



**REMEDIATION SUMMARY
AND
SITE CLOSURE REQUEST**

**COG Operating, LLC
Federal 18 #004 SWD
Lea County, New Mexico
Unit Letter "H", Section 18, Township 19 South, Range 33 East
Latitude 32.6620674° North, Longitude 103.6959839° West
NMOCD Reference No. 1RP-5302**


Prepared For:

**COG Operating, LLC
600 W Illinois Avenue
Midland, Texas 79701**

Prepared By:

**TRC Environmental Corporation
10 Desta Drive, Suite 150E
Midland, Texas 79705**

March 2019


Jared Stoffel, PG
Staff Geologist


Curt Stanley
Senior Project Manager

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INTRODUCTION & BACKGROUND INFORMATION

TRC Environmental Corporation (TRC), on behalf of COG Operating, LLC (COG), has prepared this *Remediation Summary and Site Closure Request* for the Release at the Site known as the Federal 18 #004 SWD (the Site). The legal description of the Site is Unit Letter “H”, Section 18, Township 19 South, Range 33 East, in Lea County, New Mexico. The subject property is owned by the United States Department of the Interior and is administered by the Bureau of Land Management (BLM). The GPS coordinates for the Site are N 32.6620674° W 103.6959839°. A topographical map is provided as **Figure 1**. Photographs are provided in the photolog as **Appendix B**.

On November 29, 2018, COG discovered a produced water release had occurred at the Site. The Release was attributed to the development of a hole in a hammer union, which resulted in the release of produced water onto the caliche production pad and the adjacent pasture area. On the discovery date, COG notified the New Mexico Oil and Conservation Division (NMOCD) and BLM of the Release and the Release was assigned an NMOCD Reference number of 1RP-5302. During initial response activities, a vacuum truck was dispatched to recover all freestanding fluids. On December 3, 2019, the initial Release Notification and Corrective Action (Form C-141) was submitted and indicated one hundred (100) barrels (bbls) of produced water was released, with approximately twenty (20) bbls of produced water recovered. The Release affected an area measuring approximately thirteen thousand sq. ft. The majority of the release was on the caliche production pad and caliche lease roads, with the exception of the area to the southeast which affected approximately 4,200 square feet of the adjacent pasture area. A copy of the submitted Form C-141 for the Release is provided in **Appendix C**.

A groundwater database maintained by The New Mexico Office of the State Engineer (NMOSE) identified one (1) registered water wells in Section 18, Township 19 South, Range 33 East, however depth to water was not indicated. A reference map utilized by the NMOCD indicates groundwater should be encountered at approximately two hundred (200) feet below ground surface (bgs). No water wells were observed within one-thousand (1,000) feet of the Site. No surface water was observed within one-thousand (1,000) feet of the release.

Based on the depth to groundwater, the NMOCD Closure Criteria for Soils Impacted by a Release for the Federal 18 #004 SWD Release Site are as follows:

- Benzene – 10 mg/kg
- Benzene, toluene, ethylbenzene, and xylenes (BTEX) – 50 mg/kg
- Total Petroleum Hydrocarbons (TPH) – 2,500 mg/kg (Non-Pasture), 100 mg/kg (Pasture)
- Chloride – 20,000 mg/kg (Non-Pasture), 600 mg/kg (Pasture)

INITIAL INVESTIGATION

On January 4, 2019, an initial investigation was conducted at the Release Site. During the initial investigation, seven (7) augerholes (HA-1, HA-2, HA-3, HA-4, HA-5, HA-6, and HA-7) were advanced within the Release margins in an effort to characterize the vertical extent of soil impact. In addition, twelve (12) lateral samples (N-1 @ S, S-1 @ S, E-1 @ S, W-1 @ S, N-2 @ S, S-2 @ S, E-2 @ S, W-2 @ S, N-3 @ 1', S-3 @ 1', E-3 @ 1', and W-3 @ 1') were collected approximately

five (5) feet outside the inferred margins of the Release area to characterize the lateral extent of soil impact. Please reference **Figure 3A – Site & Sample Location Map – Initial Investigation**.

Soil samples HA-1 @ S, HA-2 @ S, HA-3 @ S, HA-4 @ S, and HA-5 @ S were advanced in the inferred impacted areas on the caliche production pad and associated caliche road. Surface samples at each location were collected and submitted to the laboratory for analysis of BTEX, TPH, and chloride concentrations. Laboratory analytical results indicated BTEX constituents in all samples were below the laboratory method detection limit (MDL), TPH concentrations were below the NMOCD regulatory guidelines in all samples, and chloride concentrations were below NMOCD regulatory guidelines all samples, with the exception of soil sample HA-2 @ S. Based on laboratory analytical results, soil was not affected above the NMOCD regulatory guidelines for BTEX constituents or TPH at the surface in the caliche pad and road areas. The area represented by HA-2 exceeded the NMOCD regulatory guidelines for chloride concentrations on the surface within the caliche pad and road area.

Six (6) soil samples (HA-6 @ S, HA-6 @ 1', HA-6 @ 2', HA-7 @ S, HA-7 @ 1', and HA-7 @ 2') were collected from within the inferred impacted area within the pasture and submitted to the laboratory for analysis of BTEX, TPH, and chloride concentrations. Laboratory analytical results indicated BTEX constituents and TPH concentrations in all samples were below the laboratory MDL, and chloride concentrations were below NMOCD regulatory guidelines in HA-6 @ 2' and HA-7 @ 2'. Based on laboratory analytical results, soil was not affected above the NMOCD regulatory guidelines for BTEX constituents, TPH or chloride deeper than two (2) ft. bgs in the pasture area.

Eight (8) soil samples (N-1 @ S, N-2 @ S, S-1 @ S, S-2 @ S, E-1 @ S, E-2 @ S, W-1 @ S, and W-2 @ S) were collected from approximately five (5) feet outside the inferred margins of the impacted area adjacent to the caliche pad and road areas to determine lateral extent of the impacted area and were submitted to the laboratory for analysis of BTEX, TPH, and chloride concentrations. Laboratory analytical results indicated BTEX constituents in all samples were below the laboratory MDL, and TPH and chloride concentrations were below the NMOCD regulatory guidelines in all lateral pad samples. Based on laboratory analytical results, soil was not affected above the NMOCD regulatory guidelines for BTEX constituents, TPH, or chloride concentrations laterally beyond the inferred margins of the release area in the caliche pad and road area.

Four (4) soil samples (N-3 @ S, S-3 @ S, E-3 @ S, and W-3 @ S) were collected from approximately five (5) feet outside the inferred margins of the impacted area in the pasture area and were submitted to the laboratory for analysis of BTEX, TPH, and chloride concentrations. Laboratory analytical results indicated BTEX constituents and TPH concentrations in all samples were below the laboratory MDL, and chloride concentrations were below the NMOCD regulatory guidelines in all pasture lateral delineation samples. Based on laboratory analytical results, soil was not affected above the NMOCD regulatory guidelines for BTEX constituents, TPH, or chloride concentrations laterally outside the inferred margins of the release area in the pasture.

SUMMARY OF SOIL REMEDIATION ACTIVITIES

On February 11, 2019, excavation activities commenced without an NMOCD workplan. The areas characterized by augerholes HA-3 and HA-5 were excavated to approximately six (6) inches bgs to aesthetically address the chloride crusting. The areas characterized by augerholes HA-1, HA-2, and HA-4 were excavated to approximately six (6) inches bgs to remove NMOCD regulatory guideline exceedances of chloride concentrations at the surface. The areas characterized by augerholes HA-6 and HA-7 were excavated to approximately two (2) to two and a half (2.5) feet bgs. Excavated soil was stockpiled on-site pending final disposition.

