/1/2020		X				X		1	N

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
<i>[Signature]</i>	8/7/20	1002	<i>[Signature]</i>	8/7/20	1002
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

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ANALYSIS REQUEST

(Circle or Specify Method No.)

1009481

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

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

LAB USE ONLY	REMARKS:
Sample Temperature	
2.6/2.2	

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Tetra Tech, Inc.

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

Page 5 of 8

Client Name: Concho		Site Manager: Mike Carmona	
Project Name: JRs Horz Federal #002 (2.4.19)		Project #: 212C-MD-02279	
Project Location: Eddy County, New Mexico			
Invoice to: Ike Tavaraz			
Receiving Laboratory: Xenco		Sampler Signature: Devin Dominguez	
Comments:			
LAB #			
SAMPLE IDENTIFICATION			
LAB USE ONLY			
YEAR: 2020			
DATE			
TIME			
WATER			
SOIL			
HCL			
HNO ₃			
ICE			
None			
# CONTAINERS			
FILTERED (Y/N)			
Sidewall-4 comp 4'			
8/1/2020			
X			
1			
N			
Sidewall-5 comp 1'			
8/1/2020			
X			
1			
N			
Sidewall-6 comp 4'			
8/1/2020			
X			
1			
N			
Sidewall-7 comp 4'			
8/1/2020			
X			
1			
N			
Sidewall-8 comp 4'			
8/1/2020			
X			
1			
N			
Sidewall-9 comp 4'			
8/1/2020			
X			
1			
N			
Sidewall-10 comp 4'			
8/1/2020			
X			
1			
N			
Sidewall-11 comp 4'			
8/1/2020			
X			
1			
N			
Sidewall-12 comp 1'			
8/1/2020			
X			
1			
N			
Sidewall-13 comp 1'			
8/1/2020			
X			
1			
N			
Relinquished by: [Signature]			
Date: 8/1/2020			
Time: 1002			
Received by: [Signature]			
Date: 8/1/20			
Time: 1002			
Relinquished by:			
Date:			
Time:			
Received by:			
Date:			
Time:			

ANALYSIS REQUEST
(Circle or Specify Method No.)

13760

LAB USE ONLY		REMARKS:		TEST RESULTS	
Sample Temperature <i>20/20</i>	☐ STANDARD ☒ RUSH: Same Day <i>24 hr</i> ☐ Rush Charges Authorized ☐ Special Report Limits or TRRP Report	☒	☒	BTEX 8021B	BTEX 8260B
		☒	☒	TPH TX1005 (Ext to C35)	
		☒	☒	TPH 8015M (GRO - DRO - ORO - MRO)	
		☒	☒	PAH 8270C	
		☒	☒	Total Metals Ag As Ba Cd Cr Pb Se Hg	
		☒	☒	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	
		☒	☒	TCLP Volatiles	
		☒	☒	TCLP Semi Volatiles	
		☒	☒	RCI	
		☒	☒	GC/MS Vol. 8260B / 624	
		☒	☒	GC/MS Semi. Vol. 8270C/625	
		☒	☒	PCB's 8082 / 608	
		☒	☒	NORM	
		☒	☒	PLM (Asbestos)	
		☒	☒	Chloride	
☒	☒	Chloride Sulfate TDS			
☒	☒	General Water Chemistry (see attached list)			
☒	☒	Anion/Cation Balance			
☒	☒	TPH 8015R			
☒	☒	Hold			

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Page 6 of 8



Tetra Tech, Inc.

 900 West Wall Street, Ste 100
 Midland Texas 79701
 Tel (432) 682-4539
 Fax (432) 682-3946

Client Name: Concho Site Manager: Mike Carmona

Project Name: JR's Horz Federal #002 (2.4.19)

Project Location: Eddy County, New Mexico

Project #: 212C-MD-02279

Invoice to: Ike Tavares

Receiving Laboratory: Xenco Sampler Signature: Devin Dominguez

Comments:

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING		MATRIX	PRESERVATIVE METHOD					# CONTAINERS	FILTERED (Y/N)	LAB USE ONLY	REMARKS:	
		DATE	TIME		WATER	SOIL	HCL	HNO ₃	ICE					None
	Sidewall-14 comp 1'	8/1/2020		X				X		1	N	X		
	Sidewall-15 comp 4'	8/4/2020		X				X		1	N	X		
	Sidewall-16 comp 4'	8/4/2020		X				X		1	N	X		
	Sidewall-17 comp 4'	8/4/2020		X				X		1	N	X		
	Sidewall-18 comp 4'	8/4/2020		X				X		1	N	X		
	Sidewall-19 comp 4'	8/4/2020		X				X		1	N	X		
	Sidewall-20 comp 4'	8/4/2020		X				X		1	N	X		
	Sidewall-21 comp 6'	8/4/2020		X				X		1	N	X		
	Sidewall-22 comp 6'	8/4/2020		X				X		1	N	X		
	Sidewall-23 comp 6'	8/4/2020		X				X		1	N	X		

ANALYSIS REQUEST

(Circle or Specify Method No.)

