<u>Received by OCD: 7/14/2020 11:22:37 AM</u>

## SITE INFORMATION

Report Ty	ype: Wor	k Plan 2RP-	-5449 and 21	RP-5469	9		
General Site Information:							
Site & Lease No:		White Federal C	om #001H				
Company:		COG Operating	LLC				
Section, Township and Ra	ange	Unit L	Sec. 22	T 25S	R 29E		
Lease Number:		API No.					
County:		Eddy County					
GPS:			32.114263			-103.977405	
Surface Owner:		Federal					
Directions:						n Longhorn Rd. and go	~3.91 miles,
		turn (north) and go	3.69 miles and loca	ation is on v	Vest side of R	.a.	
		1					
Release Data:							
RP Number	2RP- 5449	2RP- 5469					
Date Released:	5/13/2019	5/17/2019					
Type Release:	Produced Water	Produced Water					
Source of Contamination:	Flowline	Flowline					
Fluid Released:	46 bbl	20 bbl					
Fluids Recovered:	0 bbls	0 bbls					
Official Communication:							
Name:	Ike Tavarez				Clair Gonza	les	
Company:	COG Operating, LL	.C			Tetra Tech		
Address:	One Concho Center	r			901 West W	/all Street	
	600 W. Illinois Ave.				Suite 100		
City:	Midland Texas, 797	'01		xas			
Phone number:	<mark>(432) 686-3023</mark>				(432) 687-8	110	
Fax:	(432) 684-7137						
Email:	itavarez@concho.	.com			Clair.Gonz	ales@tetratech.com	

Site Characterization	
	60' below surface
Karst Potential:	Medium

<b>Recommended Remedial A</b>	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							



July 7, 2020

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

# Re: Project Update and Work Plan for the COG Operating, LLC, White Federal Com #1H, Unit L, Section 22, Township 25 South, Range 29 East, Eddy County, New Mexico. 2RP-5449 and 2RP-5469

Mr. Bratcher:

Tetra Tech, Inc. (Tetra Tech) was contacted by COG Operating, LLC (COG) to assess a release that occurred at the White Federal Com #1H, Unit L, Section 22, Township 25 South, Range 29 East, Eddy County, New Mexico (Site). The spill site coordinates are 32.114263°, -103.977405°. 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 May 13, 2019, and released approximately 46 barrels of produced water due the flowline being ruptured. None of the produced water was recovered. The release occurred on the pasture and migrated into the draw impacting areas measuring approximately 65' x 40' and 1,290' x 15'.

On May 17, 2019, a second release occurred at the site and released approximately 20 barrels of produced water. The release overlapped the first release approximately 200' in the draw. The C-141 Forms are included in Appendix A.

### WORK PLAN SUBMITTAL

On February 23, 2020, the BLM approves the monitoring work plan for 2RP-5449 and 2RP-5469. The NMOCD denied the monitoring plan and requested the impacted area be remediated per guideline.

### SITE CHARATERIZATION

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

Tetra Tech 901 West Wall St, Suite 100, Midland, TX 79701 Tel 432.682.4559 Fax 432.682.3946 www.tetratech.com



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 the New Mexico State Engineer's (NMOSE) database, approximately 2.82 miles north of the site, and has a reported depth to groundwater of 60' below surface. According to the Chevron Texaco Groundwater Trend map, the average depth to groundwater in the area is approximately 175' below surface. The site characterization data is shown in Appendix B.

### REGULATORY

A risk-based evaluation was performed for the Site in accordance with the New Mexico Oil Conservation Division (NMOCD) Guidelines for Remediation of Leaks, Spills and Releases, updated August 14, 2018. The guidelines require a risk-based evaluation of the site to determine recommended remedial action levels (RRAL) for benzene, toluene, ethylbenzene and xylene (collectively referred to as BTEX) and total petroleum hydrocarbons (TPH) in soil. The proposed RRAL for benzene was determined to be 10 parts per million (ppm) or milligrams per kilogram (mg/kg) and 50 ppm for total BTEX (sum of benzene, toluene, ethylbenzene, and xylene). Based upon the site characterization, the proposed RRAL for TPH is 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

### Pasture Area Sampling

On May 21, 2019, Tetra Tech personnel were on-site to evaluate and sample the release area. A total of four (4) auger holes (AH-1 through AH-4) were installed in the pasture area release area to total depths ranging from surface to 3.5' below surface. Additionally, ten (10) horizontal delineation samples (Horizontal Northwest-1, Horizontal Northwest-2, Horizontal Northwest-3, Horizontal Northwest-4, Horizontal Northwest-5, Horizontal Northwest-6, Horizontal Southeast-1, Horizontal Southeast-2, and Horizontal Southeast-3, Horizontal Southeast-4) were collected outside the spill footprint. 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. The sample locations are shown on Figure 3.

### Auger holes Installation

Referring to Table 1, none of the samples analyzed showed benzene, TPH, or total BTEX concentrations above the laboratory reporting limits. However, the areas of auger holes AH-1 and AH-2 showed elevated chloride concentrations ranging from 4,280 mg/kg to 10,200 mg/kg at surface to 2.5'-3.0' below surface. The area of auger hole AH-3 showed chloride concentrations of 11,300 mg/kg at 0-1' and 11,800 mg/kg at 1'-1.5' below surface. The area of auger hole AH-4 showed a high chloride concentration of 5,220 mg/kg from surface to 1.0' and then declined with depth to below the RRALs at 1.0'-1.5' below surface. The areas of AH-1 AH-2, and AH-3 were not vertically defined for chlorides. and deeper samples were not collected due to the dense formation in the area.

### Horizontals Delineation



Referring to Table 1, the areas of horizontal delineation samples (Horizontal Northwest-3, Horizontal Northwest-4, Horizontal Northwest-5, Horizontal Southeast-2, and Horizontal Southeast-3) showed any benzene, total BTEX, TPH, or chloride concentrations above the RRAL's. However, the areas of the horizontal delineation samples (Horizontal Northwest-1, Horizontal Northwest-2, Horizontal Northwest-6, Horizontal Southeast-1, and Horizontal Southeast-4) showed high chloride concentrations ranging from 854 mg/kg to 12,800 mg/kg at 0-1' below surface. The areas then declined with depth at 1.0'-1.5' below surface with concentrations ranging from 35.8 mg/kg to 403 mg/kg.

### **Background**

Referring to Table 1, the background samples showed chloride concentrations ranging from 24.3 mg/kg to 213 mg/kg at a depth of surface to 1.0' below surface.

### Draw Area Sampling

A total of ten (10) auger holes were installed in the draw area (AH-5 through AH-14) to total depths ranging from 1.0'-4.5' below surface. Four (4) background auger holes were installed in order to evaluate the native soils. 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 and the results of the sampling are summarized in Table 1. The sample locations are shown on Figure 3.

Referring to Table 1, all the samples analyzed for benzene, total BTEX, and TPH were below the laboratory reporting limits. Also, the areas of auger holes (AH5, AH-6, AH-7, AH-8, AH-9, AH-10, AH-11, AH-12, AH-13, and AH-14) all showed chloride concentrations above the RRAL, with concentrations ranging from 947 mg/kg to 22,300 mg/kg. Only the area of AH-10 was vertically defined for chloride with a concentration of 564 mg/kg at 2.0'-2.5' below surface.

### SAMPLING EVENTS

### 2<sup>nd</sup> Sampling Event

Based on the area having a heavy rainfall event, Tetra Tech returned on June 18, 2019, to install ten (10) auger holes in the draw area (AH-5 through AH-14) to total depths ranging from 1.0'-4.5' below surface. The rain has significantly helped dilute or help migrate the chloride concentrations during those events. The soil samples were collected and submitted to the laboratory for chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C, and sampling summarized in Table 1. The sample locations are shown on Figure 3 and Figure 3A.

Referring to Table 1, the areas of auger holes (AH-1 through AH-13) showed high chloride concentrations of 2,430 mg/kg, 2,110 mg/kg, 2,250 mg/kg, 1,390 mg/kg, 8,060 mg/kg, 11,600 mg/kg, 5,570 mg/kg, 12,300 mg/kg, 9,710 mg/kg, 623 mg/kg, 8,560 mg/kg, 1,470 mg/kg, and 635 mg/kg. The area of auger hole AH-14 showed a chloride concentration of 24.9 mg/kg. Based on the data supported from the second event of sampling, the rain events have showed to help the chloride concentrations decrease overtime.



### 3rd Sampling Event

Tetra Tech returned on April 30, 2020, to install fourteen (14) auger holes in the draw and pasture area (AH-1 through AH-14) to total depths ranging from 1.0'-4.5' below surface. The rain has significantly helped dilute or help migrate the chloride concentrations during those events. The soil samples were collected and submitted to the laboratory for chloride by EPA method 300.0. Copies of laboratory analysis and chain-of-custody documentation are included in Appendix C, and sampling summarized in Table 1. The sample locations are shown on Figure 3 and Figure 3A.

Referring to Table 1, the areas of auger holes (AH-2 and AH-8) showed high chloride concentrations of 4,210 mg/kg and 2,180 mg/kg. The areas of auger holes (AH-1, AH-3, AH-4, AH-5, AH-6, AH-7, AH-9, AH-10, AH-11, AH-12, AH-13, and AH-14) all showed chloride concentration below the regulatory limit. Based on the data supported by the recent sampling, the rain events have showed to help the chloride concentrations decrease over time.

### Horizontals Delineation

On June 18, 2020, Tetra Tech re-sampled the areas of horizontal delineation samples (Horizontal Northwest-1, Horizontal Northwest-2, Horizontal Northwest-6, Horizontal Southeast-1, and Horizontal Southeast-4).

Referring to Table 1, the areas of horizontal delineation samples (Horizontal Northwest-1 and Horizontal Southeast-1 showed chloride concentrations above the RRAL's with concentrations of 4,480 mg/kg and 3,340 mg/kg. However, the areas of the horizontal delineation samples (Horizontal Northwest-2, Horizontal Northwest-6, and Horizontal Southeast-4) showed high chloride concentrations ranging from 13.7 mg/kg to 239 mg/kg at 0-1' below surface.

### **Conclusion and Recommendations**

On February 23, 2020, the BLM approved the monitoring work plan. However, the NMOCD denied the monitoring plan on March 25, 2020, and requested the impacted areas be remediated per guidelines. Upon further site review, COG has concerns with safety and access issues which are summarized below.

Tetra Tech personnel met on-site with the contractor to inspect and determine if the site can be safely remediated. After further evaluation, the site was determined to have high traffic, its proximity is near the edge of the road, and no place to stage, trucks, equipment and material for the site to be properly excavated. Also, impacted soil around structures or lines may not be viable or practicable to be removed due to safety concerns for on-site staff.

According to the data, there are four (4) areas that are above the regulatory limit for chlorides. These areas include the pasture area (AH-2, H-NW1 and H-SE1) and draw area (AH-8). Based on the monitoring results, we are continuing to see a reduction of chloride concentrations in the soils over time, especially after a heavy rainfall. The area of auger hole (AH-8) has limited access and safety concerns due to the depth of the draw, and can't safely access. Also, further impact on the native vegetation would be higher than removing the impact from the area.



Due limited access and current reduction of the chlorides, COG proposes to continue to monitor the site for the remainder of 2020, if needed or after a heavy rainfall event, which should help dilute the chloride concentrations over time with the limited access in the pasture area. Let me know if we need to set up an on-site meeting with the BLM to discuss further on the proposed plan.

If you have any questions or comments concerning the assessment activities for this site, please call at (432) 682-4559.

Respectfully submitted, TETRA TECH

Mike Carmona Geologist

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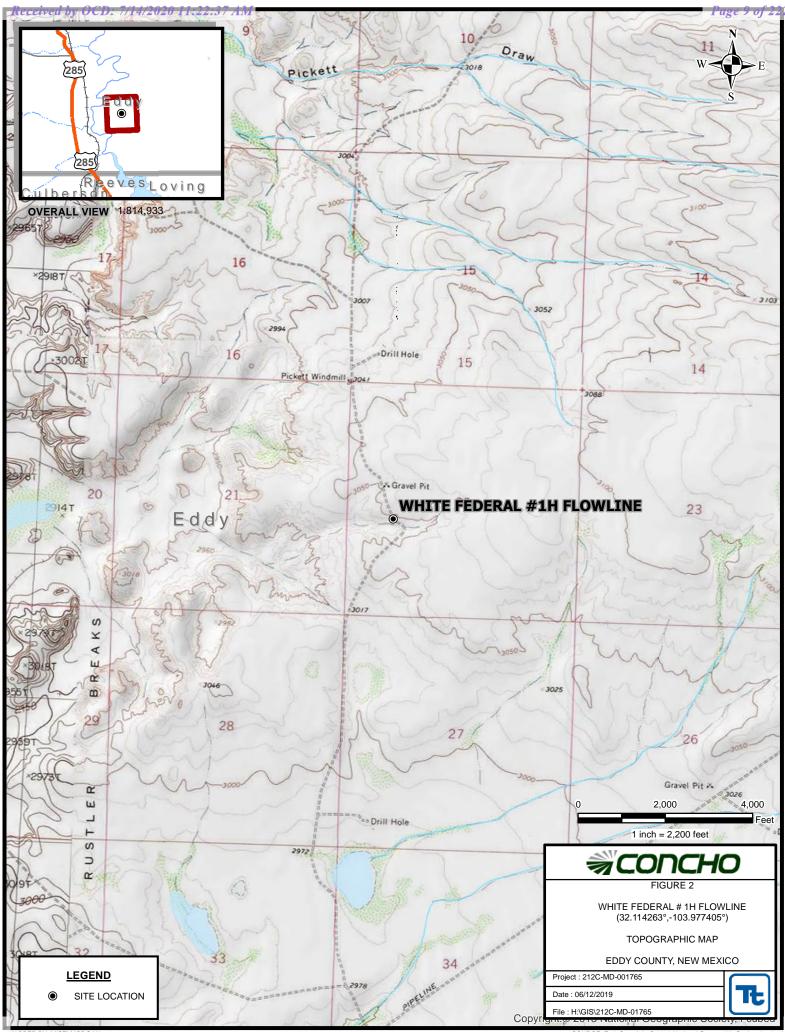
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# Figures



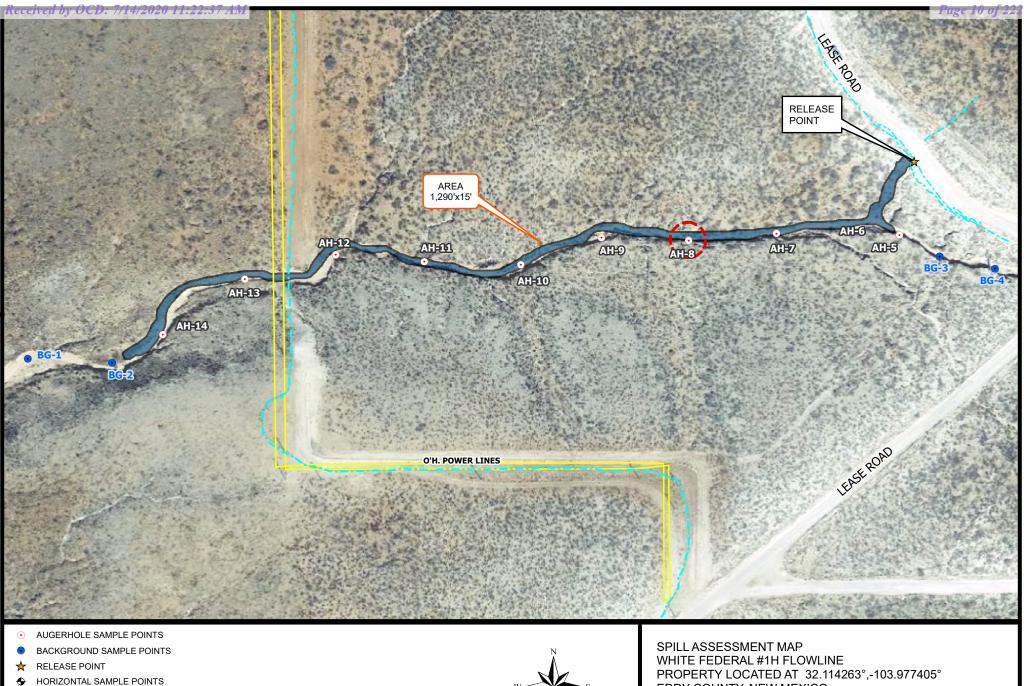
MAPPED BY: MISTI MORGAN

SOURCE: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, © OpenStreetMap contributors, and the GIS User Community



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- •
- **O.H. POWERLINES**
- FLOWLINE

Docu

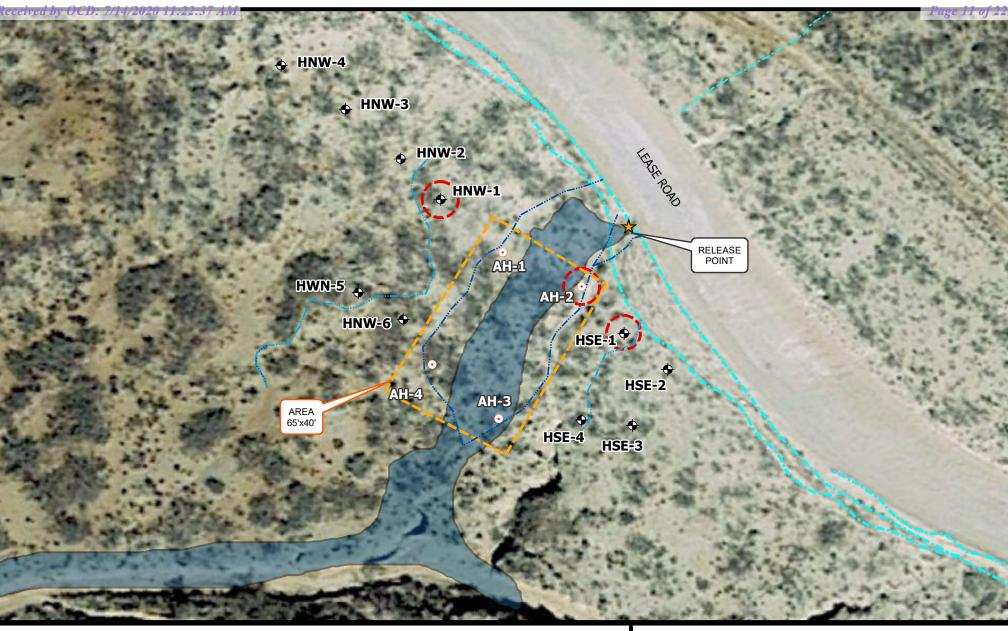
- AREA EXCEEDING REGULATORY LEVELS
- SPILL AREA

Approximate Scale in Feet

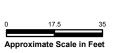
EDDY COUNTY, NEW MEXICO



Source: "New Mexico". 32° 6'51.35"N, 103°58'38.66"W. Google Earth. February, 2019.December 3, 2019.



- AUGERHOLE SAMPLE POINTS
- ★ RELEASE POINT
- HORIZONTAL SAMPLE POINTS
- O.H. POWERLINES
- FLOWLINE
- C AREA EXCEEDING REGULATORY LEVELS
- SPILL AREA



SPILL ASSESSMENT MAP WHITE FEDERAL #1H FLOWLINE PROPERTY LOCATED AT 32.114263°,-103.977405° EDDY COUNTY, NEW MEXICO



Source: "New Mexico". 32° 6'51.35"N, 103°58'38.66"W. Google Earth February, 2019.December 3, 2019.

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# Tables

Sample Depth (ft)           0         0-1           1-1.5         2-2.5           2.5-3         0           0         0-1           1-1.5         2-2.5           2.5-3         3	Sample Depth (ft) - - - - - - - -	In-Situ X X X X X	Status Removed - - -	GRO <15.0 -	DRO <15.0 -	mg/kg) MRO <15.0	<b>Total</b>	Benzene (mg/kg)	Toluene (mg/kg)	Ethlybenzene (mg/kg)	Xylene (mg/kg)	Total BTEX (mg/kg)	Chloride (mg/kg)
1-1.5           2-2.5           2.5-3           0           1-1.5           2-2.5		X X X X	-	-	-		<15.0	0.00000					
1-1.5           2-2.5           2.5-3           0           1-1.5           2-2.5		X X X X	-	-	-		<15.0	0.00000					
2-2.5 2.5-3 0-1 1-1.5 2-2.5	-	X X X	-	-		-		< 0.00200	<0.00200	<0.00200	<0.00200	<0.00200	4,280
2.5-3 0-1 1-1.5 2-2.5	-	X X			-		-	-	-	-	-	-	4,890
0-1 1-1.5 2-2.5	-	Х	-	_		-	-	-	-	-	-	-	5,600
1-1.5 2-2.5	-			-	-	-	-	-	-	-	-	-	7,320
2-2.5			-	-	-	-	-	-	-	-	-	-	36.9
	-	Х	-	-	-	-	-	-	-	-	-	-	680
3-3.5		Х	-	-	-	-	-	-	-	-	-	-	34.9
	-	Х	-	-	-	-	-	-	-	-	-	-	2,430
0-1	-	Х	-	-	-	-	-	-	-	-	-	-	1,630
1-1.5	-	Х	-	-	-	-	-	-	-	-	-	-	16.1
2-2.5	-	Х	-	-	-	-	-	-	-	-	-	-	2,310
3-3.5	-	Х	-	-	-	-	-	-	-	-	-	-	4,940
0-1	-	Х	-	-	-	-	-	-	-	-	-	-	29.2
	-		-	-	-	-	-	-	-	-	-	-	21.5
	-		-	-	-	-	-	-	-	_	-	-	16.2
	-	Х	-	-	-	-	-	-	-	_	-	-	36.5
												1	
0-1	-	Х	-	<15.0	<15.0	<15.0	<15.0	<0.00201	< 0.00201	<0.00201	<0.00201	<0.00201	13,800
1-1.5	-	Х	-	-	-	-	-	-	-	-	-	-	17,600
2-2.5	-	Х	-	-	-	-	-	-	-	-	-	-	10,200
0-1	-	Х	-	-	-	-	-	-	-	-	-	-	1,090
1-1.5	-	Х	-	-	-	-	-	-	-	-	-	-	2,110
0-1	-	Х	-	-	-	-	-	-	-	-	-	-	2,130
1-1.5	-	Х	-	-	-	-	-	-	-	-	-	-	722
2-2.5	-	Х	-	-	-	-	-	-	-	-	-	-	692
0-1	-	Х	-	-	-	-	-	-	-	-	-	-	387
1-1.5	-	Х	-	-	-	-	-	-	-	-	-	-	1,100
2-2.5	-	Х	-	-	-	-	-	-	-	-	-	-	2,740
0-1	-	Х	-	-	-	-	-	-	-	-	-	-	720 <b>4,180</b>
			-										
	1-1.5           2-2.5           2.5-3           0           1-1.5           2-2.5           0           0           0           1-1.5           2-2.5           0           0           1-1.5           2-2.5           0           0           1-1.5           2-2.5           0           0           0           1-1.5           2-2.5           0           0-1	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	1-1.5       -       X       - $2-2.5$ -       X       - $2.5-3$ -       X       - $1-1.5$ -       X       - $2.2.5$ -       X       - $2.2.5$ -       X       - $0$ $0-1$ -       X       - $0$ $0-1$ -       X       - $1.1.5$ -       X       - $2.2.5$ -       X       - $0$ $0-1$ -       X       -	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	1-1.5       -       X       -       -       -       -       - $2-2.5$ -       X       -       -       -       -       -       - $2.5-3$ -       X       -       -       -       -       -       - $2.5-3$ -       X       -       -       -       -       -       - $2.5-3$ -       X       -       -       -       -       -       - $2.5-3$ -       X       -       -       -       -       -       - $0$ 0-1       -       X       -       -       -       -       - $2.2.5$ -       X       -       -       -       -       -       - $0$ 0-1       -       X       -       -       -       -       - $1.1.5$ -       X       -       -       -       -       -       - $0$ 0-1       -       X       -       -       -       -       - $1.1.5$ -       X       -       - <td><math display="block"> \begin{array}{c ccccccccccccccccccccccccccccccccccc</math></td>	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$				

### Table 1 COG White Federal 1H Flowline

Eddy County, NM

Samula ID	Sample	Sample	BEB Sample	Soil	Status		TPH (	mg/kg)		Benzene	Toluene	Ethlybenzene	Xylene	Total BTEX	Chloride
Sample ID	Date	Depth (ft)	Depth (ft)	In-Situ	Removed	GRO	DRO	MRO	Total	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
AH-3	6/18/2019	0-1	-	х	-		l <u>-</u>	-	-	-	-	-	-	-	171
7	"	1-1.5	-	X	-	-	-	-	-	-	-	-	-	-	2,250
AH-3	2/12/2020	0-1		Х	-					_	-	-	-	-	25.8
	"	1-1.5	-	X	-	-	-	-	-	-	-	-	-	-	25.2
AH - 3	4/30/2020	0-1	-	Х	-	-	-	-	-	-	_	-	-	-	15.0
	"	1-1.5	-	X	-	-	-	-	-	-	-	-	-	-	20.1
AH-4	5/21/2019	0-1	-	Х	-	<15.0	<15.0	<15.0	<15.0	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	5,220
	"	1-1.5	-	Х	-	-	-	-	-	-	-	-	-	-	526
	"	2-2.5	-	Х	-	-	-	-	-	-	-	-	-	-	582
	"	3-3.5	-	Х	-	-	-	-	-	-	-	-	-	-	338
AH-4	6/18/2019	0-1	-	Х	-	-	-	-	-	-	-	-	-	-	61.6
	"	1-1.5	-	Х	-	-	-	-	-	-	-	-	-	-	78.9
	"	2-2.5	-	Х	-	-	-	-	-	-	-	-	-	-	1,390
AH-4	2/12/2020	0-1	-	Х	-	-	-	-	-	-	-	-	-	-	2,940
	"	1-1.5	-	Х	-	-	-	-	-	-	-	-	-	-	1,680
	"	2-2.5	-	Х	-	-	-	-	-	-	-	-	-	-	814
	n	3-3.5	-	Х	-	-	-	-	-	-	-	-	-	-	307
AH-4	4/30/2020	0-1	-	Х	-	-	-	-	-	-	-	-	-	-	177
	"	1-1.5	-	Х	-	-	-	-	-	-	-	-	-	-	456
	"	2-2.5	-	Х	-	-	-	-	-	-	-	-	-	-	1,910
	"	3-3.5	-	Х	-	-	-	-	-	-	-	-	-	-	2,540
AH-4	6/18/2020	0-1	-	Х	-	-	-	-	-	-	-	-	-	-	58.3
	"	1-1.5	-	Х	-	-	-	-	-	-	-	-	-	-	30.1
	"	2-2.5	-	Х	-	-	-	-	-	-	-	-	-	-	58.9

	Sample	Sample	BEB	Soil	Status		TPH (	mg/kg)		Benzene	Toluene	Ethlybenzene	Xylene	Total BTEX	Chloride
Sample ID	Date	Depth (ft)	Sample Depth (ft)	In-Situ	Removed	GRO	DRO	MRO	Total	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
	5/21/2019	0-1		Х		<15.0	<15.0	<15.0	<15.0	<0.00199	< 0.00199	<0.00199	< 0.00199	<0.00199	6,750
H-NW 1	"	1-1.5		Х		-	-	-	-	-	-	-	-	-	35.8
	6/18/2002	0-1		Х		-	-	-	-	-	-	-	-	-	4,480
	5/21/2019	0-1	1	Х		<14.9	<14.9	<14.9	<14.9	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	1,460
	5/21/2019	1-1.5		X		<14.9	<14.9	<14.9	<14.9	<0.00199	<0.00199	-	-	<0.00199	276
H-NW 2		1-1.5		~		-	_	_		_	_		_	_	210
	6/18/2020	0-1		х		-	-	-	-	-	-	-	-	-	141
H-NW 3	5/21/2019	0-1		Х		<15.0	<15.0	<15.0	<15.0	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	217
H-NW 4	5/21/2019	0-1		Х		<15.0	<15.0	<15.0	<15.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	279
H-NW 5	5/21/2019	0-1		Х		<15.0	<15.0	<15.0	<15.0	<0.00202	<0.00202	<0.00202	<0.00202	<0.00202	260
	5/21/2019	0-1		Х		<15.0	<15.0	<15.0	<15.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	854
H-NW 6	"	1-1.5		Х		-	-	-	-	-	-	-	-	-	403
	6/18/2020	0-1		Х		-	-	-	-	-	-	-	-	-	239
	5/21/2019	0-1		Х		<14.9	<14.9	<14.9	<14.9	< 0.00200	< 0.00200	<0.00200	< 0.00200	<0.00200	12,800
H-SE 1	n	1-1.5		Х		-	-	-	-	-	-	-	-	-	328
II-SE I															
	6/18/2020	1-1.6		Х		-	-	-	-	-	-	-	-	-	3,340
H-SE 2	5/21/2019	0-1		Х		<15.0	<15.0	<15.0	<15.0	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	71.1
H-SE 3	5/21/2019	0-1		Х		<15.0	<15.0	<15.0	<15.0	<0.00198	<0.00198	<0.00198	<0.00198	<0.00198	48.2
	5/21/2019	0-1		Х		<15.0	<15.0	<15.0	<15.0	<0.00200	<0.00200	<0.00200	<0.00200	<0.00200	2,670
H-SE 4	"	1-1.5		Х		-	-	-	-	-	-	-	-	-	481
п-эс 4															
	6/18/2020	0-1		Х		-	-	-	-	-	-	-	-	-	13.7

	Sample	Sample	BEB	Soil	Status		TPH (	mg/kg)		Benzene	Toluene	Ethlybenzene	Xylene	Total BTEX	Chloride
Sample ID	Date	Depth (ft)	Sample Depth (ft)	In-Situ	Removed	GRO	DRO	MRO	Total	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Praw Area															
AH-5	5/21/2019	0-1	-	Х	-	<15.0	<15.0	<15.0	<15.0	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	17,800
	"	1-1.5	-	Х	-	-	-	-	-	-	-	-	-	-	15,600
	"	2-2.5	-	Х	-	-	-	-	-	-	-	-	-	-	8,170
	"	3-3.5	-	Х	-	-	-	-	-	-	-	-	-	-	1,450
AH-5	6/18/2019	0-1	-	Х	-	_	-	-	-	-	-	-	-	-	38.2
	"	1-1.5	-	X	-		-	_	-	-				-	4,260
	"	2-2.5	-	X	-	-	-	-	-	-	-	-	-	-	8,060
	"	3-3.5	-	X	-	-	-	-	-	-	-	-	-	-	7,510
ALL 5	0/10/0000			1											
AH-5	2/12/2020	0-1	-	Х	-	-	-	-	-	-	-	-	-	-	<9.98
		1-1.5	-	Х	-	-	-	-	-	-	-	-	-	-	<9.92
		2-2.5	-	Х	-	-	-	-	-	-	-	-	-	-	<9.96
		3-3.5	-	Х	-	-	-	-	-	-	-	-	-	-	10.5
AH -5	4/30/2020	0-1	-	Х	-	-	-	-	-	-	-	-	-	-	13.6
	"	1-1.5	-	Х	-	-	-	-	-	-	-	-	-	-	21.9
	"	2-2.5	-	Х	-	-	-	-	-	-	-	-	-	-	8.67
	"	3-3.5	-	Х	-	-	-	-	-	-	-	-	-	-	6.60
	· 1					-	-						I		
AH-6	5/22/2019	0-1	-	Х	-	<15.0	<15.0	<15.0	<15.0	<0.00202	<0.00202	<0.00202	< 0.00202	<0.00202	15,100
		1-1.5	-	X	-	-	-	-	-	-	-	-	-	-	947
	"	2-2.5	-	X	-	-	-	-	-	-	-	-	-	-	19,000
		3-3.5	-	X X	-	-					-		-	-	20,100
		4-4.5	-		-	-	-	-	-	-	-	-	-	-	16,600
AH-6	6/18/2019	0-1	-	Х	-	-	-	-	-	-	-	-	-	-	63.4
	"	1-1.5	-	Х	-	-	-	-	-	-	-	-	-	-	96.5
	"	2-2.5	-	Х	-	-	-	-	-	-	-	-	-	-	1,700
	"	3-3.5	-	Х	-	-	-	-	-	-	-	-	-	-	11,100
	"	4-4.5	-	Х	-	-	-	-	-	-	-	-	-	-	11,600
		5-5.5	-	Х	-	-	-	-	-	-	-	-	-	-	6,650
AH-6	2/12/2020	0-1	-	Х	-	-	-	-	-	-	-	-	-	-	29.4
	"	1-1.5	-	Х	-	-	-	-	-	-	-	-	-	-	14.9
	"	2-2.5	-	Х	-	-	-	-	-	-	-	-	-	-	28.7
	"	3-3.5	-	Х	-	-	-	-	-	-	-	-	-	-	22.3
	"	4-4.5	-	Х	-	-	-	-	-	-	-	-	-	-	24.7
AH -6	4/30/2020	0-1	-	Х	-	-	-	-	-	-	-	-	-	-	14.1
<i>i</i> o	4/30/2020	1-1.5	-	X	-	-	-	-	-	-	-	-	-	-	21.4
	"	2-2.5	-	X	-	-	-	-	-	-	-	-	-	-	48.1
	"	3-3.5	-	X	-			-	-	-	-	-	-	-	14.1
	"	4-4.5	-	X	-	-	-	-	-	-	-	-	-	-	10.0

	Sample	Sample	BEB	Soil S	Status		TPH (	mg/kg)		Benzene	Toluene	Ethlybenzene	Xylene	Total BTEX	Chloride
Sample ID	Date	Depth (ft)	Sample Depth (ft)	In-Situ	Removed	GRO	DRO	MRO	Total	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
AH-7	5/22/2019	0-1	-	Х	-	<15.0	<15.0	<15.0	.15.0	<0.00199	<0.00199	<0.00199	<0.00199	-0.00100	19,900
All-1	5/22/2019	1-1.5	-	X	-	<15.0	<15.0	<15.0	<15.0 -	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	19,900
		2-2.5	-	X	-	-	-	-	-	-	-	-	-	-	12,500
			-			-	-	-	-	-	-	-	-	-	
AH-7	6/18/2019	0-1	-	Х	-	-	-	-	-	-	-	-	-	-	716
	"	1-1.5	-	Х	-	-	-	-	-	-	-	-	-	-	1,890
	"	2-2.5	-	Х	-	-	-	-	-	-	-	-	-	-	5,570
AH-7	2/12/2020	0-1	-	Х	-	-	-	-	-	-	-	-	-	-	10.7
		1-1.5	-	Х	-	-	-	-	-	-	-	-	-	-	17.7
	"	2-2.5	-	Х	-	-	-	-	-	-	-	-	-	-	<10.1
AH -7	4/30/2020	0-1	-	Х	-		-	-	-	-	-	-	-	-	10.7
	"	1-1.5	-	Х	-	-	-	-	-	-	-	-	-	-	18.6
	"	2-2.5	-	Х	-	-	-	-	-	-	-	-	-	-	22.8
AH-8	5/22/2019	0-1	-	Х	-	<15.0	21.1	<15.0	21.1	<0.00199	<0.00199	<0.00199	<0.00199	<0.00199	18,80
	"	1-1.5	-	Х	-	-	-	-	-	-	-	-	-	-	22,30
	"	2-2.5	-	Х	-	-	-	-	-	-	-	-	-	-	1,400
	"	3-3.5	-	Х	-	-	-	-	-	-	-	-	-	-	5,010
	н	4-4.5	-	Х	-	-	-	-	-	-	-	-	-	-	3,180
AH-8	6/18/2019	0-1	-	Х	-	-	-	-	-	-	-	-	-	-	48.6
	"	1-1.5	-	Х	-	-	-	-	-	-	-	-	-	-	542
	"	2-2.5	-	Х	-	-	-	-	-	-	-	-	-	-	12,30
AH-8	2/12/2020	0-1	-	Х	-	-	-	-	-	-	-	-	-	-	<10.1
	"	1-1.5	-	X	-	-	-	-	-	-	-	-	-	-	<10.1
	"	2-2.5	-	X	-	-	-	-	-	-	-	-	-	-	<9.94
	"	3-3.5	-	X	-		-	-	-	-	-	-	-	-	14.8
	"	4-4.5	-	X	-	-	-	-	-	-	-	-	-	-	41.4
AH-8	4/30/2020	0-1	_	Х	-	-	-	_	-	-	-	-	-	-	6.43
	4/30/2020	1-1.5	-	X	-		-	-	-	-	-	-	-	-	9.31
	"	2-2.5	-	X	-		_	-	-	-	-	-	-	-	9.85
	"	3-3.5	-	X	-		_	-	-	-	-	-	-	-	12.7
	н	4-4.5	-	X	-	<u> </u>	-	-	-	-	-	-	-	_	2,180