On February 15, 2019, following the excavation of the impacted soil from within the margins of the Release Site, TRC collected thirty-nine (39) excavation confirmation soil samples (1 Sec 1 @ 6", 1 Sec 2 @ 6", 1 Sec 3 @ 6", 1 Sec 4 @ 6", 1 Sec 5 @ 6", 1 Sec 6 @ 6", 1 Sec 7 @ 6", 1 Sec 8 @ 6", 1 Sec 9 @ 6", 1 Sec 10 @ 6", 1 Sec 11 @ 6", 1 Sec 12 @ 6", 1 Sec 13 @ 6", 1 Sec 14 @ 6", 1 Sec 15 @ 6", 1 W 1, 1 W 2, 1 W 3, 2 Sec 1 @ 2', 2 Sec 2 @ 2', 2 Sec 3 @ 2', 2 Sec 4 @ 2', 2 Sec 5 @ 2.5', 2 Sec 6 @ 2.5', 2 Sec 7 @ 2.5', 2 Sec 8 @ 2.5', 2 Sec 9 @ 2.5', 2 Sec 10 @ 2.5', 2 Sec 11 @ 2.5', 2 Sec 12 @ 2', 2 Sec 13 @ 2', 2 Sec 14 @ 2.5', 2 Sec 15 @ 2.5', 2 Sec 16 @ 2.5', 2 Sec 17 @ 2.5', 2 W 1, 2 W 2, 2 W 3, and 2 W 4) from the floor and sidewalls of the excavated area. Collected soil samples were submitted to the laboratory for analysis of chloride concentrations. Laboratory analytical results indicated chloride concentrations were below the applicable NMOCD regulatory guidelines in all of the submitted soil samples.

Prior to backfilling, the final dimensions of the excavated area were approximately six hundred and fifty (650) ft. in length, three (3) to ninety (90) ft. in width, and six (6) to thirty (30) inches in depth.

The Site was returned to grade utilizing locally sourced clean backfill material. All excavated materials were disposed of at an NMOCD approved disposal facility.

SITE CLOSURE REQUEST

Remediation activities were conducted in accordance with NMCOD guidelines. Laboratory analytical results from excavation confirmation soil samples indicated chloride concentrations were below the NMOCD regulatory guidelines in all of the submitted confirmation soil samples. The impacted soil was transported to an NMOCD approved disposal facility, and the Site was returned to grade with locally sourced non-impacted backfill material.

Based on laboratory analytical results and field activities conducted to date, TRC recommends COG provide copies of this Remediation Summary and Site Closure Request to the NMOCD and BLM and request closure status to the Federal 18 #004 SWD.

LIMITATIONS

TRC has prepared this Remediation Summary and Site Closure Request to the best of its ability. No other warranty, expressed or implied, is made or intended.

TRC has examined and relied upon documents referenced in the report and has relied on oral statements made by certain individuals. TRC has not conducted an independent examination of the facts contained in referenced materials and statements. We have presumed the genuineness of the documents and that the information provided in documents or statements is true and accurate. TRC has prepared this report, in a professional manner, using the degree of skill and care exercised by similar environmental consultants. TRC also notes that the facts and conditions referenced in this report may change over time and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

This report has been prepared for the benefit of COG Operating, LLC. The information contained in this report, including all exhibits and attachments, may not be used by any other party without the express consent of TRC and/or COG Operating, LLC.

DISTRIBUTION

- Copy 1: Mike Bratcher
New Mexico Energy, Minerals and Natural Resources Department
Oil Conservation Division, District 2
811 S. First Street
Artesia, NM 88210
- Copy 2: Jim Amos
U.S. Department of the Interior
Carlsbad Field Office
620 E Greene Street
Carlsbad, New Mexico 88220
- Copy 3: Rebecca Haskell
COG Operating, LLC
600 W. Illinois Avenue
Midland, Texas 79701
- Copy4: TRC Environmental Corporation
10 Desta Dr STE 150E
Midland, TX 79705



LEGEND:

● Site Location

Figure 1

Topographical Map
COG Operating, LLC
Federal 18 #004 SWD
Lea County, NM

Drafted by: BC | Checked by: JS

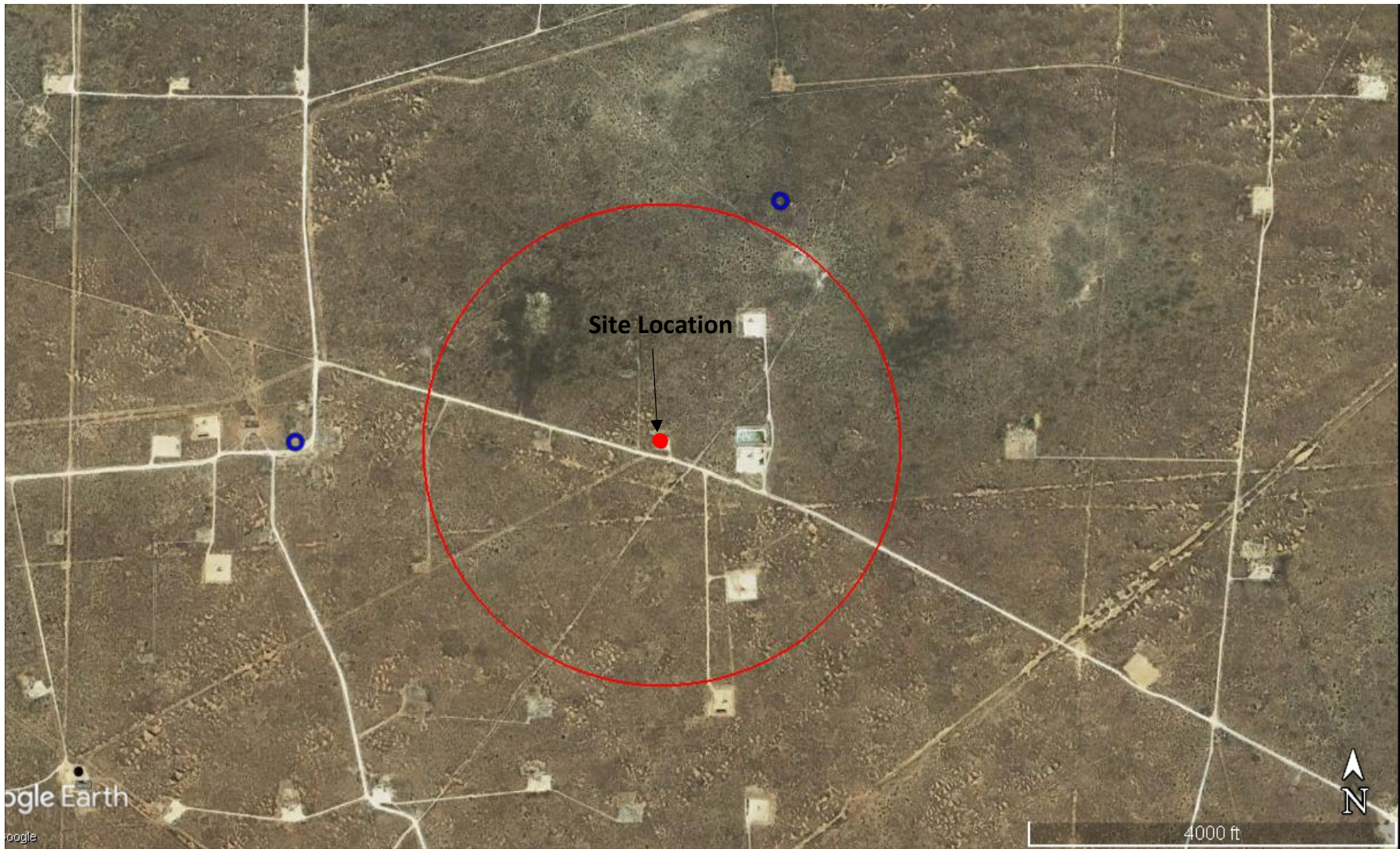
Draft: March 25, 2010

GPS: 32.6620674 -103.6959839

UL "H", Sec. 18, T19S, R33E

TRC Proj. No: 324472





LEGEND:

- | | | | |
|---|---------------------|---|-------------------------|
| ● | Site Location |  | Non-Industrial Building |
| ● | Fresh Water Well |  | Municipal Well Field |
|  | 100-Year Floodplain |  | Subsurface Mine |
|  | High/Critical Karst | ○ | 1/2 Mile Radius |

Figure 2

Aerial Map
COG Operating, LLC
Federal 18 #004 SWD
Lea County, NM

Drafted by: BC | Checked by: JS

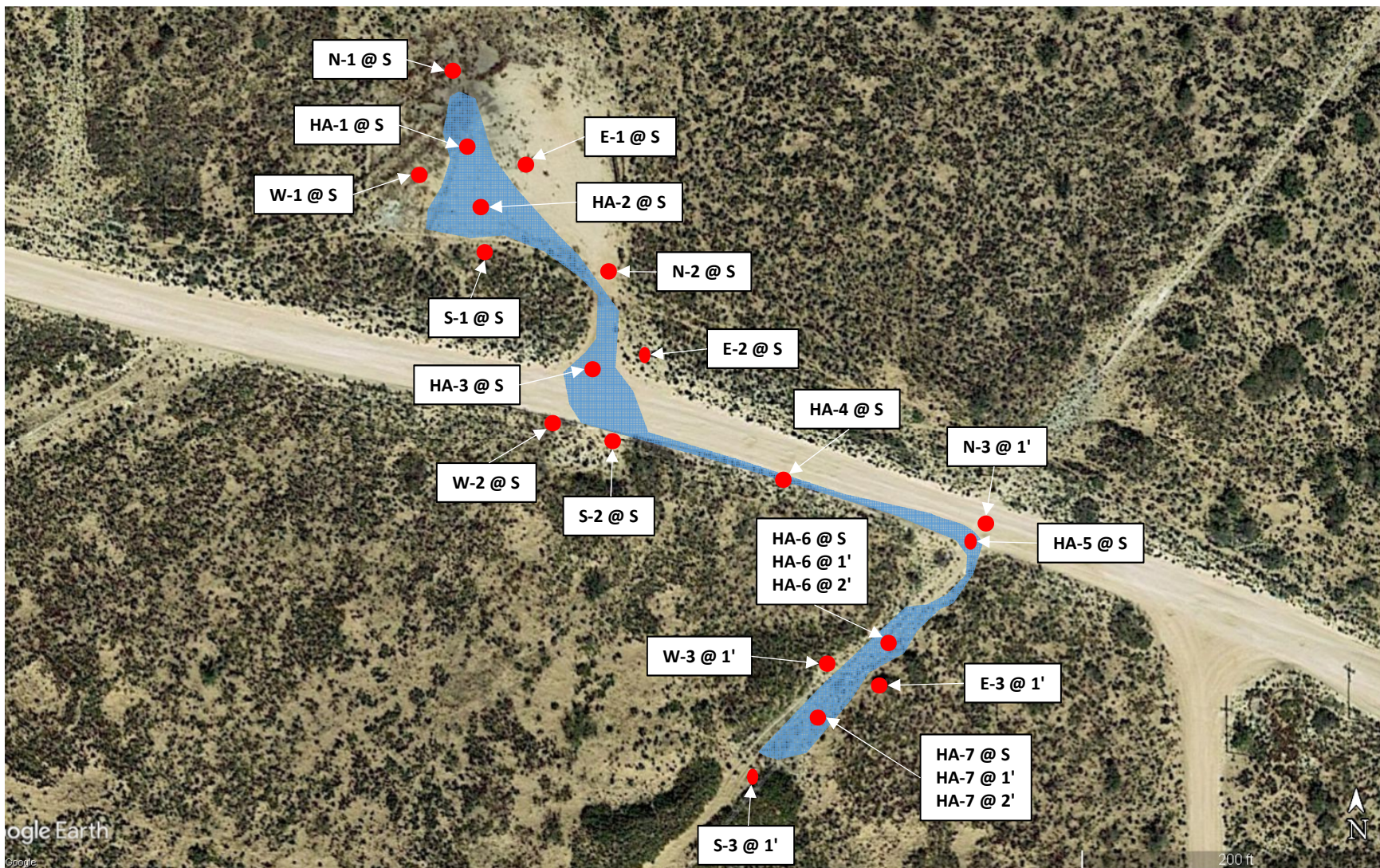
Draft: March 25, 2019

GPS: 32.6620674 -103.6959839

UL "H", Sec. 18, T19S, R33E

TRC Proj. No: 324472





LEGEND:

- Inferred Release Margins
- Sample Location

Figure 2
 Site & Sample Location Map -
 Initial Investigation
 COG Operating, LLC
 Federal 18 #004 SWD
 Lea County, NM

Drafted by: BC | Checked by: CS

Draft: February 4, 2019

GPS: 32.6620674 -103.6959839

UL "H", Sec. 18, T19S, R33E

TRC Proj. No: 324472





LEGEND:






-  Inferred Release Margins
-  Aesthetically Addressed Area
-  6" Excavated Area
-  2' Excavated Area
-  2.5' Excavated Area

Figure 3B

Site & Excavation Location Map
 COG Operating, LLC
 Federal 18 #004 SWD
 Lea County, NM