1009431

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

LAB USE ONLY

REMARKS:

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

Sample Temperature

24/22

Relinquished by:

Date: Time:

Relinquished by:

Date: Time:

Received by:

Date: Time:

Received by:

Date: Time:

24/22

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Analysis Request of Chain of Custody Record

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Tetra Tech, Inc.

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

Client Name: Concho Site Manager: Mike Carmona

Project Name: JR's Horz Federal #002 (2.4.19)

Project Location: Eddy County, New Mexico Project #: 212C-MD-02279

Invoice to: Ike Tavaréz

Receiving Laboratory: Xenco Sampler Signature: Devin Dominguez

Comments:

LAB # (LAB USE ONLY)	SAMPLE IDENTIFICATION	SAMPLING		MATRIX	PRESERVATIVE METHOD					# CONTAINERS	FILTERED (Y/N)	LAB USE ONLY	REMARKS:	
		DATE	TIME		WATER	SOIL	HCL	HNO ₃	ICE					None
	Sidewall-24 comp 6'	8/4/2020		X				X			1	N	X	
	Sidewall-25 comp 6'	8/4/2020		X				X			1	N	X	
	Sidewall-26 comp 6'	8/4/2020		X				X			1	N	X	
	Sidewall-27 comp 6'	8/4/2020		X				X			1	N	X	
	Sidewall-28 comp 6'	8/4/2020		X				X			1	N	X	
	Sidewall-29 comp 6'	8/4/2020		X				X			1	N	X	
	Sidewall-30 comp 6'	8/4/2020		X				X			1	N	X	
	Sidewall-31 comp 1.5'	8/4/2020		X				X			1	N	X	
	Sidewall-32 comp 1.5'	8/4/2020		X				X			1	N	X	
	Sidewall-33 comp 1.5'	8/4/2020		X				X			1	N	X	

ANALYSIS REQUEST

(Circle or Specify Method No.)

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

LAB USE ONLY

Sample Temperature

☐ 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

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Tetra Tech, Inc.

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

Client Name:

Concho

Site Manager:

Mike Carmona

Project Name:

JR's Horz Federal #002 (2.4.19)

Project Location:
(county, state)

Eddy County, New Mexico

Project #:

212C-MD-02279

Invoice to:

Ike Tavares

Receiving Laboratory:

Xenco

Sampler Signature:

Devin Dominguez

Comments:

LAB #

(LAB USE ONLY)

SAMPLE IDENTIFICATION

SAMPLING

YEAR: 2020

DATE

TIME

MATRIX

PRESERVATIVE METHOD

 WATER
 SOIL
 HCL
 HNO₃
 ICE
 None

CONTAINERS

FILTERED (Y/N)

Sidewall-34 comp 1.5'

8/4/2020

X

X

1

N

X BTEX 8021B BTEX 8260B

X TPH TX1005 (Ext to C35)

X 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)

X Chloride

Chloride Sulfate TDS

General Water Chemistry (see attached list)

Anion/Cation Balance

TPH 8015R

Hold

ANALYSIS REQUEST

(Circle or Specify Method No.)

Relinquished by:

Date: Time:

Received by:

Date: Time:

Relinquished by:

Date: Time:

Received by:

Date: Time:

Relinquished by:

Date: Time:

Received by:

Date: Time:

LAB USE ONLY

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

Eurofins Xenco, LLC

Prelogin/Nonconformance Report- Sample Log-In

Client: Tetra Tech- Midland

Date/ Time Received: 08.07.2020 10.22.00 AM

Work Order #: 669481

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : IR-8

Sample Receipt Checklist	Comments
#1 *Temperature of cooler(s)?	2.2
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes BTEX was in bulk container
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	N/A
#18 Water VOC samples have zero headspace?	N/A

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

Analyst:

PH Device/Lot#:

Checklist completed by:



Brianna Teel

Date: 08.07.2020

Checklist reviewed by:



Jessica Kramer

Date: 08.07.2020

Incident ID	NAB1904554978
District RP	
Facility ID	
Application ID	

Closure

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

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

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

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

Printed Name: _____ Title: _____

Signature:  _____ Date: 10/20/2020

email: _____ Telephone: _____

OCD Only

Received by: _____ Date: _____

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

Closure Approved by: Robert Hamlet _____ Date: _____

Printed Name: _____ Title: _____

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

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

CONDITIONS

Action 10763

CONDITIONS OF APPROVAL

Operator:			OGRID:	Action Number:	Action Type:
COG OPERATING LLC 600 W Illinois Ave Midland, TX79701			229137	10763	C-141
OCD Reviewer	Condition				
rhamlet	We have received your closure report and final C-141 for Incident #NAB1904554978 JR'S HORZ FEDERAL #2, thank you. This closure is approved.				