	Sample	Sample	BEB	Soil	Status		TPH (	mg/kg)		Benzene	Toluene	Ethlybenzene	Xylene	Total BTEX	Chloride
Sample ID	Date	Depth (ft)	Sample Depth (ft)	In-Situ	Removed	GRO	DRO	MRO	Total	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
AH-9	5/22/2019	0-1	-	Х	-	<15.0	36.8	<15.0	36.8	<0.00200	< 0.00200	<0.00200	<0.00200	<0.00200	6,250
	"	1-1.5	-	Х	-	-	-	-	-	-	-	-	-	-	19,100
	"	2-2.5	-	Х	-	-	-	-	-	-	-	-	-	-	19,600
	"	3-3.5	-	Х	-	-	-	-	-	-	-	-	-	-	9,250
AH-9	6/18/2019	0-1	-	Х	-	-	-	-	-	-	-	-	-	-	2,110
	"	1-1.5	-	Х	-	-	-	-	-	-	-	-	-	-	7,050
	"	2-2.5	-	Х	-	-	-	-	-	-	-	-	-	-	5,920
	"	3-3.5	-	Х	-	-	-	-	-	-	-	-	-	-	9,710
AH-9	2/12/2020	0-1	-	Х	-	-	-	-	-	-	-	-	-	-	<9.98
	"	1-1.5	-	Х	-	-	÷	-	-	-	-	-	-	-	<10.0
	"	2-2.5	-	Х	-	-	-	-	-	-	-	-	-	-	10.9
	"	3-3.5	-	Х	-	-	-	-	-	-	-	-	-	-	12.6
AH-9	4/30/2020	0-1	-	Х	-	-	-	-	-	-	-	-	-	-	21.7
	"	1-1.5	-	Х	-	-	-	-	-	-	-	-	-	-	7.54
	"	2-2.5	-	Х	-	-	-	-	-	-	-	-	-	-	<4.96
	"	3-3.5	-	Х	-	-	-	-	-	-	-	-	-	-	6.24
AH-10	5/22/2019	0-1	-	Х	-	<15.0	<15.0	<15.0	<15.0	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	8,560
	3/22/2019	1-1.5	-	X	-	<15.0	<15.0	<15.0	<15.0	<0.00201	<0.00201	-	<0.00201	<0.00201	17,500
	"	2-2.5	-	X	-	-	-	-	-	-	-	-	-	-	564
AH-10	6/18/2019	0-1	-	Х	-	-	-	-	-	-	-	-	-	-	72.3
	"	1-1.5	-	Х	-	-	-	-	-	-	-	-	-	-	454
	"	2-2.5	-	Х	-	-	-	-	-	-	-	-	-	-	623
AH-10	2/12/2020	0-1	-	Х	-	-	-	-	-	-	-	-	-	-	28.1
	"	1-1.5	-	Х	-	-	-	-	-	-	-	-	-	-	19.0
	н	2-2.5	-	Х	-	-	-	-	-	-	-	-	-	-	<9.98
AH-10	4/30/2020	0-1	-	Х	-	-	-	-	-	-	-	-	-	-	6.77
	"	1-1.5	-	Х	-	-	-	-	-	-	-	-	-	-	16.8
	"	2-2.5	-	Х	-	-	-	-	-	-	-	-	-	-	20.4

a i ia	Sample	Sample	BEB	Soil	Status		TPH (	mg/kg)		Benzene	Toluene	Ethlybenzene	Xylene	Total BTEX	Chloride
Sample ID	Date	Depth (ft)	Sample Depth (ft)	In-Situ	Removed	GRO	DRO	MRO	Total	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
AH-11	5/22/2019	0-1	-	Х	-	<15.0	20.5	<15.0	20.5	<0.00200	< 0.00200	<0.00200	<0.00200	<0.00200	6,730
	"	1-1.5	-	Х	-	-	-	-	-	-	-	-	-	-	3,020
	"	2-2.5	-	Х	-	-	-	-	-	-	-	-	-	-	190
	"	3-3.5	-	Х	-	-	-	-	-	-	-	-	-	-	1,120
AH-11	6/18/2019	0-1	-	Х	-	-	-	-	-	-	-	-	-	-	52.2
	"	1-1.5	-	Х	-	-	-	-	-	-	-	-	-	-	501
	н	2-2.5	-	Х	-	-	-	-	-	-	-	-	-	-	8,560
	"	3-3.5	-	Х	-	-	-	-	-	-	-	-	-	-	3,330
AH-11	2/12/2020	0-1	-	Х	-	-	-	-	-	-	-	-	-	-	<10.0
	"	1-1.5	-	Х	-	-	-	-	-	-	-	-	-	-	<10.1
	"	2-2.5	-	Х	-	-	-	-	-	-	-	-	-	-	<9.88
	"	3-3.5	-	Х	-	-	-	-	-	-	-	-	-	-	15.4
AH-11	4/30/2020	0-1	-	Х	-	-	-	-	-	-	-	-	-	-	11.7
	"	1-1.5	-	Х	-	-	-	-	-	-	-	-	-	-	14.6
	н	2-2.5	-	Х	-	-	-	-	-	-	-	-	-	-	15.2
	"	3-3.5	-	Х	-	-	-	-	-	-	-	-	-	-	16.8
A11.40	1		1		1										
AH-12	5/22/2019	0-1	-	Х	-	<15.0	<15.7	<15.0	<15.7	<0.00201	<0.00201	<0.00201	<0.00201	<0.00201	6,230
		1-1.5	-	X	-	-	-	-	-	-	-	-	-	-	7,010
		2-2.5	-	Х	-	-	-	-	-	-	-	-	-	-	6,030
AH-12	6/18/2019	0-1	-	Х	-	-	-	-	-	-	-	-	-	-	15.8
	"	1-1.5	-	Х	-	-	-	-	-	-	-	-	-	-	1,470
AH-12	2/12/2020	0-1	-	Х	-	-	-	-	-	-	-	-	-	-	<9.94
	"	1-1.5	-	Х	-	-	-	-	-	-	-	-	-	-	12.4
	"	2-2.5	-	Х	-	-	-	-	-	-	-	-	-	-	10.3
AH-12	4/30/2020	0-1	-	Х	-	-	-	-	-	-	-	-	-	-	12.1
	"	1-1.5	-	Х	-	-	-	-	-	-	-	-	-	-	14.4
	"	2-2.5	-	Х	-	-	-	-	-	-	-	-	-	-	17.4

#### Table 1 COG White Federal 1H Flowline Eddy County, NM

0	Sample	Sample	BEB	Soil	Status		TPH (	mg/kg)		Benzene	Toluene	Ethlybenzene	Xylene	Total BTEX	Chloride
Sample ID	Date	Depth (ft)	Sample Depth (ft)	In-Situ	Removed	GRO	DRO	MRO	Total	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
AH-13	5/22/2019	0-1	-	-		-	-	-	-	-	-	-	-	-	6,090
	н	1-1.5	-	-		-	-	-	-	-	-	-	-	-	8,470
AH-13	6/18/2019	0-1	-	Х	-	-	-	-	-	-	-	-	-	-	37.4
	"	1-1.5	-	Х	-	-	-	-	-	-	-	-	-	-	34.2
	"	2-2.5	-	Х	-	-	-	-	-	-	-	-	-	-	635
AH-13	2/12/2020	0-1	-	Х	-	-	-	-	-	-	-	-	-	-	<10.0
	"	1-1.5	-	Х	-	-	-	-	-	-	-	-	-	-	<9.94
AH-13	4/30/2020	0-1	-	Х	-	-	-	-	-	-	-	-	-	-	25.3
	"	1-1.5	-	Х	-	-	-	-	-	-	-	-	-	-	16.6
AH-14					1 1		1				[	[			
AH-14	5/22/2019	0-1	-	-	-	-	-	-	-	-	-	-	-	-	2,730
AH-14	6/18/2019	0-1	-	Х	-	-	-	-	-	-	-	-	-	-	24.9
	"	1-1.5	-	Х	-	-	-	-	-	-	-	-	-	-	6.77
AH-14	2/12/2020	0-1	-	Х	-	-	-	-	-	-	-	-	-	-	<10.0
AH-14	4/30/2020	0-1	-	Х	-	-	-	-	-	-	-	-	-	-	12.4
	E/00/0040		1		r i		[				r	-	[	1	[
Background 1	5/22/2019	0-1	-	-	-	-	-	-	-	-	-	-	-	-	213
Background 2	5/22/2019	0-1	-	-	-	-	-	-	-	-	-	-	-	-	138
Background 3	5/22/2019	0-1	-	-	-	-	-	-	-	-	-	-	-	-	153
Background 4	5/22/2019	0-1	-	-	-	-	-	-	-	-	-	-	-	-	24.3



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Exceeds Regulatory Limits

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# Photos

## White Federal #1H Flowline

## Eddy County, New Mexico



Facing Southwest, viewing AH-1 and AH-2



Facing Southwest, viewing area of AH-3 and AH-4

## White Federal #1H Flowline

# Eddy County, New Mexico



Facing Southeast, viewing AH-5 and BG-3



Facing West, viewing area of AH-6 and AH-7



# White Federal #1H Flowline

Eddy County, New Mexico



Facing West, viewing AH-8



Facing East, viewing AH-9



## White Federal #1H Flowline

## Eddy County, New Mexico



Facing Northeast, viewing AH-10



Facing West, viewing AH-11



# White Federal #1H Flowline

Eddy County, New Mexico



Facing Southwest, viewing AH-12



Facing West, viewing AH-13



White Federal #1H Flowline

Eddy County, New Mexico



Facing Northeast, viewing AH-14



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# 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, Midlar	nd, Texas 79701	

## **Location of Release Source**

Latitude 32.11408

-103.97715

(NAD 83 in decimal degrees to 5 decimal places)

White Federal Colli #00111			Site Type	Flowline		
Date Release Discovered May 17, 2019			API# (if applicable)	30-015-36185		
Unit Letter	Section	Township	Range		County	
L	22	25S	29E		Eddy	

Surface Owner: State Federal Tribal Private (Name:

## Nature and Volume of Release

Materia	l(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) 20	Volume Recovered (bbls) 0
	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. The flowline has been repaired The release was in the pasture. A vacuum truck was dispatched to remove all freestanding fluids. Concho will evaluate the site to determine if we may commence remediation immediately or delineate any possible impact from the release and we will present a remediation work plan to the NMOCD for approval prior to any significant remediation activities.

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by	If YES, for what reason(s) does the responsible party consider this a major release?
19.15.29.7(A) NMAC?	
🗌 Yes 🔳 No	
If YES, was immediate no	otice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?

## **Initial Response**

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

The source of the release has been stopped.

The impacted area has been secured to protect human health and the environment.

Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

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

Printed Name: DeAnn Grant	Title: HSE Administrative Assistant
Signature:	Date: 5/24/2019
	Telephone: (432) 253-4513
	·
OCD Only	
Received by:	Date:

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	NAB1914934715
District RP	2RP-5449
Facility ID	fAB1914934447
Application ID	pAB1914934518

# **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)	NAB1914934715
Contact mailing address	600 West Illinois Avenue, Midlar	nd, Texas 79701	

### **Location of Release Source**

Latitude 32.11408

L

22

-103.97715

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

Site Name White Federal Com #001H			Site Type	Flowli	ne		
Date Release Discovered May 13, 2019		API# (if applicable)					
Unit Letter	Section	Township	Danga		Country		
Unit Letter	Section	Township	Range		County		

Eddv

Surface Owner: 🗌 State 🔳 Federal 🗌 Tribal 🗌 Private (*Name:* \_\_\_\_\_\_

25S

## 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)

29E

	volume Released (bols)	volume Recovered (bbis)
Produced Water	Volume Released (bbls) 46	Volume Recovered (bbls) 0
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	Ves 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 ruptured flowline. The flowline has been repaired The release was in the pasture. A vacuum truck was dispatched to remove all freestanding fluids. Concho will evaluate the site to determine if we may commence remediation immediately or delineate any possible impact from the release and we will present a remediation work plan to the NMOCD for approval prior to any significant remediation activities. Page 2

Oil Conservation Division

Incident ID	NAB1914934715
District RP	2RP-5449
Facility ID	fAB1914934447
Application ID	pAB1914934518

Was this a major release as defined by 19.15.29.7(A) NMAC?	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 May 14, 2019 at 9:10 am to Mike Bratcher and Crystal Weaver.			

## **Initial Response**

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

The source of the release has been stopped.

The impacted area has been secured to protect human health and the environment.

Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices.

All free liquids and recoverable materials have been removed and managed appropriately.

If all the actions described above have not been undertaken, explain why:

Per 19.15.29.8 B. (4) NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please attach a narrative of actions to date. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see 19.15.29.11(A)(5)(a) NMAC), please attach all information needed for closure evaluation.

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

Printed Name: De	eAnn Grant	Title: HSE Administrative Assistant
	Sunn Opeant	Date:5/14/2019
email: agrant@	@concho.com	Telephone: (432) 253-4513
OCD Only		
Received by:	Anului Jotamunte	Date: 5/29/2019

Received by OCD: 7/14/2020 11:22:37 AM Form C-141 State of New Mexico

Oil Conservation Division

Incident ID	
District RP	2RP-5449 and 2RP-5469
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?	<u>60'</u> (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 <b>not</b> 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.

Page 3

Page 33 of 222

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Received by OCD: 7/14/2020 1 Form C-141	11:22:37 AM State of New Mexico	Page 34 of 222
		Incident ID
Page 4	Oil Conservation Division	District RP
		Facility ID
		Application ID
regulations all operators are requ public health or the environment failed to adequately investigate a	aired to report and/or file certain release notification. The acceptance of a C-141 report by the OCD and remediate contamination that pose a threat to C-141 report does not relieve the operator of response	of my knowledge and understand that pursuant to OCD rules and ions and perform corrective actions for releases which may endanger does not relieve the operator of liability should their operations have groundwater, surface water, human health or the environment. In onsibility for compliance with any other federal, state, or local laws le:
Signature:	Da	te:
email:	Tel	lephone:
OCD Only Received by:		Date:

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# Appendix B

### Water Well Data Average Depth to Groundwater (ft) White Federal Com #1H Eddy County, New Mexico

_		24 South			28	28 East				
6	70	5	30	4	30	3	2	55	1	60
7		8	50	9		10	11		12	
						17	20		73	
18		17		16		15	14		13	
		42		29		18	52		34	
19		20		21		22	23		24	
		48								
30		29		28		27	26		25	
31		32		33		34	35		36	

	25 Sc	outh	28	East	
6	5	4 <b>35</b>	3 <b>32</b>	2	1
	59				Site
7	8	9	10	11	12
18	17	16	15 <mark>48</mark>	14	13
67			49		
19	20	21	22	23	24
	96				
30	29	28	27	26 <b>40</b>	25
	15	90			$\zeta$
31	32	33	34	35	36
					40

	26 Sc	outh	28	East	
6	5	4	3	2 <b>120</b>	1 کر
				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

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

**57** 

**140** 14

22 Site 23

29 East

29 East

25 South

**60** 

26 South

5 65

32 <mark>98</mark>

**78** 

<mark>30</mark> 

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

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

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

88 New Mexico State Engineers Well Reports

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	(R=POE replaced O=orpha C=the fi	aned,	(qu						E 3=SW					
water right file.)	closed)	POD	(qu				smalle	st to la	argest)	(NAD8	3 UTM in meter	s)	(In feet)	
POD Number	Code	Sub- basin	Countv	_	Q 16	_	Sec	Tws	Rng	x	Y	DepthWellD		Water Column
<u>C 01337</u>		С	ED			1	30	258	29E	591926	3552642*	180	30	150
<u>C 01880</u>		С	ED	3	3	2	06	25S	29E	592161	3558605*	85	40	45
<u>C 02371</u>		С	ED		2	3	15	25S	29E	596741	3555106*	200	60	140
<u>C 02459</u>		С	ED	4	4	1	02	258	29E	598422	3558663*	150		
<u>C 02518</u>		С	ED		3	4	08	258	29E	593895	3556300*	462		
<u>C 02680</u>		CUB	ED		2	3	15	258	29E	596741	3555106*	200		
<u>C 04324 POD10</u>		CUB	ED	1	1	1	09	258	29E	594563	3557603	65	60	5
<u>C 04324 POD11</u>		CUB	ED	1	1	1	09	258	29E	594576	3557619	61	61	0
<u>C 04324 POD12</u>		CUB	ED	2	2	2	08	25S	29E	594476	3557627	65	60	5
<u>C 04324 POD6</u>		CUB	ED	1	1	1	09	258	29E	594538	3557657	62	61	1
<u>C 04324 POD8</u>		CUB	ED	4	4	4	05	258	29E	594442	3557807	69	65	4
<u>C 04324 POD9</u>		CUB	ED	1	1	1	09	25S	29E	594590	3557676	72	62	10
										1	Average Depth t	o Water:	55 fe	et
											Minimu	ım Depth:	30 fe	et
											M aximu	m Depth:	65 fe	et

#### PLSS Search:

....

Township: 25S Range: 29E

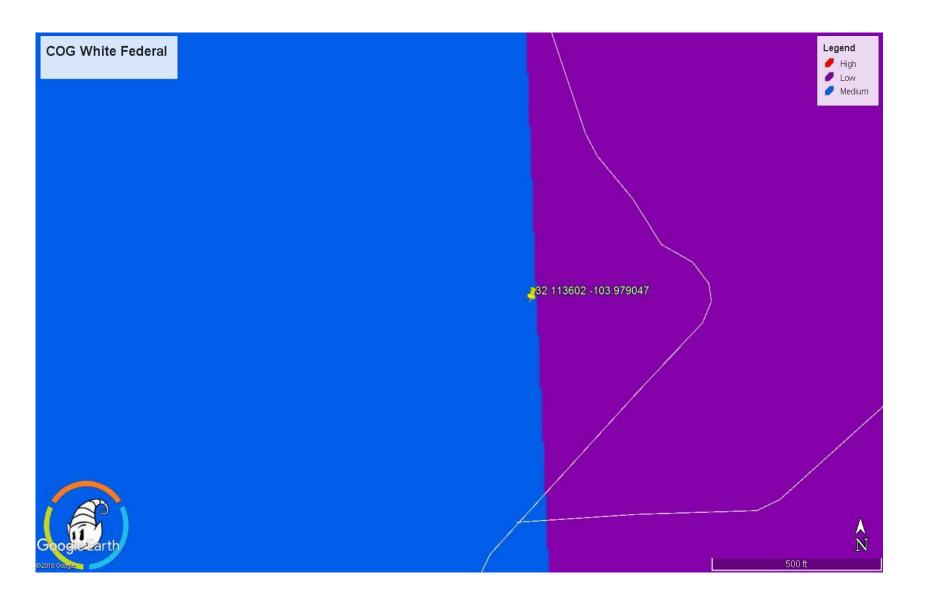
\*UTM location was derived from PLSS - see Help

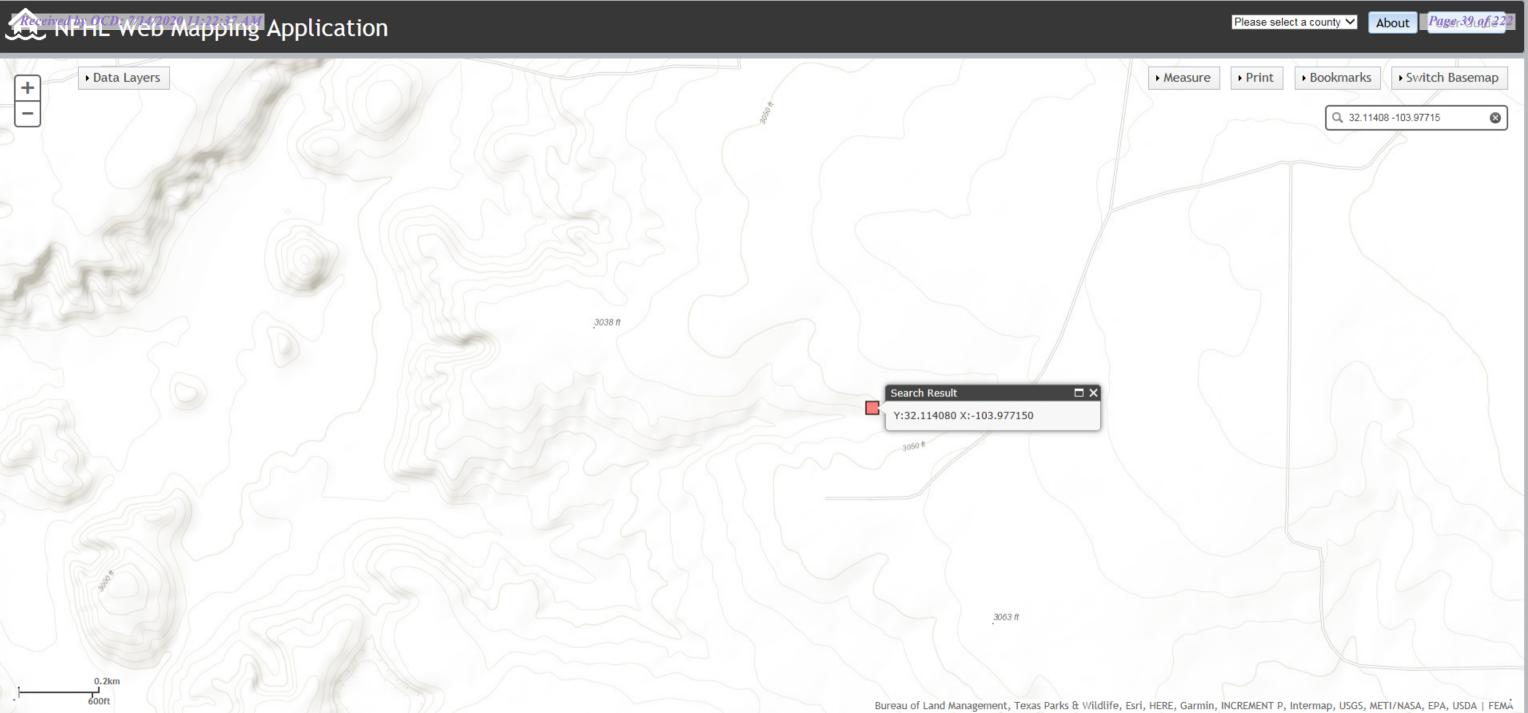
The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

11/13/19 9:16 AM

WATER COLUMN/ AVERAGE DEPTH TO WATER

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# Appendix C

### Analytical Report 625280

for Tetra Tech- Midland

**Project Manager: Mike Carmona** 

White Federal 1H Flowline (5-13-19)

212C-MD-01765

#### 30-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)



30-MAY-19



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

Reference: XENCO Report No(s): **625280 White Federal 1H Flowline (5-13-19)** Project Address: Eddy County, New Mexcio

#### Mike Carmona:

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 625280. 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. 625280 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Vramer

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

Page 42 of 222



#### Sample Id

AH-1 (0-1')
AH-1 (1'-1.5')
AH-1 (2'-2.5')
AH-1 (2.5'-3')
AH-2 (0-1')
AH-2 (1-1.5')
AH-2 (2-2.5')
AH-3 (0-1')
AH-3 (1'-1.5')
AH-4 (0-1')
AH-4 (1'-1.5')
AH-4 (2'-2.5')
AH-4 (3'-3.5')
AH-5 (0-1')
AH-5 (1'-1.5')
AH-5 (2'-2.5')
AH-5 (3'-3.5')
AH-6 (0-1')
AH-6 (1'-1.5')
AH-6 (2'-2.5')
AH-6 (3'-3.5')
AH-6 (4-4.5')
AH-7 (0-1')
AH-7 (1'-1.5')
AH-7 (2'-2.5')
AH-8 (0-1')
AH-8 (1'-1.5')
AH-8 (2'-2.5')
AH-8 (3'-3.5')
AH-8 (4-4.5')
AH-9 (0-1')
AH-9 (1'-1.5')
AH-9 (2'-2.5')
AH-9 (3'-3.5')
AH-10 (0-1')
AH-10 (1'-1.5')
AH-10 (2'-2.5')
AH-11 (0-1')
AH-11 (1'-1.5')
AH-11 (2'-2.5')
AH-11 (3'-3.5')
AH-12 (0-1')
AH-12 (1'-1.5')

### Sample Cross Reference 625280

### Tetra Tech- Midland, Midland, TX

White Federal 1H Flowline (5-13-19)

Matrix	Date Collected	Sample Depth	Lab Sample Id
S	05-21-19 00:00		625280-001
S	05-21-19 00:00		625280-002
S	05-21-19 00:00		625280-003
S	05-21-19 00:00		625280-004
S	05-21-19 00:00		625280-005
S	05-21-19 00:00		625280-006
S	05-21-19 00:00		625280-007
S	05-21-19 00:00		625280-008
S	05-21-19 00:00		625280-009
S	05-21-19 00:00		625280-010
S	05-21-19 00:00		625280-011
S	05-21-19 00:00		625280-012
S	05-21-19 00:00		625280-013
S	05-21-19 00:00		625280-014
S	05-21-19 00:00		625280-015
S	05-21-19 00:00		625280-016
S	05-22-19 00:00		625280-017
S	05-22-19 00:00		625280-018
S	05-22-19 00:00		625280-019
S	05-22-19 00:00		625280-020
S	05-22-19 00:00		625280-021
S	05-22-19 00:00		625280-022
S	05-22-19 00:00		625280-023
S	05-22-19 00:00		625280-024
S	05-22-19 00:00		625280-025
S	05-22-19 00:00		625280-026
S	05-22-19 00:00		625280-027
S	05-22-19 00:00		625280-028
S	05-22-19 00:00		625280-029
S	05-22-19 00:00		625280-030
S	05-22-19 00:00		625280-031
S	05-22-19 00:00		625280-032
S	05-22-19 00:00		625280-033
S	05-22-19 00:00		625280-034
S	05-22-19 00:00		625280-035
S	05-22-19 00:00		625280-036
S	05-22-19 00:00		625280-037
S	05-22-19 00:00		625280-038
S	05-22-19 00:00		625280-039
S	05-22-19 00:00		625280-040
S	05-22-19 00:00		625280-041
S	05-21-19 00:00		625280-042
S	05-22-19 00:00		625280-043





AH-12 (2'-2.5')
AH-13 (0-1')
AH-13 (1'-1.5')
AH-14 (0-1')
BG-1 (0-1')
BG-2 (0-1')
BG-3 (0-1')
BG-4 (0-1')

### Sample Cross Reference 625280



### Tetra Tech- Midland, Midland, TX

White Federal 1H Flowline (5-13-19)

S	05-22-19 00:00	625280-044
S	05-22-19 00:00	625280-045
S	05-22-19 00:00	625280-046
S	05-22-19 00:00	625280-047
S	05-22-19 00:00	625280-048
S	05-22-19 00:00	625280-049
S	05-22-19 00:00	625280-050
S	05-22-19 00:00	625280-051



### CASE NARRATIVE

Client Name: Tetra Tech- Midland Project Name: White Federal 1H Flowline (5-13-19)

Project ID: 212C-MD-01765 Work Order Number(s): 625280 Report Date: 30-MAY-19 Date Received: 05/23/2019

#### Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

#### Analytical non conformances and comments:

Batch: LBA-3090079 Inorganic Anions by EPA 300

Lab Sample ID 625334-001 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: 625280-001, -002, -003, -004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014, -015.

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

Batch: LBA-3090083 Chloride by EPA 300

Lab Sample ID 625280-041 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: 625280-034, -035, -036, -037, -038, -039, -040, -041, -042, -043, -044, -045, -046, -047, -048, -049, -050, -051.

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

Batch: LBA-3090390 BTEX by EPA 8021B Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3090399 BTEX by EPA 8021B Soil samples were not received in Terracore kits and therefore were prepared by method 5030.

Batch: LBA-3090434 BTEX by EPA 8021B Soil samples were not received in Terracore kits and therefore were prepared by method 5030.





Project Id:	212C-MD-01765
Contact:	Mike Carmona
Project Location:	Eddy County, New Mexcio

### Certificate of Analysis Summary 625280

Tetra Tech- Midland, Midland, TX

Project Name: White Federal 1H Flowline (5-13-19)



Date Received in Lab:Thu May-23-19 10:48 amReport Date:30-MAY-19Project Manager:Jessica Kramer

	Lab Id:	625280-0	001	625280-0	02	625280-0	03	625280-0	04	625280-0	05	625280-0	06
An alusia De an este d	Field Id:	AH-1 (0-	-1')	AH-1 (1'-1	.5')	AH-1 (2'-2	2.5')	AH-1 (2.5	'-3')	AH-2 (0-	1')	AH-2 (1-1	.5')
Analysis Requested	Depth:												
	Matrix:	SOIL	SOIL		SOIL		SOIL		SOIL			SOIL	
	Sampled:	May-21-19	00:00	May-21-19 (	00:00	May-21-19 (	00:00	May-21-19	00:00	May-21-19	00:00	May-21-19 (	00:00
BTEX by EPA 8021B	Extracted:	May-28-19	15:00							May-28-19	15:00		
	Analyzed:	May-28-19	17:35							May-28-19	21:23		
	Units/RL:	mg/kg	RL							mg/kg	RL		
Benzene		< 0.00200	<0.00200 0.00200							< 0.00201	0.00201		
Toluene		< 0.00200	0.00200							< 0.00201	0.00201		
Ethylbenzene		< 0.00200	0.00200							<0.00201	0.00201		
m,p-Xylenes		< 0.00400	0.00400							< 0.00402	0.00402		
o-Xylene		< 0.00200	0.00200							< 0.00201	0.00201		
Total Xylenes		< 0.00200	0.00200							< 0.00201	0.00201		
Total BTEX		< 0.00200	0.00200							< 0.00201	0.00201		
Chloride by EPA 300	Extracted:	May-23-19	14:15	May-23-19 14:15		May-23-19 14:15		May-23-19 14:15		May-23-19 14:15		May-23-19 14:15	
	Analyzed:	May-23-19	23:22	May-23-19 2	23:30	May-23-19 2	23:37	May-23-19 2	23:44	May-23-19 23:52		May-24-19 00:21	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		4280	25.2	4890	49.6	5600	49.9	7320	50.1	13800	99.6	17600	100
TPH by SW8015 Mod	Extracted:	May-26-19	10:00							May-26-19	10:00		
	Analyzed:	May-26-19	12:25							May-26-19	13:23		
	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		

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Jessica Kramer Project Assistant



212C-MD-01765

Eddy County, New Mexcio

Mike Carmona

**Project Id:** 

**Project Location:** 

**Contact:** 

Certificate of Analysis Summary 625280

Tetra Tech- Midland, Midland, TX

**Project Name: White Federal 1H Flowline (5-13-19)** 



Date Received in Lab:Thu May-23-19 10:48 amReport Date:30-MAY-19Project Manager:Jessica Kramer

	Lab Id:	625280-0	07	625280-0	08	625280-0	09	625280-0	010	625280-0	)11	625280-0	012
An aluais De au ested	Field Id:	AH-2 (2-2	2.5')	AH-3 (0-	1')	AH-3 (1'-1	.5')	AH-4 (0-	-1')	AH-4 (1'-1	1.5')	AH-4 (2'-2	2.5')
Analysis Requested	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-21-19	00:00	May-21-19 (	00:00	May-21-19 (	00:00	May-21-19	00:00	May-21-19	00:00	May-21-19	00:00
BTEX by EPA 8021B	Extracted:			May-28-19	5:00			May-28-19	15:00				
	Analyzed:			May-28-19 2	21:42			May-28-19	22:01				
	Units/RL:			mg/kg	RL			mg/kg	RL				
Benzene				< 0.00200	0.00200			< 0.00201	0.00201				
Toluene				< 0.00200	0.00200			< 0.00201	0.00201				
Ethylbenzene					0.00200			< 0.00201	0.00201				
m,p-Xylenes				< 0.00400	0.00400			< 0.00402	0.00402				
o-Xylene				< 0.00200	0.00200			< 0.00201	0.00201				
Total Xylenes				< 0.00200	0.00200			< 0.00201	0.00201				
Total BTEX				< 0.00200	0.00200			< 0.00201	0.00201				
Chloride by EPA 300	Extracted:	May-23-19	14:15	May-23-19 14:15 May-23-19 14:15		4:15	May-23-19 14:15		May-23-19 14:15		May-23-19 14:15		
	Analyzed:	May-24-19	00:28	May-24-19 (	00:50	May-24-19 0	00:57	May-24-19	01:04	May-23-19	23:59	May-24-19 (	01:11
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		10200	49.9	11400	99.0	11800	101	5220	49.8	526	4.95	582	5.05
TPH by SW8015 Mod	Extracted:			May-26-19	0:00			May-26-19	10:00				
	Analyzed:			May-26-19	3:43			May-26-19	14:02				
	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				

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Eddy County, New Mexcio

Mike Carmona

**Project Id:** 

**Project Location:** 

**Contact:** 

Certificate	of Ana	lysis	Summary	625280
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Tetra Tech- Midland, Midland, TX

Project Name: White Federal 1H Flowline (5-13-19)



Date Received in Lab:Thu May-23-19 10:48 amReport Date:30-MAY-19Project Manager:Jessica Kramer

	Lab Id:	625280-0	013	625280-0	014	625280-0	15	625280-0	16	625280-0	017	625280-0	018
Analysis Requested	Field Id:	AH-4 (3'-3	3.5')	AH-5 (0-	-1')	AH-5 (1'-1	.5')	AH-5 (2'-2	2.5')	AH-5 (3'-3	3.5')	AH-6 (0	-1')
Analysis Kequesiea	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	,
	Sampled:	May-21-19	00:00	May-21-19	00:00	May-21-19 (	00:00	May-21-19	00:00	May-22-19	00:00	May-22-19	00:00
BTEX by EPA 8021B	Extracted:				15:00							May-28-19	15:00
	Analyzed:			May-28-19	22:20							May-28-19	22:39
	Units/RL:			mg/kg	RL							mg/kg	RL
Benzene				< 0.00199	0.00199							< 0.00202	0.00202
Toluene				< 0.00199	0.00199							< 0.00202	0.00202
Ethylbenzene				< 0.00199	0.00199							< 0.00202	0.00202
m,p-Xylenes				< 0.00398	0.00398							< 0.00403	0.00403
o-Xylene				< 0.00199	0.00199							< 0.00202	0.00202
Total Xylenes				< 0.00199	0.00199							< 0.00202	0.00202
Total BTEX				< 0.00199	0.00199							< 0.00202	0.00202
Chloride by EPA 300	Extracted:	May-23-19	14:15	May-23-19	14:15	May-23-19 14:15		May-23-19 15:00		May-23-19 15:00		May-23-19	15:00
	Analyzed:	May-24-19	01:19	May-24-19	01:26	May-24-19 01:33		May-24-19 02:38		May-24-19 02:46		May-24-19 02:53	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		338	4.96	17800	100	15600	100	8170	49.5	1450	5.02	15100	99.6
TPH by SW8015 Mod	Extracted:			May-26-19	10:00							May-26-19	10:00
	Analyzed:			May-26-19	14:21							May-26-19	14:41
	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

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Certificate of Anal	ysis Summary	625280
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Tetra Tech- Midland, Midland, TX

Project Name: White Federal 1H Flowline (5-13-19)



Project Id:212C-MD-01765Contact:Mike CarmonaProject Location:Eddy County, New Mexcio

Date Received in Lab:Thu May-23-19 10:48 amReport Date:30-MAY-19Project Manager:Jessica Kramer

	Lab Id:	625280-0	19	625280-0	20	625280-0	21	625280-0	22	625280-0	23	625280-0	24
	Field Id:	AH-6 (1'-1		AH-6 (2'-2	-	AH-6 (3'-3		AH-6 (4-4		AH-7 (0-	-	AH-7 (1'-1	
Analysis Requested		AII-0 (1 -		AII-0 (2 -2		AII-0 (5-5		AII-0 (4-4		AII-7 (0-	1)	AII-7 (1-1	
	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-22-19	00:00	May-22-19 (	00:00	May-22-19 (	00:00	May-22-19	00:00	May-22-19 (	00:00	May-22-19 (	00:00
BTEX by EPA 8021B	Extracted:		ľ							May-28-19	15:00		
	Analyzed:									May-28-19 2	22:58		
	Units/RL:									mg/kg	RL		
Benzene										< 0.00199	0.00199		
Toluene										< 0.00199	0.00199		
Ethylbenzene										< 0.00199	0.00199		
m,p-Xylenes										< 0.00398	0.00398		
o-Xylene										< 0.00199	0.00199		
Total Xylenes										< 0.00199	0.00199		
Total BTEX										< 0.00199	0.00199		
Chloride by EPA 300	Extracted:	May-23-19	-23-19 15:00 May-23-19		19 15:00 May-23-19 15:00		5:00	May-23-19 15:00		May-23-19 15:00		May-23-19 15:00	
	Analyzed:	May-24-19	03:00	May-24-19 0	03:22	May-24-19 0	03:29	May-24-19 03:36		May-24-19 03:44		May-24-19 03:51	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		947	5.05	19000	100	20100	101	16600	99.6	19900	251	12500	99.0
TPH by SW8015 Mod	Extracted:						ĺ			May-26-19	10:00		
	Analyzed:									May-26-19	15:02		
	Units/RL:									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 Project Assistant

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212C-MD-01765

Eddy County, New Mexcio

Mike Carmona

**Project Id:** 

**Project Location:** 

**Contact:** 

<b>Certificate of Analysis Summary</b> 62	25280
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Tetra Tech- Midland, Midland, TX

Project Name: White Federal 1H Flowline (5-13-19)



Date Received in Lab:Thu May-23-19 10:48 amReport Date:30-MAY-19Project Manager:Jessica Kramer

	Lab Id:	625280-0	025	625280-02	26	625280-02	27	625280-0	28	625280-0	)29	625280-0	30
	Field Id:	AH-7 (2'-2	2.5')	AH-8 (0-	1')	AH-8 (1'-1	.5')	AH-8 (2'-2	2.5')	AH-8 (3'-:	3.5')	AH-8 (4-4	.5')
Analysis Requested	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-22-19 (	00:00	May-22-19 (	00:00	May-22-19 (	00:00	May-22-19	00:00	May-22-19	00:00	May-22-19 (	00:00
BTEX by EPA 8021B	Extracted:			May-28-19 1	5:00								
	Analyzed:			May-28-19 2	23:17								
	Units/RL:			mg/kg	RL								
Benzene				< 0.00199	0.00199								
Toluene				< 0.00199	0.00199								
Ethylbenzene				< 0.00199	0.00199								
m,p-Xylenes				< 0.00398	0.00398								
o-Xylene					0.00199								
Total Xylenes					0.00199								
Total BTEX				< 0.00199	0.00199								
Chloride by EPA 300	Extracted:	May-23-19	15:00	May-23-19 1	5:00	May-23-19 1	5:00	May-23-19	15:00	May-23-19	15:00	May-23-19	15:00
	Analyzed:	May-24-19	04:20	May-24-19 0	04:27	May-24-19 0	04:49	May-24-19	04:56	May-24-19	05:03	May-24-19 (	)5:11
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		12100	99.6	18800	252	22300	248	1400	25.0	5010	24.9	3180	25.1
TPH by SW8015 Mod	Extracted:			May-26-19 1	0:00								
	Analyzed:			May-26-19 1	5:23								
	Units/RL:			mg/kg	RL								
Gasoline Range Hydrocarbons (GRO)				<15.0	15.0								
Diesel Range Organics (DRO)				21.1	15.0								
Motor Oil Range Hydrocarbons (MRO)				<15.0	15.0								
Total TPH				21.1	15.0								

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Jessica Kramer Project Assistant

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Project Id:212C-MD-01765Contact:Mike CarmonaProject Location:Eddy County, New Mexcio

### Certificate of Analysis Summary 625280

Tetra Tech- Midland, Midland, TX

**Project Name: White Federal 1H Flowline (5-13-19)** 



Date Received in Lab:Thu May-23-19 10:48 amReport Date:30-MAY-19Project Manager:Jessica Kramer