Drafted by: BC | Checked by: JS

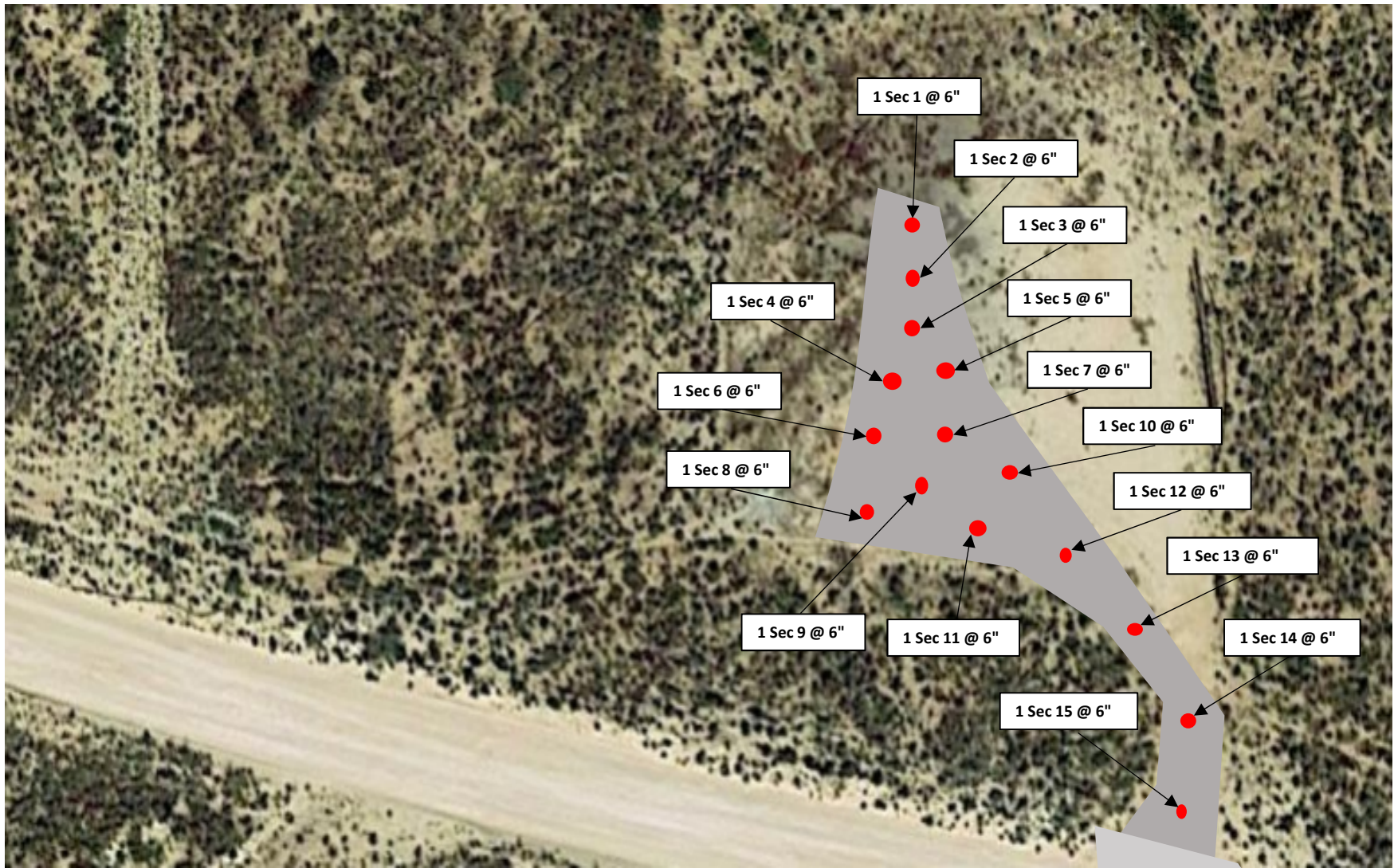
Draft: March 22, 2019


GPS: 32.6620674 -103.6959839

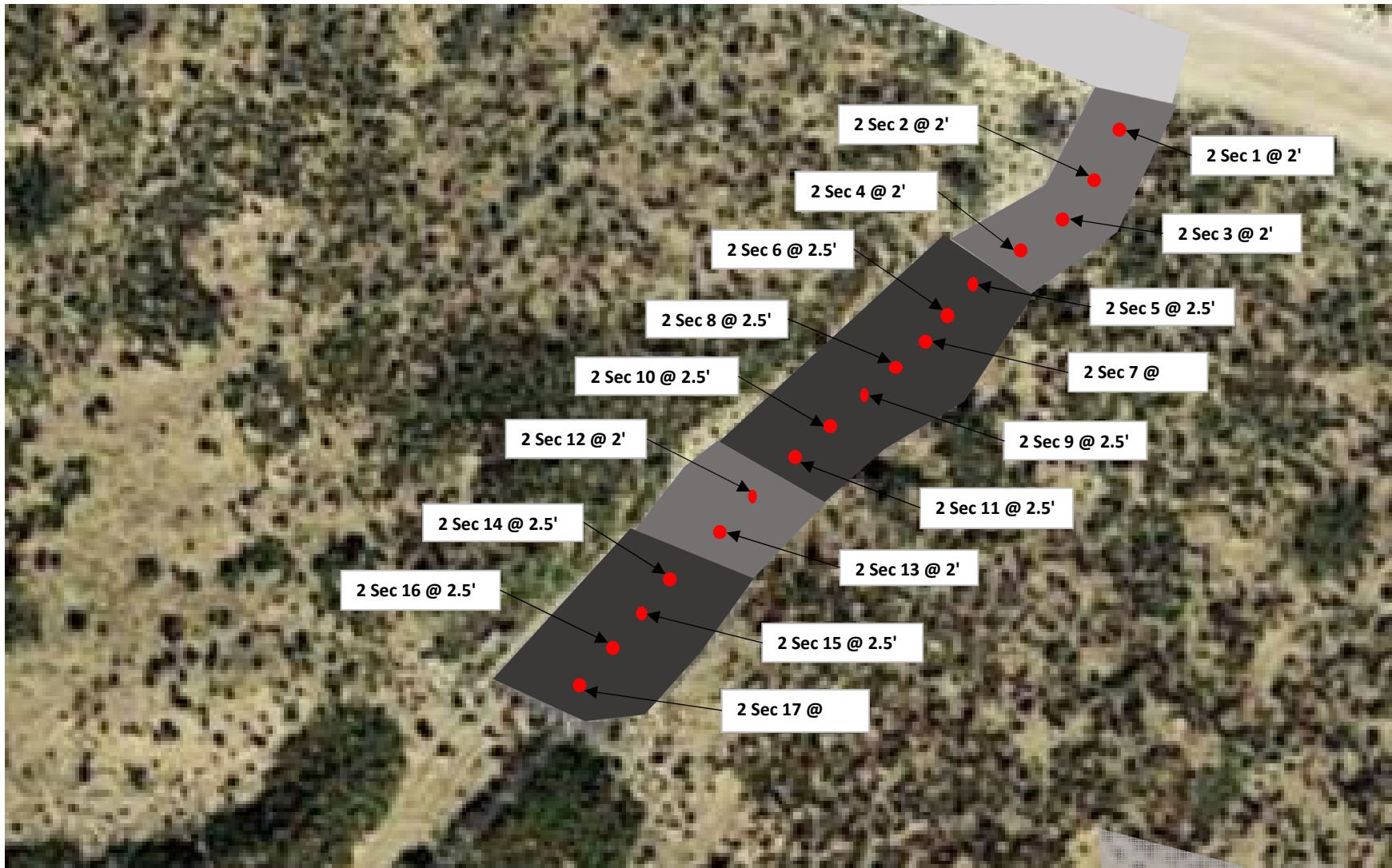
UL "H", Sec. 18, T19S, R33E

TRC Proj. No: 324472

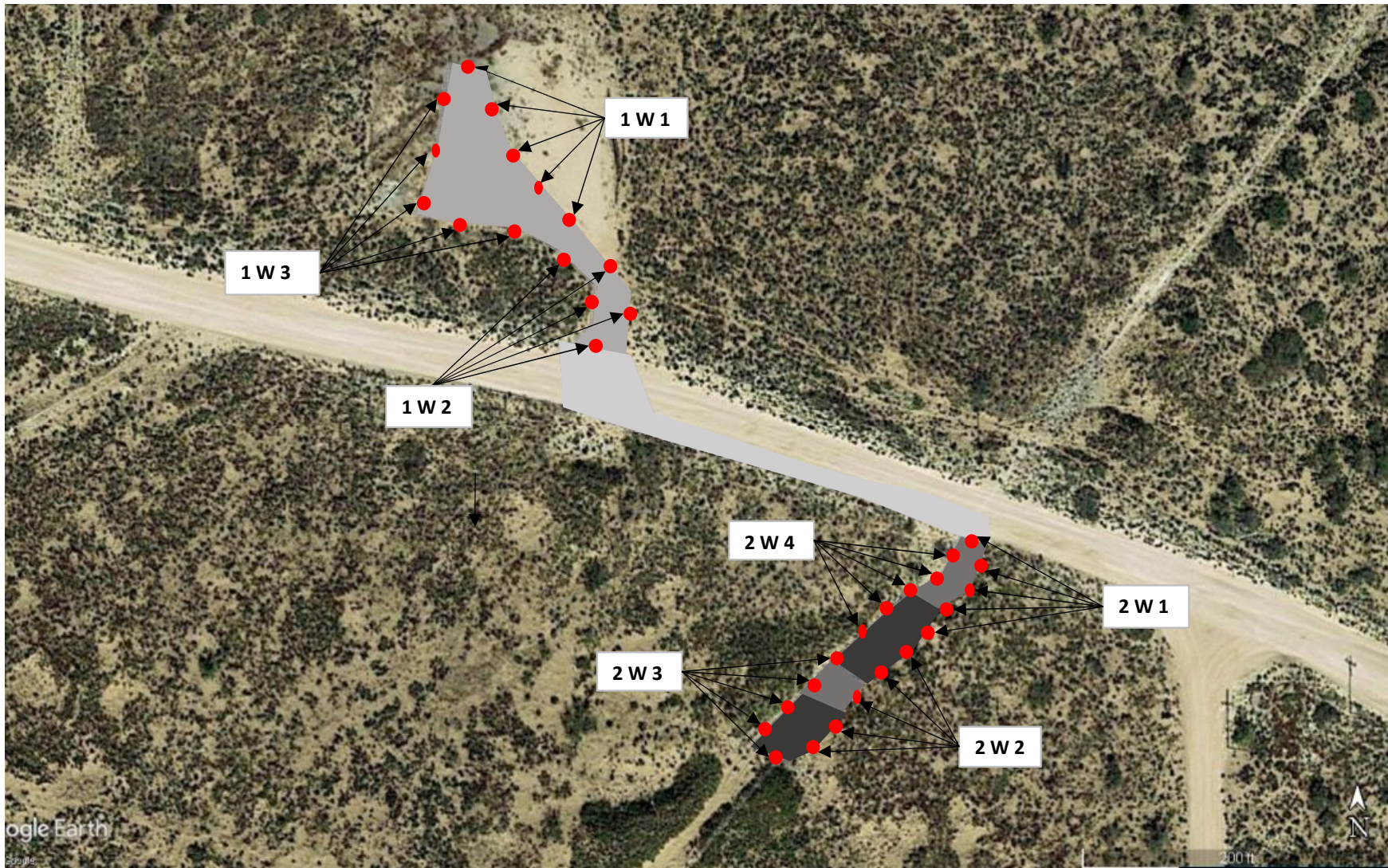




LEGEND: <div style="display: flex; align-items: center; margin-bottom: 5px;"> ● 5 Point Composite Sample Location </div> <div style="display: flex; align-items: center; margin-bottom: 5px;"> Aesthetically Addressed Area </div> <div style="display: flex; align-items: center;"> 6" Excavated Area </div>	Figure 3C Sec. 1 Site & Confirmation Sample Location Map (North Floor) COG Operating, LLC Federal 18 #004 SWD Lea County, NM	Scale: 1" = 45'	<div style="text-align: center;">  <i>Results you can rely on</i> </div>
		Drafted by: BC Checked by: JS	
		Draft: March 22, 2019	
		GPS: 32.6620674 -103.6959839	
		UL "H", Sec. 18, T19S, R33E	
		TRC Proj. No: 324472	



LEGEND: <div>● 5 Point Composite Sample Location</div> <div>■ 2' Excavated Area</div> <div>■ 2.5' Excavated Area</div>	Figure 3D Sec. 2 Site & Confirmation Sample Location Map (South Floor) COG Operating, LLC Federal 18 #004 SWD Lea County, NM	Scale: 1" = 25'	
		Drafted by: BC Checked by: JS	
		Draft: March 22, 2019	
		GPS: 32.6620674 -103.6959839	
		UL "H", Sec. 18, T19S, R33E	
		TRC Proj. No: 324472	





LEGEND: <div><div></div> Sample Point Location</div> <div><div></div> Aesthetically Addressed Area</div> <div><div></div> 6" Excavated Area</div> <div><div></div> 2' Excavated Area</div> <div><div></div> 2.5' Excavated Area</div>	Figure 3D Site & Confirmation Sample Location Map (Wall) COG Operating, LLC Federal 18 #004 SWD Lea County, NM		<div>TRC <i>Results you can rely on</i></div> <div></div>
		Drafted by: BC Checked by: JS	
		Draft: March 25, 2019	
		GPS: 32.6620674 -103.6959839	
		UL "H", Sec. 18, T19S, R33E	
TRC Proj. No: 324472			



Table 1 - Concentrations of BTEX, TPH and/or Chloride in Soil

Sample ID	Date	Depth	Soil Status	SW 846 8021B		SW 846 8015M Ext.					E 300	
				Benzene (mg/kg)	BTEX (mg/kg)	GRO C ₆ -C ₁₀ (mg/kg)	DRO C ₁₀ -C ₂₈ (mg/kg)	GRO + DRO C ₆ -C ₂₈ (mg/kg)	EXT DRO C ₂₈ -C ₃₅ (mg/kg)	TPH C ₆ -C ₃₅ (mg/kg)	Chloride (mg/kg)	
HA-1 @ S	1/4/19	Surface	Excavated	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	20,000	
HA-2 @ S	1/4/19	Surface	Excavated	<0.050	<0.300	<10.0	16.4	16.4	<10.0	16.4	24,800	
HA-3 @ S	1/4/19	Surface	Excavated	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16,000	
HA-4 @ S	1/4/19	Surface	Excavated	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	20,000	
HA-5 @ S	1/4/19	Surface	Excavated	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,100	
HA-6 @ S	1/4/19	Surface	Excavated	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	1,680	
HA-6 @ 1'	1/4/19	1'	Excavated	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	5,040	