			24	<b>(252</b> 000 0				<b>62 52</b> 00 0	<u>.</u>	<b>60.50</b> 000			2.6
	Lab Id:	625280-0	031	625280-0	32	625280-03	33	625280-0	34	625280-0	35	625280-0	36
Analysis Requested	Field Id:	AH-9 (0-	·1')	AH-9 (1'-1	.5')	AH-9 (2'-2.	.5')	AH-9 (3'-3	.5')	AH-10 (0	-1')	AH-10 (1'-	1.5')
Analysis Kequesieu	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-22-19	00:00	May-22-19 (	00:00	May-22-19 0	00:00	May-22-19	00:00	May-22-19	00:00	May-22-19 (	00:00
BTEX by EPA 8021B	Extracted:	May-28-19	15:00							May-28-19	15:00		
	Analyzed:	May-28-19	23:36							May-28-19	23:55		
	Units/RL:	mg/kg	RL							mg/kg	RL		
Benzene		< 0.00200	0.00200							< 0.00201	0.00201		
Toluene		< 0.00200	0.00200							< 0.00201	0.00201		
Ethylbenzene		< 0.00200	0.00200							< 0.00201	0.00201		
m,p-Xylenes		< 0.00400	0.00400							< 0.00402	0.00402		
o-Xylene		< 0.00200	0.00200							< 0.00201	0.00201		
Total Xylenes		< 0.00200	0.00200							< 0.00201	0.00201		
Total BTEX		< 0.00200	0.00200							< 0.00201	0.00201		
Chloride by EPA 300	Extracted:	May-23-19	15:00	May-23-19 1	15:00	May-23-19 1	5:00	May-23-19	15:30	May-23-19	15:30	May-23-19	15:30
	Analyzed:	May-24-19	05:18	May-24-19 (	)5:25	May-24-19 0	5:32	May-23-19	9:29	May-23-19	19:34	May-23-19	19:39
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		6250	50.0	19100	100	19600	100	9250	50.4	8560	49.6	17500	99.8
TPH by SW8015 Mod	Extracted:	May-26-19	10:00							May-26-19	10:00		
	Analyzed:	May-26-19	15:43							May-26-19	16:03		
	Units/RL:	mg/kg	RL							mg/kg	RL		
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0							<15.0	15.0		
Diesel Range Organics (DRO)		36.8	15.0							<15.0	15.0		
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0							<15.0	15.0		
Total TPH		36.8	15.0							<15.0	15.0		

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Jessica Kramer Project Assistant



212C-MD-01765

Eddy County, New Mexcio

Mike Carmona

**Project Id:** 

**Project Location:** 

**Contact:** 

Certificate of Analysis	Summary	625280
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Tetra Tech- Midland, Midland, TX

Project Name: White Federal 1H Flowline (5-13-19)



Date Received in Lab:Thu May-23-19 10:48 amReport Date:30-MAY-19Project Manager:Jessica Kramer

	Lab Id:	625280-0	)37	625280-0	)38	625280-0	39	625280-0	040	625280-0	041	625280-0	042
Analysis Paguastad	Field Id:	AH-10 (2'-	2.5')	AH-11 (0	-1')	AH-11 (1'-	1.5')	AH-11 (2'-	2.5')	AH-11 (3'-	3.5')	AH-12 (0	)-1')
Analysis Requested	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-22-19	00:00	May-22-19	00:00	May-22-19	00:00	May-22-19	00:00	May-22-19	00:00	May-21-19	00:00
BTEX by EPA 8021B	Extracted:			May-28-19	15:00							May-28-19	16:00
	Analyzed:			May-29-19	00:14							May-29-19	03:22
	Units/RL:			mg/kg	RL							mg/kg	RL
Benzene				< 0.00200	0.00200							< 0.00201	0.00201
Toluene				< 0.00200	0.00200							< 0.00201	0.00201
Ethylbenzene				< 0.00200	0.00200							< 0.00201	0.00201
m,p-Xylenes				< 0.00399	0.00399							< 0.00402	0.00402
o-Xylene				< 0.00200	0.00200							< 0.00201	0.00201
Total Xylenes				< 0.00200	0.00200							< 0.00201	0.00201
Total BTEX				< 0.00200	0.00200							< 0.00201	0.00201
Chloride by EPA 300	Extracted:	May-23-19	15:30	May-23-19	15:30	May-23-19	15:30	May-23-19	15:30	May-23-19	15:30	May-23-19	15:30
	Analyzed:	May-23-19	19:14	May-23-19	19:44	May-23-19	19:59	May-23-19	20:04	May-23-19	20:24	May-23-19	20:09
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		564	5.02	6730	49.7	3020	25.2	190	4.99	1120	4.99	6230	50.3
TPH by SW8015 Mod	Extracted:			May-26-19	10:00							May-26-19	10:00
	Analyzed:			May-26-19	16:43							May-26-19	17:03
	Units/RL:			mg/kg	RL							mg/kg	RL
Gasoline Range Hydrocarbons (GRO)				<15.0	15.0							<15.0	15.0
Diesel Range Organics (DRO)				20.5	15.0							15.7	15.0
Motor Oil Range Hydrocarbons (MRO)				<15.0	15.0							<15.0	15.0
Total TPH				20.5	15.0							15.7	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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Jessica Kramer Project Assistant

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212C-MD-01765

Eddy County, New Mexcio

Mike Carmona

**Project Id:** 

**Project Location:** 

**Contact:** 

Certificate of Analysi	s Summary	625280
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Tetra Tech- Midland, Midland, TX

Project Name: White Federal 1H Flowline (5-13-19)



 Date Received in Lab:
 Thu May-23-19 10:48 am

 Report Date:
 30-MAY-19

 Project Manager:
 Jessica Kramer

	Lab Id:	625280-0	43	625280-0	44	625280-0	45	625280-0	46	625280-0	)47	625280-	048
An shuis Descuented	Field Id:	AH-12 (1'-	1.5')	AH-12 (2'-	2.5')	AH-13 (0	-1')	AH-13 (1'-	1.5')	AH-14 (0	-1')	BG-1 (0	-1')
Analysis Requested	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-22-19	00:00	May-22-19	00:00	May-22-19	00:00	May-22-19	00:00	May-22-19	00:00	May-22-19	00:00
BTEX by EPA 8021B	Extracted:					May-28-19	16:00			May-28-19	16:00	May-28-19	15:15
	Analyzed:					May-29-19	03:41			May-29-19	04:00	May-28-19	17:27
	Units/RL:					mg/kg	RL			mg/kg	RL	mg/kg	RL
Benzene						< 0.00200	0.00200			< 0.00201	0.00201	< 0.00198	0.00198
Toluene						< 0.00200	0.00200			< 0.00201	0.00201	< 0.00198	0.00198
Ethylbenzene						< 0.00200	0.00200			< 0.00201	0.00201	< 0.00198	0.00198
m,p-Xylenes						< 0.00399	0.00399			< 0.00402	0.00402	< 0.00397	0.00397
o-Xylene						< 0.00200	0.00200			< 0.00201	0.00201	< 0.00198	0.00198
Total Xylenes						< 0.00200	0.00200			< 0.00201	0.00201	< 0.00198	0.00198
Total BTEX						< 0.00200	0.00200			< 0.00201	0.00201	< 0.00198	0.00198
Chloride by EPA 300	Extracted:	May-23-19	15:30	May-23-19	15:30	May-23-19	15:30	May-23-19	15:30	May-23-19	15:30	May-23-19	15:30
	Analyzed:	May-23-19	20:14	May-23-19	20:19	May-25-19	11:53	May-23-19	20:43	May-23-19	20:58	May-23-19	21:03
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		7010	49.8	6030	50.0	6090	25.0	8470	50.3	2730	24.8	213	4.97
TPH by SW8015 Mod	Extracted:					May-26-19	10:00			May-26-19	10:00	May-26-19	10:00
	Analyzed:					May-26-19	17:23			May-26-19	17:42	May-26-19	18:03
	Units/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
Diesel Range Organics (DRO)						17.9	15.0			34.7	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						17.9	15.0			34.7	15.0	<15.0	15.0

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Jessica Kramer Project Assistant

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Project Id:212C-MD-01/65Contact:Mike CarmonaProject Location:Eddy County, New Mexcio

### Certificate of Analysis Summary 625280

Tetra Tech- Midland, Midland, TX

**Project Name: White Federal 1H Flowline (5-13-19)** 



Date Received in Lab:Thu May-23-19 10:48 amReport Date:30-MAY-19Project Manager:Jessica Kramer

	Lab Id:	625280-0	049	625280-0	50	625280-0	)51		
	Field Id:	BG-2 (0-		BG-3 (0-		BG-4 (0-			
Analysis Requested		BG-2 (0-	-1)	BG-3 (0-	1)	BG-4 (0-	1)		
	Depth:								
	Matrix:	SOIL		SOIL		SOIL			
	Sampled:	May-22-19	00:00	May-22-19	00:00	May-22-19	00:00		
BTEX by EPA 8021B	Extracted:	May-28-19	15:15	May-28-19	15:15	May-28-19	15:15		
	Analyzed:	May-28-19	17:46	May-28-19	21:13	May-28-19	21:32		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Benzene		< 0.00201	0.00201	< 0.00199	0.00199	< 0.00202	0.00202		
Toluene		< 0.00201	0.00201	< 0.00199	0.00199	< 0.00202	0.00202		
Ethylbenzene		< 0.00201	0.00201	< 0.00199	0.00199	< 0.00202	0.00202		
m,p-Xylenes		< 0.00402	0.00402	< 0.00398	0.00398	< 0.00404	0.00404		
o-Xylene		< 0.00201	0.00201	< 0.00199	0.00199	< 0.00202	0.00202		
Total Xylenes		< 0.00201	0.00201	< 0.00199	0.00199	< 0.00202	0.00202		
Total BTEX		< 0.00201	0.00201	< 0.00199	0.00199	< 0.00202	0.00202		
Chloride by EPA 300	Extracted:	May-23-19	15:30	May-23-19	15:30	May-23-19	15:30		
	Analyzed:	May-23-19	21:08	May-23-19	21:13	May-23-19	21:18		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		138	4.95	153	4.95	24.3	4.95		
TPH by SW8015 Mod	Extracted:	May-26-19	10:00	May-26-19	10:00	May-29-19	11:00		
	Analyzed:	May-26-19	18:22	May-26-19	18:42	May-29-19	20:28		
	Units/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		
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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### **Flagging Criteria**



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- 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 LimitSDLSample Detection LimitLOD Limit of Detection
- PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation
- DL Method Detection Limit
- NC Non-Calculable

SMP Clie	ent Sample	BLK	Method Blank	
BKS/LCS	Blank Spike/Laboratory Control Sample	BKSD/LCSD	Blank Spike Duplicate/Labo	ratory 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



	<b>ders :</b> 625280 #: 3090431	0, Sample: 625280-001 / SMP	Batch		: 212C-MD-0	)1765	
Units:	mg/kg	Date Analyzed: 05/26/19 12:25	SU	RROGATE R	ECOVERY	STUDY	
	TPH b	oy SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chloroocta	ane		90.0	99.8	90	70-135	
o-Terphenyl			44.0	49.9	88	70-135	
Lab Batch	#: 3090431	Sample: 625280-005 / SMP	Batch	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 05/26/19 13:23	SU	RROGATE R	ECOVERY	STUDY	
		oy SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chloroocta			94.2	99.7	94	70-135	
o-Terphenyl			46.3	49.9	93	70-135	
	#: 3090431	Sample: 625280-008 / SMP	Batch			10 100	
Units:	mg/kg	<b>Date Analyzed:</b> 05/26/19 13:43	SU	RROGATE R		STUDY	
	трп і	oy SW8015 Mod	Amount	True		Control	
		Analytes	Found [A]	Amount [B]	Recovery %R [D]	Limits %R	Flags
1-Chloroocta			93.0	99.8	93	70-135	
o-Terphenyl			46.2	49.9	93	70-135	
Lab Batch		Sample: 625280-010 / SMP	Batch			10 155	
Units:	mg/kg	<b>Date Analyzed:</b> 05/26/19 14:02		RROGATE R		STUDY	
		oy SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chloroocta	ane		91.4	99.9	91	70-135	
o-Terphenyl			44.8	50.0	90	70-135	
Lab Batch	#: 3090431	Sample: 625280-014 / SMP	Batch	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 05/26/19 14:21	SU	RROGATE R	ECOVERY	STUDY	
		oy SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flage
1-Chloroocta			91.5	99.9	92	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



	<b>ders :</b> 62528 #: 3090431	0, Sample: 625280-018 / SMP	Batch	-	212C-MD-0	01765	
Units:	mg/kg	<b>Date Analyzed:</b> 05/26/19 14:41		RROGATE R		STUDY	
	TPH	by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooct	ane		88.4	100	88	70-135	
o-Terphenyl			43.7	50.0	87	70-135	
	#: 3090431	Sample: 625280-023 / SMP	Batch			10 100	
Units:	mg/kg	Date Analyzed: 05/26/19 15:02	SU	RROGATE R	ECOVERY	STUDY	
	TPH	by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooct	ane		91.4	99.8	92	70-135	
o-Terphenyl			45.0	49.9	92	70-135	
· ·	#: 3090431	Sample: 625280-026 / SMP	43.0 Batch			70-133	
Units:	mg/kg	Date Analyzed: 05/26/19 15:23		RROGATE R		STUDY	
	TPH	by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooct	ane		87.3	99.7	88	70-135	
o-Terphenyl			43.0	49.9	86	70-135	
	#: 3090431	Sample: 625280-031 / SMP	Batch				
Units:	mg/kg	<b>Date Analyzed:</b> 05/26/19 15:43	SU	RROGATE R	ECOVERY	STUDY	
	TPHI	by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooct	300	Analytes	90.5	99.7	91	70.125	
o-Terphenyl			90.5 44.6	49.9	89	70-135	
	#: 3090431	Sample: 625280-035 / SMP	44.6 Batch			70-135	
Units:	mg/kg	Date Analyzed: 05/26/19 16:03		RROGATE R		STUDY	
	TPH	by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooct	ane		91.4	99.9	91	70-135	
					1		

\* 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



Work Orders: 625280, Lab Batch #: 3090431

mg/kg

mg/kg

Units:

Units:

1-Chlorooctane o-Terphenyl

1-Chlorooctane o-Terphenyl

Lab Batch #: 3090431

Lab Batch #: 3090431

### Form 2 - Surrogate Recoveries

: 625280				: 212C-MD-0	)1765	
90431	Sample: 625280-038 / SMP	Bate	h: 1 Matrix	: Soil		
g/kg	Date Analyzed: 05/26/19 16:43	SU	RROGATE R	RECOVERY	STUDY	
	by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
	Analytes					
		92.2	99.9	92	70-135	
		45.1	50.0	90	70-135	
90431	Sample: 625280-042 / SMP	Batc	h: 1 Matrix	: Soil		
g/kg	Date Analyzed: 05/26/19 17:03	SU	RROGATE R	RECOVERY	STUDY	
	oy SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
		92.9	99.8	93	70-135	
		45.9	49.9	92	70-135	
90431	Sample: 625280-045 / SMP	Batc	h: 1 Matrix	: Soil	1 1	l
g/kg	Date Analyzed: 05/26/19 17:23	st	RROGATE R	RECOVERY	STUDY	
	w SW8015 Mod	Amount	True		Control	

Units:	mg/kg	Date Analyzed: 05/26/19 17:23	SURROGATE RECOVERY STUDY					
	ТРН	by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags	
1-Chlorooc	tane		93.2	100	93	70-135		
o-Terpheny	1		46.1	50.0	92	70-135		
Lab Batch	#: 3090431	Sample: 625280-047 / SMP	Batc	h: 1 Matrix:	Soil			

Units: mg/kg Date Analyzed: 05/26/19 17:42

#### SURROGATE RECOVERY STUDY

TPH by SW8015 Analytes	Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane		92.2	100	92	70-135	
o-Terphenyl		45.4	50.0	91	70-135	
Lab Batch #: 3090431 S	ample: 625280-048 / SMP	Batch	1 Matrix:	Soil		I

Units: mg/kg Date Analyzed: 05/26/19 18:03

SURROGATE RECOVERY STUDY

TPH by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane	92.6	99.7	93	70-135	
o-Terphenyl	45.5	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



	<b>:ders :</b> 62528 #: 3090431	0, Sample: 625280-049 / SMP	Project ID: 212C-MD-01765 P Batch: 1 Matrix: Soil						
Units:	mg/kg	<b>Date Analyzed:</b> 05/26/19 18:22		RROGATE R		STUDY			
	TPH	by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chlorooct	ane	Anaryus	92.2	99.9	92	70-135			
o-Terpheny			44.4	50.0	89	70-135			
	#: 3090431	Sample: 625280-050 / SMP	Batch			10 155			
Units:	mg/kg	Date Analyzed: 05/26/19 18:42		RROGATE R	-	STUDY			
	TPH	by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1-Chlorooct	ane	Tindy tes	93.1	99.8	93	70-135			
o-Terpheny			45.1	49.9	90	70-135			
	#: 3090399	Sample: 625280-048 / SMP	Batch			10 155			
Units:	mg/kg	Date Analyzed: 05/28/19 17:27		RROGATE R		STUDY			
	BTEX	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1 4 Diffuor	hanzana	Analytes	0.0201	0.0200		70.120			
1,4-Difluor			0.0291	0.0300	97	70-130			
4-Bromoflu		Sec. 1. (25220.001./SMD	0.0342	0.0300	114	70-130			
Lab Batch Units:	#: 3090390 mg/kg	Sample: 625280-001 / SMP Date Analyzed: 05/28/19 17:35	Batch	n: 1 Matrix		STUDY			
		X by EPA 8021B	Amount Found	True Amount	Recovery	Control Limits	Flags		
		A 1	[A]	[ <b>B</b> ]	%R [D]	%R			
1.4.5.0	,	Analytes							
1,4-Difluor			0.0306	0.0300	102	70-130			
4-Bromoflu			0.0277	0.0300	92	70-130			
	#: 3090399	Sample: 625280-049 / SMP	Batch						
Units:	mg/kg	Date Analyzed: 05/28/19 17:46	SU	RROGATE R	ECOVERY	STUDY			
	BTEX	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
				1					
1,4-Difluoro	obenzene		0.0290	0.0300	97	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



	<b>:ders :</b> 625286 #: 3090399	0, Sample: 625280-050 / SMP	Batch		: 212C-MD-0 : Soil	11/65			
Units:	mg/kg	Date Analyzed: 05/28/19 21:13	SURROGATE RECOVERY STUDY						
	BTEX	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
		Analytes			[D]				
1,4-Difluoro	obenzene		0.0283	0.0300	94	70-130			
4-Bromoflu	orobenzene		0.0338 0.0300 113 70-130						
Lab Batch	#: 3090390	Sample: 625280-005 / SMP	Batch	n: 1 Matrix	: Soil				
Units:	mg/kg	Date Analyzed: 05/28/19 21:23	SU	RROGATE R	ECOVERY S	STUDY			
		A polytos	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1,4-Difluoro		Analytes	0.0298	0.0300	99	70-130			
4-Bromoflu			0.0288	0.0300	96	70-130			
Lab Batch	#: 3090399	Sample: 625280-051 / SMP	Batch			10 150			
Units:	mg/kg	<b>Date Analyzed:</b> 05/28/19 21:32		RROGATE R		STUDY			
	BTEX	X by EPA 8021B	Amount Found	True Amount	Recovery	Control Limits	Flage		
		Analytes	[A]	[B]	%R [D]	%R			
1,4-Difluor	obenzene		0.0285	0.0300	95	70-130			
4-Bromoflu	orobenzene		0.0351	0.0300	117	70-130			
Lab Batch	#: 3090390	Sample: 625280-008 / SMP	Batch	n: 1 Matrix	: Soil				
Units:	mg/kg	Date Analyzed: 05/28/19 21:42	SU	RROGATE R	ECOVERY S	STUDY			
	ВТЕХ	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1,4-Difluoro	obenzene		0.0302	0.0300	101	70-130			
4-Bromoflu			0.0281	0.0300	94	70-130			
Lab Batch	#: 3090390	Sample: 625280-010 / SMP	Batch	n: 1 Matrix	: Soil				
Units:	mg/kg	Date Analyzed: 05/28/19 22:01	SU	RROGATE R	ECOVERY S	STUDY			
	BTEX	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1,4-Difluor	benzene	4 Mary 005	0.0307	0.0300	102	70-130			
4-Bromoflu									
DIOIIIOIIU	orobenzene		0.0292	0.0300	97	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



Work Orc Lab Batch #	lers : 625280 : 3090390	), Sample: 625280-014 / SMP	Batcl		: 212C-MD-0 : Soil	11/65	
Units:	mg/kg	Date Analyzed: 05/28/19 22:20	SU	RROGATE R	ECOVERY S	STUDY	
	BTEX	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluorob	oenzene		0.0318	0.0300	106	70-130	
4-Bromofluor	robenzene		0.0315	0.0300	105	70-130	
Lab Batch #	: 3090390	Sample: 625280-018 / SMP	Batcl	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 05/28/19 22:39	SU	RROGATE R	ECOVERY S	STUDY	
		L by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorot		Analytes	0.0315	0.0300	105	70-130	
4-Bromofluor			0.0313	0.0300	103	70-130	
Lab Batch #		Sample: 625280-023 / SMP	Batcl			/0-150	
Units:	mg/kg	Date Analyzed: 05/28/19 22:58		RROGATE R		STUDY	
	DTEV	L. EDA 9021D	Amount	True		Control	
		Analytes	Found [A]	Amount [B]	Recovery %R [D]	Limits %R	Flags
1,4-Difluorob			0.0313	0.0300	104	70-130	
4-Bromofluor	robenzene		0.0305	0.0300	102	70-130	
Lab Batch #	t: 3090390	Sample: 625280-026 / SMP	Batcl				
Units:	mg/kg	<b>Date Analyzed:</b> 05/28/19 23:17	SU	RROGATE R	ECOVERYS	STUDY	
		A by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorob	oenzene		0.0312	0.0300	104	70-130	
4-Bromofluor	robenzene		0.0288	0.0300	96	70-130	
Lab Batch #	<b>:</b> 3090390	Sample: 625280-031 / SMP	Batcl	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 05/28/19 23:36	SU	RROGATE R	ECOVERY S	STUDY	
		X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
					1		
1,4-Difluorob	benzene		0.0306	0.0300	102	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



	: 3090390	Sample: 625280-035 / SMP	Batcl						
Units:	mg/kg	<b>Date Analyzed:</b> 05/28/19 23:55	SURROGATE RECOVERY STUDY						
	BTEX	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
		Analytes			[D]				
1,4-Difluorobe	enzene		0.0310	0.0300	103	70-130			
4-Bromofluor	obenzene		0.0303	0.0300	101	70-130			
Lab Batch #:	: 3090390	Sample: 625280-038 / SMP	IP   Batch:   1   Matrix:   Soil						
Units:	mg/kg	<b>Date Analyzed:</b> 05/29/19 00:14	SU	RROGATE R	ECOVERY	STUDY			
		X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
1.4-Difluorobe		Anarytes	0.0310	0.0300	103	70-130			
4-Bromofluor	obenzene		0.0308	0.0300	103	70-130			
Lab Batch #:	: 3090434	Sample: 625280-042 / SMP	Batcl	h: 1 Matrix					
Units:	mg/kg	Date Analyzed: 05/29/19 03:22	SU	RROGATE R	ECOVERY	STUDY			
	BTEX	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags		
		Analytes	[13]	[0]	[D]	/01			
1,4-Difluorobe	enzene		0.0297	0.0300	99	70-130			
4-Bromofluor	obenzene		0.0279	0.0300	93	70-130			
Lab Batch #:	: 3090434	Sample: 625280-045 / SMP	Batcl	h: 1 Matrix	: Soil				
Units:	mg/kg	Date Analyzed: 05/29/19 03:41	SU	RROGATE R	ECOVERY	STUDY			
	BTEX	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flage		
1,4-Difluorobe	enzene		0.0311	0.0300	104	70-130			
1,1 2111001000			0.0304	0.0300	101	70-130			
4-Bromofluor		Sample: 625280-047 / SMP	Batc	h: 1 Matrix	: Soil				
4-Bromofluor	: 3090434	-			FCOVERV	STUDY			
4-Bromofluore	: 3090434 mg/kg	<b>Date Analyzed:</b> 05/29/19 04:00	SU	RROGATE R					
4-Bromofluoro Lab Batch #:	mg/kg BTEX	Date Analyzed: 05/29/19 04:00	SU Amount Found [A]	TROGATE R True Amount [B]	Recovery %R [D]	Control Limits %R	Flags		
	mg/kg BTEX	Date Analyzed: 05/29/19 04:00	Amount Found	True Amount	Recovery %R	Limits	Flags		

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

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B



	<b>ders :</b> 625286 #: 3090586	0, Sample: 625280-051 / SMP	Batcl		: 212C-MD-0 : Soil	)1765	
Units:	mg/kg	<b>Date Analyzed:</b> 05/29/19 20:28		RROGATE R	ECOVERY	STUDY	
	TPH t	oy SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chloroocta	ane		91.4	99.9	91	70-135	
o-Terphenyl	l		44.1	50.0	88	70-135	
Lab Batch	#: 3090431	Sample: 7678725-1-BLK / I	BLK Batcl	h: 1 Matrix	: Solid	<u>.</u>	
Units:	mg/kg	Date Analyzed: 05/26/19 11:26	SU	RROGATE R	ECOVERY	STUDY	
	TPH I	oy SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
1-Chloroocta	ane		92.6	100	93	70-135	
o-Terphenyl			46.4	50.0	93	70-135	
	#: 3090399	Sample: 7678713-1-BLK / I			: Solid	I	<u> </u>
Units:	mg/kg	<b>Date Analyzed:</b> 05/28/19 16:50	SU	RROGATE R	ECOVERY	STUDY	
	BTEX	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flag
		Analytes			[D]		
1,4-Difluoro	obenzene		0.0306	0.0300	102	70-130	
4-Bromofluo	orobenzene		0.0313	0.0300	104	70-130	
Lab Batch	#: 3090390	Sample: 7678711-1-BLK / H	BLK Batel	h: 1 Matrix	: Solid		
Units:	mg/kg	Date Analyzed: 05/28/19 16:56	SU	RROGATE R	ECOVERY	STUDY	
	BTEX	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
1,4-Difluoro	obenzene		0.0279	0.0300	93	70-130	
4-Bromofluc	orobenzene		0.0241	0.0300	80	70-130	
Lab Batch	#: 3090434	Sample: 7678719-1-BLK / H	BLK Batcl	h: 1 Matrix	: Solid		
Units:	mg/kg	Date Analyzed: 05/29/19 02:44	SU	RROGATE R	ECOVERYS	STUDY	
		X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
1,4-Difluoro	obenzene		0.0276	0.0300	92	70-130	
	Bromofluorobenzene						

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

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B



	ders: 62528 #: 3090586	0, Sample: 7678857-1-BLK	BLK Batch		: 212C-MD-0	01765	
Units:	mg/kg	<b>Date Analyzed:</b> 05/29/19 12:43	SUI	RROGATE R	ECOVERY	STUDY	
	TPH	by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooct	ane	Timity cos	95.1	100	95	70-135	
o-Terphenyl			47.9	50.0	96	70-135	<u>.</u>
	#: 3090431	Sample: 7678725-1-BKS			: Solid		<u>.</u>
Units:	mg/kg	<b>Date Analyzed:</b> 05/26/19 11:45		RROGATE R		STUDY	
	TPH	by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooct	ane	· · · · · · · · · · · · · · · · · · ·	125	100	125	70-135	
o-Terphenyl			62.2	50.0	123	70-135	<u>.                                    </u>
	#: 3090399	Sample: 7678713-1-BKS			: Solid	10 155	<u>I</u>
Units:	mg/kg	<b>Date Analyzed:</b> 05/28/19 15:16		RROGATE R		STUDY	
	ВТЕХ	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluoro	benzene	•	0.0266	0.0300	89	70-130	L
4-Bromoflue	orobenzene		0.0302	0.0300	101	70-130	
Lab Batch	#: 3090390	Sample: 7678711-1-BKS	BKS Batch	: 1 Matrix	: Solid		
Units:	mg/kg	<b>Date Analyzed:</b> 05/28/19 15:18	SUI	RROGATE R	ECOVERY	STUDY	
	BTEX	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluoro	obenzene		0.0317	0.0300	106	70-130	
4-Bromoflue			0.0283	0.0300	94	70-130	
Lab Batch	#: 3090434	Sample: 7678719-1-BKS	BKS Batch	: 1 Matrix	: Solid		
Units:	mg/kg	Date Analyzed: 05/29/19 01:10	SUI	RROGATE R	ECOVERY	STUDY	
	BTEX	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
		Analyces					
1,4-Difluoro	benzene	Anaryces	0.0307	0.0300	102	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



Work Orde Lab Batch #:		Sample: 7678857-1-BKS /	BKS Batch		212C-MD-0		
U <b>nits:</b>	mg/kg	Date Analyzed: 05/29/19 13:02	SU	RROGATE R	ECOVERY	STUDY	
		oy SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chlorooctane			119	100	119	70-135	
o-Terphenyl			52.2	50.0	104	70-135	
Lab Batch #:	3090431	Sample: 7678725-1-BSD /	BSD Batch	n: 1 Matrix	: Solid		
Units:	mg/kg	Date Analyzed: 05/26/19 12:05	SU.	RROGATE R	ECOVERY	STUDY	
		oy SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane			126	100	126	70-135	
o-Terphenyl			63.2	50.0	126	70-135	
Lab Batch #:	3090399	Sample: 7678713-1-BSD /			: Solid		
Units:	mg/kg	Date Analyzed: 05/28/19 15:35		RROGATE R		STUDY	
	DTEN	7 by EDA 9021D	Amount	True		Control	
		K by EPA 8021B Analytes	Found [A]	Amount [B]	Recovery %R [D]	Limits %R	Flage
1,4-Difluorober			0.0271	0.0300	90	70-130	
4-Bromofluoro	benzene		0.0302	0.0300	101	70-130	
Lab Batch #:	3090390	Sample: 7678711-1-BSD /					
Units:	mg/kg	<b>Date Analyzed:</b> 05/28/19 15:38		RROGATE R		STUDY	
	BTEX	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluorober	nzene		0.0318	0.0300	106	70-130	
4-Bromofluoro	benzene		0.0294	0.0300	98	70-130	
Lab Batch #:	3090434	Sample: 7678719-1-BSD /	BSD Batch	n: 1 Matrix	: Solid		
Units:	mg/kg	Date Analyzed: 05/29/19 01:29	SU	RROGATE R	ECOVERY	STUDY	
		K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flage
1,4-Difluorober			0.0313	0.0300	104	70-130	
4-Bromofluoro			0.0313	0.0300	97	70-130	
	CONLONG		0.0292	0.0500	1 21	1 10-130	

\* 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



Work Order Lab Batch #:		0, <b>Sample:</b> 7678857-1-BSD / BS	D Batch	9	212C-MD-0	)1765	
	mg/kg	Date Analyzed: 05/29/19 13:22		RROGATE R		STUDY	
	TPH	by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane			121	100	121	70-135	
o-Terphenyl			57.1	50.0	114	70-135	
Lab Batch #:	3090431	Sample: 625280-001 S / MS	Batch				
Units:	mg/kg	<b>Date Analyzed:</b> 05/26/19 12:44	SUI	RROGATE R	ECOVERY	STUDY	
	TPH	by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooctane			113	99.8	113	70-135	
o-Terphenyl			45.6	49.9	91	70-135	
Lab Batch #:	3090399	Sample: 625614-001 S / MS	Batch			10 155	
	mg/kg	Date Analyzed: 05/28/19 15:54		RROGATE R		STUDY	
	BTEX	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluoroben	zene		0.0276	0.0300	92	70-130	
4-Bromofluorob	enzene		0.0311	0.0300	104	70-130	
Lab Batch #:	3090390	Sample: 625613-001 S / MS	Batch		-		
Units:	mg/kg	<b>Date Analyzed:</b> 05/28/19 15:58	SUI	RROGATE R	ECOVERY	STUDY	
	BTEX	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluoroben	zene		0.0318	0.0300	106	70-130	
4-Bromofluorob			0.0299	0.0300	100	70-130	
Lab Batch #:	3090434	Sample: 625615-001 S / MS	Batch	: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 05/29/19 01:48	SUI	RROGATE R	ECOVERY	STUDY	
	BTEX	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluoroben	zene	-	0.0311	0.0300	104	70-130	
	Bromofluorobenzene						

\* Surrogate outside of Laboratory QC limits

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\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B



	<b>ders :</b> 62528 #: 3090586	0, Sample: 625759-001 S / MS	S Batcl		: 212C-MD-0 : Soil	11/05	
Units:	mg/kg	Date Analyzed: 05/29/19 14:01	SU	RROGATE R	ECOVERYS	STUDY	
	TPH b	oy SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chloroocta	ane		117	99.8	117	70-135	
o-Terphenyl			53.1	49.9	106	70-135	
Lab Batch	#: 3090431	Sample: 625280-001 SD / N	ASD Batcl	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 05/26/19 13:04	SU	RROGATE R	ECOVERY	STUDY	
	TPH I	oy SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
1-Chloroocta	ane	Anarytes	118	100	118	70-135	
o-Terphenyl			52.7	50.0	105	70-135	
Lab Batch	#: 3090399	Sample: 625614-001 SD / N	ASD Batcl	h: 1 Matrix	: Soil		
Units:	mg/kg	<b>Date Analyzed:</b> 05/28/19 16:13	SU	RROGATE R	ECOVERY	STUDY	
	BTEX	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flag
		Analytes			[D]		
1,4-Difluoro	benzene		0.0276	0.0300	92	70-130	
4-Bromofluc	orobenzene		0.0332	0.0300	111	70-130	
Lab Batch	#: 3090390	Sample: 625613-001 SD / N	ASD Batcl	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 05/28/19 16:17	SU	RROGATE R	ECOVERY	STUDY	
	BTEX	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
1,4-Difluoro	benzene		0.0327	0.0300	109	70-130	
4-Bromofluc	orobenzene		0.0271	0.0300	90	70-130	
Lab Batch	#: 3090434	Sample: 625615-001 SD / M	ASD Batcl	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 05/29/19 02:07	SU	RROGATE R	ECOVERY	STUDY	
		K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
					1		
1,4-Difluoro			0.0310	0.0300	103	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



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	rders : 625280 n #: 3090586	), Sample: 625759-001 SD / I	MSD Batcl	Project ID: n: 1 Matrix:		01765						
Units:	mg/kg	Date Analyzed: 05/29/19 14:20	SURROGATE RECOVERY STUDY									
TPH by SW8015 Mod Analytes		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags						
1-Chlorooc			119	99.9	119	70-135						
o-Terpheny	yl		53.1	50.0	106	70-135						

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

\*\*\* Poor recoveries due to dilution

Surrogate Recovery [D] = 100 \* A / B





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#### **Project Name:** White Federal 1H Flowline (5-13-19)

Work Order #: 625280							Proj	ject ID: 2	212C-MD-(	)1765	
Analyst: SCM	D	ate Prepar	red: 05/28/201	.9			Date A	nalyzed: (	)5/28/2019		
Lab Batch ID: 3090390 Sample: 7678711-1	-BKS	Batc	<b>h #:</b> 1					Matrix: S	Solid		
Units: mg/kg		BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY									
BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	< 0.000383	0.0996	0.107	107	0.101	0.120	119	11	70-130	35	
Toluene	< 0.000454	0.0996	0.0996	100	0.101	0.111	110	11	70-130	35	
Ethylbenzene	< 0.000563	0.0996	0.106	106	0.101	0.118	117	11	70-130	35	
m,p-Xylenes	< 0.00101	0.199	0.220	111	0.202	0.246	122	11	70-130	35	
o-Xylene	< 0.000343	0.0996	0.108	108	0.101	0.121	120	11	70-130	35	
Analyst: SCM	D	ate Prepar	red: 05/28/201	.9			Date A	nalyzed: (	)5/28/2019		
Lab Batch ID: 3090399 Sample: 7678713-1	-BKS	Batc	<b>h #:</b> 1					Matrix: S	Solid		
Units: mg/kg		BLAN	K/BLANK	SPIKE / I	BLANK S	SPIKE DUP	LICATE	RECOVI	ERY STUI	γ	
BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Benzene	<0.00200	0.0998	0.101	101	0.100	0.103	103	2	70-130	35	
Toluene	<0.00200	0.0998	0.102	102	0.100	0.101	101	1	70-130	35	
Ethylbenzene	< 0.00200	0.0998	0.115	115	0.100	0.114	114	1	70-130	35	
m,p-Xylenes	< 0.00399	0.200	0.241	121	0.201	0.236	117	2	70-130	35	
o-Xylene	< 0.00200	0.0998	0.114	114	0.100	0.113	113	1	70-130	35	





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#### **Project Name:** White Federal 1H Flowline (5-13-19)

Work Order #: 625280							Proj	ect ID:	212C-MD-	01765	
Analyst: SCM	<b>Date Prepared:</b> 05/28/2019 <b>Date Analyzed:</b> 05/29/2019										
Lab Batch ID: 3090434 Sample: 7678719-1-	BKS	Batcl	<b>h #:</b> 1					Matrix: S	Solid		
Units: mg/kg		BLAN	K/BLANK	SPIKE / I	BLANK S	SPIKE DUP	LICATE	RECOVI	ERY STUI	DY	
BTEX by EPA 8021B	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes		[B]	[C]	[D]	[E]	Result [F]	[G]				
Benzene	< 0.000383	0.0996	0.103	103	0.0994	0.0997	100	3	70-130	35	
Toluene	< 0.000454	0.0996	0.0954	96	0.0994	0.0915	92	4	70-130	35	
Ethylbenzene	< 0.000563	0.0996	0.101	101	0.0994	0.0956	96	5	70-130	35	
m,p-Xylenes	< 0.00101	0.199	0.207	104	0.199	0.198	99	4	70-130	35	
o-Xylene	< 0.000343	0.0996	0.102	102	0.0994	0.0998	100	2	70-130	35	
Analyst: CHE	D	ate Prepar	red: 05/23/202	19			Date A	nalyzed: (	)5/23/2019	•	
Lab Batch ID: 3090079 Sample: 7678489-1-	BKS	Batcl	<b>h #:</b> 1					Matrix: S	Solid		
Units: mg/kg		BLAN	K/BLANK	SPIKE / 1	BLANK S	SPIKE DUP	LICATE	RECOVI	ERY STUI	DY	
Chloride by EPA 300 Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<0.858	250	243	97	250	243	97	0	90-110	20	





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#### **Project Name:** White Federal 1H Flowline (5-13-19)

Work Order	* <b>#:</b> 625280							Pro	ject ID: 🤇	212C-MD-0	01765			
Analyst:	CHE	<b>Date Prepared:</b> 05/23/2019 <b>Date Analyzed:</b> 05/24/2019												
Lab Batch ID	: 3090081 Sample: 7678490-1	<b>mple:</b> 7678490-1-BKS <b>Batch #:</b> 1						Matrix: Solid						
Units:	mg/kg	BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY												
Analy	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		
Chloride		<5.00	250	246	98	250	246	98	0	90-110	20			
Analyst:	CHE	D	ate Prepar	ed: 05/23/201	9	+		Date A	nalyzed: (	5/23/2019	ł	ļ		
Lab Batch ID	: 3090083 Sample: 7678491-1	-BKS	Batcl	<b>h #:</b> 1					Matrix: S	Solid				
Units:	mg/kg		BLAN	K /BLANK S	SPIKE / 1	BLANK S	SPIKE DUPI	LICATE	RECOVI	ERY STUI	DY			
	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		
Chloride	rtes	<5.00	250	258	103	250	259	104	0	90-110	20			
	ARM					230	239		, , , , , , , , , , , , , , , , , , ,		20			
Analyst: Lab Batch ID:			-	red: 05/26/201 h #: 1	.9				nalyzed: ( Matrix: S					
Units:	mg/kg		BLAN	K /BLANK S	SPIKE / 1	BLANK S	SPIKE DUPI	LICATE	RECOVI	ERY STUI	DY			
Analy	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		
	Range Hydrocarbons (GRO)	<8.00	1000	1120	112	1000	1120	112	0	70-135	20			
	nge Organics (DRO)	<8.13	1000	1040	104	1000	1040	104	0	70-135	20			





#### **Project Name:** White Federal 1H Flowline (5-13-19)

Work Order #: 625280 Project ID: 212C-MD-01765													
Analyst:	ARM	<b>Date Prepared:</b> 05/29/2019					<b>Date Analyzed:</b> 05/29/2019						
Lab Batch ID: 3090586         Sample: 7678857-1-BKS         Batch #: 1					Matrix: Solid								
Units:	Units:         mg/kg         BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY												
	TPH by SW8015 Mod	Blank Sample Result [A]	Spike Added	Blank Spike Result	Blank Spike %R	Spike Added	Blank Spike Duplicate	Blk. Spk Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag	
Analy	Analytes     [B]     [C]     [D]     [E]     Result [F]     [G]												
Gasoline I	Range Hydrocarbons (GRO)	<8.00	1000	1070	107	1000	1060	106	1	70-135	20		
Diesel Rat	nge Organics (DRO)	<8.13	1000	1010	101	1000	1020	102	1	70-135	20		





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### **Project Name: White Federal 1H Flowline (5-13-19)**

<b>Work Order #:</b> 625280						Project II	<b>D:</b> 212C-1	MD-0176	5		
Lab Batch ID: 3090390	QC- Sample ID:	625613	-001 S	Ba	tch #:	1 Matrix	x: Soil				
<b>Date Analyzed:</b> 05/28/2019	Date Prepared:	05/28/2	019	An	alyst: S	SCM					
<b>Reporting Units:</b> mg/kg		Μ	ATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
BTEX by EPA 8021B	Parent Sample Result	Spike Added	Spiked Sample Result [C]	Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	%R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes	[A]	[B]		[D]	[E]		[G]				
Benzene	<0.000384	0.0998	0.110	110	0.100	0.0909	91	19	70-130	35	
Toluene	< 0.000455	0.0998	0.102	102	0.100	0.0826	83	21	70-130	35	
Ethylbenzene	< 0.000564	0.0998	0.109	109	0.100	0.0849	85	25	70-130	35	
m,p-Xylenes	< 0.00101	0.200	0.227	114	0.200	0.174	87	26	70-130	35	
o-Xylene	0.000451	0.0998	0.110	110	0.100	0.0837	83	27	70-130	35	
Lab Batch ID: 3090399	QC- Sample ID:	625614	-001 S	Ba	tch #:	1 Matri	x: Soil				
<b>Date Analyzed:</b> 05/28/2019	Date Prepared:	05/28/2	019	An	alyst: S	SCM					
<b>Reporting Units:</b> mg/kg		Μ	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	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	<0.00200	0.100	0.0761	76	0.101	0.0652	65	15	70-130	35	X
Toluene	<0.00200	0.100	0.0766	77	0.101	0.0741	73	3	70-130	35	
Ethylbenzene	<0.00200	0.100	0.0856	86	0.101	0.0751	74	13	70-130	35	
m,p-Xylenes	< 0.00401	0.200	0.180	90	0.201	0.136	68	28	70-130	35	X
o-Xylene	< 0.00200	0.100	0.0855	86	0.101	0.0629	62	30	70-130	35	X

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

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



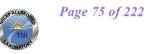


### **Project Name: White Federal 1H Flowline (5-13-19)**

Work Order # :	625280						Project II	<b>):</b> 212C-N	4D-0176	5		
Lab Batch ID:	3090434	QC- Sample ID:	625615	-001 S	Ba	tch #:	1 Matrix	: Soil				
Date Analyzed:	05/29/2019	Date Prepared:	05/28/2	019	An	alyst: S	SCM					
<b>Reporting Units:</b>	mg/kg		Μ	ATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA'	TE RECO	OVERY	STUDY		
F	BTEX by EPA 8021B	Parent Sample Result	Spike Added	Spiked Sample Result [C]	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Analytes	[A]	[ <b>B</b> ]		[D]	[E]		[G]				
Benzene		<0.000386	0.100	0.101	101	0.0992	0.106	107	5	70-130	35	
Toluene		<0.000457	0.100	0.0928	93	0.0992	0.0970	98	4	70-130	35	
Ethylbenzene		< 0.000566	0.100	0.0967	97	0.0992	0.102	103	5	70-130	35	
m,p-Xylenes		< 0.00102	0.200	0.200	100	0.198	0.208	105	4	70-130	35	
o-Xylene		0.000360	0.100	0.0987	98	0.0992	0.100	100	1	70-130	35	
Lab Batch ID:	3090079	QC- Sample ID:	625280	-011 S	Ba	tch #:	1 Matrix	: Soil				
Date Analyzed:	05/24/2019	Date Prepared:	05/23/2	019	An	alyst: (	CHE					
<b>Reporting Units:</b>	mg/kg		Μ	ATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE RECO	OVERY	STUDY		
(	Chloride by EPA 300	Parent Sample Result	Spike Added	Spiked Sample Result [C]	Sample	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits	Control Limits	Flag
	Analytes	[A]									1 % RPD 1	
	1 mary ces	[11]	[B]		%R [D]	[E]	incount [1]	[G]	, 0	%R	%RPD	
Chloride		526	[ <b>B</b> ]	661			734		10	90-110	20 % RPD	X
Chloride Lab Batch ID:			248	661	[ <b>D</b> ] 54	[E]	734	[G]				X
	3090079	526	248 625334	661 -001 S	[D] 54 Ba	[E] 248	734 1 <b>Matrix</b>	[G] 84				X
Lab Batch ID:	3090079	526 QC- Sample ID:	248 625334 05/23/2	661 -001 S 019	[D] 54 Ba An	[E] 248 tch #: alyst: C	734 1 <b>Matrix</b>	[G] 84 x: Sludge	10	90-110		X
Lab Batch ID: Date Analyzed: Reporting Units:	3090079 (0 05/23/2019 mg/kg Chloride by EPA 300	526 C- Sample ID: Date Prepared: Parent Sample Result	248 625334 05/23/2 M Spike Added	661 -001 S 019	[D] 54 Ba An E / MAT Spiked Sample %R	[E] 248 tch #: alyst: C RIX SPI Spike Added	734 1 Matrix	[G] 84 x: Sludge TE RECC Spiked Dup. %R	10	90-110		X
Lab Batch ID: Date Analyzed: Reporting Units:	3090079 05/23/2019 mg/kg	526 C- Sample ID: Date Prepared: Parent Sample	248 625334 05/23/2 M Spike	661 -001 S 019 IATRIX SPIK Spiked Sample Result	[D] 54 Ba An E / MAT Spiked Sample	[E] 248 tch #: alyst: C RIX SPI Spike	734 1 Matrix CHE KE DUPLICA Duplicate Spiked Sample	[G] 84 c: Sludge TE RECC Spiked Dup.	10 DVERY S RPD	90-110 STUDY Control Limits	20 Control Limits	

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





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### **Project Name: White Federal 1H Flowline (5-13-19)**

Work Order # :	625280						Project II	<b>D:</b> 212C-1	MD-0176	5		
Lab Batch ID:	3090081	QC- Sample ID:	625281-	-012 S	Ba	tch #:	1 Matrix	<b>x:</b> Soil				
Date Analyzed:	05/24/2019	Date Prepared:	05/23/2	019	An	alyst: (	CHE					
<b>Reporting Units:</b>	mg/kg		Μ	ATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
	Chloride by EPA 300	Parent Sample Result	Spike Added	Spiked Sample Result [C]	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Analytes	[A]	[B]	[C]	[D]	[E]	Kesun [F]	[G]	70	701	70KI D	
Chloride		71.1	250	317	98	250	320	100	1	90-110	20	
Lab Batch ID:	3090081	QC- Sample ID:	625281-	-013 S	Ba	tch #:	1 Matrix	<b>x:</b> Soil				
Date Analyzed:	05/24/2019	Date Prepared:	05/23/2	019	An	alyst: (	CHE					
<b>Reporting Units:</b>	mg/kg		Μ	ATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
	Chloride by EPA 300	Parent Sample Result	Spike Added	Spiked Sample Result [C]	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Analytes	[A]	[B]	[C]	[D]	[E]	Kesun [F]	[G]	70	70K	70KF D	
Chloride		48.2	248	274	91	248	292	98	6	90-110	20	
Lab Batch ID:	3090083	C- Sample ID:	625280	-037 S	Ba	tch #:	1 Matrix	x: Soil	-	·		
Date Analyzed:	05/23/2019	Date Prepared:	05/23/2	019	An	alyst: (	CHE					
<b>Reporting Units:</b>	mg/kg		Μ	ATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
	Chloride by EPA 300	Parent Sample Result	Spike	Spiked Sample Result	Sample	Spike	Duplicate Spiked Sample		RPD	Control Limits	Control Limits	Flag
	Analytes	[A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
Chloride		564	251	810	98	251	807	97	0	90-110	20	

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

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





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### **Project Name: White Federal 1H Flowline (5-13-19)**

<b>Work Order # :</b> 625280						Project II	<b>):</b> 212C-1	MD-0176	5		
Lab Batch ID: 3090083	QC- Sample ID:	625280	-041 S	Ba	tch #:	1 Matrix	<b>k:</b> Soil				
<b>Date Analyzed:</b> 05/23/2019	Date Prepared:	05/23/2	019	An	alyst: (	CHE					
Reporting Units: mg/kg		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
Chloride by EPA 300	Parent Sample Result	Spike Added	Spiked Sample Result [C]	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes	[A]	[B]	[C]	[D]	[E]	Kesun [F]	[G]	/0	/0K	70KI D	
Chloride	1120	250	1320	80	250	1320	80	0	90-110	20	Х
Lab Batch ID: 3090431	QC- Sample ID:	625280	-001 S	Ba	tch #:	1 Matrix	k: Soil				
<b>Date Analyzed:</b> 05/26/2019	Date Prepared:	05/26/2	019	An	alyst: A	ARM					
Reporting Units: mg/kg		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
TPH by SW8015 Mod	Parent Sample Result	Spike	Spiked Sample Result	Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
Analytes	[A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
Gasoline Range Hydrocarbons (GRO)	<7.99	998	1060	106	1000	1080	108	2	70-135	20	
Diesel Range Organics (DRO)	8.92	998	1020	101	1000	1030	102	1	70-135	20	
Lab Batch ID:         3090586	QC- Sample ID:	625759	-001 S	Ba	tch #:	1 Matrix	k: Soil				
<b>Date Analyzed:</b> 05/29/2019	Date Prepared:	05/29/2	019	An	alyst: A	ARM					
Reporting Units: mg/kg		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
TPH by SW8015 Mod	Parent Sample Result	Spike Added	Spiked Sample Result [C]	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes	[A]	[B]	[~]	[D]	[E]	Acout [1]	[G]				
Gasoline Range Hydrocarbons (GRO)	<7.99	998	1070	107	999	1080	108	1	70-135	20	
Diesel Range Organics (DRO)	<8.11	998	1020	102	999	1060	106	4	70-135	20	

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

.

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

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	iished by:		lished by:	lished by:										LAB USE )	LAB #			abora	ġ	Project Location: state)	Name:			/sis Requ
	Date: Time:		5.23.19	AH-4 (U-1') Date: Time:	AH-3 (1'-1.5')	AH-3 (0-1')	AH-2 (2'-2.5')	AH-2 (1'-1.5')	AH-2 (0-1')	AH-1 (2.5'-3')	AH-1 (2'-2.5')	AH-1 (1'-1.5')	AH-1 (0-1')		SAMPLE IDENTIFICATION		Run deeper samples if TPH (GRO + DRO + MRO) exceeds 1,000 mg/kg. run deeper samples if 10 mg/kg or Total BTEX exceeds 50 mg/kg.	v <sup>y:</sup> Xenco	Ike Tavarez	(county, Eddy County, New Mexico	White Federal 1H Flowline (5-13-19)	COG	Tetra Tech, Inc.	Analysis Request of Chain of Custody Record
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	Date:	Date	N 23	Date:										HCL			sample	Devin Doming		212C-MD-017		Mike Carmona	Vest Wall S Midland, Tex Tel (432) 68 Fax (432) 6	
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															s		Run deeper samples if TPH (GRO + DRO + 10 mg/kg or Total BTEX exceeds 50 mg/kg.	Xenco	lke Tavarez	Eddy County, New Mexico	White Federal 1H Flowline	cog	T	lain of
			J	Ą	AH	Ą	AH	AH	Ą	Aŀ	AH	AH	AH		SAMPLE IDENTIFICATION		les if TI BTEX (		arez	ounty, I	ederal		etr	Custo
	Date:			AH-6 (2'-2.5') Date:	AH-6 (1'-1.5')	AH-6 (0-1')	AH-5 (3'-3.5')	AH-5 (2'-2.5')	AH-5 (1'-1.5')	AH-5 (0-1')	AH-4 (3'-3.5')	AH-4 (2'-2.5')	AH-4 (1'-1.5')		DENTIF		PH (GF			Vew M	1H Flo		aT	dy Rec
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																	MRO) e				9)		Inc.	
0				P											X		MRO) exceeds 1,000 mg/kg. run deeper samples if benzene	s		ע		S		
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	т	-	-	⊨ ×	×	×	×	×	×	×	×	×	×	HNO₃ ICE		PRESERVATIVE METHOD	es if b	ningu		-0176		a	street, Ste as 79701 82-4559 82-3946	
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# **XENCO** Laboratories



#### Prelogin/Nonconformance Report- Sample Log-In

Client: Tetra Tech- Midland Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient Date/ Time Received: 05/23/2019 10:48:00 AM Temperature Measuring device used : R8 Work Order #: 625280 Comments Sample Receipt Checklist 3.1 #1 \*Temperature of cooler(s)? #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: 05/23/2019

Checklist reviewed by: Jession Whamer

Jessica Kramer

Date: 05/28/2019

# Analytical Report 625281

for Tetra Tech- Midland

**Project Manager: Mike Carmona** 

White Federal 1H Flowline (5-13-19)

212C-MD-01765

## 29-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)



29-MAY-19

SAP ACCREDINE



Reference: XENCO Report No(s): **625281 White Federal 1H Flowline (5-13-19)** 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) 625281. 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. 625281 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Vramer

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 Id

Horizontal NW-1 (0-1')
Horizontal NW-1 (1'-1.5')
Horizontal NW-2 (0-1')
Horizontal NW-2 (1'-1.5')
Horizontal NW-3 (0-1')
Horizontal NW-4 (0-1')
Horizontal NW-5 (0-1')
Horizontal NW-6 (0-1')
Horizontal NW-6 (1'-1.5')
Horizontal SE-1 (0-1')
Horizontal SE-1 (1-1.5')
Horizontal SE-2 (0-1')
Horizontal SE-3 (0-1')
Horizontal SE-4 (0-1')
Horizontal SE-4 (1-1.5')

# Sample Cross Reference 625281



White Federal 1H Flowline (5-13-19)

Matrix	Date Collected	Sample Depth	Lab Sample Id
S	05-21-19 00:00		625281-001
S	05-21-19 00:00		625281-002
S	05-21-19 00:00		625281-003
S	05-21-19 00:00		625281-004
S	05-21-19 00:00		625281-005
S	05-21-19 00:00		625281-006
S	05-21-19 00:00		625281-007
S	05-21-19 00:00		625281-008
S	05-21-19 00:00		625281-009
S	05-21-19 00:00		625281-010
S	05-21-19 00:00		625281-011
S	05-21-19 00:00		625281-012
S	05-21-19 00:00		625281-013
S	05-21-19 00:00		625281-014
S	05-21-19 00:00		625281-015

Rage 85 of 222



# CASE NARRATIVE

Client Name: Tetra Tech- Midland Project Name: White Federal 1H Flowline (5-13-19)

Project ID: 212C-MD-01765 Work Order Number(s): 625281 
 Report Date:
 29-MAY-19

 Date Received:
 05/23/2019

#### Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

#### Analytical non conformances and comments:

Batch: LBA-3090088 Chloride by EPA 300

Lab Sample ID 625335-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 625281-003, -004, -005, -006, -007, -008, -009, -010, -011, -014. The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.

Batch: LBA-3090331 TPH by SW8015 Mod

Surrogate o-Terphenyl recovered below QC limits. Matrix interferences is suspected. Samples affected are: 625281-008,625281-007.

Batch: LBA-3090399 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: 625281-012,625281-008.

Batch: LBA-3090434 BTEX by EPA 8021B Soil samples were not received in Terracore kits and therefore were prepared by method 5030.



Project Id:212C-MD-01765Contact:Mike CarmonaProject Location:Eddy County, New Mexico

Certificate of Analysis Summary 625281

Tetra Tech- Midland, Midland, TX Project Name: White Federal 1H Flowline (5-13-19)



Date Received in Lab:Thu May-23-19 10:48 amReport Date:29-MAY-19Project Manager:Jessica Kramer

	Lab Id:	625281-0	001	625281-0	02	625281-0	003	625281-0	04	625281-	005	625281-	006
An aluais Do an astad	Field Id:	Horizontal NW	'-1 (0-1')	Horizontal NW-	1 (1'-1.5')	Horizontal NW	-2 (0-1')	Horizontal NW-	2 (1'-1.5')	Horizontal NV	V-3 (0-1')	Horizontal NV	V-4 (0-1')
Analysis Requested	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	May-21-19	00:00	May-21-19	00:00	May-21-19	00:00	May-21-19	00:00	May-21-19	00:00	May-21-19	00:00
BTEX by EPA 8021B	Extracted:	May-28-19	15:15			May-28-19	15:15			May-28-19	15:15	May-28-19	15:15
	Analyzed:	May-28-19	21:51			May-28-19	22:10			May-28-19	22:29	May-28-19	22:48
	Units/RL:	mg/kg	RL			mg/kg	RL			mg/kg	RL	mg/kg	RL
Benzene		< 0.00199	0.00199			< 0.00198	0.00198			< 0.00201	0.00201	< 0.00199	0.00199
Toluene		< 0.00199	0.00199			< 0.00198	0.00198			< 0.00201	0.00201	< 0.00199	0.00199
Ethylbenzene		< 0.00199	0.00199			< 0.00198	0.00198			< 0.00201	0.00201	< 0.00199	0.00199
m,p-Xylenes		< 0.00398	0.00398			< 0.00397	0.00397			< 0.00402	0.00402	< 0.00398	0.00398
o-Xylene		< 0.00199	0.00199			< 0.00198	0.00198			< 0.00201	0.00201	< 0.00199	0.00199
Total Xylenes		< 0.00199	0.00199			< 0.00198	0.00198			< 0.00201	0.00201	< 0.00199	0.00199
Total BTEX		< 0.00199	0.00199			< 0.00198	0.00198			< 0.00201	0.00201	< 0.00199	0.00199
Chloride by EPA 300	Extracted:	May-23-19	15:30	May-23-19	15:30	May-23-19	16:40	May-23-19	16:40	May-23-19	16:40	May-23-19	16:40
	Analyzed:	May-23-19	21:23	May-23-192	21:28	May-24-19	06:38	May-24-19	06:16	May-24-19	06:45	May-24-19	06:52
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		6750	49.5	35.8	4.99	1460	5.03	276	4.96	217	4.99	279	4.96
TPH by SW8015 Mod	Extracted:	May-25-19	10:00			May-25-19	10:00			May-25-19	10:00	May-25-19	10:00
	Analyzed:	May-25-19	18:40			May-25-19	19:05			May-25-19	19:29	May-25-19	20:18
	Units/RL:	mg/kg	RL			mg/kg	RL			mg/kg	RL	mg/kg	RL
Gasoline Range Hydrocarbons (GRO)		<15.0	15.0			<14.9	14.9			<15.0	15.0	<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0			<14.9	14.9			<15.0	15.0	<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0			<14.9	14.9			<15.0	15.0	<15.0	15.0
Total TPH		<15.0	15.0			<14.9	14.9			<15.0	15.0	<15.0	15.0

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Version: 1.%

fession kramer

Jessica Kramer Project Assistant



Project Id:212C-MD-01765Contact:Mike CarmonaProject Location:Eddy County, New Mexico

Certificate of Analysis Summary 625281

Tetra Tech- Midland, Midland, TX

**Project Name: White Federal 1H Flowline (5-13-19)** 



Date Received in Lab:Thu May-23-19 10:48 amReport Date:29-MAY-19Project Manager:Jessica Kramer

	Lab Id:	625281-0	007	625281-0	008	625281-0	09	625281-0	010	625281-0	11	625281-0	012
	Field Id:	Horizontal NW	V-5 (0-1')	Horizontal NW	'-6 (0-1')	Horizontal NW-	6 (1'-1.5')	Horizontal SE	-1 (0-1')	Horizontal SE-1	(1-1.5')	Horizontal SE	2-2 (0-1')
Analysis Requested	Depth:												
	Matrix:	SOIL	,	SOIL		SOIL		SOIL		SOIL		SOIL	,
	Sampled:	May-21-19	00:00	May-21-19	00:00	May-21-19	00:00	May-21-19	00:00	May-21-19 (	00:00	May-21-19	00:00
BTEX by EPA 8021B	Extracted:	May-28-19	15:15	May-28-19	15:15			May-28-19	15:15			May-28-19	15:15
	Analyzed:	May-28-19	23:07	May-28-19	23:26			May-28-19	23:45			May-29-19	00:04
	Units/RL:	mg/kg	RL	mg/kg	RL			mg/kg	RL			mg/kg	RL
Benzene		< 0.00202	0.00202	< 0.00200	0.00200			< 0.00200	0.00200			< 0.00201	0.00201
Toluene		< 0.00202	0.00202	< 0.00200	0.00200			< 0.00200	0.00200			< 0.00201	0.00201
Ethylbenzene		< 0.00202	0.00202	< 0.00200	0.00200			< 0.00200	0.00200			< 0.00201	0.00201
m,p-Xylenes		< 0.00403	0.00403	< 0.00399	0.00399			< 0.00400	0.00400			< 0.00402	0.00402
o-Xylene		< 0.00202	0.00202	< 0.00200	0.00200			< 0.00200	0.00200			< 0.00201	0.00201
Total Xylenes		< 0.00202	0.00202	< 0.00200	0.00200			< 0.00200	0.00200			< 0.00201	0.00201
Total BTEX		< 0.00202	0.00202	< 0.00200	0.00200			< 0.00200	0.00200			< 0.00201	0.00201
Chloride by EPA 300	Extracted:	May-23-19 16:40		May-23-19 16:40		May-23-19	16:40	May-23-19	16:40	May-23-19	6:40	May-23-19	15:00
	Analyzed:	May-24-19	06:59	May-24-19	07:21	May-24-19 (	07:29	May-24-19	07:36	May-24-19 (	07:43	May-24-19	02:17
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		260	5.05	854	4.98	403	5.00	12800	100	328	5.00	71.1	4.99
TPH by SW8015 Mod	Extracted:	May-25-19	10:00	May-25-19	10:00			May-25-19	10:00			May-25-19	10:00
	Analyzed:	May-25-19	20:43	May-25-19	21:07			May-25-19	21:32			May-25-19	21:56
	Units/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			<14.9	14.9			<15.0	15.0
Diesel Range Organics (DRO)		<15.0	15.0	<15.0	15.0			<14.9	14.9			<15.0	15.0
Motor Oil Range Hydrocarbons (MRO)		<15.0	15.0	<15.0	15.0			<14.9	14.9			<15.0	15.0
Total TPH		<15.0	15.0	<15.0	15.0			<14.9	14.9			<15.0	15.0

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Jessica Kramer Project Assistant

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Project Id:212C-MD-01765Contact:Mike CarmonaProject Location:Eddy County, New Mexico

Certificate of Analysis Summary 625281

Tetra Tech- Midland, Midland, TX Project Name: White Federal 1H Flowline (5-13-19)



Date Received in Lab:Thu May-23-19 10:48 amReport Date:29-MAY-19Project Manager:Jessica Kramer

	Lab Id:	625281-0	013	625281-0	14	625281-0	15		
Analysis Requested	Field Id:	Horizontal SE	-3 (0-1')	Horizontal SE-	4 (0-1')	Horizontal SE-4	(1-1.5')		
Analysis Kequestea	Depth:								
	Matrix:	SOIL	,	SOIL		SOIL			
	Sampled:	May-21-19	00:00	May-21-19	00:00	May-21-19 (	00:00		
BTEX by EPA 8021B	Extracted:	May-28-19	16:00	May-28-19	16:00				
	Analyzed:	May-29-19	04:19	May-29-19	04:38				
	Units/RL:	mg/kg	RL	mg/kg	RL				
Benzene		< 0.00198	0.00198	< 0.00200	0.00200				
Toluene		< 0.00198	0.00198	< 0.00200	0.00200				
Ethylbenzene		< 0.00198	0.00198	< 0.00200	0.00200				
m,p-Xylenes		< 0.00397	0.00397	< 0.00401	0.00401				
o-Xylene		< 0.00198	0.00198	< 0.00200	0.00200				
Total Xylenes		< 0.00198	0.00198	< 0.00200	0.00200				
Total BTEX		< 0.00198	0.00198	< 0.00200	0.00200				
Chloride by EPA 300	Extracted:	May-23-19	15:00	May-23-19	16:40	May-28-19 1	13:10		
	Analyzed:	May-24-19	03:58	May-24-19	07:50	May-28-19 1	18:17		
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL		
Chloride		48.2	4.95	2670	25.0	481	4.96		
TPH by SW8015 Mod	Extracted:	May-25-19	10:00	May-25-19	10:00				
	Analyzed:	May-25-19	22:21	May-25-192	22:45				
	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				

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Jessica Kramer Project Assistant



# **Flagging Criteria**



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- 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 LimitSDLSample Detection LimitLOD Limit of Detection
- PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation
- DL Method Detection Limit
- NC Non-Calculable

SMP Clie	ent Sample	BLK	Method Blank					
BKS/LCS	S Blank Spike/Laboratory Control Sample	BKSD/LCSD	Blank Spike Duplicate/Labo	ratory 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



	<b>:ders :</b> 62528 #: 3090331	1, Sample: 625281-001 / SMP	Batch	-	212C-MD-0	01765					
Lab Batch Units:	mg/kg	Date Analyzed: 05/25/19 18:40	SURROGATE RECOVERY STUDY								
		by SW8015 Mod	Amount Found	True Amount	Recovery	Control Limits	Flags				
		Analytes	[A]	[B]	%R [D]	%R					
1-Chlorooct	tane		102	99.7	102	70-135					
o-Terpheny	1		47.0	49.9	94	70-135					
Lab Batch	#: 3090331	Sample: 625281-003 / SMP	Batch	n: 1 Matrix	Soil						
Units:	mg/kg	Date Analyzed: 05/25/19 19:05	SU	RROGATE R	ECOVERY S	STUDY					
	TPH	by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flage				
1-Chlorooct	ane	Anaryus	102	99.6	102	70-135					
o-Terphenyl			37.0	49.8	74	70-135					
	#: 3090331	Sample: 625281-005 / SMP	Batch			70-135					
Units:	mg/kg	Date Analyzed: 05/25/19 19:29		RROGATE R		STUDY					
			Amount	True		Control					
	IPH	by SW8015 Mod	Found [A]	Amount [B]	Recovery %R [D]	Limits %R	Flage				
1 Chlans at		Analytes	102	00.0		70.125					
1-Chlorooct			102	99.9	102	70-135					
o-Terpheny		Samely (25291.00) ( SND	39.2	50.0	78	70-135					
	#: 3090331	Sample: 625281-006 / SMP	Batch								
Units:	mg/kg	Date Analyzed: 05/25/19 20:18	SU	RROGATE R	ECOVERY S	STUDY					
	TPHI	by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flage				
1-Chlorooct	tane		94.9	99.7	95	70-135					
o-Terpheny	1		42.8	49.9	86	70-135					
Lab Batch	#: 3090331	Sample: 625281-007 / SMP	Batch	n: 1 Matrix	Soil						
Units:	mg/kg	Date Analyzed: 05/25/19 20:43	SU	RROGATE R	ECOVERY S	STUDY					
	TPH by SW8015 Mod Analytes		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag				
1-Chlorooct	tane		89.5	99.7	90	70-135					
					1						

\* 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



	<b>ders :</b> 62528 #: 3090331	1, Sample: 625281-008 / SMP	Project ID: 212C-MD-01765 Batch: 1 Matrix: Soil								
Units:	mg/kg	Date Analyzed: 05/25/19 21:07	SURROGATE RECOVERY STUDY								
		by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags				
1-Chlorooct		Anarytes	87.9	99.8	88	70-135					
o-Terphenyl			34.4	49.9	69	70-135	**				
	#: 3090331	Sample: 625281-010 / SMP	Batch			70-155					
Units:	mg/kg	Date Analyzed: 05/25/19 21:32		RROGATE R		STUDY					
		by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags				
1-Chlorooct		Analytes	98.0	99.6	98	70-135					
o-Terphenyl			46.2	49.8	98	70-135					
	#: 3090331	Sample: 625281-012 / SMP	40.2 Batch			/0-135					
		•									
Units:	mg/kg	Date Analyzed: 05/25/19 21:56	SU	RROGATE R	ECOVERY	STUDY					
		by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags				
1-Chlorooct		1 mary tes	92.4	99.8	93	70-135					
o-Terphenyl			39.9	49.9	80	70-135					
	#: 3090331	Sample: 625281-013 / SMP	Batch			10-155					
Units:	mg/kg	Date Analyzed: 05/25/19 22:21		RROGATE R		STUDY					
		by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags				
		Analytes			[D]						
1-Chlorooct	ane		98.1	100	98	70-135					
o-Terphenyl			41.3	50.0	83	70-135					
Lab Batch	#: 3090331	Sample: 625281-014 / SMP	Batch	: 1 Matrix	: Soil						
Units:	mg/kg	Date Analyzed: 05/25/19 22:45	SU	RROGATE R	ECOVERYS	STUDY					
		by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags				
			90.1	00.0	90	70-135					
1-Chlorooct	ane		90.1	99.9	90	/()-1)					

\* 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.

Final 1.000



## **Project Name: White Federal 1H Flowline (5-13-19)**

Lab Batch #:		Sample: 625281-001 / SMP	Batc				
Units:	mg/kg	Date Analyzed: 05/28/19 21:51	SU	JRROGATE R	ECOVERY S	STUDY	
	BTEX	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flag
		Analytes			[D]		
1,4-Difluorober	nzene		0.0286	0.0300	95	70-130	
4-Bromofluorol	benzene		0.0341	0.0300	114	70-130	
Lab Batch #:	3090399	Sample: 625281-003 / SMP	Batc	h: 1 Matrix	: Soil	·	
Units:	mg/kg	Date Analyzed: 05/28/19 22:10	SU	JRROGATE R	ECOVERY S	STUDY	
	втех	A polytos	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
1,4-Difluorober	izene	Analytes	0.0284	0.0300	95	70-130	
4-Bromofluorol			0.0284	0.0300	119	70-130	
Lab Batch #:		Sample: 625281-005 / SMP	Batc			70-150	
	mg/kg	Date Analyzed: 05/28/19 22:29		JRROGATE R		STUDY	
	втех	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flag
		Analytes			[D]		
1,4-Difluorober	nzene		0.0282	0.0300	94	70-130	
4-Bromofluorol	benzene		0.0355	0.0300	118	70-130	
Lab Batch #:	3090399	Sample: 625281-006 / SMP	Batc	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 05/28/19 22:48	SU	JRROGATE R	ECOVERY S	STUDY	
	втех	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
1.4-Difluorober	izene	Anarytes	0.0284	0.0300	95	70-130	
4-Bromofluorol			0.0355	0.0300	118	70-130	
Lab Batch #:		Sample: 625281-007 / SMP	Batc			, 0 150	
	mg/kg	Date Analyzed: 05/28/19 23:07		JRROGATE R		STUDY	
	втех	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flag
		Analytes			[D]		
1,4-Difluorober	nzene		0.0284	0.0300	95	70-130	
4-Bromofluorol			0.0359	0.0300	120	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



Lab Batch	#: 3090399	Sample: 625281-008 / SMP	Batc	h: 1 Matrix	c: Soil					
U <b>nits:</b>	mg/kg	Date Analyzed: 05/28/19 23:26	SU	RROGATE F	RECOVERY	STUDY				
	BTEX	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flage			
		Analytes			[D]					
1,4-Difluoro	benzene		0.0278	0.0300	93	70-130				
4-Bromoflue			0.0432	0.0300	144	70-130	**			
Lab Batch	#: 3090399	Sample: 625281-010 / SMP	Batc	h: 1 Matrix	<b>c:</b> Soil					
Units:	mg/kg	Date Analyzed: 05/28/19 23:45	SU	RROGATE R	RECOVERY	STUDY				
		X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flage			
1,4-Difluoro		Analytes	0.0283	0.0300	94	70-130				
4-Bromoflu	orobenzene		0.0356	0.0300	119	70-130				
	#: 3090399	Sample: 625281-012 / SMP	Batc	h: 1 Matrix	: Soil					
Units:	mg/kg	Date Analyzed: 05/29/19 00:04	SU	RROGATE F	RECOVERYS	STUDY				
		X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag			
1.4-Difluoro		Anaryus	0.0262	0.0200		70-130				
4-Bromoflu			0.0262	0.0300	87	70-130	**			
	#: 3090434	Sample: 625281-013 / SMP	Batc			70-130				
Units:	mg/kg	Date Analyzed: 05/29/19 04:19	P Batch: 1 Matrix: Soil SURROGATE RECOVERY STUDY							
	BTEX	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flage			
		Analytes			[D]					
1,4-Difluoro	benzene		0.0313	0.0300	104	70-130				
4-Bromoflue			0.0295	0.0300	98	70-130				
Lab Batch	#: 3090434	Sample: 625281-014 / SMP	Batc	h: 1 Matrix	: Soil					
Units:	mg/kg	Date Analyzed: 05/29/19 04:38	SU	RROGATE F	RECOVERY	STUDY				
	BTEX by EPA 8021B Analytes		Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag			
1,4-Difluoro	benzene		0.0314	0.0300	105	70-130				
				1	1					

\* 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



	<b>:ders :</b> 62528 #: 3090331	81, Sample: 7678657-1-BLK /	BLK Batch	-	212C-MD-0	)1765	
Units:	mg/kg	Date Analyzed: 05/25/19 13:41		RROGATE R		STUDY	
	TPH	by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chlorooct	tane		98.7	100	99	70-135	
o-Terphenyl	1		51.8	50.0	104	70-135	
Lab Batch	#: 3090399	Sample: 7678713-1-BLK /	BLK Batch	n: 1 Matrix	: Solid		
Units:	mg/kg	<b>Date Analyzed:</b> 05/28/19 16:50	SU	RROGATE R	ECOVERYS	STUDY	
	BTEX	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1.4-Difluoro	obenzene		0.0306	0.0300	102	70-130	
4-Bromoflu			0.0313	0.0300	102	70-130	
	#: 3090434	Sample: 7678719-1-BLK /			-	70-150	
Units:	mg/kg	Date Analyzed: 05/29/19 02:44		RROGATE R		STUDY	
	BTE	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluoro	benzene	Anarytes	0.0276	0.0300	92	70-130	
4-Bromoflu			0.0246	0.0300	82	70-130	. <u></u>
	#: 3090331	Sample: 7678657-1-BKS /			-	70-130	
Units:	mg/kg	Date Analyzed: 05/25/19 14:06		RROGATE R		STUDY	
	TPH	by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1-Chlorooct	tane		97.4	100	97	70-135	
o-Terpheny	1		54.6	50.0	109	70-135	
Lab Batch	#: 3090399	Sample: 7678713-1-BKS /	BKS Batch	n: 1 Matrix	: Solid		
Units:	mg/kg	Date Analyzed: 05/28/19 15:16	SU	RROGATE R	ECOVERY	STUDY	
	BTE	X by EPA 8021B	Amount Found	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes	[A]		[D]		
1,4-Difluoro	obenzene	Analytes	0.0266	0.0300		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



Work Ord Lab Batch #	lers: 62528 : 3090434	1, Sample: 7678719-1-BKS /	BKS Batcl	-	212C-MD-0 Solid	)1765	
Units:	mg/kg	<b>Date Analyzed:</b> 05/29/19 01:10		RROGATE R	ECOVERY	STUDY	
	ВТЕХ	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluorob			0.0307	0.0300	102	70-130	
4-Bromofluor			0.0281	0.0300	94	70-130	
Lab Batch #	: 3090331	Sample: 7678657-1-BSD /	BSD Batcl	h: 1 Matrix	: Solid		
Units:	mg/kg	Date Analyzed: 05/25/19 14:31	SU	RROGATE R	ECOVERY	STUDY	
	TPH I	by SW8015 Mod Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1-Chloroocta	ne		103	100	103	70-135	
o-Terphenyl			62.0	50.0	100	70-135	
Lab Batch #	: 3090399	Sample: 7678713-1-BSD /				10 100	
Units:	mg/kg	Date Analyzed: 05/28/19 15:35		RROGATE R		STUDY	
	втех	K by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
1,4-Difluorob	enzene		0.0271	0.0300	90	70-130	
4-Bromofluor			0.0302	0.0300	101	70-130	
Lab Batch #		Sample: 7678719-1-BSD /				70-150	
Units:	mg/kg	Date Analyzed: 05/29/19 01:29		RROGATE R		STUDY	
	BTEX	K by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
145.01		Analytes					
1,4-Difluorob			0.0313	0.0300	104	70-130	
4-Bromofluor			0.0292	0.0300	97	70-130	
Lab Batch #		Sample: 625271-001 S / M					
Units:	mg/kg	Date Analyzed: 05/25/19 15:21	SU	RROGATE R	ECOVERY	STUDY	
	TPH I	by SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flags
		Analytes			נען		
1-Chlorooctar	ne	Analytes	83.2	99.9	83	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