HA-6 @ 2'	1/4/19	2'	Excavated	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	208	
HA-7 @ S	1/4/19	Surface	Excavated	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	11,300	
HA-7 @ 1'	1/4/19	1'	Excavated	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	2,600	
HA-7 @ 2'	1/4/19	2'	Excavated	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	160	
N-1 @ S	1/4/19	Surface	In-Situ	<0.050	<0.300	<10.0	59.7	59.7	20.0	79.7	16.0	
S-1 @ S	1/4/19	Surface	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0	
E-1 @ S	1/4/19	Surface	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	576	
W-1 @ S	1/4/19	Surface	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0	
N-2 @ S	1/4/19	Surface	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	176	
S-2 @ S	1/4/19	Surface	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0	
E-2 @ S	1/4/19	Surface	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	128	
W-2 @ S	1/4/19	Surface	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0	
N-3 @ 1'	1/4/19	1'	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0	
S-3 @ 1'	1/4/19	1'	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0	
E-3 @ 1'	1/4/19	1'	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0	
W-3 @ 1'	1/4/19	1'	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0	
NMOCD Closure Criteria (Non-Pasture) NMOCD Closure Criteria (Pasture)				10	50	-	-	1,000 100	-	2,500 100	20,000	600

Pasture areas indicated by highlighted sample point names.

Table 1 - Concentrations of BTEX, TPH and/or Chloride in Soil

Sample ID	Date	Depth	Soil Status	SW 846 8021B		SW 846 8015M Ext.					E 300
				Benzene (mg/kg)	BTEX (mg/kg)	GRO C ₆ -C ₁₀ (mg/kg)	DRO C ₁₀ -C ₂₈ (mg/kg)	GRO + DRO C ₆ -C ₂₈ (mg/kg)	EXT DRO C ₂₈ -C ₃₅ (mg/kg)	TPH C ₆ -C ₃₅ (mg/kg)	Chloride (mg/kg)
1 Sec 1 @ 6"	2/15/19	6"	In-Situ	-	-	-	-	-	-	-	252
1 sec 2 @ 6"	2/15/19	6"	In-Situ	-	-	-	-	-	-	-	1,120
1 sec 3 @ 6"	2/15/19	6"	In-Situ	-	-	-	-	-	-	-	365
1 Sec 4 @ 6"	2/15/19	6"	In-Situ	-	-	-	-	-	-	-	3,970
1 Sec 5 @ 6"	2/15/19	6"	In-Situ	-	-	-	-	-	-	-	777
1 Sec 6 @ 6"	2/15/19	6"	In-Situ	-	-	-	-	-	-	-	2,370
1 Sec 7 @ 6"	2/15/19	6"	In-Situ	-	-	-	-	-	-	-	549
1 Sec 8 @ 6"	2/15/19	6"	In-Situ	-	-	-	-	-	-	-	396
1 Sec 9 @ 6"	2/15/19	6"	In-Situ	-	-	-	-	-	-	-	613
1 Sec 10 @ 6"	2/15/19	6"	In-Situ	-	-	-	-	-	-	-	969
1 Sec 11 @ 6"	2/15/19	6"	In-Situ	-	-	-	-	-	-	-	132
1 Sec 12 @ 6"	2/15/19	6"	In-Situ	-	-	-	-	-	-	-	911
1 Sec 13 @ 6"	2/15/19	6"	In-Situ	-	-	-	-	-	-	-	999
1 Sec 14 @ 6"	2/15/19	6"	In-Situ	-	-	-	-	-	-	-	912
1 Sec 15 @ 6"	2/15/19	6"	In-Situ	-	-	-	-	-	-	-	177
1 W 1	2/15/19	6"	In-Situ	-	-	-	-	-	-	-	4,120
1 W 2	2/15/19	6"	In-Situ	-	-	-	-	-	-	-	2,510
1 W 3	2/15/19	6"	In-Situ	-	-	-	-	-	-	-	354
NMOCD Closure Criteria (Non-Pasture)				NMOCD							
Closure Criteria (Pasture)				10	50	-	-	1,000 100	-	2,500 100	20,000 600

Pasture areas indicated by highlighted sample point names.