Work Ord Lab Batch #:		1, <b>Sample:</b> 625614-001 S / MS	Batc	-	: 212C-MD-0 : Soil	)1765	
Units:	mg/kg	Date Analyzed: 05/28/19 15:54	SU	RROGATE R	ECOVERY S	STUDY	
	BTEX	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flags
		Analytes			[D]		
1,4-Difluorobe	enzene		0.0276	0.0300	92	70-130	
4-Bromofluoro	obenzene		0.0311	0.0300	104	70-130	
Lab Batch #:	3090434	Sample: 625615-001 S / MS	Batc	h: 1 Matrix	: Soil		
Units:	mg/kg	Date Analyzed: 05/29/19 01:48	SU	RROGATE R	ECOVERY	STUDY	
	BTEX	X by EPA 8021B Analytes	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flage
1,4-Difluorobe	nzene		0.0311	0.0300	104	70-130	
4-Bromofluoro			0.0296	0.0300	99	70-130	
Lab Batch #:		Sample: 625271-001 SD / M				/0-130	
Lab Batch #: Units:	mg/kg	<b>Date Analyzed:</b> 05/25/19 15:46					
		Dute Mary 200, 05/25/17 15.40	SU	RROGATE R	ECOVERYS	STUDY	
	TPH I	oy SW8015 Mod	Amount Found [A]	True Amount [B]	Recovery %R	Control Limits %R	Flag
		Analytes			[D]		
1-Chlorooctan	e		82.9	100	83	70-135	
o-Terphenyl			35.5	50.0	71	70-135	
Lab Batch #:	3090399	Sample: 625614-001 SD / M	SD Bate	h: 1 Matrix	: Soil	1	1
Units:	mg/kg	Date Analyzed: 05/28/19 16:13	SU	RROGATE R	ECOVERY S	STUDY	
	BTEX	X by EPA 8021B	Amount Found [A]	True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
14 D'fleese ha		Analytes	0.027.6	0.0200		70.100	
1,4-Difluorobe			0.0276	0.0300	92	70-130	
4-Bromofluoro		Sample: 625615-001 SD / M	0.0332 SD Bate	0.0300 h: 1 Matrix	111 •• Soil	70-130	
Lab Batch #: Units:		<b>Date Analyzed:</b> 05/29/19 02:07					
Units:	mg/kg	Date Analyzeu: 03/29/19 02.07	SU	RROGATE R	ECOVERY	STUDY	
	BTEX by EPA 8021B			True Amount [B]	Recovery %R [D]	Control Limits %R	Flag
140:0 1	Analytes			0.0000		70.120	
	4-Difluorobenzene			0.0300	103	70-130	
4-Bromofluoro	obenzene		0.0270	0.0300	90	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



## **BS / BSD Recoveries**



## **Project Name:** White Federal 1H Flowline (5-13-19)

Work Order #:         625281           Project ID:         212C-MD-01765																		
Analyst: SCM	D	ate Prepar	ed: 05/28/201	9			Date A	nalyzed: (	)5/28/2019		ttrol nits RPD 55 55 55 55 55 55							
Lab Batch ID: 3090399 Sample: 7678713-1	-BKS	Batc	<b>h #:</b> 1					Matrix: S	Solid									
Units: mg/kg		BLAN	K /BLANK	SPIKE / I	BLANK S	SPIKE DUP	LICATE	RECOV	ERY STUI	DY								
BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag							
Benzene	< 0.00200	0.0998	0.101	101	0.100	0.103	103	2	70-130	35								
Toluene	< 0.00200	0.0998	0.102	102	0.100	0.101	101	1	70-130	35								
Ethylbenzene	< 0.00200	0.0998	0.115	115	0.100	0.114	114	1	70-130	35								
m,p-Xylenes	< 0.00399	0.200	0.241	121	0.201	0.236	117	2	70-130	35								
o-Xylene	< 0.00200	0.0998	0.114	114	0.100	0.113	113	1	70-130	35								
Analyst: SCM	D	ate Prepar	red: 05/28/201	9			Date A	analyzed: 05/29/2019										
Lab Batch ID: 3090434 Sample: 7678719-1	-BKS	Bate	<b>h #:</b> 1			Matrix: Solid												
Units: mg/kg		BLAN	K /BLANK	SPIKE / 1	BLANK S	SPIKE DUP	LICATE	RECOV	ERY STUI	DY								
BTEX by EPA 8021B Analytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag							
Benzene	< 0.000383	0.0996	0.103	103	0.0994	0.0997	100	3	70-130	35								
Toluene	< 0.000454	0.0996	0.0954	96	0.0994	0.0915	92	4	70-130	35								
Ethylbenzene	< 0.000563	0.0996	0.101	101	0.0994	0.0956	96	5	70-130	35								
m,p-Xylenes	< 0.00101	0.199	0.207	104	0.199	0.198	99	4	70-130	35								
o-Xylene	< 0.000343	0.0996	0.102	102	0.0994	0.0998	100	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:** White Federal 1H Flowline (5-13-19)

Work Order	Work Order #: 625281 Project ID: 212C-MD-01765											
Analyst:	CHE	D	ate Prepar	ed: 05/23/20	19			Date A	nalyzed: (	05/24/2019		
Lab Batch ID	<b>Sample:</b> 7678490	1-BKS	Batc	<b>h #:</b> 1					Matrix: S	Solid		
Units:	mg/kg		BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY									
Analy	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
Chloride		<5.00	250	246	98	250	246	98	0	90-110	20	
Analyst:	CHE	<b>Date Prepared:</b> 05/23/2019 <b>Date Analyzed:</b> 05/23/2019									I	
Lab Batch ID	<b>:</b> 3090083 <b>Sample:</b> 7678491											
Units:	mg/kg		BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY									
Analy	Chloride by EPA 300 ytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride		<5.00	250	258	103	250	259	104	0	90-110	20	
Analyst:	CHE	D	ate Prepar	ed: 05/23/20	19	1	1	Date A	nalyzed: (	)5/24/2019	+	41
Lab Batch ID	<b>:</b> 3090088 <b>Sample:</b> 7678496	1-BKS	Bate	<b>h #:</b> 1					Matrix: S	Solid		
Units:	mg/kg		BLAN	K /BLANK	SPIKE /	BLANK S	SPIKE DUP	LICATE	RECOV	ERY STUI	)Y	
Analy	Chloride by EPA 300 ytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride		<5.00	250	247	99	250	246	98	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:** White Federal 1H Flowline (5-13-19)

Work Order	r #: 625281							Proj	ect ID:	212C-MD-0	01765	
Analyst:	CHE	D	ate Prepai	red: 05/28/202	19			Date A	nalyzed: (	05/28/2019		
Lab Batch ID	<b>Sample Sample</b>	e: 7678648-1-BKS	Batc	<b>h #:</b> 1					Matrix: S	Solid		
Units:	mg/kg		BLAN	K /BLANK	SPIKE / ]	BLANK S	SPIKE DUP	LICATE	RECOV	ERY STUI	DY	
	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
Anal												
Chloride		<0.858	250	237	95	250	238	95	0	90-110	20	
Analyst:	ARM	D	ate Prepai	red: 05/25/20	19	ļ	1	Date A	nalyzed: (	)5/25/2019		ļ
Analyst: Lab Batch ID		D e: 7678657-1-BKS	-	red: 05/25/201 h #: 1	19	_	1		nalyzed: ( Matrix: S		ł	<u> </u>
-			Batc			BLANK	SPIKE DUP		Matrix: S	Solid	DY	·
Lab Batch ID	2: 3090331 Sample mg/kg TPH by SW8015 Mod		Batc	<b>h #:</b> 1		BLANK S Spike Added [E]	SPIKE DUP Blank Spike Duplicate Result [F]		Matrix: S	Solid	DY Control Limits %RPD	Flag
Lab Batch ID Units: Anal	2: 3090331 Sample mg/kg TPH by SW8015 Mod	e: 7678657-1-BKS Blank Sample Result	Batc BLAN Spike Added	h #: 1 IK /BLANK Blank Spike Result	SPIKE / ] Blank Spike %R	Spike Added	Blank Spike Duplicate	LICATE Blk. Spk Dup. %R	Matrix: S RECOVI	Solid ERY STUI Control Limits	Control Limits	Flag

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





### **Project Name: White Federal 1H Flowline (5-13-19)**

<b>Work Order # :</b> 625281						Project II	<b>D:</b> 212C-N	MD-0176	5		
Lab Batch ID: 3090399	QC- Sample ID:	625614	-001 S	Ba	tch #:	1 Matrix	x: Soil				
<b>Date Analyzed:</b> 05/28/2019	Date Prepared:	05/28/2	019	An	alyst: S	SCM					
<b>Reporting Units:</b> mg/kg		N	ATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
BTEX by EPA 8021B	Parent Sample Result	Spike Added	Spiked Sample Result [C]	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes	[A]	[B]	[0]	[D]	[E]	itesuit [1]	[G]				
Benzene	<0.00200	0.100	0.0761	76	0.101	0.0652	65	15	70-130	35	X
Toluene	<0.00200	0.100	0.0766	77	0.101	0.0741	73	3	70-130	35	
Ethylbenzene	<0.00200	0.100	0.0856	86	0.101	0.0751	74	13	70-130	35	
m,p-Xylenes	<0.00401	0.200	0.180	90	0.201	0.136	68	28	70-130	35	X
o-Xylene	<0.00200	0.100	0.0855	86	0.101	0.0629	62	30	70-130	35	X
Lab Batch ID: 3090434	QC- Sample ID:	625615	-001 S	Ba	tch #:	1 Matrix	x: Soil				
<b>Date Analyzed:</b> 05/29/2019	Date Prepared:	05/28/2	019	An	alyst: S	SCM					
<b>Reporting Units:</b> mg/kg		N	ATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	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	<0.000386	0.100	0.101	101	0.0992	0.106	107	5	70-130	35	
Toluene	< 0.000457	0.100	0.0928	93	0.0992	0.0970	98	4	70-130	35	
Ethylbenzene	<0.000566	0.100	0.0967	97	0.0992	0.102	103	5	70-130	35	
m,p-Xylenes	<0.00102	0.200	0.200	100	0.198	0.208	105	4	70-130	35	
o-Xylene	0.000360	0.100	0.0987	98	0.0992	0.100	100	1	70-130	35	

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





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### **Project Name: White Federal 1H Flowline (5-13-19)**

Work Order # :	625281						Project II	<b>):</b> 212C-1	MD-0176	5		
Lab Batch ID:	3090081	C- Sample ID:	625281	-012 S	Ba	tch #:	1 Matrix	k: Soil				
Date Analyzed:	05/24/2019	Date Prepared:	05/23/2	019	An	alyst: (	CHE					
<b>Reporting Units:</b>	mg/kg		Μ	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
	Chloride by EPA 300	Parent Sample Result	Spike Added	Spiked Sample Result [C]	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Analytes	[A]	[B]		[D]	[E]	Kesun [F]	[G]	/0	/or	70KI D	
Chloride		71.1	250	317	98	250	320	100	1	90-110	20	
Lab Batch ID:	3090081	C- Sample ID:	625281	-013 S	Ba	tch #:	1 Matrix	k: Soil				
Date Analyzed:	05/24/2019	Date Prepared:	05/23/2	019	An	alyst: (	CHE					
<b>Reporting Units:</b>	mg/kg		Μ	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
	Chloride by EPA 300	Parent Sample Result	Spike Added	Spiked Sample Result [C]	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Analytes	[A]	[B]	[C]	5%K [D]	[E]	Kesult [F]	56K [G]	-70	70K	70KFD	
Chloride		48.2	248	274	91	248	292	98	6	90-110	20	
Lab Batch ID:	3090083	C- Sample ID:	625280	-037 S	Ba	tch #:	1 Matrix	<b>x:</b> Soil				
Date Analyzed:	05/23/2019	Date Prepared:	05/23/2	019	An	alyst: (	CHE					
<b>Reporting Units:</b>	mg/kg		Μ	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
	Chloride by EPA 300	Parent Sample Result	Spike	Spiked Sample Result	Spiked Sample %R	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits %R	Control Limits %RPD	Flag
	Analytes	[A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%K	%KPD	
Chloride		564	251	810	98	251	807	97	0	90-110	20	

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

.

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





### **Project Name: White Federal 1H Flowline (5-13-19)**

Work Order # :	625281						Project II	<b>D:</b> 212C-1	MD-0176	5		
Lab Batch ID:	3090083	QC- Sample ID:	625280	-041 S	Ba	tch #:	1 Matrix	<b>x:</b> Soil				
Date Analyzed:	05/23/2019	Date Prepared:	05/23/2	019	An	alyst: (	CHE					
<b>Reporting Units:</b>	mg/kg		Μ	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
	Chloride by EPA 300	Parent Sample Result	Spike	Spiked Sample Result	Sample	Spike	Duplicate Spiked Sample		RPD	Control Limits	Control Limits	Flag
	Analytes	[A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
Chloride		1120	250	1320	80	250	1320	80	0	90-110	20	X
Lab Batch ID:	3090088	QC- Sample ID:	625281	-004 S	Ba	tch #:	1 Matrix	x: Soil				
Date Analyzed:	05/24/2019	Date Prepared:	05/23/2	019	An	alyst: (	CHE					
<b>Reporting Units:</b>	mg/kg		Μ	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
	Chloride by EPA 300	Parent Sample Result	Spike	Spiked Sample Result	Sample	Spike	Duplicate Spiked Sample		RPD	Control Limits	Control Limits	Flag
	Analytes	[A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
Chloride		276	248	458	73	248	515	96	12	90-110	20	X
Lab Batch ID:	3090088	QC- Sample ID:	625335	-001 S	Ba	tch #:	1 Matrix	<b>x:</b> Soil				
Date Analyzed:	05/24/2019	Date Prepared:	05/23/2	019	An	alyst: (	CHE					
<b>Reporting Units:</b>	mg/kg		Μ	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
	Chloride by EPA 300	Parent Sample Result	Spike	Spiked Sample Result	Sample	Spike	Duplicate Spiked Sample		RPD	Control Limits	Control Limits	Flag
	Analytes	[A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
	1 inter y vos				1-1	[]						

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





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### **Project Name: White Federal 1H Flowline (5-13-19)**

Work Order # :	625281						Project II	<b>):</b> 212C-1	MD-0176	5		
Lab Batch ID:	3090379	QC- Sample ID:	625611	-001 S	Ba	tch #:	1 Matrix	<b>k:</b> Soil				
Date Analyzed:	05/28/2019	Date Prepared:	05/28/2	019	An	alyst: (	CHE					
<b>Reporting Units:</b>	mg/kg		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
	Chloride by EPA 300	Parent Sample Result	Spike	Spiked Sample Result	Sample	Spike	Duplicate Spiked Sample	Spiked Dup. %R	RPD	Control Limits %R	Control Limits %RPD	Flag
	Analytes	[A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%K	%RPD	
Chloride		23.4	250	257	93	250	259	94	1	90-110	20	
Lab Batch ID:	3090379	QC- Sample ID:	625616	-008 S	Ba	tch #:	1 Matrix	k: Soil				
Date Analyzed:	05/28/2019	Date Prepared:	05/28/2	019	An	alyst: (	CHE					
<b>Reporting Units:</b>	mg/kg		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
	Chloride by EPA 300	Parent Sample Result	Spike	Spiked Sample Result	Sample	Spike	Duplicate Spiked Sample		RPD	Control Limits	Control Limits	Flag
	Analytes	[A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
Chloride		371	251	595	89	251	594	89	0	90-110	20	Х
Lab Batch ID:	3090331	QC- Sample ID:	625271	-001 S	Ba	tch #:	1 Matrix	<b>x:</b> Soil				
Date Analyzed:	05/25/2019	Date Prepared:	05/25/2	019	An	alyst: A	ARM					
<b>Reporting Units:</b>	mg/kg		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
	TPH by SW8015 Mod	Parent Sample Result	Spike	Spiked Sample Result	Sample	Spike	Duplicate Spiked Sample		RPD	Control Limits	Control Limits	Flag
	Analytes	[A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
Gasoline Range	e Hydrocarbons (GRO)	8.90	999	877	87	1000	869	86	1	70-135	20	
Diesel Range O	brganics (DRO)	9.43	999	822	81	1000	829	82	1	70-135	20	

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

.

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

Image: Control Cutartory Record         Image: Contro Record         Image: Control Cutartory		CD: Relinquished by:	14/20 Tenniquistied by.	1	Relinquished by:											( LAB USE )	LAB #		Comments: F	Receiving Laboratory:	Invoice to:	Project Location: state)	Project Name:		Pag	Analysis Req
Sample Temperature       Fill Temperature         Sample Temperature       Standard         Standard       Standard         Stan				P-56-5	Date: Time:	Horizontal SE-1 (0-1')	Horizontal NW-6 (1'-1.5')	Horizontal NW-6 (0-1')	Horizontal NW-5 (0-1')	Horizontal NW-4 (0-1')	Horizontal NW-3 (0-1')	Horizontal NW-2 (1'-1.5')	Horizontal NW-2 (0-1')	Horizontal NW-1 (1'-1.5')	Horizontal NW-1 (0-1')	Υ.	SAMPLE IDENTIFICATION		Run deeper samples if TPH (GRO + DRO + MRO) ex 10 mg/kg or Total BTEX exceeds 50 mg/kg.				White Federal 1H Flowline (5-13-19)	COG	Tech,	Analysis Request of Chain of Custody Record
Somple Temperature       Fill Temperature         Circle or Specify Method No.)         1       1         1	ORIGINAL COP	Received by:	Heceived by:	M M	5/21/2019 Received by:	5/21/2019	5/21/2019	5/21/2019	5/21/2019	5/21/2019	5/21/2019	5/21/2019	5/21/2019	5/21/2019	5/21/2019		YEAR: 2019	SAMPLING	ceeds 1,000 mg/kg.	Sampler Signature:		Project #:		Site Manager:		
Sample Temperature       Fill Temperature         Sample Temperature       Standard         Standard       Standard         Stan	~	Date	· Date	S	~		×	X	×	×	×	×	×	×	_	SOIL	2		run deeper samp	Devin Do		212C-ME		Mike Carmo	900 West Wall Midland,T Tel (432) Fax (432)	
Image: Second Part of the second Part o				2 Ia		×	×	×	×	×	×	×	×	×		HNO <sub>3</sub> ICE		PRESERVATIVE METHOD	zene	ominguez		0-01765		na	Street, Ste 100 exas 79701 682-4559 682-3946	
ABUSE ONLY       REMARKS:       Image: Construction of the sector				8	Z	- z	- z	ר Z	ר צ	⊐ Z	⊐ z	⊐ Z	⊐ z						exceeds							6
Image: Straking #:       Image: St	(Circle)	() ()	Sample	LAB		×		×	×	×	×		×													ġ.
Image: Straking #:       Image: St	HAND D	$\underline{\circ}$	Tempera	USE C		×		×	×	×	×		×			PAH 827	70C							5		R,
FEDEX       VPS       Tracking #:	ELIVERI		ture		F											TCLP Me	tals /	Ag As E			-					E
And						┢										TCLP Se							q v	ANAL		
And		Special	RUSH:	ST	<u> </u>					$\square$						GC/MS V								YSIS		
And		Repor	Same																270C/625					REQU		
And Har     And	acking #	t Limits	Day														esto	s)					etnov	JEST		Pa
Anion/Cation Balance       T		nzed or TRf	24 hr		×	×	×	×	×	×	×	×	×	×			Si	ulfate	TDS							ge
9         72         TPH 8015R         9		чР Нер	48 hr		F					1	4									ee atta	ched li	st)	: _	-		
		ont			F	$\square$								1												1 of
			V		L																					-

Site Manager:     Nike Carmona       65-13-19)     Froject #:       Sampler Signature:     Devin Dominguez       DRO + MRO) exceeds 1,000 mg/kg.     SAMPLING       MARE     MATRIX       YEAR: 2019	Inc.     sou West Wall Street. Sie 100 Midland,Texes 78701 Tal (422) 882-3946       19)     Project #: Sampler Signature:     Devin Dominguez       Sampler Signature:     Devin Dominguez       Sampler Signature:     Devin Dominguez       VEAH: 2019     MATRIX       YEAH: 2019     MATRIX       BTEX 8260B	Sh, Inc.     900 West Wail Street, Ste 100 Midland, Wail Street, Ste 100 Tel (432) RE2-3946       Site Manager: Tel (432) RE2-3946     Site Manager: Tel (432) RE2-3946       BRO + MRO) exceeds 1,000 mg/kg. run deeper samples if benzene exceeds 1,000 mg/kg.     Devin Dominguez Tel (432) RE2-3946       DRO + MRO) exceeds 1,000 mg/kg. run deeper samples if benzene exceeds 10005 (Ext to C35)     Circle       SAMPLING     MATRIX     PRESERVATIVE Feaster 82600B       Citots (Ext to C35)     State 100 (Circle (Circle R)	ON     Indext Tasks 7970 Tol (42) 882-458 Tol (4	In the constraint of the second secon
site Manager:     Mike Carmona       roject #:     212C-MD-01765       sampler Signature:     Devin Dominguez       sampler Signature:     Devin Dominguez	ITAINERS         0           RED (Y/N)         0           8021B         BTEX 8260B	FAINERS     Composition       ED (Y/N)     Composition       021B     BTEX 8260B       (1005 (Ext to C35))       15M ( GRO - DRO - ORO - MRO)       70C       otals Ag As Ba Cd Cr Pb Se Hg       etals Ag As Ba Cd Cr Pb Se Hg	AINERS ED (Y/N) D21B BTEX 8260B 1005 (Ext to C35) 15M ( GRO - DRO - ORO - MRO) 70C tals Ag As Ba Cd Cr Pb Se Hg batals Ag As Ba Cd Cr Pb Se Hg hatiles mi Volatiles For C C C C C C C C C C C C C C C C C C C	ITAINERS       Image: Constraint of the second
900 West Wall Street, Ste 100 Midland, Texas 78701 Tel (422) 682-3946 Pax (422) 682-3946 AMike Carmona Devin Dominguez Devin Dominguez NTRIX PRESERVATIVE METHOD NTAINERS	NTAINERS         O           RED (Y/N)         O           8021B         BTEX 8260B	FAINERS     Composition       ED (Y/N)     Composition       021B     BTEX 8260B       (1005 (Ext to C35))       15M ( GRO - DRO - ORO - MRO)       70C       otals Ag As Ba Cd Cr Pb Se Hg       etals Ag As Ba Cd Cr Pb Se Hg	AINERS ED (Y/N) D21B BTEX 8260B 1005 (Ext to C35) 15M ( GRO - DRO - ORO - MRO) 70C tals Ag As Ba Cd Cr Pb Se Hg batals Ag As Ba Cd Cr Pb Se Hg hatiles mi Volatiles For C C C C C C C C C C C C C C C C C C C	NTAINERS       Source       Control of the second s
Preservative es if benzene ex preservative pe ontainers ontainers	NTAINERS         O           RED (Y/N)         O           8021B         BTEX 8260B	FAINERS     Composition       ED (Y/N)     Composition       021B     BTEX 8260B       (1005 (Ext to C35))       15M ( GRO - DRO - ORO - MRO)       70C       otals Ag As Ba Cd Cr Pb Se Hg       etals Ag As Ba Cd Cr Pb Se Hg	AINERS ED (Y/N) D21B BTEX 8260B 1005 (Ext to C35) 15M ( GRO - DRO - ORO - MRO) 70C tals Ag As Ba Cd Cr Pb Se Hg batals Ag As Ba Cd Cr Pb Se Hg hatiles mi Volatiles For C C C C C C C C C C C C C C C C C C C	DNTAINERS       B         ERED (Y/N)       G         X 8021B       BTEX 8260B         TX1005 (Ext to C35)         8015M ( GRO - DRO - ORO - MRO)         8270C         Metals Ag As Ba Cd Cr Pb Se Hg         P Metals Ag As Ba Cd Cr Pb Se Hg         P Metals Ag As Ba Cd Cr Pb Se Hg         P Metals Ag As Ba Cd Cr Pb Se Hg         P Metals Ag As Ba Cd Cr Pb Se Hg         P Metals Ag As Ba Cd Cr Pb Se Hg         P Metals Ag As Ba Cd Cr Pb Se Hg         P Metals Ag As Ba Cd Cr Pb Se Hg         P Semi Volatiles         P Semi Vo
	8021B BTEX 8260B	021B     BTEX 8260B       (1005 (Ext to C35))       15M ( GRO - DRO - ORO - MRO)       70C       values Ag As Ba Cd Cr Pb Se Hg       etals Ag As Ba Cd Cr Pb Se Hg	D21B         BTEX 8260B           1005 (Ext to C35)           15M ( GRO - DRO - ORO - MRO)           70C           tals Ag As Ba Cd Cr Pb Se Hg           batals Ag As Ba Cd Cr Pb Se Hg           batals Ag As Ba Cd Cr Pb Se Hg           values           rol values           ro	X 8021B       BTEX 8260B         TX1005 (Ext to C35)       TX1005 (Ext to C35)         8015M ( GRO - DRO - ORO - MRO)       8270C         IMetals Ag As Ba Cd Cr Pb Se Hg       Circle or Specify Method         P Metals Ag As Ba Cd Cr Pb Se Hg       Page         P Metals Ag As Ba Cd Cr Pb Se Hg       Page         P Metals Ag As Ba Cd Cr Pb Se Hg       Page         P Metals Ag As Ba Cd Cr Pb Se Hg       Page         P Metals Ag As Ba Cd Cr Pb Se Hg       Page         P Semi Volatiles       Page         AS Vol. 8260B / 624       Method No.         AS Semi. Vol. 8270C/625       Method No.         ide       Ide         ride Sulfate TDS       Page         aral Water Chemistry (see attached list)

Received by OCD: 7/14/2020 11:22:37 AM



# **XENCO** Laboratories



Prelogin/Nonconformance Report- Sample Log-In

Client: Tetra Tech- Midland Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient Date/ Time Received: 05/23/2019 10:48:00 AM Temperature Measuring device used : R8 Work Order #: 625281 Comments Sample Receipt Checklist 3.1 #1 \*Temperature of cooler(s)? #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?

#### \* 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: 05/23/2019

N/A

Checklist reviewed by: Jession Whamer

Jessica Kramer

Date: 05/28/2019

# Analytical Report 628192

for Tetra Tech- Midland

**Project Manager: Mike Carmona** 

White Fed 1H Flowline

212C-MD-01765

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): 628192 White Fed 1H Flowline 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) 628192. 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. 628192 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Vramer

Jessica Kramer Project Assistant

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





#### Sample Id

AH #1 (0-1')
AH #1 (1-1.5')
AH #1 (2-2.5')
AH #1 (3-3.5')
AH #2 (0-1')
AH #2 (1-1.5')
AH #3 (0-1')
AH #3 (1-1.5')
AH #4 (0-1')
AH #4 (1-1.5')
AH #4 (2-2.5')
AH #5 (0-1')
AH #5(1-1.5')
AH #5 (2-2.5')
AH #5 (3-3.5')
AH #6 (0-1')
AH #6 (1-1.5')
AH #6 (2-2.5')
AH #6 (3-3.5')
AH #6 (4-4.5')
AH #6 (5-5.5')
AH #7 (0-1')
AH #7 (1-1.5')
AH #7 (2-2.5')
AH #8 (0-1')
AH #8 (1-1.5')
AH #8 (2-2.5')
AH #9 (0-1')
AH #9 (1-1.5')
AH #9 (2-2.5')
AH #9 (3-3.5')
AH #10 (0-1')
AH #10 (1-1.5')
AH #10 (2-2.5')
AH #11 (0-1')
AH #11 (1-1'.5)
AH #11 (2-2.5')
AH #11 (3-3.5')
AH #12 (0-1')
AH #12 (1-1.5')
AH #13 (0-1')
AH #13 (1-1.5')
AH #13 (2-2.5')

# Sample Cross Reference 628192



White Fed 1H Flowline

Matrix	Date Collected	Sample Depth	Lab Sample Id
S	06-18-19 00:00		628192-001
S	06-18-19 00:00		628192-002
S	06-18-19 00:00		628192-003
S	06-18-19 00:00		628192-004
S	06-18-19 00:00		628192-005
S	06-18-19 00:00		628192-006
S	06-18-19 00:00		628192-007
S	06-18-19 00:00		628192-008
S	06-18-19 00:00		628192-009
S	06-18-19 00:00		628192-010
S	06-18-19 00:00		628192-011
S	06-18-19 00:00		628192-012
S	06-18-19 00:00		628192-013
S	06-18-19 00:00		628192-014
S	06-18-19 00:00		628192-015
S	06-18-19 00:00		628192-016
S	06-18-19 00:00		628192-017
S	06-18-19 00:00		628192-018
S	06-18-19 00:00		628192-019
S	06-18-19 00:00		628192-020
S	06-18-19 00:00		628192-021
S	06-18-19 00:00		628192-022
S	06-18-19 00:00		628192-023
S	06-18-19 00:00		628192-024
S	06-18-19 00:00		628192-025
S	06-18-19 00:00		628192-026
S	06-18-19 00:00		628192-027
S	06-18-19 00:00		628192-028
S	06-18-19 00:00		628192-029
S	06-18-19 00:00		628192-030
S	06-18-19 00:00		628192-031
S	06-18-19 00:00		628192-032
S	06-18-19 00:00		628192-033
S	06-18-19 00:00		628192-034
S	06-18-19 00:00		628192-035
S	06-18-19 00:00		628192-036
S	06-18-19 00:00		628192-037
S	06-18-19 00:00		628192-038
S	06-18-19 00:00		628192-039
S	06-18-19 00:00		628192-040
S	06-18-19 00:00		628192-041
S	06-18-19 00:00		628192-042
S	06-18-19 00:00		628192-043



.



Sample Cross Reference 628192



# Tetra Tech- Midland, Midland, TX

White Fed 1H Flowline

S	06-18-19 00:00	628192-044
S	06-18-19 00:00	628192-045

AH #14 (0-1') AH #14 (1-1.5')

.

.



## CASE NARRATIVE

Client Name: Tetra Tech- Midland Project Name: White Fed 1H Flowline

Project ID: 212C-MD-01765 Work Order Number(s): 628192 Report Date: 25-JUN-19 Date Received: 06/19/2019

#### Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

#### Analytical non conformances and comments:

Batch: LBA-3092996 Chloride by EPA 300

Lab Sample ID 628192-026 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: 628192-018, -019, -020, -021, -022, -023, -024, -025, -026, -027, -028, -029, -030, -031, -032, -033, -034, -035, -036, -037. The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was

Batch: LBA-3093264 Chloride by EPA 300

Lab Sample ID 628335-006 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: 628192-043, -044, -045. The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was

accepted.

accepted.



# Certificate of Analysis Summary 628192

Tetra Tech- Midland, Midland, TX Project Name: White Fed 1H Flowline



Date Received in Lab:Wed Jun-19-19 11:40 amReport Date:25-JUN-19Project Manager:Jessica Kramer

	Lab Id:	628192-0	01	628192-0	02	628192-0	03	628192-0	04	628192-0	005	628192-0	06
Analysis Requested	Field Id:	AH #1 (0	-1')	AH #1 (1-1.5')		AH #1 (2-2.5')		AH #1 (3-3.5')		AH #2 (0-1')		AH #2 (1-1	1.5')
Anulysis Kequesieu	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-18-19 (	00:00	Jun-18-19 (	00:00	Jun-18-19 (	00:00	Jun-18-19 0	0:00	Jun-18-19 (	00:00	Jun-18-19 0	0:00
Chloride by EPA 300	Extracted:	Jun-19-19	19:00	Jun-19-19 1	9:00	Jun-19-19 1	9:00	Jun-19-19 1	9:00	Jun-19-19	9:00	Jun-19-19 1	9:00
	Analyzed:	Jun-19-19 2	20:51	Jun-19-19 2	0:56	Jun-19-19 2	1:13	Jun-19-19 2	1:19	Jun-19-19 2	21:24	Jun-19-19 2	1:30
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		36.9	4.99	680	4.96	34.9	5.00	2430	25.0	1090	5.01	2110	24.9

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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fession kramer

Jessica Kramer Project Assistant

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# Certificate of Analysis Summary 628192

Tetra Tech- Midland, Midland, TX Project Name: White Fed 1H Flowline



Date Received in Lab:Wed Jun-19-19 11:40 amReport Date:25-JUN-19Project Manager:Jessica Kramer

	Lab Id:	628192-0	07	628192-0	08	628192-0	09	628192-0	10	628192-0	)11	628192-0	12
Analysis Requested	Field Id:	AH #3 (0	-1')	AH #3 (1-	1.5')	AH #4 (0-	-1')	AH #4 (1-1	1.5')	AH #4 (2-2	2.5')	AH #5 (0-	-1')
Anulysis Kequesleu	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-18-19 (	00:00	Jun-18-19 (	00:00	Jun-18-19 (	0:00	Jun-18-19 0	0:00	Jun-18-19 (	00:00	Jun-18-19 0	0:00
Chloride by EPA 300	Extracted:	Jun-19-19	9:00	Jun-19-19 1	9:00	Jun-19-19 1	9:00	Jun-19-19 1	9:00	Jun-19-19 1	9:00	Jun-19-19 1	9:00
	Analyzed:	Jun-19-19 2	21:41	Jun-19-19 2	21:35	Jun-19-19 2	1:57	Jun-19-19 2	2:03	Jun-19-19 2	22:19	Jun-19-19 2	2:25
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		171	4.96	2250	25.0	61.6	5.04	78.9	5.03	1390	5.03	38.2	5.02

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

fession kramer

Jessica Kramer Project Assistant

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# Certificate of Analysis Summary 628192

Tetra Tech- Midland, Midland, TX Project Name: White Fed 1H Flowline



Date Received in Lab:Wed Jun-19-19 11:40 amReport Date:25-JUN-19Project Manager:Jessica Kramer

	Lab Id:	628192-0	13	628192-0	14	628192-0	15	628192-0	16	628192-0	17	628192-0	18
Analysis Requested	Field Id:	AH #5(1-1	.5')	AH #5 (2-2	2.5')	AH #5 (3-3	3.5')	AH #6 (0-	1')	AH #6 (1-	1.5')	AH #6 (2-2	2.5')
Analysis Kequestea	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-18-19 0	0:00	Jun-18-19 (	0:00	Jun-18-19 0	0:00	Jun-18-19 0	0:00	Jun-18-19 (	00:00	Jun-18-19 0	0:00
Chloride by EPA 300	Extracted:	Jun-19-19 1	9:00	Jun-19-19 1	9:00	Jun-19-19 1	9:00	Jun-19-19 1	9:00	Jun-19-19 1	9:00	Jun-19-19 1	9:30
	Analyzed:	Jun-19-19 2	2:30	Jun-19-19 2	2:36	Jun-19-19 2	2:41	Jun-19-19 2	2:47	Jun-19-19 2	2:52	Jun-19-19 2	3:42
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		4260	25.2	8060	50.3	7510	49.5	63.4	5.04	96.5	5.04	1700	25.0

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fession kramer

Jessica Kramer Project Assistant



# Certificate of Analysis Summary 628192

Tetra Tech- Midland, Midland, TX Project Name: White Fed 1H Flowline



Date Received in Lab:Wed Jun-19-19 11:40 amReport Date:25-JUN-19Project Manager:Jessica Kramer

	Lab Id:	628192-0	19	628192-0	20	628192-0	21	628192-0	22	628192-0	23	628192-0	24
Analysis Requested	Field Id:	AH #6 (3-3	5.5')	AH #6 (4-4	1.5')	AH #6 (5-5	5.5')	AH #7 (0-	-1')	AH #7 (1-	1.5')	AH #7 (2-2	2.5')
Analysis Kequestea	Depth:												
	Matrix:	SOIL											
	Sampled:	Jun-18-19 0	0:00	Jun-18-19 0	0:00	Jun-18-19 0	0:00	Jun-18-19 0	00:00	Jun-18-19 (	00:00	Jun-18-19 0	00:00
Chloride by EPA 300	Extracted:	Jun-19-19 1	9:30										
	Analyzed:	Jun-19-19 2	3:48	Jun-19-19 2	3:53	Jun-19-19 2	3:59	Jun-20-19 0	0:15	Jun-20-19 (	0:21	Jun-20-19 1	9:27
	Units/RL:	mg/kg	RL										
Chloride		11100	100	11600	100	6650	49.5	716	4.96	1890	25.0	5570	24.9

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fession kenner

Jessica Kramer Project Assistant

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# Certificate of Analysis Summary 628192

Tetra Tech- Midland, Midland, TX Project Name: White Fed 1H Flowline



Date Received in Lab:Wed Jun-19-19 11:40 amReport Date:25-JUN-19Project Manager:Jessica Kramer

	Lab Id:	628192-0	25	628192-0	26	628192-0	27	628192-0	28	628192-0	29	628192-0	30
Analysis Requested	Field Id:	AH #8 (0-	-1')	AH #8 (1-	1.5')	AH #8 (2-2	2.5')	AH #9 (0-	-1')	AH #9 (1-	1.5')	AH #9 (2-2	2.5')
Analysis Kequeslea	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-18-19 (	0:00	Jun-18-19 (	00:00	Jun-18-19 0	0:00	Jun-18-19 (	0:00	Jun-18-19 (	00:00	Jun-18-19 0	00:00
Chloride by EPA 300	Extracted:	Jun-19-19 1	9:30	Jun-19-19 1	9:30	Jun-19-19 1	9:30	Jun-19-19 1	9:30	Jun-19-19 1	9:30	Jun-19-19 1	9:30
	Analyzed:	Jun-20-19 (	0:26	Jun-20-19 0	0:43	Jun-20-19 0	0:32	Jun-20-19 0	0:37	Jun-20-19 (	0:59	Jun-20-19 0	1:05
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		48.6	5.01	542	5.00	12300	100	2110	25.0	7050	50.0	5920	50.3

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Jessica Kramer Project Assistant

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# Certificate of Analysis Summary 628192

Tetra Tech- Midland, Midland, TX Project Name: White Fed 1H Flowline



Date Received in Lab:Wed Jun-19-19 11:40 amReport Date:25-JUN-19Project Manager:Jessica Kramer

	Lab Id:	628192-0	31	628192-0	32	628192-0	33	628192-0	34	628192-0	35	628192-0	36
Analysis Requested	Field Id:	AH #9 (3-	3.5')	AH #10 (0	)-1')	AH #10 (1-	1.5')	AH #10 (2-	2.5')	AH #11 (0	)-1')	AH #11 (1-	1'.5)
Analysis Kequeslea	Depth:												
	Matrix:	SOIL											
	Sampled:	Jun-18-19 (	00:00	Jun-18-19 0	00:00								
Chloride by EPA 300	Extracted:	Jun-19-19	19:30	Jun-19-19 1	9:30								
	Analyzed:	Jun-20-19 (	01:22	Jun-20-19 0	1:27	Jun-20-19 0	1:33	Jun-20-19 0	1:38	Jun-20-19 (	01:44	Jun-20-19 0	01:49
	Units/RL:	mg/kg	RL										
Chloride		9710	49.6	72.3	5.03	454	5.02	623	5.05	52.2	5.05	501	5.00

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# Certificate of Analysis Summary 628192

Tetra Tech- Midland, Midland, TX Project Name: White Fed 1H Flowline



Date Received in Lab:Wed Jun-19-19 11:40 amReport Date:25-JUN-19Project Manager:Jessica Kramer

	Lab Id:	628192-0	37	628192-0	38	628192-0	39	628192-0	40	628192-0	041	628192-0	42
Analysis Requested	Field Id:	AH #11 (2-	2.5')	AH #11 (3-	3.5')	AH #12 (0	-1')	AH #12 (1-	1.5')	AH #13 ((	)-1')	AH #13 (1-	1.5')
Analysis Kequeslea	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	Jun-18-19 0	00:00	Jun-18-19 (	00:00	Jun-18-19 (	0:00	Jun-18-19 0	0:00	Jun-18-19 (	00:00	Jun-18-19 0	0:00
Chloride by EPA 300	Extracted:	Jun-19-19 1	9:30	Jun-20-19 1	8:30	Jun-20-19 1	8:30	Jun-20-19 1	8:30	Jun-20-19 1	8:30	Jun-20-19 1	8:30
	Analyzed:	Jun-20-19 (	01:55	Jun-21-19 (	3:36	Jun-21-19 0	3:44	Jun-21-19 0	3:51	Jun-21-19 (	)3:58	Jun-21-19 0	4:05
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		8560	49.8	3330	25.2	15.8	4.99	1470	5.04	37.4	5.04	34.2	4.96

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fession kenner

Jessica Kramer Project Assistant



# Certificate of Analysis Summary 628192

Tetra Tech- Midland, Midland, TX Project Name: White Fed 1H Flowline



Date Received in Lab:Wed Jun-19-19 11:40 amReport Date:25-JUN-19Project Manager:Jessica Kramer

	Lab Id:	628192-0	43	628192-0	44	628192-0	45			
Analysis Requested	Field Id:	AH #13 (2-	2.5')	AH #14 (0	)-1')	AH #14 (1-	1.5')			
Anuiysis Kequesieu	Depth:									
	Matrix:	SOIL		SOIL		SOIL				
	Sampled:	Jun-18-19 (	00:00	Jun-18-19 (	00:00	Jun-18-19 0	0:00			
Chloride by EPA 300	Extracted:	Jun-21-19 1	0:50	Jun-21-19 1	.0:50	Jun-21-19 1	0:50			
	Analyzed:	Jun-21-19 1	1:14	Jun-21-19 1	1:29	Jun-21-19 1	1:34			
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL			
Chloride		635	4.99	24.9	5.03	6.77	4.96			

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# **Flagging Criteria**



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- 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 LimitSDLSample Detection LimitLOD Limit of Detection
- PQL Practical Quantitation Limit MQL Method Quantitation Limit LOQ Limit of Quantitation
- DL Method Detection Limit
- NC Non-Calculable

SMP Clie	ent Sample	BLK	Method Blank	
BKS/LCS	Blank Spike/Laboratory Control Sample	BKSD/LCSD	Blank Spike Duplicate/Labo	ratory 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: White Fed 1H Flowline**

Work Orde	<b>r #:</b> 628192							Pro	ject ID:	212C-MD-	01765	
Analyst:	SPC	D	ate Prepar	red: 06/19/20	19			Date A	nalyzed: (	06/19/2019		
Lab Batch ID	<b>Sample:</b> 7680344	-1-BKS	Bate	<b>h #:</b> 1					Matrix: S	Solid		
Units:	mg/kg		BLAN	K/BLANK	SPIKE /	BLANK	SPIKE DUP	LICATE	RECOV	ERY STUI	DY	
Anal	Chloride by EPA 300 ytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	-	<5.00	250	256	102	250	256	102	0	90-110	20	
Analyst:	SPC	D	ate Prepar	ed: 06/19/20	19	4		Date A	nalyzed: (	)6/19/2019	•	·'
Lab Batch ID	<b>Sample:</b> 7680345	-1-BKS	Batc	<b>h #:</b> 1					Matrix:	Solid		
Units:	mg/kg		BLAN	K /BLANK	SPIKE /	BLANK S	SPIKE DUP	LICATE	RECOV	ERY STUI	DY	
Anal	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
Chloride		<5.00	250	256	102	250	256	102	0	90-110	20	
Analyst:	SPC		ate Prepar	red: 06/20/20	19			Date A	nalvzed: (	06/21/2019		
Lab Batch ID	<b>Sample:</b> 7680431		-	<b>h #:</b> 1					Matrix:			
Units:	mg/kg		BLAN	K /BLANK	SPIKE /	BLANK S	SPIKE DUP	LICATE	RECOV	ERY STUI	DY	
Anal	Chloride by EPA 300 ytes	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride		<0.858	250	245	98	250	246	98	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**

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.