Table 1 - Concentrations of BTEX, TPH and/or Chloride in Soil												
Sample ID	Date	Depth	Soil Status	SW 846 8021B		SW 846 8015M Ext.					E 300	
				Benzene (mg/kg)	BTEX (mg/kg)	GRO C ₆ -C ₁₀ (mg/kg)	DRO C ₁₀ -C ₂₈ (mg/kg)	GRO + DRO C ₆ -C ₂₈ (mg/kg)	EXT DRO C ₂₈ -C ₃₅ (mg/kg)	TPH C ₆ -C ₃₅ (mg/kg)	Chloride (mg/kg)	
2 Sec 1 @ 2'	2/15/19	2'	In-Situ	-	-	-	-	-	-	-	199	
2 Sec 2 @ 2'	2/15/19	2'	In-Situ	-	-	-	-	-	-	-	92.7	
2 Sec 3 @ 2'	2/15/19	2'	In-Situ	-	-	-	-	-	-	-	146	
2 Sec 4 @ 2'	2/15/19	2'	In-Situ	-	-	-	-	-	-	-	384	
2 Sec 5 @ 2.5'	2/15/19	2.5'	In-Situ	-	-	-	-	-	-	-	210	
2 Sec 6 @ 2.5'	2/15/19	2.5'	In-Situ	-	-	-	-	-	-	-	67.3	
2 Sec 7 @ 2.5'	2/15/19	2.5'	In-Situ	-	-	-	-	-	-	-	28.2	
2 Sec 8 @ 2.5'	2/15/19	2.5'	In-Situ	-	-	-	-	-	-	-	<4.97	
2 Sec 9 @ 2.5'	2/15/19	2.5'	In-Situ	-	-	-	-	-	-	-	<4.99	
2 Sec 10 @ 2.5'	2/15/19	2.5'	In-Situ	-	-	-	-	-	-	-	<4.96	
2 Sec 11 @ 2'	2/15/19	2'	In-Situ	-	-	-	-	-	-	-	219	
2 Sec 12 @ 2'	2/15/19	2'	In-Situ	-	-	-	-	-	-	-	62.5	
2 Sec 13 @ 2'	2/15/19	2'	In-Situ	-	-	-	-	-	-	-	229	
2 Sec 14 @ 2.5'	2/15/19	2.5'	In-Situ	-	-	-	-	-	-	-	239	
2 Sec 15 @ 2.5'	2/15/19	2.5'	In-Situ	-	-	-	-	-	-	-	76.3	
2 Sec 16 @ 2.5'	2/15/19	2.5'	In-Situ	-	-	-	-	-	-	-	<4.97	
2 Sec 17 @ 2.5'	2/15/19	2.5'	In-Situ	-	-	-	-	-	-	-	<4.99	
2 W 1	2/15/19	1'	In-Situ	-	-	-	-	-	-	-	<5.00	
2 W 2	2/15/19	1'	In-Situ	-	-	-	-	-	-	-	58.7	
2 W 3	2/15/19	1'	In-Situ	-	-	-	-	-	-	-	<4.95	
2 W 4	2/15/19	6"	In-Situ	-	-	-	-	-	-	-	72.7	
NMOCD Closure Criteria (Non-Pasture) Closure Criteria (Pasture)				NMOCD	10	50	-	-	1,000 100	-	2,500 100	20,000 600

Pasture areas indicated by highlighted sample point names.

Field Data, if applicable, is provided as Attachment #5. Laboratory analytical reports are provided as Attachment #6. A "Site & Sample Location Map" is provided as Attachment #3.



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

January 14, 2019

JARED STOFFEL

TRC

10 DESTA DR. SUITE 150 E

MIDLAND, TX 79705

RE: FEDERAL 18 #004 SWD

Enclosed are the results of analyses for samples received by the laboratory on 01/07/19 15:20.

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

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

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

Celey D. Keene

Lab Director/Quality Manager

Analytical Results For:

TRC
JARED STOFFEL
10 DESTA DR. SUITE 150 E
MIDLAND TX, 79705
Fax To:

Received: 01/07/2019
Reported: 01/14/2019
Project Name: FEDERAL 18 #004 SWD
Project Number: NONE GIVEN
Project Location: CONCHO - LEA CO NM

Sampling Date: 01/04/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: HA - 1 @ S (H900029-01)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/10/2019	ND	2.05	103	2.00	3.60	
Toluene*	<0.050	0.050	01/10/2019	ND	2.12	106	2.00	3.35	
Ethylbenzene*	<0.050	0.050	01/10/2019	ND	2.16	108	2.00	2.14	
Total Xylenes*	<0.150	0.150	01/10/2019	ND	6.42	107	6.00	6.86	
Total BTEX	<0.300	0.300	01/10/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 91.0 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	20000	16.0	01/09/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/09/2019	ND	215	107	200	8.05	
DRO >C10-C28*	<10.0	10.0	01/09/2019	ND	197	98.7	200	8.81	
EXT DRO >C28-C36	<10.0	10.0	01/09/2019	ND					

Surrogate: 1-Chlorooctane 89.6 % 41-142

Surrogate: 1-Chlorooctadecane 86.0 % 37.6-147

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TRC
JARED STOFFEL
10 DESTA DR. SUITE 150 E
MIDLAND TX, 79705
Fax To:

Received: 01/07/2019
Reported: 01/14/2019
Project Name: FEDERAL 18 #004 SWD
Project Number: NONE GIVEN
Project Location: CONCHO - LEA CO NM

Sampling Date: 01/04/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: HA - 2 @ S (H900029-02)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/10/2019	ND	2.05	103	2.00	3.60	
Toluene*	<0.050	0.050	01/10/2019	ND	2.12	106	2.00	3.35	
Ethylbenzene*	<0.050	0.050	01/10/2019	ND	2.16	108	2.00	2.14	
Total Xylenes*	<0.150	0.150	01/10/2019	ND	6.42	107	6.00	6.86	
Total BTX	<0.300	0.300	01/10/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 88.7 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	24800	16.0	01/09/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/09/2019	ND	215	107	200	8.05	
DRO >C10-C28*	16.4	10.0	01/09/2019	ND	197	98.7	200	8.81	
EXT DRO >C28-C36	<10.0	10.0	01/09/2019	ND					

Surrogate: 1-Chlorooctane 79.3 % 41-142

Surrogate: 1-Chlorooctadecane 76.5 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TRC
JARED STOFFEL
10 DESTA DR. SUITE 150 E
MIDLAND TX, 79705
Fax To:

Received: 01/07/2019
Reported: 01/14/2019
Project Name: FEDERAL 18 #004 SWD
Project Number: NONE GIVEN
Project Location: CONCHO - LEA CO NM

Sampling Date: 01/04/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: HA - 3 @ S (H900029-03)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/10/2019	ND	2.05	103	2.00	3.60	
Toluene*	<0.050	0.050	01/10/2019	ND	2.12	106	2.00	3.35	
Ethylbenzene*	<0.050	0.050	01/10/2019	ND	2.16	108	2.00	2.14	
Total Xylenes*	<0.150	0.150	01/10/2019	ND	6.42	107	6.00	6.86	
Total BTX	<0.300	0.300	01/10/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 86.9 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16000	16.0	01/09/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/09/2019	ND	215	107	200	8.05	
DRO >C10-C28*	<10.0	10.0	01/09/2019	ND	197	98.7	200	8.81	
EXT DRO >C28-C36	<10.0	10.0	01/09/2019	ND					