#### **Project Name: White Fed 1H Flowline**

Work Order	·#: 628192								Proj	ect ID:	212C-MD-(	01765	
Analyst:	SPC		D	ate Prepar	ed: 06/21/20	19			Date A	nalyzed: (	06/21/2019		
Lab Batch ID	: 3093264	Sample: 7680446-1-	-BKS	Batch	<b>#:</b> 1					Matrix: S	Solid		
Units:	mg/kg			BLAN	K/BLANK	SPIKE / ]	BLANK S	SPIKE DUP	LICATE	RECOV	ERY STUI	DY	
Analy	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
Analy	les												
Chloride			<5.00	250	246	98	250	238	95	3	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: White Fed 1H Flowline**



.

Work Order # :	628192						Project ID	: 212C-1	MD-0176	5		
Lab Batch ID:	3092993	QC- Sample ID:	628187	-003 S	Ba	tch #:	1 Matrix	: Soil				
Date Analyzed:	06/19/2019	Date Prepared:	06/19/2	019	Ar	alyst: S	SPC					
<b>Reporting Units:</b>	mg/kg		Μ	ATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	FE REC	OVERY	STUDY		
	Chloride by EPA 300	Parent Sample Result	Spike Added	Spiked Sample Result	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Analytes	[A]	Added [B]	[C]	%K [D]	E]	Kesult [F]	%K [G]	70	%0K	%KPD	
Chloride		4.75	248	242	96	248	242	96	0	90-110	20	
Lab Batch ID:	3092993	QC- Sample ID:	628192	-007 S	Ba	tch #:	1 Matrix	: Soil				
Date Analyzed:	06/19/2019	Date Prepared:	06/19/2	019	Ar	alyst: S	SPC					
<b>Reporting Units:</b>	mg/kg		Μ	ATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	FE REC	OVERY	STUDY		
	Chloride by EPA 300	Parent Sample Result	Spike Added	Spiked Sample Result [C]	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Analytes	[A]	[B]	[C]	<sup>7</sup> 0K [D]	E]	Kesult [F]	50K [G]	70	70K	70KPD	
Chloride		171	248	408	96	248	410	96	0	90-110	20	
Lab Batch ID:	3092996	QC- Sample ID:	628192	-024 S	Ba	tch #:	1 Matrix	: Soil		·	-	
Date Analyzed:	06/20/2019	Date Prepared:	06/19/2	019	Ar	alyst: S	SPC					
<b>Reporting Units:</b>	mg/kg		Μ	ATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	FE REC	OVERY	STUDY		
	Chloride by EPA 300	Parent Sample Result	Spike Added	Spiked Sample Result	Spiked Sample %R	Spike Added	Duplicate Spiked Sample	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Analytes	[A]	Added [B]	[C]	%K [D]	E]	Result [F]	%K [G]	-70	-/0K	70KPD	
Chloride		5570	249	5760	76	249	5760	76	0	90-110	20	X

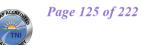
Matrix Spike Percent Recovery  $[D] = 100^{*}(C-A)/B$ Relative Percent Difference RPD =  $200^{*}|(C-F)/(C+F)|$  Matrix Spike Duplicate Percent Recovery [G] = 100\*(F-A)/E

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



# Form 3 - MS / MSD Recoveries

#### **Project Name: White Fed 1H Flowline**



.

Work Order # :	628192						Project II	<b>):</b> 212C-1	MD-0176	5		
Lab Batch ID:	3092996	QC- Sample ID:	628192	-026 S	Ba	tch #:	1 Matrix	k: Soil				
Date Analyzed:	06/20/2019	Date Prepared:	06/19/2	019	Ar	alyst: S	SPC					
<b>Reporting Units:</b>	mg/kg		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
	Chloride by EPA 300	Parent Sample Result	Spike Added	Spiked Sample Result [C]	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Analytes	[A]	[B]	[0]	[D]	[E]	Kesun [F]	[G]	/0	701	70KI D	
Chloride		542	250	789	99	250	786	98	0	90-110	20	
Lab Batch ID:	3093095	QC- Sample ID:	628450	-021 S	Ba	tch #:	1 Matrix	k: Soil				
Date Analyzed:	06/21/2019	Date Prepared:	06/20/2	019	Ar	alyst: S	SPC					
<b>Reporting Units:</b>	mg/kg		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
	Chloride by EPA 300	Parent Sample Result	Spike Added	Spiked Sample Result [C]	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Analytes	[A]	[B]		/0K [D]	[E]	Kesun [F]	[G]	/0	70K	70KI D	
Chloride		46.0	249	299	102	249	299	102	0	90-110	20	
Lab Batch ID:	3093095	QC- Sample ID:	628450	-031 S	Ba	tch #:	1 Matrix	<b>x:</b> Soil				
Date Analyzed:	06/21/2019	Date Prepared:	06/20/2	019	Ar	alyst: S	SPC					
<b>Reporting Units:</b>	mg/kg		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
	Chloride by EPA 300	Parent Sample Result	Spike Added	Spiked Sample Result [C]	Spiked Sample %R	Spike Added	Duplicate Spiked Sample Result [F]	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Analytes	[A]	Added [B]		%R [D]	E]	Kesuit [F]	%K [G]	70	70 K	70KFD	
Chloride		16.8	249	277	104	249	277	104	0	90-110	20	

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

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



# Form 3 - MS / MSD Recoveries

#### **Project Name: White Fed 1H Flowline**



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Work Order # :	628192						Project II	<b>):</b> 212C-1	MD-0176	5		
Lab Batch ID:	3093264	QC- Sample ID:	628192	-043 S	Ba	tch #:	1 Matrix	k: Soil				
Date Analyzed:	06/21/2019	Date Prepared:	06/21/2	019	Ar	alyst: S	SPC					
<b>Reporting Units:</b>	mg/kg		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
	Chloride by EPA 300	Parent Sample Result	Spike	Spiked Sample Result	Spiked Sample %R	Spike	Duplicate Spiked Sample	Spiked Dup. %R	RPD %	Control Limits %R	Control Limits %RPD	Flag
	Analytes	[A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%K [G]	70	% <b>K</b>	%KPD	
Chloride		635	250	821	74	250	822	75	0	90-110	20	X
Lab Batch ID:	3093264	QC- Sample ID:	628335	-006 S	Ba	tch #:	1 Matrix	<b>k:</b> Soil				
Date Analyzed:	06/21/2019	Date Prepared:	06/21/2	019	Ar	alyst: S	SPC					
<b>Reporting Units:</b>	mg/kg		N	IATRIX SPIK	E / MAT	RIX SPI	KE DUPLICA	TE REC	OVERY	STUDY		
	Chloride by EPA 300	Parent Sample Result	Spike	Spiked Sample Result	Sample	Spike	Duplicate Spiked Sample	Spiked Dup.	RPD	Control Limits	Control Limits	Flag
	Analytes	[A]	Added [B]	[C]	%R [D]	Added [E]	Result [F]	%R [G]	%	%R	%RPD	
Chloride		141	252	386	97	252	386	97	0	90-110	20	

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

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

eived by	<u>OCD: 7</u>	/14/202			7, <b>A</b> 1	И	_																Page	e 127 of 22
	Relinquished by:	Helinguished by:	Own	Pelinguished by:	Þ	A	Þ	A	A	A	A	A	A	LAB USE	LAB #		Comments:	Receiving Laboratory:	invoice to:	Project Location: (county, state)	Project Name:	Client Name:	7	Analysis Requ
	Date: Time:	6/12/19 1400	marly 6/18/6		AH #4 (0-1')	AH #3 (1-1.5')	AH #3 (0-1')	AH #2 (1-1.5')	AH #2 (0-1')	AH #1 (3-3.5')	AH #1 (2-2.5')	AH #1 (1-1.5')	AH #1 (0-1')		SAMPLE IDENTIFICATION			ary: Xenco	COG - Ike Taverez	Eddy Co, NM	White Fed 1H Flowline	COG	Tetra Tech, Inc.	e 127 of 2. Analysis Request of Chain of Custody Record
ORIGINAL COPY	Received by:	Fool TX	Heceived	6/18/2019	6/18/2019	6/18/2019	6/18/2019	6/18/2019	6/18/2019	6/18/2019	6/18/2019	6/18/2019	6/18/2019	DATE TIME	YEAR: 2019	SAMPLING		Sampler Signature:		Project #:		Site Manager:		
	Date: Time:	6/18/19 1400			×	X X	X X	X X	X X	X X	X X	X X	x	WATEP SOIL HCL HNO <sub>3</sub> ICE None	1 3 	MATRIX PRESERVATIVI METHOD		Conner Moehring		212C-MD-01765		Mike Carmona	901W Wall Street, Ste 100 Midland, Texas 79705 Tel (432) 682-4559 Fax (432) 682-3946	
(Circle) H		C Sample Temperature	1350 OI	 Z	1 N	1 N	1 N	1 N	1 N	N I	1 N	1 N		# CONTA FILTERE BTEX 80 TPH TX1 TPH 801	D (Y 21B	III IRS (/N) BTE (Ext to			MRO)					U DO
HAND DELIVERS FEDEX U														PAH 827 Total Met TCLP Me TCLP Vol TCLP Ser RCI GC/MS V GC/MS S	OC als A tals / latiles mi Vo	Ag As B Ag As E s platiles 3260B /	a Cd Cr I 3a Cd Cr 624	Pb Se Pb Se	Hg			ANALYSIS R		Jon and
UPS Tracking #:	Special Report Limits or TRRP Report	RUSH: Same Day 24 hr 48 hr Rush Charges Authorized			×	×	×	×	×	X	X	X	×	PCB's 80 NORM PLM (Asb Chloride Chloride General \ Anion/Ca	082 / Desto St Wate	608 s) ulfate er Cher	TDS nistry (se		ched li	st)				Page
	ž	72 hr	)								Pa	age		Hold f 25					Final	1.000				

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	Relinquished by:		Jolinni lichard h	Hellinguistien by:											ULAB USE	LAB #		Comments:	Receiving Laboratory:	Invoice to:	Project Location: (county, state)	Project Name:	Client Name:	F	nalysis Re
	by:) Date: Time:	6/18/19 1400		my marling 6/18/12 13	AH #6 (4-4.5')	AH #6 (3-3.5')	AH #6 (2-2.5')	AH #6 (1-1.5')	AH #6 (0-1')	AH #5 (3-3.5')	AH #5 (2-2.5')	AH #5 (1-1.5')	AH #5 (0-1')	AH #4 (2-2.5')		SAMPLE IDENTIFICATION			vratory: Xenco	COG - Ike Taverez	": Eddy Co, NM	White Fed 1H Flowline	COG	h,	28 2 Analysis Request of Chain of Custody Record
ORIGINAL COPY	Received by:	XJVOZ	Donoliund But	S O Hecelved D	6/18/2019	6/18/2019	6/18/2019	6/18/2019	6/18/2019	6/18/2019	6/18/2019	6/18/2019	6/18/2019	6/18/2019	DATE	YEAR: 2019	SAMPLING		Sampler Signature:		Project #:		Site Manager:	Inc.	
Y	Date: Time:	6 R 19 1400	2	Date: lime:		×	×	X X	X X	X X		X X	X	x	WATE SOIL HCL HNO <sub>3</sub> ICE None	R	MATRIX PRESERVATIVE METHOD		Conner Moehring		212C-MD-01765		Mike Carmona	901W Wall Street, Ste 100 Midland,Texas 79705 Tel (432) 682-459 Fax (432) 682-3946	
(Circle) ATAND DEL				INIV	1 Z	1 Z	1 N	1 N	1 N	1 N	1 N	1 N	1 N	1 N	PAH 82 Total Me	ED (Y 021B (1005 15M ( 70C etals A	RS /N) BTE (Ext to GRO - g As B	X 8260E C35) - DRO - ( a Cd Cr	ORO - Pb Se	Hg					CNDC, N
(Circle) HAND DELIVERED FEDEX UPS Tracking #:		Image: Construction of the second s		REMARKS:		X	x						X	X	TCLP V TCLP S RCI GC/MS	vol. 8 Semi. 3082 /	s Diatiles 260B / Vol. 8: 608	3a Cd Cr 624 270C/623 TDS		Hg			ANALYSIS REQUEST		M Page
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				marky	AH #9 (2-2.5')	AH #9 (1-1.5')	AH #9 (0-1')	AH #8 (2-2.5')	AH #8 (1-1.5')	AH #8 (0-1')	AH #7 (2-2.5')	AH #7 (1-1.5')	AH #7 (0-1')	AH #6 (5-5.5')		4S			ry: Xenco	cog -	Eddy Co, NM	White Fe	COG	Tetra Tech
	Date:	6/18/19	Date:	Date: し/18/いへ	7.											SAMPLE IDENTIFICATION				Ike Taverez	MM	White Fed 1H Flowline		Tetra Tech,
	Time:	1400	Time.	Time: 1350												ON								ch, Inc.
	Received by:	Fool 5	Beceived hy	Received by:	6/18/2019	6/18/2019	6/18/2019	6/18/2019	6/18/2019	6/18/2019	6/18/2019	6/18/2019	6/18/2019	6/18/2019	DATE	YEAR: 2019	SAMPLING		Sampler Signature:		Project #:		Site Manager:	
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	Date: T	5		Alvalla		×	×	×	×	×	×	×	×	×	HCL HNO₃ ICE		PRESERV, METHO		Conner Moehring		212C-MD-01765		nona	901W Wall Street, Ste 100 Midland, Texas 79705 Tel (432) 682-4559 Fax (432) 682-3946
	Time:	1400	ime:	Time: えてつ										_	None		IESERVATIVE METHOD		ng		бі			5 100
		)			1 N	-1 Z	1 N	N L	1 N	1 N	1 N	1 N	1 N	1 N	# CONT									
(Circle	0	Samp		pome											BTEX 80	)21B	BTE	X 8260E	3					
(Circle) HAND DELIVERED	0.S[0, 5	Sample Temperature		LAB USE											TPH 80 <sup>-</sup> PAH 82	5M 70C	(GRO ·	- DRO - C				(	5	
		ture													Total Me TCLP Me TCLP Vo	etals	Ag As I						A	
			<b>N</b>												TCLP Se							ç		
FEDEX U	pecial	Rush Charges Authorized	ËNH.	STA				_							GC/MS \ GC/MS S				5					
UPS T	Report	larges	Same	STANDARD											PCB's 8				_					
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ŧ	or TRI	z+ III ized	94 hr		×	×	×	×	×	×	×	×	×	×	Chloride Chloride		ulfate	TDS						
	Special Report Limits or TRRP Report		48 hr												General Anion/Ca				ee atta	iched li	st)		-	
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	Relinquished by:		alinguishadhu-	Relinquished by:			/	,							LAB USE )	LAB #		Comments:	Receiving Laboratory:	invoice to:	Project Location: (county, state)	Project Name:	Client Name:	A	Analysis Req
	, Date: Time:	6/18/19 (400	$\int \int \int \frac{\partial f(x)}{\partial x} dx = \int \frac{\partial f(x)}{\partial x}$	Date: Time:	AH #12 (1-1.5')	AH #12 (0-1')	AH #11 (3-3.5')	AH #11 (2-2.5')	AH #11 (1-1.5')	AH #11 (0-1')	AH #10 (2-2.5')	AH #10 (1-1.5')	AH #10 (0-1')	AH #9 (3-3.5')		SAMPLE IDENTIFICATION	ζ.		ory: Xenco	COG - Ike Taverez	Eddy Co, NM	White Fed 1H Flowline	COG	Tetra Tech, Inc.	130 of 222 Analysis Request of Chain of Custody Record
ORIGINAL COPY	Received by:	Food by:	Providence of the second secon	Received by:	6/18/2019	6/18/2019	6/18/2019	6/18/2019	6/18/2019	6/18/2019	6/18/2019	6/18/2019	6/18/2019	6/18/2019	DATE	YEAR: 2019	SAMPLING		Sampler Signature:		Project #:		Site Manager:		
~	Date:	01/8/10	61 810	Date:	×	×	×	×	×	×	×	×	×	×	WATEF SOIL HCL HNO3	<b> </b>	MATRIX		Conner Moehring		212C-MD-01765		Mike Carmona	901W Wall Street, Ste 100 Midland, Texas 79705 Tel (432) 682-4559 Fax (432) 692-3946	
	Time:	1.400		Ţ	× 1	× 1	X 11	X 1	X 11	X 1	X 1	X 11	X 11	1	ICE None # CONT,	AINE			hring		1765			Ste 100 79705 4559 3946	
(Circle) MAND DELIVERED FEDEX UPS Tracking #:	しつ (いう Decial Report Limits or TRRP Report	B B Bush Charges Authorized	Same Dav 94 br	REMARK											FILTERE BTEX 80 TPH TX TPH 801 PAH 827 Total Met TCLP Met TCLP Vo TCLP Se RCI GC/MS V GC/MS V GC/MS V GC/MS V GC/MS V Chloride Chloride General Anion/Ca	221B 1005 5M ( 70C alls A tatiles mi Vc fol. 8 semi. 082 / 0082 / 5 St Wwate	g As B g As B Ag As E s olatiles (260B / Vol. 8 608 s) ulfate or Cher	- DRO - ( la Cd Cr Ba Cd Cr 624 270C/62 TDS mistry (s	DRO - Pb Se Pb Se	Hg Hg	st)		ANALYSIS REQUEST		UDELAD Page 4 of 5
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eived by	CD: Relinquished by		Pelinquished b	all () ann	37.4	M								LAB #		Comments:	Receiving Laboratory:	Invoice to:	Project Location: (county, state)	Project Name:	Client Name:	Pag	<i>x 131 o</i> Analysis Re
	yd Date: Time:	6/18	Pate: Time:	mujarly 6/18/19 1350			ALL #14 (1-1.3)		AH #14 (0.1")	AH #13 (2-2.5')	AH #13 (1-1.5')	AH #13 (0-1')		SAMPLE IDENTIFICATION			atory: Xenco	COG - Ike Taverez	Eddy Co, NM	White Fed 1H Flowline	COG	Tetra Tech, Inc.	Analysis Request of Chain of Custody Record
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γο	Date: Time:	6/18/19	Date: Tin	6/R/19 1			×				X	×	WATEF SOIL HCL HNO <sub>3</sub> ICE	2	MATRIX PRESERVATIVE METHOD		Conner Moehring		212C-MD-01765		Mike Carmona	901W Wall Street, Ste 100 Midland, Texas 79705 Tel (422) 682-4559 Fax (432) 682-3946	
	ne:	(OD)		1350					1 - 2 - 2	-1 Z	1 N	1 N	None # CONT/ FILTERE BTEX 80	ED (Y	RS /N)	X 82601						ō	
(Circle) HAND DELIVERED	5.930	Sample Lemperature	Terreture	ONLY									TPH TX TPH 801 PAH 827 Total Met TCLP Me TCLP Vo	5M ( 70C als A	(Ext to GRO - g As B Ag As E	C35) DRO - ( a Cd Cr	DRO - I Pb Se	Hg			(Circle )		J. J.
FEDEX UPS	Special Report L	Rush Charges Authorized	X RUSH: Same Day										TCLP Se RCI GC/MS V GC/MS S PCB's 80 NORM	mi Vc ′ol. 8 Semi. )82 /	260B / Vol. 82		5				ANALYSIS REQUEST		101 ar
Tracking #:	Special Report Limits or TRRP Report	orized	24 hr 48 hr (				×			×	×	×	PLM (Ast Chloride Chloride General Anion/Ca	Si Wate	ılfate r Cher		ee atta	ched li	st)		IST		Page 5
		(	72 hr	}									Hold								:		е Г

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Received by OCD: 7/14/2020 11:22:37 AM





#### Prelogin/Nonconformance Report- Sample Log-In

Client: Tetra Tech- Midland Acceptable Temperature Range: 0 - 6 degC Air and Metal samples Acceptable Range: Ambient Date/ Time Received: 06/19/2019 11:40:00 AM Temperature Measuring device used : R8 Work Order #: 628192 Comments Sample Receipt Checklist .3 #1 \*Temperature of cooler(s)? #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

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

Analyst:

PH Device/Lot#:

#18 Water VOC samples have zero headspace?

Checklist completed by: Brianna Teel

Date: 06/19/2019

N/A

Checklist reviewed by: Jession Vramer

Jessica Kramer

Date: 06/19/2019



# Analytical Report 660363

for

**Tetra Tech- Midland** 

**Project Manager: Mike Carmona** 

COG White Federal Com #1H (5.13.19)

#### 212C-MD-02125

#### 05.05.2020

Collected By: Client



1211 W. Florida Ave Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122): Texas (T104704215-20-32), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054) Oklahoma (2019-058), North Carolina (681), Arkansas (19-037-0)

> Xenco-Dallas (EPA Lab Code: TX01468): Texas (TX104704295-19-23), Arizona (AZ0809)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-19-16) 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 (T104704534-19-5) Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757) Xenco-Tampa: Florida (E87429), North Carolina (483)

Eddy County, New Mexico



**Project Id:** 

**Project Location:** 

**Contact:** 

# Certificate of Analysis Summary 660363

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Tetra Tech- Midland, Midland, TX

Project Name: COG White Federal Com #1H (5.13.19)

 Date Received in Lab:
 Fri 05.01.2020 09:09

 Report Date:
 05.05.2020 18:15

Project Manager: Jessica Kramer

	Lab Id:	660363-0	01	660363-00	02	660363-00	)3	660363-00	)4	660363-0	05	660363-00	)6
Analysis Requested	Field Id:	AH-1 (0-1	)	AH-1 (1'-1.	5')	AH-1 (2'-2.5	)	AH-1 (2.5'-3	')	AH-2 (0-1'	)	AH-2 (1'-1.5'	)
Analysis Requested	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	04.30.2020 0	00:00	04.30.2020 0	00:00	04.30.2020 (	00:00	04.30.2020 0	00:00	04.30.2020	00:00	04.30.2020 0	00:00
Chloride by EPA 300	Extracted:	05.02.2020	12:15	05.02.2020 1	2:15	05.02.2020 1	2:15	05.02.2020	2:15	05.02.2020	12:15	05.02.2020 1	2:15
	Analyzed:	05.02.2020	18:05	05.02.2020 1	8:10	05.02.2020 1	8:26	05.02.2020	8:31	05.02.2020	18:37	05.02.2020 1	8:42
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		29.2	5.00	21.5	5.00	16.2	5.00	36.5	5.00	387	5.00	1100	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.

fession kenner

Jessica Kramer Project Manager

Eddy County, New Mexico



**Project Id:** 

**Project Location:** 

**Contact:** 

# Certificate of Analysis Summary 660363

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Tetra Tech- Midland, Midland, TX

Project Name: COG White Federal Com #1H (5.13.19)

 Date Received in Lab:
 Fri 05.01.2020 09:09

 Report Date:
 05.05.2020 18:15

Project Manager: Jessica Kramer

	Lab Id:	660363-0	07	660363-00	)8	660363-00	)9	660363-0	10	660363-0	11	660363-01	12
Analysis Requested	Field Id:	AH-2 (2'-2.	5')	AH-3 (0-1	')	AH-3 (1'-1.5	)	AH-4 (0-1)		AH-4 (1'-1.5	5')	AH-4 (2'-2.5'	)
Analysis Requested	Depth:												
	Matrix:	SOIL		SOIL									
	Sampled:	04.30.2020 (	00:00	04.30.2020 0	00:00	04.30.2020 (	00:00	04.30.2020 (	00:00	04.30.2020	00:00	04.30.2020 0	00:00
Chloride by EPA 300	Extracted:	05.02.2020	12:15	05.02.2020 1	2:15	05.02.2020	2:15	05.02.2020	4:15	05.02.2020	14:15	05.02.2020 1	4:15
	Analyzed:	05.02.2020	18:47	05.02.2020 1	8:52	05.02.2020	8:58	05.02.2020	9:29	05.02.2020	19:45	05.02.2020 1	9:50
	Units/RL:	mg/kg	RL	mg/kg	RL								
Chloride		2740	25.0	15.0	5.00	20.1	5.00	177	4.97	456	5.01	1910	25.1

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

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Jessica Kramer Project Manager

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Eddy County, New Mexico



**Project Id:** 

**Project Location:** 

**Contact:** 

# Certificate of Analysis Summary 660363

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Tetra Tech- Midland, Midland, TX

Project Name: COG White Federal Com #1H (5.13.19)

 Date Received in Lab:
 Fri 05.01.2020 09:09

 Report Date:
 05.05.2020 18:15

Project Manager: Jessica Kramer

	Lab Id:	660363-0	13	660363-01	14	660363-0	15	660363-0	16	660363-0	17	660363-01	18
Analysis Requested	Field Id:	AH-4 (3'-3.	AH-4 (3'-3.5')		AH-5 (0-1')		AH-5 (1'-1.5')		AH-5 (2'-2.5')		AH-5 (3'-3.5')		
Analysis Requested	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	04.30.2020	00:00	04.30.2020 0	00:00	04.30.2020 0	00:00	04.30.2020 0	00:00	04.30.2020	00:00	04.30.2020 0	00:00
Chloride by EPA 300	Extracted:	05.02.2020	14:15	05.02.2020 1	4:15	05.02.2020	4:15	05.02.2020	4:15	05.02.2020	14:15	05.02.2020 1	4:15
	Analyzed:	05.02.2020	19:56	05.02.2020 2	20:01	05.02.2020 2	20:17	05.02.2020 2	20:22	05.02.2020	20:27	05.02.2020 2	20:33
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		2540	24.8	13.6	4.98	21.9	5.02	8.67	4.99	6.60	5.04	14.1	5.05

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fession kenner

Jessica Kramer Project Manager

Eddy County, New Mexico



**Project Id:** 

**Project Location:** 

**Contact:** 

# Certificate of Analysis Summary 660363

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Tetra Tech- Midland, Midland, TX

Project Name: COG White Federal Com #1H (5.13.19)

 Date Received in Lab:
 Fri 05.01.2020 09:09

 Report Date:
 05.05.2020 18:15

Project Manager: Jessica Kramer

	Lab Id:	660363-0	19	660363-02	20	660363-02	21	660363-02	22	660363-0	23	660363-02	24
Analysis Requested	Field Id:	AH-6 (1'-1.	AH-6 (1'-1.5')		AH-6 (2'-2.5')		AH-6 (3-3.5')		AH-6 (4'-4.5')		AH-7 (0-1')		') (
Analysis Requested	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	04.30.2020	00:00	04.30.2020 (	00:00	04.30.2020 (	00:00	04.30.2020 (	00:00	04.30.2020	00:00	04.30.2020 0	00:00
Chloride by EPA 300	Extracted:	05.02.2020	14:15	05.02.2020	14:15	05.02.2020	4:15	05.02.2020	4:15	05.02.2020	14:15	05.02.2020 1	14:15
	Analyzed:	05.02.2020	20:38	05.02.2020 2	20:43	05.02.2020 2	20:59	05.02.2020 2	21:04	05.02.2020	21:20	05.02.2020 2	21:25
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		21.4	5.00	48.1	5.03	14.1	5.00	10.0	4.99	10.7	5.01	18.6	5.05

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

fession kenner

Jessica Kramer Project Manager

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Eddy County, New Mexico



**Project Id:** 

**Project Location:** 

**Contact:** 

# Certificate of Analysis Summary 660363

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Tetra Tech- Midland, Midland, TX

Project Name: COG White Federal Com #1H (5.13.19)

 Date Received in Lab:
 Fri 05.01.2020 09:09

 Report Date:
 05.05.2020 18:15

Project Manager: Jessica Kramer

	Lab Id:	660363-0	25	660363-02	26	660363-02	27	660363-02	28	660363-0	29	660363-03	30
Analysis Requested	Field Id:	AH-7 (2'-2.	AH-7 (2'-2.5')		AH-8 (0-1')		AH-8 (1'-1.5')		AH-8 (2'-2.5')		AH-8 (3'-3.5')		') (
Analysis Requested	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	04.30.2020	00:00	04.30.2020 (	00:00	04.30.2020 0	00:00	04.30.2020 (	00:00	04.30.2020	00:00	04.30.2020 0	00:00
Chloride by EPA 300	Extracted:	05.02.2020	14:15	05.02.2020 1	4:15	05.02.2020	14:15	05.02.2020	14:15	05.02.2020	14:15	05.02.2020 1	4:32
	Analyzed:	05.02.2020	21:31	05.02.2020 2	21:36	05.02.2020	21:41	05.02.2020	21:46	05.02.2020	21:52	05.02.2020 2	22:23
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		22.8	5.00	6.43	4.99	9.31	4.99	9.85	4.99	12.7	4.98	2180	24.9

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.

fession kenner

Jessica Kramer Project Manager

Eddy County, New Mexico



**Project Id:** 

**Project Location:** 

**Contact:** 

# Certificate of Analysis Summary 660363

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Tetra Tech- Midland, Midland, TX

Project Name: COG White Federal Com #1H (5.13.19)

 Date Received in Lab:
 Fri 05.01.2020 09:09

 Report Date:
 05.05.2020 18:15

Project Manager: Jessica Kramer

	Lab Id:	660363-0	31	660363-03	32	660363-03	33	660363-03	34	660363-0	35	660363-03	36
Analysis Requested	Field Id:	AH-9 (0-1	AH-9 (0-1')		AH-9 (1'-1.5')		AH-9 (2'-2.5')		AH-9 (3'-3.5')		AH-10 (0-1')		5')
Analysis Requested	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	04.30.2020	00:00	04.30.2020 (	00:00	04.30.2020 (	00:00	04.30.2020 0	00:00	04.30.2020	00:00	04.30.2020 0	00:00
Chloride by EPA 300	Extracted:	05.02.2020	14:32	05.02.2020 1	4:32	05.02.2020 1	4:32	05.02.2020	14:32	05.02.2020	14:32	05.02.2020 1	4:32
	Analyzed:	05.02.2020	22:39	05.02.2020 2	22:44	05.02.2020 2	2:50	05.02.2020 2	22:55	05.02.2020	23:11	05.02.2020 2	23:16
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		21.7	4.97	7.54	4.96	<4.96	4.96	6.24	5.02	6.77	5.00	16.8	4.96

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fession kenner

Jessica Kramer Project Manager

Eddy County, New Mexico



**Project Id:** 

**Project Location:** 

**Contact:** 

# Certificate of Analysis Summary 660363

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Tetra Tech- Midland, Midland, TX

Project Name: COG White Federal Com #1H (5.13.19)

 Date Received in Lab:
 Fri 05.01.2020 09:09

 Report Date:
 05.05.2020 18:15

Project Manager: Jessica Kramer

	Lab Id:	660363-0	37	660363-03	38	660363-0	39	660363-04	40	660363-0	41	660363-04	42
Analysis Requested	Field Id:	AH-10 (2'-2	AH-10 (2'-2.5')		AH-11 (0-1')		AH-11 (1'-1.5')		AH-11 (2'-2.5')		AH-11 (3'-3.5')		)
Analysis Requested	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	04.30.2020 0	00:00	04.30.2020 (	00:00	04.30.2020 (	00:00	04.30.2020 (	00:00	04.30.2020	00:00	04.30.2020 0	00:00
Chloride by EPA 300	Extracted:	05.02.2020	14:32	05.02.2020	14:32	05.02.2020	4:32	05.02.2020 1	4:32	05.02.2020	14:32	05.02.2020 1	4:32
	Analyzed:	05.02.2020	23:21	05.02.2020 2	23:26	05.02.2020	23:32	05.02.2020 2	23:37	05.02.2020	23:53	05.02.2020 2	23:58
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		20.4	5.01	11.7	4.97	14.6	4.97	15.2	4.99	16.8	5.04	12.1	5.05

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fession kenner

Jessica Kramer Project Manager

Eddy County, New Mexico



**Project Id:** 

**Project Location:** 

**Contact:** 

# Certificate of Analysis Summary 660363

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Tetra Tech- Midland, Midland, TX

Project Name: COG White Federal Com #1H (5.13.19)

 Date Received in Lab:
 Fri 05.01.2020 09:09

 Report Date:
 05.05.2020 18:15

Project Manager: Jessica Kramer

	Lab Id:	660363-04	43	660363-04	14	660363-04	45	660363-04	46	660363-0	47	
Analysis Requested	Field Id:	AH-12 (1'-1	.5')	AH-12 (2'-2	.5')	AH-13 (0-1'	)	AH-13 (1'-1.5	5')	AH-14 (0-1	י ר	
Analysis Requested	Depth:											
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		
	Sampled:	04.30.2020 (	00:00	04.30.2020 0	00:00	04.30.2020 (	00:00	04.30.2020 (	00:00	04.30.2020	00:00	
Chloride by EPA 300	Extracted:	05.02.2020	4:32	05.02.2020 1	4:32	05.02.2020 1	4:32	05.02.2020	14:32	05.02.2020	14:32	
	Analyzed:	05.03.2020 (	00:14	05.03.2020 0	0:19	05.03.2020 (	00:24	05.03.2020 (	00:30	05.03.2020	00:35	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	
Chloride		14.4	5.03	17.4	4.99	25.3	4.95	16.6	5.05	12.4	4.99	

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.

fession Vermer

Jessica Kramer Project Manager



05.05.2020

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

Reference: XENCO Report No(s): **660363 COG White Federal Com #1H (5.13.19)** 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) 660363. 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. 660363 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,

Jession Kramer

Jessica Kramer Project Manager

A Small Business and Minority Company

#### Received by OCD: 7/14/2020 11:22:37 AM



#### Sample Id

AH-1 (0-1')
AH-1 (1'-1.5')
AH-1 (2'-2.5')
AH-1 (2.5'-3')
AH-2 (0-1')
AH-2 (1'-1.5')
AH-2 (2'-2.5')
AH-3 (0-1')
AH-3 (1'-1.5')
AH-4 (0-1')
AH-4 (1'-1.5')
AH-4 (2'-2.5')
AH-4 (3'-3.5')
AH-5 (0-1')
AH-5 (1'-1.5')
AH-5 (2'-2.5')
AH-5 (3'-3.5')
AH-6 (0-1')
AH-6 (1'-1.5')
AH-6 (2'-2.5')
AH-6 (3-3.5')
AH-6 (4'-4.5')
AH-7 (0-1')
AH-7 (1'-1.5')
AH-7 (2'-2.5')
AH-8 (0-1')
AH-8 (1'-1.5')
AH-8 (2'-2.5')
AH-8 (3'-3.5')
AH-8 (4'-4.5')
AH-9 (0-1')
AH-9 (1'-1.5')
AH-9 (2'-2.5')
AH-9 (3'-3.5')
AH-10 (0-1')
AH-10 (1'-1.5')
AH-10 (2'-2.5')
AH-11 (0-1')
AH-11 (1'-1.5')
AH-11 (2'-2.5')
AH-11 (3'-3.5')
AH-12 (0-1')
AH-12 (1'-1.5')
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# Sample Cross Reference 660363

#### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

Matrix	Date Collected	Sample Depth	Lab Sample Id
S	04.30.2020 00:00		660363-001
S	04.30.2020 00:00		660363-002
S	04.30.2020 00:00		660363-003
S	04.30.2020 00:00		660363-004
S	04.30.2020 00:00		660363-005
S	04.30.2020 00:00		660363-006
S	04.30.2020 00:00		660363-007
S	04.30.2020 00:00		660363-008
S	04.30.2020 00:00		660363-009
S	04.30.2020 00:00		660363-010
S	04.30.2020 00:00		660363-011
S	04.30.2020 00:00		660363-012
S	04.30.2020 00:00		660363-013
S	04.30.2020 00:00		660363-014
S	04.30.2020 00:00		660363-015
S	04.30.2020 00:00		660363-016
S	04.30.2020 00:00		660363-017
S	04.30.2020 00:00		660363-018
S	04.30.2020 00:00		660363-019
S	04.30.2020 00:00		660363-020
S	04.30.2020 00:00		660363-021
S	04.30.2020 00:00		660363-022
S	04.30.2020 00:00		660363-023
S	04.30.2020 00:00		660363-024
S	04.30.2020 00:00		660363-025
S	04.30.2020 00:00		660363-026
S	04.30.2020 00:00		660363-027
S	04.30.2020 00:00		660363-028
S	04.30.2020 00:00		660363-029
S	04.30.2020 00:00		660363-030
S	04.30.2020 00:00		660363-031
S	04.30.2020 00:00		660363-032
S	04.30.2020 00:00		660363-033
S	04.30.2020 00:00		660363-034
S	04.30.2020 00:00		660363-035
S	04.30.2020 00:00		660363-036
S	04.30.2020 00:00		660363-037
S	04.30.2020 00:00		660363-038
S	04.30.2020 00:00		660363-039
S	04.30.2020 00:00		660363-040
S	04.30.2020 00:00		660363-041
S	04.30.2020 00:00		660363-042
S	04.30.2020 00:00		660363-043

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#### Received by OCD: 7/14/2020 11:22:37 AM



AH-12 (2'-2.5') AH-13 (0-1') AH-13 (1'-1.5') AH-14 (0-1')

### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

S	04.30.2020 00:00	660363-044
S	04.30.2020 00:00	660363-045
S	04.30.2020 00:00	660363-046
S	04.30.2020 00:00	660363-047

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### **CASE NARRATIVE**

Client Name: Tetra Tech- Midland Project Name: COG White Federal Com #1H (5.13.19)

Project ID: 212C-MD-02125 Work Order Number(s): 660363 
 Report Date:
 05.05.2020

 Date Received:
 05.01.2020

#### Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None



### **Certificate of Analytical Results 660363**

#### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

Sample Id: <b>AH-1 (0-1')</b> Lab Sample Id: 660363-001		Matrix: Date Col	Soil lected: 04.30.2020 00:00	)	Date Received	Date Received:05.01.2020 09:09		
Analytical Method: Chloride by EPA Tech: SPC	300				Prep Method: % Moisture:	E300P		
Analyst: SPC Seq Number: 3124966		Date Prep	p: 05.02.2020 12:15	i	Basis:	Wet Weight		
Parameter	Cas Number	Result	RL	Units	Analysis Da	te Flag	Dil	
Chloride	16887-00-6	29.2	5.00	mg/kg	05.02.2020 18	:05	1	

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16887-00-6 29.2

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## **Certificate of Analytical Results 660363**

#### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

Sample Id:         AH-1 (1'-1.5')           Lab Sample Id:         660363-002	Matrix Date C	x: Soil Collected: 04.30.2020 (		Date Received:05.0	01.2020 09	:09
Analytical Method:Chloride by EPA 300Tech:SPCAnalyst:SPCSeq Number:3124966	Date F	Prep: 05.02.2020		Prep Method: E30 % Moisture: Basis: We	00P t Weight	
Parameter Cas Nu	mber Result	RL	Units	Analysis Date	Flag	Dil
Chloride 16887-00	)-6 21.5	5.00	mg/kg	05.02.2020 18:10		1



## **Certificate of Analytical Results 660363**

#### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

Sample Id: Lab Sample Id	<b>AH-1 (2'-2.5')</b> d: 660363-003		Matrix: Date Col	Soil lected: 04.30.2020 00:	00	Date Received:	Date Received:05.01.2020 09:09		
Analytical Me Tech:	ethod: Chloride by EPA SPC	300				Prep Method: % Moisture:	E300P		
Analyst:	SPC		Date Prej	p: 05.02.2020 12:	15	Basis:	Wet Weight		
Seq Number:	3124966								
Parameter		Cas Number	Result	RL	Units	Analysis Da	te Flag	Dil	
Chloride		16887-00-6	16.2	5.00	mg/kg	05.02.2020 18	:26	1	

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## **Certificate of Analytical Results 660363**

#### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

Sample Id:         AH-1 (2.5'-3')           Lab Sample Id:         660363-004		Matrix: Date Coll	Soil lected: 04.30.2020 00:00	)	Date Received	1:05.01.2020	09:09
Analytical Method: Chloride by EPA Tech: SPC Analyst: SPC Seq Number: 3124966	300	Date Prep	p: 05.02.2020 12:15	i	Prep Method: % Moisture: Basis:	E300P Wet Weigh	ıt
Parameter	Cas Number	Result	RL	Units	Analysis Da	ate Flag	Dil
Chloride	16887-00-6	36.5	5.00	mg/kg	05.02.2020 18	3:31	1

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### **Certificate of Analytical Results 660363**

#### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

Sample Id:         AH-2 (0-1')           Lab Sample Id:         660363-005		Matrix: Date Coll	Soil lected: 04.30.2020 00:00	)	Date Received:	05.01.2020 09	:09
Analytical Method: Chloride by EP Tech: SPC	A 300				Prep Method: 3 % Moisture:	E300P	
Analyst: SPC Seq Number: 3124966		Date Prep	o: 05.02.2020 12:15	5	Basis:	Wet Weight	
Parameter	Cas Number	Result	RL	Units	Analysis Dat	e Flag	Dil
Chloride	16887-00-6	387	5.00	mg/kg	05.02.2020 18:	37	1



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## **Certificate of Analytical Results 660363**

#### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

Sample Id:         AH-2 (1'-1.5')           Lab Sample Id:         660363-006		Matrix: Date Coll	Soil lected: 04.30.2020 00:00	)	Date Received	1:05.01	.2020 09:	09
Analytical Method: Chloride by EPA Tech: SPC Analyst: SPC Seq Number: 3124966	300	Date Prep	p: 05.02.2020 12:15	i	Prep Method: % Moisture: Basis:		P Weight	
Parameter	Cas Number	Result	RL	Units	Analysis Da	ate	Flag	Dil
Chloride	16887-00-6	1100	5.00	mg/kg	05.02.2020 18	8:42		1



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## **Certificate of Analytical Results 660363**

#### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

Sample Id:         AH-2 (2'-2.5')           Lab Sample Id:         660363-007		Matrix: Date Coll	Soil ected: 04.30.2020 00:00	)	Date Received	09		
Analytical Method:Chloride by EPATech:SPCAnalyst:SPCSeq Number:3124966	300	Date Prep	: 05.02.2020 12:15		Prep Method: % Moisture: Basis:		)P Weight	
Parameter	Cas Number	Result	RL	Units	Analysis D	ate	Flag	Dil
Chloride	16887-00-6	2740	25.0	mg/kg	05.02.2020 1	8:47		5

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### **Certificate of Analytical Results 660363**

#### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

Sample Id:         AH-3 (0-1')           Lab Sample Id:         660363-008		Matrix: Date Coll	Soil lected: 04.30.2020 00:00	)	Date Received	:09	
Analytical Method: Chloride by EPA Tech: SPC	A 300				Prep Method: % Moisture:	E300P	
Analyst: SPC Seq Number: 3124966		Date Prep	b: 05.02.2020 12:15	5	Basis:	Wet Weight	
Parameter	Cas Number	Result	RL	Units	Analysis Da	te Flag	Dil
Chloride	16887-00-6	15.0	5.00	mg/kg	05.02.2020 18	:52	1



## **Certificate of Analytical Results 660363**

#### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

Sample Id: Lab Sample Id	<b>AH-3 (1'-1.5')</b> d: 660363-009		Matrix: Date Col	Soil lected: 04.30.2020 00:0	)0	Date Received	Date Received:05.01.2020 09:09		
Analytical Me Tech:	ethod: Chloride by EPA SPC	300				Prep Method: % Moisture:	E300P		
Analyst:	SPC		Date Prej	p: 05.02.2020 12:1	15	Basis:	Wet Weight		
Seq Number:	3124966								
Parameter		Cas Number	Result	RL	Units	Analysis Da	te Flag	Dil	
Chloride		16887-00-6	20.1	5.00	mg/kg	05.02.2020 18	:58	1	

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# **Certificate of Analytical Results 660363**

#### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

Sample Id: Lab Sample Id	<b>AH-4 (0-1')</b> d: 660363-010		Matrix: Date Col	lected	Soil 1: 04.30.2020 00:00		Date Received	Date Received:05.01.2020 09:0		
Analytical Me Tech:	ethod: Chloride by EPA 3 SPC	300					Prep Method: % Moisture:	E30	0P	
Analyst:	SPC		Date Pre	p:	05.02.2020 14:15		Basis:	Wet	Weight	
Seq Number:	3124967									
Parameter		Cas Number	Result	RL		Units	Analysis D	ate	Flag	Dil

Chloride

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16887-00-6 177

4.97

mg/kg 05.02.2020 19:29

1



## **Certificate of Analytical Results 660363**

#### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

Sample Id:     AH-4 (1'-1.5')     Matrix:     Soil     Date Received:05.01.2020 09:09       Lab Sample Id:     660363-011     Date Collected: 04.30.2020 00:00     Prep Method:     E300P       Analytical Method:     Chloride by EPA 300     Prep Method:     E300P       Tech:     SPC     % Moisture:       Analyst:     SPC     Date Prep:     05.02.2020 14:15     Basis:     Wet Weight       Seq Number:     3124967     Cas Number     Result     RL     Units     Analysis Date     Flag     D	Chloride		16887-00-6	456	5.01	ma/ka	05 02 2020 19:4	15	1	
Lab Sample Id: 660363-011       Date Collected: 04.30.2020 00:00         Analytical Method: Chloride by EPA 300       Prep Method: E300P         Tech:       SPC         Analyst:       SPC         Date Prep:       05.02.2020 14:15         Basis:       Wet Weight	Parameter		Cas Number	Result	RL	Units	Analysis Date	e Flag	Dil	
Lab Sample Id: 660363-011       Date Collected: 04.30.2020 00:00         Analytical Method: Chloride by EPA 300       Prep Method: E300P         Tech:       SPC       % Moisture:         SPC       % Moisture:	Seq Number:	3124967								
Lab Sample Id: 660363-011Date Collected: 04.30.2020 00:00Analytical Method: Chloride by EPA 300Prep Method: E300P	Analyst:	SPC		Date Pro	ep: 05.02.2	020 14:15	Basis: V	Wet Weight		
Lab Sample Id:         660363-011         Date Collected:         04.30.2020         00:00	Tech:	SPC					% Moisture:			
	Analytical M	ethod: Chloride by E	EPA 300				Prep Method: H	E300P		
Sample Id:         AH-4 (1'-1.5')         Matrix:         Soil         Date Received:05.01.2020 09:09	Lab Sample I	d: 660363-011		Date Co	llected: 04.30.2	020 00:00				
	Sample Id:	AH-4 (1'-1.5')		Matrix:	Soil		Date Received:0	)5.01.2020 09	:09	

Chloride

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16887-00-6 456

5.01

mg/kg 05.02.2020 19:45

1

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# **Certificate of Analytical Results 660363**

#### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

Sample Id: AH-4 ( Lab Sample Id: 660363	( <b>2'-2.5'</b> ) 3-012	Matrix: Date Colle	Soil ected: 04.30.2020 00:00		Date Received	1:05.01.	.2020 09:	09
Analytical Method: Cl Tech: SPC	hloride by EPA 300				Prep Method: % Moisture:	E300F	þ	
Analyst: SPC		Date Prep	: 05.02.2020 14:15		Basis:	Wet V	Veight	
Seq Number: 312496	7							
Parameter	Cas Number	Result	RL	Units	Analysis Da	ate	Flag	Dil
Chloride	16887-00-6	1910	25.1	mg/kg	05.02.2020 19	9:50		5

Chloride

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## **Certificate of Analytical Results 660363**

#### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

Sample Id: AH-4 ( Lab Sample Id: 660363	<b>(3'-3.5'</b> ) 3-013	Matrix: Date Colle	Soil ected: 04.30.2020 00:00	)	Date Received	1:05.01	.2020 09:	09
Analytical Method: Cl Tech: SPC Analyst: SPC Seq Number: 312496'		Date Prep:	05.02.2020 14:15		Prep Method: % Moisture: Basis:		P Weight	
Parameter	Cas Number	Result	RL	Units	Analysis Da	ate	Flag	Dil
Chloride	16887-00-6	2540	24.8	mg/kg	05.02.2020 19	9:56		5

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Final 1.000



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### **Certificate of Analytical Results 660363**

#### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

Sample Id: <b>AH-5 (0-1')</b> Lab Sample Id: 660363-014	•			)	Date Received:05.01.2020 09:0			
Analytical Method: Chloride by EPA Tech: SPC Analyst: SPC Seg Number: 3124967	300	Date Prep	o: 05.02.2020 14:1:	5	Prep Method: % Moisture: Basis:		P Weight	
Parameter Chloride	<b>Cas Number</b> 16887-00-6	Result	<b>RL</b>	Units mg/kg	<b>Analysis Da</b> 05.02.2020 20		Flag	<b>Dil</b>



# **Certificate of Analytical Results 660363**

#### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

Sample Id: Lab Sample Id	<b>AH-5 (1'-1.5')</b> d: 660363-015		Matrix: Date Col	lected	Soil 1: 04.30.2020 00:00		Date Received:05.01.2020			09
Analytical Me Tech: Analyst:	ethod: Chloride by EPA 3 SPC SPC	300	Date Pre		05.02.2020 14:15		Prep Method: % Moisture: Basis:		)P Weight	
Seq Number:			Date Trej	<b>.</b>	05.02.2020 14.15		Dusis.	wet	Weight	
Parameter		Cas Number	Result	RL		Units	Analysis D	ate	Flag	Dil

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16887-00-6 **21.9** 

5.02

mg/kg 05.02.2020 20:17

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## **Certificate of Analytical Results 660363**

#### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

Sample Id: <b>AH-5 (2'-2.5')</b> Lab Sample Id: 660363-016		Matrix:SoilDate Received:05.0Date Collected:04.30.202000:00					9:09
Analytical Method: Chloride by E Tech: SPC Analyst: SPC Seg Number: 3124967	PA 300	Date Pre	p: 05.02.2020 14:	15	Prep Method: E30 % Moisture: Basis: We	00P et Weight	
Parameter Chloride	Cas Number	Result 8.67	<b>RL</b> 4.99	Units mg/kg	Analysis Date	Flag	<b>Dil</b>

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## **Certificate of Analytical Results 660363**

#### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

Sample Id: AH-5 Lab Sample Id: 6603	5 ( <b>3'-3.5'</b> ) 53-017	Matrix: Date Collec	Soil cted: 04.30.2020 00:00		Date Received	1:05.01	1.2020 09:	09
Analytical Method: Tech: SPC	Chloride by EPA 300				Prep Method: % Moisture:	E300	P	
Analyst: SPC Seq Number: 31249	67	Date Prep:	05.02.2020 14:15		Basis:	Wet '	Weight	
Parameter	Cas Number	Result	RL	Units	Analysis D	ate	Flag	Dil
Chloride	16887-00-6	6.60	5.04	mg/kg	05.02.2020 20	0:27		1

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## **Certificate of Analytical Results 660363**

#### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

Chloride		16887-00-6	14.1	5.05	mg/kg	05.02.2020 20:	33	1
Parameter		Cas Number	Result	RL	Units	Analysis Dat	e Flag	Dil
Seq Number:	3124967							
Analyst:	SPC		Date Pre	p: 05.02.2020 14:1	5	Basis:	Wet Weight	
Tech:	SPC					% Moisture:		
Analytical M	ethod: Chloride by EF	PA 300				Prep Method:	E300P	
Lab Sample I	ld: 660363-018		Date Collected: 04.30.2020 00:00					
Sample Id: <b>AH-6 (0-1')</b>			Matrix:	Soil		9:09		

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16887-00-6 14.1

5.05

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# **Certificate of Analytical Results 660363**

#### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

Parameter		Cas Number	Result	RL		Units	Analysis D	ate	Flag	Dil
Seq Number:	3124967									
Analyst:	SPC		Date Pre	ep:	05.02.2020 14:15		Basis:	Wet	Weight	
Tech:	SPC						% Moisture:			
Analytical Me	ethod: Chloride by EPA	300					Prep Method:	E300	OP	
Lab Sample I	Sample Id: 660363-019 Date Collected: 04.30.2020 00:00									
Sample Id:	AH-6 (1'-1.5')		Matrix:		Soil		Date Received	1:05.0	1.2020 09:	09

Chloride

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21.4

16887-00-6

5.00

mg/kg 05.02.2020 20:38



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## **Certificate of Analytical Results 660363**

#### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

Sample Id: AH-6 ( Lab Sample Id: 660363	Matrix: Date Coll	Soil ected: 04.30.2020 00:0	00	Date Received:05.01.2020 09:09			
Analytical Method: Ch Tech: SPC	nloride by EPA 300				Prep Method: % Moisture:	E300P	
Analyst: SPC		Date Prep	o: 05.02.2020 14:1	.5	Basis:	Wet Weigh	t
Seq Number: 3124967	7						
Parameter	Cas Number	Result	RL	Units	Analysis Da	ate Flag	Dil
Chloride	16887-00-6	48.1	5.03	mg/kg	05.02.2020 20	):43	1

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### **Certificate of Analytical Results 660363**

#### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

Sample Id:         AH-6 (3-3.5')           Lab Sample Id:         660363-021		Matrix:SoilDate Received:05.01.20Date Collected:04.30.202000:00					9:09
Analytical Method: Chloride by EPA Tech: SPC	A 300				Prep Method: % Moisture:	E300P	
Analyst: SPC		Date Prep	05.02.2020 14:15	5	Basis:	Wet Weight	
Seq Number: 3124967 Parameter	Cas Number	Result	RL	Units	Analysis Da	te Flag	Dil
Chloride	16887-00-6	14.1	5.00	mg/kg	05.02.2020 20	:59	1

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5.00

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### **Certificate of Analytical Results 660363**

#### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

Sample Id: Lab Sample I	<b>AH-6 (4'-4.5')</b> d: 660363-022		Matrix: Soil Date Collected: 04.30.2020 00:00			Date Received:05.01.2020 09:09			
Analytical Me Tech:	ethod: Chloride by EPA SPC	. 300				Prep Method: % Moisture:	E300P		
Analyst:	SPC		Date Prep	o: 05.02.2020 14	4:15	Basis:	Wet Weight		
Seq Number: Parameter	3124967	Cas Number	Result	RL	Units	Analysis Dat	te Flag	Dil	
Chloride		16887-00-6	10.0	4.99	mg/kg	05.02.2020 21:		1	

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### **Certificate of Analytical Results 660363**

#### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

Sample Id:         AH-7 (0-1')           Lab Sample Id:         660363-023		Matrix: Soil Date Collected: 04.30.2020 00:00			Date Received:05.01.2020 09:0			
Analytical Method: Chloride by EPA 30 Tech: SPC	0				Prep Method: % Moisture:	E300	P	
Analyst: SPC Seq Number: 3124967		Date Prep:	05.02.2020 14:15		Basis:	Wet	Weight	
Parameter	Cas Number	Result	RL	Units	Analysis Da	ate	Flag	Dil
Chloride 10	5887-00-6	10.7	5.01	mg/kg	05.02.2020 2	1:20		1

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### **Certificate of Analytical Results 660363**

#### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

Sample Id:         AH-7 (1'-1.5')           Lab Sample Id:         660363-024			Matrix: Date Colle	Soil ected: 04.30.2020 00:00		Date Received:05.01.2020 09:09			
Analytical Metho Tech: SI	d: Chloride by EPA	300				Prep Method: % Moisture:	E300	P	
Analyst: SI			Date Prep	05.02.2020 14:15		Basis:	Wet	Weight	
Seq Number: 31	24967								
Parameter		Cas Number	Result	RL	Units	Analysis Da	ate	Flag	Dil
Chloride		16887-00-6	18.6	5.05	mg/kg	05.02.2020 2	1:25		1

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# **Certificate of Analytical Results 660363**

#### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

Parameter		Cas Number	Result	RL		Units	Analysis D	ate	Flag	Dil
Seq Number:	3124967									
Analyst:	SPC		Date Pre	p:	05.02.2020 14:15		Basis:	Wet	Weight	
Tech:	SPC						% Moisture:			
Analytical Me	ethod: Chloride by EPA	300					Prep Method:	E30	0P	
Lab Sample Id	d: 660363-025		Date Col	llected	1: 04.30.2020 00:00					
Sample Id:	AH-7 (2'-2.5')		Matrix:		Soil		Date Received	d:05.0	1.2020 09:	09

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16887-00-6 22.8

5.00

mg/kg 05.02.2020 21:31

31



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## **Certificate of Analytical Results 660363**

#### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

Sample Id:         AH-8 (0-1')           Lab Sample Id:         660363-026		Matrix: Date Coll	Soil ected: 04.30.2020 00:00	)	Date Received	1:05.01	.2020 09:	09
Analytical Method: Chloride by EPA Tech: SPC	300				Prep Method: % Moisture:	E300I	Р	
Analyst: SPC Seq Number: 3124967		Date Prep	o: 05.02.2020 14:15	5	Basis:	Wet W	Weight	
Parameter	Cas Number	Result	RL	Units	Analysis Da	ate	Flag	Dil
Chloride	16887-00-6	6.43	4.99	mg/kg	05.02.2020 21	1:36		1



# **Certificate of Analytical Results 660363**

#### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

Parameter		Cas Number	Result	RL		Units	Analysis D	ate	Flag	Dil
Seq Number:	3124967									
Analyst:	SPC		Date Pre	p:	05.02.2020 14:15		Basis:	Wet	Weight	
Tech:	SPC						% Moisture:			
Analytical Me	ethod: Chloride by EPA	300					Prep Method:	E30	0P	
Lab Sample Id	d: 660363-027		Date Col	lected	1: 04.30.2020 00:00					
Sample Id:	AH-8 (1'-1.5')		Matrix:		Soil		Date Received	1:05.0	1.2020 09:	09

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16887-00-6 **9.31** 

4.99

mg/kg 05.02.2020 21:41

1

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## **Certificate of Analytical Results 660363**

#### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

Sample Id:         AH-8 (2'-2.5')           Lab Sample Id:         660363-028		Matrix: Date Coll	Soil ected: 04.30.2020 00:00	)	Date Received	1:05.01	.2020 09:	09
Analytical Method:Chloride by EPA 3Tech:SPCAnalyst:SPCSeq Number:3124967	300	Date Prep	p: 05.02.2020 14:15	ī	Prep Method: % Moisture: Basis:		P Weight	
Parameter	Cas Number	Result	RL	Units	Analysis D	ate	Flag	Dil
Chloride	16887-00-6	9.85	4.99	mg/kg	05.02.2020 2	1:46		1

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## **Certificate of Analytical Results 660363**

#### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

Sample Id: Lab Sample Id	<b>AH-8 (3'-3.5')</b> l: 660363-029		Matrix: Date Col	Soil lected: 04.30.2020 00:0	0	Date Received:	05.01.2020 09	9:09
Analytical Me Tech:	thod: Chloride by EPA	A 300				Prep Method: % Moisture:	E300P	
Analyst:	SPC		Date Pre	p: 05.02.2020 14:1	5	,	Wet Weight	
Seq Number:	3124967							
Parameter		Cas Number	Result	RL	Units	Analysis Dat	te Flag	Dil
Chloride		16887-00-6	12.7	4.98	mg/kg	05.02.2020 21:	:52	1

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4.98



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## **Certificate of Analytical Results 660363**

#### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

Sample Id: Lab Sample Id	<b>AH-8 (4'-4.5')</b> d: 660363-030		Matrix: Date Col	Soil lected: 04.30.2020 00:00	)	Date Received	1:05.01	.2020 09:	09
Analytical Me Tech:	ethod: Chloride by EPA SPC	300				Prep Method: % Moisture:	E300]	Р	
Analyst: Seg Number:	SPC 3124968		Date Prej	p: 05.02.2020 14:32	2	Basis:	Wet V	Weight	
Parameter		Cas Number	Result	RL	Units	Analysis D	ate	Flag	Dil
Chloride		16887-00-6	2180	24.9	mg/kg	05.02.2020 22	2:23		5



### **Certificate of Analytical Results 660363**

#### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

Chloride		16887-00-6	21.7	4.97	mg/kg	05.02.2020 22:	:39	1
Parameter		Cas Number	Result	RL	Units	Analysis Dat	te Flag	Dil
Seq Number:	3124968							
Analyst:	SPC		Date Pre	p: 05.02.2020 14:3	2	Basis:	Wet Weight	
Tech:	SPC					% Moisture:		
Analytical M	ethod: Chloride by EF	PA 300				Prep Method:	E300P	
Lab Sample I	d: 660363-031		Date Col	lected: 04.30.2020 00:0	0			
Sample Id:	AH-9 (0-1')		Matrix:	Soil		Date Received:	05.01.2020 09	9:09

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4.97

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## **Certificate of Analytical Results 660363**

#### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

Chloride		16887-00-6	7 54	4	96	ma/ka	05 02 2020 2	2.14		1
Parameter		Cas Number	Result	RL		Units	Analysis D	ate	Flag	Dil
Seq Number:	3124968									
Analyst:	SPC		Date Pro	ep:	05.02.2020 14:32		Basis:	Wet	Weight	
Tech:	SPC						% Moisture:			
Analytical Me	ethod: Chloride by E	PA 300					Prep Method:	E300	)P	
Lab Sample I	d: 660363-032		Date Co	ollected	: 04.30.2020 00:00					
Sample Id:	AH-9 (1'-1.5')		Matrix:		Soil		Date Received	d:05.0	1.2020 09	:09

Chloride

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16887-00-6 7.54

4.96

mg/kg 05.02.2020 22:44

1

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## **Certificate of Analytical Results 660363**

#### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

Sample Id: AH-9 Lab Sample Id: 66036	( <b>2'-2.5'</b> ) 3-033	Matrix: Date Colle	Soil ected: 04.30.2020 00:00	)	Date Received:	05.01.2020 0	9:09
Analytical Method: C Tech: SPC	Chloride by EPA 300				Prep Method: % Moisture:	E300P	
Analyst: SPC Seq Number: 312496	58	Date Prep	: 05.02.2020 14:32	2	Basis:	Wet Weight	
Parameter	Cas Number	Result	RL	Units	Analysis Dat	te Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	05.02.2020 22:	:50 U	1

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## **Certificate of Analytical Results 660363**

#### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

Sample Id:         AH-9 (3'-3.5')           Lab Sample Id:         660363-034		Matrix: Date Coll	Soil lected: 04.30.2020 00:0	0	Date Received:05	5.01.2020 09	9:09
Analytical Method: Chloride by E Tech: SPC Analyst: SPC	EPA 300	Date Prep	o: 05.02.2020 14:3	2	Prep Method: E3 % Moisture: Basis: W	800P et Weight	
Seq Number: 3124968 Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	6.24	5.02	mg/kg	05.02.2020 22:55	0	1



## **Certificate of Analytical Results 660363**

#### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

Sample Id: Lab Sample Id	<b>AH-10 (0-1')</b> d: 660363-035		Matrix: Date Col	Soil lected: 04.30.2020 00:0	0	Date Received:	05.01.2020 09	9:09
Analytical Me Tech:	ethod: Chloride by EPA	A 300				Prep Method: % Moisture:	E300P	
Analyst:	SPC		Date Pre	p: 05.02.2020 14:3	2	,	Wet Weight	
Seq Number:	3124968							
Parameter		Cas Number	Result	RL	Units	Analysis Dat	te Flag	Dil
Chloride		16887-00-6	6.77	5.00	mg/kg	05.02.2020 23:	:11	1

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5.00



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## **Certificate of Analytical Results 660363**

### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

Sample Id: Lab Sample Id	<b>AH-10</b> ( <b>1'-1.5'</b> ) l: 660363-036		Matrix: Date Col	Soil lected: 04.3	l 30.2020 00:00		Date Received	1:05.0	1.2020 09:	09
Analytical Me Tech:	thod: Chloride by EPA	300					Prep Method: % Moisture:	E300	)P	
Analyst:	SPC		Date Prej	p: 05.0	02.2020 14:32		Basis:	Wet	Weight	
Seq Number:	3124968									
Parameter		Cas Number	Result	RL		Units	Analysis D	ate	Flag	Dil
Chloride		16887-00-6	16.8	4.96		mg/kg	05.02.2020 2	3:16		1

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### **Certificate of Analytical Results 660363**

### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

Sample Id:         AH-10 (2'-2.5')           Lab Sample Id:         660363-037		Matrix: Date Col	Soil lected: 04.30.2020 00:	00	Date Received:05	5.01.2020 09	9:09
Analytical Method: Chloride by E Tech: SPC	PA 300				Prep Method: E. % Moisture:	300P	
Analyst: SPC		Date Prej	p: 05.02.2020 14:	32	,	et Weight	
Seq Number: 3124968							
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	20.4	5.01	mg/kg	05.02.2020 23:21		1



# **Certificate of Analytical Results 660363**

### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

Parameter		Cas Number	Result	RL		Units	Analysis D	ate	Flag	Dil
Seq Number:	3124968									
Analyst:	SPC		Date Prep	p:	05.02.2020 14:32		Basis:	Wet	Weight	
Tech:	SPC						% Moisture:			
Analytical Me	thod: Chloride by EPA	300					Prep Method:	E300	)P	
Lab Sample Io	d: 660363-038		Date Col	lected	1: 04.30.2020 00:00					
Sample Id:	AH-11 (0-1')		Matrix:		Soil		Date Received	1:05.0	1.2020 09:	09

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16887-00-6 11.7

4.97

mg/kg 05.02.2020 23:26

1

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## **Certificate of Analytical Results 660363**

### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

Sample Id: Lab Sample I	<b>AH-11 (1'-1.5')</b> d: 660363-039		Matrix: Date Col	Sc lected: 04	il .30.2020 00:00		Date Received	1:05.0	1.2020 09:	09
Analytical Me Tech:	ethod: Chloride by EPA SPC	300					Prep Method: % Moisture:	E300	)P	
Analyst:	SPC		Date Prej	p: 05	.02.2020 14:32		Basis:	Wet	Weight	
Seq Number:	3124968									
Parameter		Cas Number	Result	RL		Units	Analysis Da	ate	Flag	Dil
Chloride		16887-00-6	14.6	4.97		mg/kg	05.02.2020 23	3:32		1

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### **Certificate of Analytical Results 660363**

### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

Sample Id:         AH-11 (2'-2.5')           Lab Sample Id:         660363-040		Matrix: Date Collec	Soil ted: 04.30.2020 00:00		Date Received	1:05.01	.2020 09:0	)9
Analytical Method: Chloride by EPA 300 Tech: SPC	0				Prep Method: % Moisture:	E300	Р	
Analyst: SPC		Date Prep:	05.02.2020 14:32		Basis:	Wet V	Weight	
Seq Number: 3124968								
Parameter	Cas Number	Result	RL	Units	Analysis Da	ate	Flag	Dil
Chloride 16	5887-00-6	15.2	4.99	mg/kg	05.02.2020 23	3:37		1

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## **Certificate of Analytical Results 660363**

### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

Sample Id: <b>AH-11 (3'-3.5')</b> Lab Sample Id: 660363-041		Matrix: Date Col	Soil lected: 04.30.2020 00:0	00	Date Received:05.	01.2020 09	9:09
Analytical Method: Chloride by E Tech: SPC Analyst: SPC Seg Number: 3124968	PA 300	Date Pre	p: 05.02.2020 14:	32	Prep Method: E30 % Moisture: Basis: We	00P t Weight	
Parameter Chloride	Cas Number 16887-00-6	Result	<b>RL</b>	Units mg/kg	Analysis Date	Flag	<b>Dil</b>



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### **Certificate of Analytical Results 660363**

### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

Sample Id: Lab Sample Id: G	<b>AH-12 (0-1')</b> 660363-042		Matrix: Date Colle	Soil ected: 04.30.2020 00:00	)	Date Received	1:05.01	.2020 09:	09
5	od: Chloride by EPA	300				Prep Method: % Moisture:	E300	Р	
	BPC		Date Prep	: 05.02.2020 14:32	!	Basis:	Wet	Weight	
Seq Number: 3	124968								
Parameter		Cas Number	Result	RL	Units	Analysis Da	ate	Flag	Dil
Chloride		16887-00-6	12.1	5.05	mg/kg	05.02.2020 23	3:58		1

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### **Certificate of Analytical Results 660363**

### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

Sample Id: Lab Sample Id	<b>AH-12 (1'-1.5')</b> : 660363-043		Matrix: Date Coll	Soil ected: 04.30	0.2020 00:00		Date Received	1:05.0	1.2020 09:	09
2	hod: Chloride by EPA SPC	300					Prep Method: % Moisture:	E300	)P	
	SPC		Date Prep	o: 05.02	2.2020 14:32		Basis:	Wet	Weight	
Seq Number:	3124968									
Parameter		Cas Number	Result	RL		Units	Analysis D	ate	Flag	Dil
Chloride		16887-00-6	14.4	5.03		mg/kg	05.03.2020 0	0:14		1



# **Certificate of Analytical Results 660363**

### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

Parameter		Cas Number	Result	RL		Units	Analysis 1	Data	Flag	Dil
Seq Number:	3124968									
Analyst:	SPC		Date Pre	ep:	05.02.2020 14:32		Basis:	Wet	Weight	
Tech:	SPC						% Moisture:			
Analytical Me	ethod: Chloride by EP	A 300					Prep Method	l: E30	0P	
Lab Sample I	d: 660363-044		Date Co	ollected	: 04.30.2020 00:00					
Sample Id:	AH-12 (2'-2.5')		Matrix:		Soil		Date Receive	ed:05.0	1.2020 09	:09

Chloride

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16887-00-6 17.4

4.99

mg/kg 05.03.2020 00:19

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### **Certificate of Analytical Results 660363**

### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

	Cas Number	Result	RL	Units	Analysis D	ate	Flag	Dil
3124968								
SPC		Date Prep	b: 05.02.2020 14:32		Basis:	Wet	Weight	
SPC					% Moisture:			
hod: Chloride by EPA	. 300				Prep Method:	E300	P	
660363-045		Date Coll	ected: 04.30.2020 00:00					
AH-13 (0-1')		Matrix:	Soil		Date Received	1:05.01	1.2020 09:	09
	660363-045 nod: Chloride by EPA SPC SPC	660363-045 nod: Chloride by EPA 300 SPC SPC	660363-045 Date Coll nod: Chloride by EPA 300 SPC Date Prep	660363-045       Date Collected: 04.30.2020 00:00         nod:       Chloride by EPA 300         SPC       Date Prep: 05.02.2020 14:32	660363-045       Date Collected: 04.30.2020 00:00         nod:       Chloride by EPA 300         SPC       Date Prep: 05.02.2020 14:32	660363-045Date Collected: 04.30.2020 00:00nod: Chloride by EPA 300Prep Method: % Moisture: Date Prep: 05.02.2020 14:32SPCDate Prep: 05.02.2020 14:32	660363-045Date Collected: 04.30.2020 00:00nod: Chloride by EPA 300Prep Method: E300SPC% Moisture:SPCDate Prep: 05.02.2020 14:32Basis: Wet	660363-045Date Collected: 04.30.2020 00:00nod:Chloride by EPA 300Prep Method:E300PSPC% Moisture:SPCDate Prep:05.02.2020 14:32Basis:Wet Weight

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### **Certificate of Analytical Results 660363**

### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

Sample Id: Lab Sample Id	<b>AH-13 (1'-1.5')</b> d: 660363-046		Matrix: Date Col	Soil lected: 04.30.2020	00:00	Date Received:05	5.01.2020 09	:09
Analytical Me Tech:	ethod: Chloride by EPA SPC	300				Prep Method: E. % Moisture:	300P	
Analyst:	SPC		Date Pre	o: 05.02.2020	14:32	,	et Weight	
Seq Number:	3124968							
Parameter		Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride		16887-00-6	16.6	5.05	mg/kg	05.03.2020 00:30	)	1



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### **Certificate of Analytical Results 660363**

### Tetra Tech- Midland, Midland, TX

COG White Federal Com #1H (5.13.19)

Sample Id: Lab Sample Id	<b>AH-14 (0-1')</b> d: 660363-047		Matrix: Date Col	Soil lected: 04.3	0.2020 00:00		Date Received	1:05.0	1.2020 09:	09
Analytical Me Tech:	ethod: Chloride by EPA SPC	300					Prep Method: % Moisture:	E300	)P	
Analyst:	SPC		Date Prej	p: 05.0	2.2020 14:32		Basis:	Wet	Weight	
Seq Number:	3124968									
Parameter		Cas Number	Result	RL		Units	Analysis D	ate	Flag	Dil
Chloride		16887-00-6	12.4	4.99		mg/kg	05.03.2020 0	0:35		1

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# **Flagging Criteria**

- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- **F** RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantitation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- **H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K Sample analyzed outside of recommended hold time.
- **JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

\*\* Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.	ND Not Detected			
<b>RL</b> Reporting Limit				
MDL Method Detection Limit	SDL Sample De	tection Limit	LOD Limit of Detection	
PQL Practical Quantitation Limit	MQL Method Qu	antitation Limit	LOQ Limit of Quantitatio	n
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/Labo	ratory Control Sample Duplicate
MD/SD Method Duplicate/Samp	le 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**

COG White Federal Com #1H (5.13.19)

Analytical Method: Seq Number: MB Sample Id: Parameter Chloride	Chloride by EPA 3 3124966 7702586-1-BLK MB Result <5.00	Spike Amount		Matrix: nple Id: <b>LCS</b> %Rec 102	Solid 7702586- LCSD Result 246	I-BKS LCSD %Rec 98	<b>Limits</b> 90-110		rep Meth Date Pr D Sample <b>RPD</b> Limit 20	ep: 05.0	0P 12.2020 2586-1-BSD Analysis Date 05.03.2020 12:13	Flag
<b>Analytical Method:</b> Seq Number: MB Sample Id:	<b>Chloride by EPA</b> 3124967 7702587-1-BLK	300		Matrix: nple Id:	Solid 7702587-1	I-BKS			rep Meth Date Pr D Sample	ep: 05.0	0P 92.2020 2587-1-BSD	
Parameter Chloride	MB Result <5.00	<b>Spike</b> <b>Amount</b> 250	LCS Result 238	<b>LCS</b> %Rec 95	LCSD Result 236	<b>LCSD</b> %Rec 94	<b>Limits</b> 90-110	<b>%RPD</b> 1	RPD Limit 20	<b>Units</b> mg/kg	<b>Analysis</b> <b>Date</b> 05.03.2020 12:18	Flag
<b>Analytical Method:</b> Seq Number: MB Sample Id:	<b>Chloride by EPA</b> 3124968 7702589-1-BLK	300		Matrix: nple Id:	Solid 7702589-1	I-BKS			ep Meth Date Pr D Sample	ep: 05.0	0P )2.2020 2589-1-BSD	
Parameter Chloride	MB Result <5.00	Spike Amount 250	LCS Result 234	LCS %Rec 94	LCSD Result 236	<b>LCSD</b> %Rec 94	<b>Limits</b> 90-110	<b>%RPD</b> 1	RPD Limit 20	<b>Units</b> mg/kg	<b>Analysis</b> <b>Date</b> 05.02.2020 22:13	Flag
<b>Analytical Method:</b> Seq Number: Parent Sample Id:	<b>Chloride by EPA</b> 3124966 660323-018	300		Matrix: nple Id:	Soil 660323-0	18 S			ep Meth Date Pr D Sample	ep: 05.0	0P 12.2020 323-018 SD	
<b>Parameter</b> Chloride	Parent Result 76.5	<b>Spike</b> Amount 251	MS Result 359	MS %Rec 113	MSD Result 353	<b>MSD</b> %Rec 110	<b>Limits</b> 90-110	% <b>RPD</b>	RPD Limit 20	<b>Units</b> mg/kg	<b>Analysis</b> <b>Date</b> 05.02.2020 16:41	Flag X
<b>Analytical Method:</b> Seq Number: Parent Sample Id:	<b>Chloride by EPA</b> 3124966	300		Matrix:	Soil			Pr	ep Meth Date Pr	od: E30	0P 12.2020	
r arent Sample Iu.	660367-001		MS Sa		660367-00	01 S			D Sample	-	367-001 SD	
Parameter Chloride	660367-001 Parent Result 661	<b>Spike</b> <b>Amount</b> 249				01 S MSD %Rec 84	<b>Limits</b> 90-110	MSI %RPD 2	D Sample <b>RPD</b> Limit 20	-		Flag X
Parameter	Parent Result 661	Amount 249	MS Sai MS Result 855	mple Id: MS %Rec 78 Matrix:	660367-00 MSD Result 871	<b>MSD</b> %Rec 84		%RPD 2 Pr	RPD Limit 20 rep Meth Date Pr	e Id: 6602 Units mg/kg od: E30 ep: 05.0	367-001 SD Analysis Date 05.02.2020 17:54	

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

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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

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#### **QC Summary** 660363

# **Tetra Tech- Midland**

COG White Federal Com #1H (5.13.19)

<b>Analytical Method:</b> Seq Number: Parent Sample Id:	<b>Chloride by</b> 3124967 660363-020	,	00		Matrix: nple Id:		20 S			ep Metho Date Pre D Sample	ep: 05.0	0P )2.2020 363-020 SD	
Parameter		Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride		48.1	252	295	98	310	104	90-110	5	20	mg/kg	05.02.2020 20:48	
Analytical Method:	Chloride by	v EPA 30	00						Pı	ep Metho	od: E30	0P	
Seq Number: Parent Sample Id:	3124968 660363-030	, ,			Matrix: nple Id:	Soil 660363-03	80 S			Date Pre	1	02.2020 363-030 SD	
Seq Number:	3124968	, ,	Spike Amount				80 S MSD %Rec	Limits		Date Pre	1	02.2020	Flag
Seq Number: Parent Sample Id:	3124968	Parent	Spike	MS Sar MS	nple Id: MS	660363-03 MSD	MSD	<b>Limits</b> 90-110	MS	Date Pre D Sample <b>RPD</b>	Id: 660	)2.2020 363-030 SD Analysis	Flag

•	Chloride by EPA 30	0						Pı	ep Metho			
Seq Number:	3124968			Matrix:	Soil				Date Pre	ep: 05.0	02.2020	
Parent Sample Id:	660363-040		MS Sar	nple Id:	660363-04	40 S		MS	D Sample	Id: 660	363-040 SD	
Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	15.2	250	249	94	264	100	90-110	6	20	mg/kg	05.02.2020 23:42	

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

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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

		elinquished by:	/2020	Relinquished by:	The particular of the particul											( LAB USE )	LAB #			Comments:	Receiving Laboratory:		on:	Project Name:	Client Name:	
		Date: Time:		Date: Time:	Date: Time:	AH-4 (0-1')	AH-3 (1'-1.5')	AH-3 (0-1')	AH-2 (2'-2.5') _	AH-2 (1'-1.5')	AH-2 (0-1')	AH-1 (2.5'-3')	AH-1 (2'-2.5')	AH-1 (1'-1.5')	AH-1 (0-1')		SAMPLE IDENTIFICATION			Neirea	COG- Attn: Ike Tavarez	Eddy County, New Mexico	White Federal Com #1H (5.13.19)		Tetra Tech, Inc.	
ORIGINAL COPY		Received by:	mecerved by:		Récommend by:	4/30/2020	4/30/2020	4/30/2020	4/30/2020	4/30/2020	4/30/2020	4/30/2020	4/30/2020	4/30/2020	4/30/2020	DATE	YEAR: 2020	SAMPLING			Sampler Signature:	Project #:	7		Site Manager:	
ΡY		Date: Tir	• Date: Tir	6	Date: Tir		× ;			× ;					×	TIME WATER SOIL HCL HNO <sub>3</sub> ICE		MATRIX PRESERVATIVE		Carlos		212C-MD-02125		Mike Carmona	900 West Wall Street, Ste 100 Midland, Texas, 79701 Tel (432) 682-4559 Fax (432) 682-3946	
0		Time:	s	909	ne:			 Z Z				→ -			_1 #	None # CONTA FILTEREI	INEF	rs N)		Tomlinson/Tony Legarda		25				
(Circle HAND DELIVERED FEDEX	-0-264	[- 11W-]	Sample Temperature												1 F T	TEX 802 TPH TX10 TPH 8015 PAH 8270 Total Meta TCLP Meta	DO5 (E M ( C IC Is Ag als Aç	Ext to GRO - As Ba	DRO - C	DRO - Pb Se	Hg					MACIK )
UPS	Special Report Li	Rush Charges Authorized	RUSH: Same Day	X STANDARD	REMARKS:										T F G G P	CLP Sem ICI IC/MS Vo IC/MS Se CB's 808 ORM	i Vola I. 820 mi. V	60B/6 ol. 82		·				ANALYSIS REQUEST		
Tracking #:	Special Report Limits or TRRP Report	uthorized	ay 24 hr 48 hr 72 hr			< >	< ×		×	×	× ×				< C C G A	LM (Asbe hloride hloride eneral W nion/Catio PH 8015F	Sulfa ater ( on Ba		istry (se	e atta	ched lis	t)	(nod No.)			Page 1
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		Relinquished by:	<u>2020</u>	Relinquished by:						١						( LAB USE )	LAB #		Comments:	Hecelving Laboratory:	Invoice to:	Project Location: (county, state)	Project Name:		Client Name:	Analysis Request
		Date: Time:		Date: Time:			AH-6 (1'-1.5')	AH-6 (0-1')	AH-5 (3'-3.5')	AH-5 (2'-2.5')	AH-5 (1'-1.5')	AH-5 (0-1')	AH-4 (3'-3.5')	AH-4 (2'-2.5')	AH-4 (1'-1.5')		SAMPLE IDENTIFICATION			Xenco	COG- Attn: Ike Tavarez	Eddy County, New Mexico	White Federal Com #1H (5.13.19)	COG	Tetra Tech, Inc.	Analysis Request of Chain of Custody Record
ORIGINAL COPY		Received by:		Received by:	A A A A A A A A A A A A A A A A A A A	4/30/2020	4/30/2020	4/30/2020	4/30/2020	4/30/2020	4/30/2020	4/30/2020	4/30/2020	4/30/2020	4/30/2020	DATE	YEAR: 2020	SAMPLING		Sampler Signature:		Project #:			Aite Manager	
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(Circle)			Sample		Towar,											BTEX 8 TPH TX			X 8260B C35)							No.
HAND		5-119-1	Sample Temperature		LAB USE											PAH 82	70C		DRO - O					()		12
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FEDEX	Special Report Limits or TRRP Repor	- Usn		ISUA	<b>ЛЯКS</b> :											RCI GC/MS \			624					ANALYSIS REQUEST		
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		Date: Time:		Date: Time:		1 Date: Time:	AH-8 (4'-4.5')	AH-8 (3'-3.5')	AH-8 (2'-2.5')	AH-8 (1'-1.5')	AH-8 (0-1')	AH-7 (2'-2.5')	AH-7 (1'-1.5')	AH-7 (0-1')	AH-6 (4'-4.5')	AH-6 (3'-3.5')		SAMPLE IDENTIFICATION			Xenco	COG- Attn: Ike Tavarez	Eddy County, New Mexico	White Federal Com #1H (5.13.19)	COG	Tetra Tech, Inc.	Analysis Request of Chain of Custody Record
ORIGINAL COPY		Received by:		Rèceived by:	NOV4	Kederyed by	4/30/2020 N	4/30/2020	4/30/2020	4/30/2020	4/30/2020	4/30/2020	4/30/2020	4/30/2020	4/30/2020	4/30/2020	DATE	YEAR: 2020	SAMPLING		Sampler Signature:		Project #:		Site Manager:		
ОРΥ		D		D	5	T	× :	×	×	×	×	×	×	×	×	×	TIME WATEF SOIL	2	IG MATRIX				212C-		Mike Carmona	900 West Midla Tel I Fax	
		Date: Time:		Date: Time:		Date: Time:	× ;	× ;	× ;	× :	×	×	×	×	×		HCL HNO <sub>3</sub> ICE None		PRESERVATIVE METHOD		Carlos Tomlinson/Tony Legarda		212C-MD-02125		mona	900 West Wall Street, Ste 100 Midland, Texas 79701 Tel (432) 682-4559 Fax (432) 682-3946	
(Ci	-		Sa	>		┝	-	+			+	-		_ Z	⊣ Z	z	# CONTA FILTERE BTEX 802	D (Y/	/N)	8260B	y Legarda						6
(CircleXHAND DELIVERED	annual des de déserte des serais en la construction de la construction de la construction de la construction d	11 W.	Sample Temperature	I	ONLY												TPH TX1 TPH 8015 PAH 8270 Fotal Meta	005 ( 5M ( 0 0C Ils Ag	Ext to C GRO - E g As Ba	35) DRO - OF Cd Cr Pt	o Se H	g					60003
FEDEX	Special			RUSH:		DEMADVC.											FCLP Met FCLP Vola FCLP Sem RCI GC/MS Vo	itiles ni Vol	atiles		b Se H	Ig		<u> </u>	Z		6.6
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	r TRRP Report	eđ	č	24 hr 48 hr 79 hr												( ( (	hloride ieneral W nion/Cati PH 8015	on B	Chemis	TDS stry (see	attach	ed list	)	No.)			പ
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			Relinquished by:		Relinquished by:	Relinquished by:										LAB USE	LAB #		Comments:	Laboratory.	Beneiving I shoretown	(county, state) hvoice to:	roject Ruine.	Project Name.	Client Name:	Analysis Reques
			Date: Time:			AH-11 (2'-2.5') Date: Time:	AH-11 (1'-1.5')	AH-11 (0-1')	AH-10 (2'-2.5')	AH-10 (1'-1.5')	AH-10 (0-1')	AH-9 (3'-3.5')	AH-9 (2'-2.5')	AH-9 (1'-1.5')	AH-9 (0-1')		SAMPLE IDENTIFICATION			Xenco	COG- Attn: Ike Tavarez	Eddy County, New Mexico	White Federal Com #1H (5.13.19)	COG	Tetra Tech, Inc.	Analysis Request of Chain of Custody Record
			Received by:	Received by:	NON	4/30/2020	4/30/2020	4/30/2020	4/30/2020	4/30/2020	4/30/2020	4/30/2020	4/30/2020	4/30/2020	4/30/2020	DATE	YEAR: 2020	SAMPLING		Sampler Signature:		Project #:			Site	
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	(Circle) HAND DELIVERE		1/10/1.3	Sample Temperature	ONLY										T P T	PH TX10 PH 8015 PH 8015 PAH 8270 Total Meta	DO5 (E M ( C DC Is Ag als Ag	Ext to C GRO - D As Ba	DRO - OR Cd Cr Pb	Se H	g		(Circle	• •		295099
	DFEDEX UPS	Special Repor	Rush Charges Authorized	RUSH: Same Day	REMARKS: X STANDARD										T R G	CLP Vola CLP Sem CI C/MS Vo C/MS Se CB's 808	i Vola I. 820 mi. V	60B / 62 ol. 827					or Specify Method	ž		55
	Tracking #:	Special Report Limits or TRRP Report	Authorized	9 Day 24 hr 48 hr	NRD	×	× ;	× ;	× >	< >	< >	< >	< >	< >	Pi C C G	ORM LM (Asbe hloride hloride eneral W nion/Cati	Sulfater (	ate T Chemis	TDS Stry (see	attach	ned lis	i)	lethod No.)	REQUEST		Page
		oort		72 hr												PH 8015										4 of
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		Relinquished by:		Relinquished by:	Ó	Relinquished by:									( LAB USE )	LAB #		Comments:	Receiving Laboratory:	Invoice to:	Project Location: (county, state)	Project Name:			
		Date: Time:		Date: Time:		Date: Time:		AH-14 (0-1')	AH-13 (1'-1.5')	AH-13 (0-1')	AH-12 (2'-2.5')	AH-12 (1'-1.5')	AH-12 (0-1')	AH-11 (3'-3.5')		SAMPLE IDENTIFICATION			Xenco	COG- Attn: lke Tavarez	Eddy County, New Mexico	White Federal Com #1H (5.13.19)	COG	Tetra Tech, Inc.	Analysis Request of Chain of Custody Record
ORIGINAL COPY		Received by:		Received by:	I DU	Reseimed hv:		4/30/2020	4/30/2020	4/30/2020	4/30/2020	4/30/2020	4/30/2020	4/30/2020	DATE	YEAR: 2020	SAMPLING		Sampler Signature:		Project #:		Site Manager:		
~		Date:		Date:	<u></u>	Data:		×	×	×	×	×	×	×	WATEF SOIL HCL	3	MATRIX		Carlos Tor		212C-MD-02125		Mike Carmona	900 West Wall Street, Ste 1 Midland, Texas 79701 Tel (432) 682-4559 Fax (432) 682-3946	
		Time:		Time:	909	Timo:		X 1	X 1	×	X 1	X 1	X 1		HNO <sub>3</sub> ICE None # CONT/	AINE	PRESERVATIVE METHOD RS		Tomlinson/Tony Legarda		02125		۵	treet, Ste 100 as 79701 82-4559 82-3946	
(CRCIE) HAND DELIVERED		1. W./.,		Sample Temperature	LAB USE			z	z	z	z	Z	z		FILTERE BTEX 80 TPH TX1 TPH 801 PAH 827 Total Met TCLP Me	21B 1005 5M ( 0C als A	BTE (Ext to GRO -	DRO - O a Cd Cr F	RO - N b Se F	g					
FEDEX UPS	Uopecial Hepoit E		Bush Charnes A	RUSH: Same Day	X STANDARD										TCLP Vol TCLP Ser RCI GC/MS V GC/MS S PCB's 80 NORM	atile: mi Vo ol. 8 emi.	s platiles 260B / Vol. 82	624			· · · · · · · · · · · · · · · · · · ·	e or specity method	AN		
Tracking #:	Special Report Limits or TRRP Report		uthorizod	0ay 24 hr 48 hr 72 hr	Ũ			×	×	×	×	×	×	× /	PLM (Asb Chloride Chloride General V Anion/Cat TPH 8015	Sı Vate tion	ilfate r Chem		e attac	hed lis	1)	[hod No.)	IST .		Page 5 of
				۲								age			Hold					al 1.0					эf 5

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### **XENCO** Laboratories

### Prelogin/Nonconformance Report- Sample Log-In

Client: Tetra Tech- Midland	Acceptable Temperature Range: 0 - 6 degC
Date/ Time Received: 05.01.2020 09.09.00 AM	Air and Metal samples Acceptable Range: Ambient
Work Order #: 660363	Temperature Measuring device used : R9
Sample Recei	pt Checklist Comments
#1 *Temperature of cooler(s)?	1.3
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6*Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	Νο
#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:

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PH Device/Lot#:

Checklist completed by: Bull Tal Brianna Teel

Date: 05.01.2020

Checklist reviewed by: Jession Weamer

Jessica Kramer

Date: 05.01.2020



# **Analytical Report 664839**

for

**Tetra Tech- Midland** 

**Project Manager: Mike Carmona** 

White Federal 1H Flowline (5.13.19)

### 212C-MD-02125

#### 06.22.2020

Collected By: Client



1211 W. Florida Ave Midland TX 79701

Xenco-Houston (EPA Lab Code: TX00122): Texas (T104704215-20-34), Arizona (AZ0765), Florida (E871002-33), Louisiana (03054) Oklahoma (2019-058), North Carolina (681), Arkansas (20-035-0)

> Xenco-Dallas (EPA Lab Code: TX01468): Texas (TX104704295-19-23), 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) 212C-MD-02125 Mike Carmona

Eddy County, New Mexico



**Project Id:** 

**Project Location:** 

**Contact:** 

# Certificate of Analysis Summary 664839

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Tetra Tech- Midland, Midland, TX

**Project Name: White Federal 1H Flowline (5.13.19)** 

 Date Received in Lab:
 Thu 06.18.2020 14:21

 Report Date:
 06.22.2020 14:09

Project Manager: Jessica Kramer

	Lab Id:	664839-0	01	664839-00	02	664839-00	)3	664839-00	94	664839-0	05	664839-00	)6
Analysis Requested	Field Id:	AH-2 (0-1	)	AH-2 (1'-1.	5')	AH-2 (2-2.5	')	AH-4 (0-1')		AH-4 (1'-1.5	5')	AH-4 (2'-2.5'	)
Analysis Requested	Depth:												
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		SOIL	
	Sampled:	06.18.2020 (	00:00	06.18.2020 (	00:00	06.18.2020 (	00:00	06.18.2020 0	0:00	06.18.2020	00:00	06.18.2020 0	00:00
Chloride by EPA 300	Extracted:	06.20.2020	14:00	06.20.2020 1	14:00	06.20.2020 1	4:25	06.20.2020 1	4:25	06.20.2020	14:25	06.20.2020 1	4:25
	Analyzed:	06.20.2020	16:47	06.20.2020 1	16:52	06.20.2020 1	7:38	06.20.2020 1	7:23	06.20.2020	17:43	06.20.2020 1	7:48
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL
Chloride		720	4.99	4180	24.8	4210	25.1	58.3 X	5.00	30.1	5.05	58.9	5.05

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

fession kenner

Jessica Kramer Project Manager

212C-MD-02125 Mike Carmona

Eddy County, New Mexico



**Project Id:** 

**Project Location:** 

**Contact:** 

# Certificate of Analysis Summary 664839

Tetra Tech- Midland, Midland, TX

**Project Name: White Federal 1H Flowline (5.13.19)** 

Date Received in Lab: Thu 06.18.2020 14:21

**Report Date:** 06.22.2020 14:09

Project Manager: Jessica Kramer

	Lab Id:	664839-0	07	664839-0	08	664839-0	)9	664839-0	10	664839-01	1	
Analysis Requested	Field Id:	Horizontal NW-	1 (0-1')	Horizontal NW-	2 (0-1')	Horizontal NW-6	(0-1')	Horizontal SE-1	(0-1')	Horizontal SE-4 (	0-1')	
Analysis Kequesieu	Depth:											
	Matrix:	SOIL		SOIL		SOIL		SOIL		SOIL		
	Sampled:	06.18.2020	00:00	06.18.2020	00:00	06.18.2020 (	00:00	06.18.2020	00:00	06.18.2020 0	00:00	
Chloride by EPA 300	Extracted:	06.20.2020	14:25	06.20.2020	14:25	06.20.2020	14:25	06.20.2020	14:25	06.20.2020 1	4:25	
	Analyzed:	06.20.2020	17:53	06.20.2020	18:08	06.20.2020	18:13	06.20.2020	18:18	06.20.2020 1	8:33	
	Units/RL:	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	mg/kg	RL	
Chloride		4480	24.9	141	5.00	239	4.95	3340	25.2	13.7 X	5.01	

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

fession Vermer

Jessica Kramer Project Manager

**Final 1.000** 



06.22.2020

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

Reference: XENCO Report No(s): **664839 White Federal 1H Flowline (5.13.19)** 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) 664839. 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. 664839 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Vramer

Jessica Kramer Project Manager

A Small Business and Minority Company

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



#### Sample Id

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AH-2 (0-1')
AH-2 (1'-1.5')
AH-2 (2-2.5')
AH-4 (0-1')
AH-4 (1'-1.5')
AH-4 (2'-2.5')
Horizontal NW-1 (0-1')
Horizontal NW-2 (0-1')
Horizontal NW-6 (0-1')
Horizontal SE-1 (0-1')
Horizontal SE-4 (0-1')

# Sample Cross Reference 664839

### Tetra Tech- Midland, Midland, TX

White Federal 1H Flowline (5.13.19)

Matrix	Date Collected	Sample Depth	Lab Sample Id
S	06.18.2020 00:00		664839-001
S	06.18.2020 00:00		664839-002
S	06.18.2020 00:00		664839-003
S	06.18.2020 00:00		664839-004
S	06.18.2020 00:00		664839-005
S	06.18.2020 00:00		664839-006
S	06.18.2020 00:00		664839-007
S	06.18.2020 00:00		664839-008
S	06.18.2020 00:00		664839-009
S	06.18.2020 00:00		664839-010
S	06.18.2020 00:00		664839-011



Client Name: Tetra Tech- Midland Project Name: White Federal 1H Flowline (5.13.19)

Project ID: 212C-MD-02125 Work Order Number(s): 664839 
 Report Date:
 06.22.2020

 Date Received:
 06.18.2020

#### Sample receipt non conformances and comments:

Sample receipt non conformances and comments per sample:

None

#### Analytical non conformances and comments:

Batch: LBA-3129554 Chloride by EPA 300

Lab Sample ID 664839-011 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 664839-003, -004, -005, -006, -007, -008, -009, -010, -011.

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



# **Certificate of Analytical Results 664839**

### Tetra Tech- Midland, Midland, TX

White Federal 1H Flowline (5.13.19)

Sample Id: <b>AH-2 (0-1')</b> Lab Sample Id: 664839-001		Matrix: Date Collec	Soil cted: 06.18.2020 00:00		Date Received	1:06.18.	.2020 14:2	21
Analytical Method: Chloride by EPA 30 Tech: CHE	0				Prep Method: % Moisture:	E300F	þ	
Analyst: CHE		Date Prep:	06.20.2020 14:00		Basis:	Wet W	Veight	
Seq Number: 3129551								
Parameter	Cas Number	Result	RL	Units	Analysis Da	ate	Flag	Dil
Chloride 1	6887-00-6	720	4.99	mg/kg	06.20.2020 10	6:47		1

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4.99

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## **Certificate of Analytical Results 664839**

### Tetra Tech- Midland, Midland, TX

White Federal 1H Flowline (5.13.19)

Sample Id: AH-2 (1'-1.5') Lab Sample Id: 664839-002		Matrix: Date Coll	Soil ected: 06.18.2020 00:00	)	Date Received	1:06.18.2020 1	4:21
Analytical Method: Chloride by EPA Tech: CHE Analyst: CHE Seq Number: 3129551	\$ 300	Date Prep	: 06.20.2020 14:00	)	Prep Method: % Moisture: Basis:	E300P Wet Weight	
Parameter Chloride	<b>Cas Number</b>	Result 4180	RL 24.8	Units mg/kg	Analysis Da	8	<b>Dil</b>

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# **Certificate of Analytical Results 664839**

### Tetra Tech- Midland, Midland, TX

White Federal 1H Flowline (5.13.19)

Sample Id:	AH-2 (2-2.5')		Matrix:	11 /	Soil		Date Received	1:06.1	8.2020 14:	21
Lao Sample I	l: 664839-003		Date Co	llected	1:06.18.2020 00:00					
Analytical Me	thod: Chloride by EPA 3	800					Prep Method:	E300	)P	
Tech:	CHE						% Moisture:			
Analyst:	CHE		Date Pre	ep:	06.20.2020 14:25		Basis:	Wet	Weight	
Seq Number:	3129554									
Parameter		Cas Number	Result	RL		Units	Analysis D	ate	Flag	Dil

Chloride

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4210

16887-00-6

25.1

06.20.2020 17:38

mg/kg



Chloride

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# **Certificate of Analytical Results 664839**

### Tetra Tech- Midland, Midland, TX

White Federal 1H Flowline (5.13.19)

Parameter		Cas Number	Result	RL		Units	Analysis D	ate	Flag	Dil
Seq Number:	3129554									
Analyst:	CHE		Date Pre	ep:	06.20.2020 14:25		Basis:	Wet V	Weight	
Tech:	CHE						% Moisture:			
Analytical M	ethod: Chloride by EPA	300					Prep Method:	E300	Р	
Lab Sample I	d: 664839-004		Date Co	llected	1:06.18.2020 00:00					
Sample Id:	AH-4 (0-1')		Matrix:		Soil		Date Received	1:06.18	3.2020 14:	21

5.00

mg/kg

06.20.2020 17:23

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1

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58.3

16887-00-6

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# **Certificate of Analytical Results 664839**

### Tetra Tech- Midland, Midland, TX

White Federal 1H Flowline (5.13.19)

Chlorida	16997 00 6	20.1	5.05	malka	06 20 2020 17:4	2	1	
Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil	
Seq Number: 3129554								
Analyst: CHE		Date Pre	ep: 06.20.202	0 14:25	Basis: W	Vet Weight		
Tech: CHE					% Moisture:			
Analytical Method: Ch	oride by EPA 300				Prep Method: E	2300P		
Lab Sample Id: 664839-	005	Date Co	llected: 06.18.202	20 00:00				
Sample Id: AH-4 (1	'-1.5')	Matrix:	Soil		Date Received:0	6.18.2020 14	:21	

Chloride

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16887-00-6 30.1

5.05

mg/kg 06.20.2020 17:43

1

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# **Certificate of Analytical Results 664839**

### Tetra Tech- Midland, Midland, TX

White Federal 1H Flowline (5.13.19)

Chloride	16887-00-6	58.9	5.05	ma/ka	06 20 2020 17./	18	1
Parameter	Cas Number	Result	RL	Units	Analysis Date	e Flag	Dil
Seq Number: 3129554							
Analyst: CHE		Date Pre	p: 06.20.2020 14:	25	Basis: V	Wet Weight	
Tech: CHE					% Moisture:		
Analytical Method: Chloride	by EPA 300				Prep Method: H	E300P	
Lab Sample Id: 664839-006		Date Co	llected: 06.18.2020 00:	00			
Sample Id: AH-4 (2'-2.5')		Matrix:	Soil		Date Received:	06.18.2020 14	:21

Chloride

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16887-00-6 58.9

5.05

mg/kg 06.20.2020 17:48

1

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# **Certificate of Analytical Results 664839**

### Tetra Tech- Midland, Midland, TX

White Federal 1H Flowline (5.13.19)

Sample Id: Lab Sample Id	<b>Horizontal NW-1 (0-</b> d: 664839-007	1')	Matrix: Date Col	Soil lected: 06.18.2020 00	0:00	Date Received:	06.18.2020 14	:21
Analytical Me Tech:	ethod: Chloride by EPA CHE	. 300				Prep Method: % Moisture:	E300P	
Analyst:	CHE		Date Prep	p: 06.20.2020 14	4:25	Basis:	Wet Weight	
Seq Number:	3129554		Deck					
Parameter Chloride		Cas Number	Result 4480	RL 24.9	Units	Analysis Dat 06.20.2020 17:	0	<b>Dil</b> 5
Chloride		1000/-00-0	4480	24.9	mg/kg	06.20.2020 17:	33	5

# **Certificate of Analytical Results 664839**

### Tetra Tech- Midland, Midland, TX

White Federal 1H Flowline (5.13.19)

Sample Id: Lab Sample I	Horizontal NW-2 ( d: 664839-008	0-1')	Matrix: Date Co	Soil llected: 06.18.2020 00	:00	Date Received:	06.18.2020 14	4:21
Analytical M	ethod: Chloride by EP	PA 300				Prep Method: H	E300P	
Tech:	CHE					% Moisture:		
Analyst:	CHE		Date Pre	p: 06.20.2020 14	:25	Basis: V	Wet Weight	
Seq Number:	3129554			•				
Parameter		Cas Number	Result	RL	Units	Analysis Date	e Flag	Dil
Chloride		16887-00-6	141	5.00	mg/kg	06.20.2020 18:0	)8	1

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5.00

1

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# **Certificate of Analytical Results 664839**

### Tetra Tech- Midland, Midland, TX

White Federal 1H Flowline (5.13.19)

Parameter		Cas Number	Result	RL		Units	Analysis D	ate	Flag	Dil
Seq Number:	3129554									
Analyst:	CHE		Date Pre	ep:	06.20.2020 14:25		Basis:	Wet	Weight	
Tech:	CHE						% Moisture:			
Analytical Me	ethod: Chloride by EPA	300					Prep Method:	E300	)P	
Lab Sample I	d: 664839-009		Date Co	llected	1:06.18.2020 00:00					
Sample Id:	Horizontal NW-6 (0-1	')	Matrix:		Soil		Date Received	1:06.1	8.2020 14:	21

239

Chloride

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16887-00-6

4.95

mg/kg 06.20.2

06.20.2020 18:13

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## **Certificate of Analytical Results 664839**

### Tetra Tech- Midland, Midland, TX

White Federal 1H Flowline (5.13.19)

Sample Id:	Horizontal SE-1 (0-1')		Matrix:		Soil		Date Received	1:06.1	8.2020 14:	21
Lab Sample I	d: 664839-010		Date Co	ollected	1:06.18.2020 00:00					
Analytical Me	ethod: Chloride by EPA	300					Prep Method:	E30	OP	
Tech:	CHE						% Moisture:			
Analyst:	CHE		Date Pr	ep:	06.20.2020 14:25		Basis:	Wet	Weight	
Seq Number:	3129554									
Parameter		Cas Number	Result	RL		Units	Analysis D	ate	Flag	Dil

Chloride

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16887-00-6 **3340** 

25.2

mg/kg

06.20.2020 18:18

5

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# **Certificate of Analytical Results 664839**

### Tetra Tech- Midland, Midland, TX

White Federal 1H Flowline (5.13.19)

Parameter		Cas Number	Result	RL		Units	Analysis D	ate	Flag	Dil
Seq Number:	3129554									
Analyst:	CHE		Date Pr	ep:	06.20.2020 14:25		Basis:	Wet	Weight	
Tech:	CHE						% Moisture:			
Analytical M	ethod: Chloride by EPA	300					Prep Method:	E300	P	
Lab Sample I	d: 664839-011		Date Co	ollected	1:06.18.2020 00:00					
Sample Id:	Horizontal SE-4 (0-1')	1	Matrix:		Soil		Date Received	1:06.18	3.2020 14:	21

Chloride

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13.7

16887-00-6

5.01

mg/kg

06.20.2020 18:33

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1

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# **Flagging Criteria**

- X In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- **B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- **D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- **F** RPD exceeded lab control limits.
- J The target analyte was positively identified below the quantitation limit and above the detection limit.
- U Analyte was not detected.
- L The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- **H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K Sample analyzed outside of recommended hold time.
- **JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

\*\* Surrogate recovered outside laboratory control limit.

<b>BRL</b> Below Reporting Limit.	ND Not Detected									
RL Reporting Limit										
MDL Method Detection Limit	SDL Sample De	tection Limit	LOD Limit of Detection							
PQL Practical Quantitation Limit	MQL Method Qu	antitation 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/Labo	ratory Control Sample Duplicate						
MD/SD Method Duplicate/Samp	ole Duplicate	MS	Matrix Spike	MSD: Matrix Spike Duplicate						
+ NELAC certification not offered	l for this compound.									

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



# Tetra Tech- Midland

White Federal 1H Flowline (5.13.19)

<b>Analytical Method:</b> Seq Number: MB Sample Id:	<b>Chloride by E</b> 3129551 7705870-1-BL		)0		Matrix: nple Id:	Solid 7705870-	1-BKS			ep Meth Date Pr D Sample	ep: 06.2	0P 20.2020 5870-1-BSD	
Parameter		MB	Spike		LCS	LCSD	LCSD	Limits	%RPD	RPD	Units	Analysis	Flag
Chloride		esult<	Amount 250	Result 256	%Rec 102	Result 261	<b>%Rec</b> 104	90-110	2	Limit 20	mg/kg	Date 06.20.2020 14:25	
Analytical Method: Seq Number:	3129554		)0		Matrix:		1 DVC			ep Meth Date Pr	ep: 06.2	20.2020	
MB Sample Id:	7705871-1-BL	.К MB	Spike	LCS Sar	LCS	7705871- LCSD	LCSD	Limits	%RPD	RPD	Units	5871-1-BSD Analysis	
Parameter		lesult	Amount	Result	%Rec	Result	%Rec			Limit		Date	Flag
Chloride	<	<5.00	250	258	103	254	102	90-110	2	20	mg/kg	06.20.2020 17:12	
<b>Analytical Method:</b> Seq Number: Parent Sample Id:	<b>Chloride by E</b> 3129551 664816-008	CPA 30	)0		Matrix: nple Id:	Soil 664816-0	08 S			rep Meth Date Pr D Sample	ep: 06.2	0P 20.2020 816-008 SD	
Parameter		arent	Spike	MS	MS	MSD	MSD	Limits	%RPD	RPD	Units	Analysis	Flag
Chloride	ĸ	lesult 15.0	Amount 249	Result 263	<b>%Rec</b> 100	Result 265	<b>%Rec</b> 100	90-110	1	Limit 20	mg/kg	<b>Date</b> 06.20.2020 14:41	
Analytical Method: Seq Number:	<b>Chloride by E</b> 3129551	CPA 30	)0		Matrix:	Soil			Pr	ep Meth Date Pr		0P 20.2020	
	-	CPA 30	)0			Soil 664816-0	18 S			Date Pr D Sample	ep: 06.2		
Seq Number:	3129551 664816-018 Pa	CPA 30 arent Result	)0 Spike Amount				18 S MSD %Rec	Limits		Date Pr	ep: 06.2	20.2020	Flag
Seq Number: Parent Sample Id:	3129551 664816-018 Pa	arent	Spike	MS Sar MS	nple Id: MS	664816-0 <b>MSD</b>	MSD	<b>Limits</b> 90-110	MS	Date Pr D Sample <b>RPD</b>	ep: 06.2 e Id: 664	20.2020 816-018 SD Analysis	Flag
Seq Number: Parent Sample Id: <b>Parameter</b>	3129551 664816-018 Pa R	arent Gesult 9.91	Spike Amount 250	MS Sar MS Result 268	mple Id: MS %Rec 103 Matrix:	664816-0 MSD Result 259	<b>MSD</b> %Rec 100		MSI %RPD 3 Pr	Date Pr D Sample RPD Limit 20 rep Meth- Date Pr	ep: 06.2 e Id: 664 Units mg/kg od: E30 ep: 06.2	20.2020 816-018 SD Analysis Date 06.20.2020 15:51	Flag
Seq Number: Parent Sample Id: Parameter Chloride Analytical Method: Seq Number:	3129551 664816-018 Pa R Chloride by E 3129554 664839-004 Pa	arent tesult 9.91 CPA 30 arent	Spike Amount 250 00 Spike	MS Sat MS Result 268 MS Sat MS	nple Id: MS %Rec 103 Matrix: nple Id: MS	664816-0 MSD Result 259 Soil 664839-0 MSD	<b>MSD</b> %Rec 100 04 S <b>MSD</b>		MSI %RPD 3 Pr	Date Pr D Sample RPD Limit 20 rep Meth Date Pr D Sample RPD	ep: 06.2 e Id: 664 Units mg/kg od: E30 ep: 06.2	20.2020 816-018 SD Analysis Date 06.20.2020 15:51 0P 20.2020 839-004 SD Analysis	Flag Flag
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MS/MSD Percent Recovery Relative Percent Difference LCS/LCSD Recovery Log Difference

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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

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Final 1.000

	CD: 78elinquished by:		elinquished by:	Velinguished by:										-	( LAB USE )	LAB #			Comments:	Invoice to:	(county, state)		Project Name	Page 22
	Date: Time:		6/18/2020 14 40 Date: Time:			Horizontal NW-6 (O - (`)	Horizontal NW-2 (O-1)	Horizontal NW-1 / 0- 1'	AH-4 (2'-2.5')	AH-4 (1'-1.5')	AH-4 (0-1')	AH-2 (2'-2.5')	AH-2 (1'-1.5')	AH-2 (0-1')		SAMPLE IDENTIFICATION			Xenco	COG Ike Tavarez	Eddy County, New Mexico	White Federal 1H Flowline (5.13.19)	COG	Tetra Tech, Inc.
ORIGINAL COPY	Received by:		Received by:	Received by:	6/18/2020	6/18/2020	6/18/2020	6/18/2020	6/18/2020	6/18/2020	6/18/2020	6/18/2020	6/18/2020	6/18/2020	DATE	YEAR: 2020	SAMPLING		Sampler Signature:		Project #:		Site Manager:	
	Date:	Lato.	310	X Date:	× ×	×	×	×	×	×	×	×	×	×	WATE SOIL HCL	R	MATRIX		Mike Carmona		212C-MD-02125		Mike Carmona	900 West Wall Street, Ste 1 Midland, Texas 79701 Tel (432) 682-4559 Fax (432) 682-3946
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### **XENCO** Laboratories

### Prelogin/Nonconformance Report- Sample Log-In

Client: Tetra Tech- Midland	Acceptable Temperature Range: 0 - 6 degC							
Date/ Time Received: 06.18.2020 02.21.00 PM	Air and Metal samples Acceptable Range: Ambient							
Work Order #: 664839	Temperature Measuring device used : IR-8							
Sample Recei	pt 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							
#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: Bill Tal Brianna Teel

Date: 06.18.2020

Checklist reviewed by: fession Vermer

Jessica Kramer

Date: 06.19.2020