Surrogate: 1-Chlorooctane 91.8 % 41-142

Surrogate: 1-Chlorooctadecane 89.2 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 TRC
 JARED STOFFEL
 10 DESTA DR. SUITE 150 E
 MIDLAND TX, 79705
 Fax To:

 Received: 01/07/2019
 Reported: 01/14/2019
 Project Name: FEDERAL 18 #004 SWD
 Project Number: NONE GIVEN
 Project Location: CONCHO - LEA CO NM

 Sampling Date: 01/04/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: HA - 4 @ S (H900029-04)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/10/2019	ND	2.05	103	2.00	3.60	
Toluene*	<0.050	0.050	01/10/2019	ND	2.12	106	2.00	3.35	
Ethylbenzene*	<0.050	0.050	01/10/2019	ND	2.16	108	2.00	2.14	
Total Xylenes*	<0.150	0.150	01/10/2019	ND	6.42	107	6.00	6.86	
Total BTX	<0.300	0.300	01/10/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 84.7 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	20000	16.0	01/09/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/09/2019	ND	215	107	200	8.05	
DRO >C10-C28*	<10.0	10.0	01/09/2019	ND	197	98.7	200	8.81	
EXT DRO >C28-C36	<10.0	10.0	01/09/2019	ND					

Surrogate: 1-Chlorooctane 87.1 % 41-142

Surrogate: 1-Chlorooctadecane 86.8 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TRC
JARED STOFFEL
10 DESTA DR. SUITE 150 E
MIDLAND TX, 79705
Fax To:

Received: 01/07/2019
Reported: 01/14/2019
Project Name: FEDERAL 18 #004 SWD
Project Number: NONE GIVEN
Project Location: CONCHO - LEA CO NM

Sampling Date: 01/04/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: HA - 5 @ S (H900029-05)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/10/2019	ND	2.05	103	2.00	3.60	
Toluene*	<0.050	0.050	01/10/2019	ND	2.12	106	2.00	3.35	
Ethylbenzene*	<0.050	0.050	01/10/2019	ND	2.16	108	2.00	2.14	
Total Xylenes*	<0.150	0.150	01/10/2019	ND	6.42	107	6.00	6.86	
Total BTX	<0.300	0.300	01/10/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 89.1 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1100	16.0	01/09/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/09/2019	ND	215	107	200	8.05	
DRO >C10-C28*	<10.0	10.0	01/09/2019	ND	197	98.7	200	8.81	
EXT DRO >C28-C36	<10.0	10.0	01/09/2019	ND					

Surrogate: 1-Chlorooctane 86.9 % 41-142

Surrogate: 1-Chlorooctadecane 83.7 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TRC
JARED STOFFEL
10 DESTA DR. SUITE 150 E
MIDLAND TX, 79705
Fax To:

Received: 01/07/2019
Reported: 01/14/2019
Project Name: FEDERAL 18 #004 SWD
Project Number: NONE GIVEN
Project Location: CONCHO - LEA CO NM

Sampling Date: 01/04/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: HA - 6 @ S (H900029-06)

BTEX 8021B		mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	01/10/2019	ND	2.05	103	2.00	3.60		
Toluene*	<0.050	0.050	01/10/2019	ND	2.12	106	2.00	3.35		
Ethylbenzene*	<0.050	0.050	01/10/2019	ND	2.16	108	2.00	2.14		
Total Xylenes*	<0.150	0.150	01/10/2019	ND	6.42	107	6.00	6.86		
Total BTEX	<0.300	0.300	01/10/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 91.1 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1680	16.0	01/09/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/09/2019	ND	215	107	200	8.05	
DRO >C10-C28*	<10.0	10.0	01/09/2019	ND	197	98.7	200	8.81	
EXT DRO >C28-C36	<10.0	10.0	01/09/2019	ND					

Surrogate: 1-Chlorooctane 91.1 % 41-142

Surrogate: 1-Chlorooctadecane 89.5 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TRC
JARED STOFFEL
10 DESTA DR. SUITE 150 E
MIDLAND TX, 79705
Fax To:

Received: 01/07/2019
Reported: 01/14/2019
Project Name: FEDERAL 18 #004 SWD
Project Number: NONE GIVEN
Project Location: CONCHO - LEA CO NM

Sampling Date: 01/04/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: HA - 6 @ 1' (H900029-07)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/10/2019	ND	2.05	103	2.00	3.60	
Toluene*	<0.050	0.050	01/10/2019	ND	2.12	106	2.00	3.35	
Ethylbenzene*	<0.050	0.050	01/10/2019	ND	2.16	108	2.00	2.14	
Total Xylenes*	<0.150	0.150	01/10/2019	ND	6.42	107	6.00	6.86	
Total BTX	<0.300	0.300	01/10/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 88.1 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	5040	16.0	01/09/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/09/2019	ND	198	98.8	200	2.20	
DRO >C10-C28*	<10.0	10.0	01/09/2019	ND	216	108	200	1.53	
EXT DRO >C28-C36	<10.0	10.0	01/09/2019	ND					

Surrogate: 1-Chlorooctane 91.7 % 41-142

Surrogate: 1-Chlorooctadecane 93.0 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TRC
JARED STOFFEL
10 DESTA DR. SUITE 150 E
MIDLAND TX, 79705
Fax To:

Received: 01/07/2019
Reported: 01/14/2019
Project Name: FEDERAL 18 #004 SWD
Project Number: NONE GIVEN
Project Location: CONCHO - LEA CO NM

Sampling Date: 01/04/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: HA - 6 @ 2' (H900029-08)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/10/2019	ND	2.05	103	2.00	3.60	
Toluene*	<0.050	0.050	01/10/2019	ND	2.12	106	2.00	3.35	
Ethylbenzene*	<0.050	0.050	01/10/2019	ND	2.16	108	2.00	2.14	
Total Xylenes*	<0.150	0.150	01/10/2019	ND	6.42	107	6.00	6.86	
Total BTEX	<0.300	0.300	01/10/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 89.3 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	01/09/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/09/2019	ND	198	98.8	200	2.20	
DRO >C10-C28*	<10.0	10.0	01/09/2019	ND	216	108	200	1.53	
EXT DRO >C28-C36	<10.0	10.0	01/09/2019	ND					

Surrogate: 1-Chlorooctane 91.2 % 41-142

Surrogate: 1-Chlorooctadecane 94.4 % 37.6-147

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TRC
JARED STOFFEL
10 DESTA DR. SUITE 150 E
MIDLAND TX, 79705
Fax To:

Received: 01/07/2019
Reported: 01/14/2019
Project Name: FEDERAL 18 #004 SWD
Project Number: NONE GIVEN
Project Location: CONCHO - LEA CO NM

Sampling Date: 01/04/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: HA - 7 @ S (H900029-09)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/10/2019	ND	2.05	103	2.00	3.60	
Toluene*	<0.050	0.050	01/10/2019	ND	2.12	106	2.00	3.35	
Ethylbenzene*	<0.050	0.050	01/10/2019	ND	2.16	108	2.00	2.14	
Total Xylenes*	<0.150	0.150	01/10/2019	ND	6.42	107	6.00	6.86	
Total BTX	<0.300	0.300	01/10/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 84.7 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	11300	16.0	01/09/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/09/2019	ND	198	98.8	200	2.20	
DRO >C10-C28*	<10.0	10.0	01/09/2019	ND	216	108	200	1.53	
EXT DRO >C28-C36	<10.0	10.0	01/09/2019	ND					

Surrogate: 1-Chlorooctane 82.3 % 41-142

Surrogate: 1-Chlorooctadecane 82.2 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 TRC
 JARED STOFFEL
 10 DESTA DR. SUITE 150 E
 MIDLAND TX, 79705
 Fax To:

 Received: 01/07/2019
 Reported: 01/14/2019
 Project Name: FEDERAL 18 #004 SWD
 Project Number: NONE GIVEN
 Project Location: CONCHO - LEA CO NM

 Sampling Date: 01/04/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: HA - 7 @ 1' (H900029-10)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/10/2019	ND	2.05	103	2.00	3.60	
Toluene*	<0.050	0.050	01/10/2019	ND	2.12	106	2.00	3.35	
Ethylbenzene*	<0.050	0.050	01/10/2019	ND	2.16	108	2.00	2.14	
Total Xylenes*	<0.150	0.150	01/10/2019	ND	6.42	107	6.00	6.86	
Total BTX	<0.300	0.300	01/10/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.1 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2600	16.0	01/09/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/09/2019	ND	198	98.8	200	2.20	
DRO >C10-C28*	<10.0	10.0	01/09/2019	ND	216	108	200	1.53	
EXT DRO >C28-C36	<10.0	10.0	01/09/2019	ND					

Surrogate: 1-Chlorooctane 85.6 % 41-142

Surrogate: 1-Chlorooctadecane 86.0 % 37.6-147

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Analytical Results For:

TRC
JARED STOFFEL
10 DESTA DR. SUITE 150 E
MIDLAND TX, 79705
Fax To:

Received: 01/07/2019
Reported: 01/14/2019
Project Name: FEDERAL 18 #004 SWD
Project Number: NONE GIVEN
Project Location: CONCHO - LEA CO NM

Sampling Date: 01/04/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: HA - 7 @ 2' (H900029-11)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/10/2019	ND	2.05	103	2.00	3.60	
Toluene*	<0.050	0.050	01/10/2019	ND	2.12	106	2.00	3.35	
Ethylbenzene*	<0.050	0.050	01/10/2019	ND	2.16	108	2.00	2.14	
Total Xylenes*	<0.150	0.150	01/10/2019	ND	6.42	107	6.00	6.86	
Total BTX	<0.300	0.300	01/10/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 92.1 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	01/09/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/09/2019	ND	198	98.8	200	2.20	
DRO >C10-C28*	<10.0	10.0	01/09/2019	ND	216	108	200	1.53	
EXT DRO >C28-C36	<10.0	10.0	01/09/2019	ND					

Surrogate: 1-Chlorooctane 85.7 % 41-142

Surrogate: 1-Chlorooctadecane 85.0 % 37.6-147

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Analytical Results For:

TRC
JARED STOFFEL
10 DESTA DR. SUITE 150 E
MIDLAND TX, 79705
Fax To:

Received: 01/07/2019
Reported: 01/14/2019
Project Name: FEDERAL 18 #004 SWD
Project Number: NONE GIVEN
Project Location: CONCHO - LEA CO NM

Sampling Date: 01/04/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: N - 1 @ S (H900029-12)

BTX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/11/2019	ND	2.05	103	2.00	3.60	
Toluene*	<0.050	0.050	01/11/2019	ND	2.12	106	2.00	3.35	
Ethylbenzene*	<0.050	0.050	01/11/2019	ND	2.16	108	2.00	2.14	
Total Xylenes*	<0.150	0.150	01/11/2019	ND	6.42	107	6.00	6.86	
Total BTX	<0.300	0.300	01/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 89.1 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	01/09/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/09/2019	ND	198	98.8	200	2.20	
DRO >C10-C28*	59.7	10.0	01/09/2019	ND	216	108	200	1.53	
EXT DRO >C28-C36	20.0	10.0	01/09/2019	ND					

Surrogate: 1-Chlorooctane 92.6 % 41-142

Surrogate: 1-Chlorooctadecane 96.3 % 37.6-147

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Analytical Results For:

TRC
JARED STOFFEL
10 DESTA DR. SUITE 150 E
MIDLAND TX, 79705
Fax To:

Received: 01/07/2019
Reported: 01/14/2019
Project Name: FEDERAL 18 #004 SWD
Project Number: NONE GIVEN
Project Location: CONCHO - LEA CO NM

Sampling Date: 01/04/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S - 1 @ S (H900029-13)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/11/2019	ND	2.03	102	2.00	3.42	
Toluene*	<0.050	0.050	01/11/2019	ND	2.15	108	2.00	2.89	
Ethylbenzene*	<0.050	0.050	01/11/2019	ND	2.18	109	2.00	2.31	
Total Xylenes*	<0.150	0.150	01/11/2019	ND	6.67	111	6.00	2.50	
Total BTEX	<0.300	0.300	01/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.7 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	01/09/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/09/2019	ND	198	98.8	200	2.20	
DRO >C10-C28*	<10.0	10.0	01/09/2019	ND	216	108	200	1.53	
EXT DRO >C28-C36	<10.0	10.0	01/09/2019	ND					

Surrogate: 1-Chlorooctane 89.6 % 41-142

Surrogate: 1-Chlorooctadecane 87.7 % 37.6-147

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Analytical Results For:

TRC
JARED STOFFEL
10 DESTA DR. SUITE 150 E
MIDLAND TX, 79705
Fax To:

Received: 01/07/2019
Reported: 01/14/2019
Project Name: FEDERAL 18 #004 SWD
Project Number: NONE GIVEN
Project Location: CONCHO - LEA CO NM

Sampling Date: 01/04/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: E - 1 @ S (H900029-14)

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/11/2019	ND	2.03	102	2.00	3.42	
Toluene*	<0.050	0.050	01/11/2019	ND	2.15	108	2.00	2.89	
Ethylbenzene*	<0.050	0.050	01/11/2019	ND	2.18	109	2.00	2.31	
Total Xylenes*	<0.150	0.150	01/11/2019	ND	6.67	111	6.00	2.50	
Total BTX	<0.300	0.300	01/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.8 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	576	16.0	01/09/2019	ND	416	104	400	3.77	QM-07

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/09/2019	ND	198	98.8	200	2.20	
DRO >C10-C28*	<10.0	10.0	01/09/2019	ND	216	108	200	1.53	
EXT DRO >C28-C36	<10.0	10.0	01/09/2019	ND					

Surrogate: 1-Chlorooctane 91.6 % 41-142

Surrogate: 1-Chlorooctadecane 91.0 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 TRC
 JARED STOFFEL
 10 DESTA DR. SUITE 150 E
 MIDLAND TX, 79705
 Fax To:

 Received: 01/07/2019
 Reported: 01/14/2019
 Project Name: FEDERAL 18 #004 SWD
 Project Number: NONE GIVEN
 Project Location: CONCHO - LEA CO NM

 Sampling Date: 01/04/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: W - 1 @ S (H900029-15)

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/11/2019	ND	2.03	102	2.00	3.42	
Toluene*	<0.050	0.050	01/11/2019	ND	2.15	108	2.00	2.89	
Ethylbenzene*	<0.050	0.050	01/11/2019	ND	2.18	109	2.00	2.31	
Total Xylenes*	<0.150	0.150	01/11/2019	ND	6.67	111	6.00	2.50	
Total BTX	<0.300	0.300	01/11/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.6 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	01/09/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/09/2019	ND	198	98.8	200	2.20	
DRO >C10-C28*	<10.0	10.0	01/09/2019	ND	216	108	200	1.53	
EXT DRO >C28-C36	<10.0	10.0	01/09/2019	ND					

Surrogate: 1-Chlorooctane 92.4 % 41-142

Surrogate: 1-Chlorooctadecane 89.7 % 37.6-147

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Analytical Results For:

TRC
JARED STOFFEL
10 DESTA DR. SUITE 150 E
MIDLAND TX, 79705
Fax To:

Received: 01/07/2019
Reported: 01/14/2019
Project Name: FEDERAL 18 #004 SWD
Project Number: NONE GIVEN
Project Location: CONCHO - LEA CO NM

Sampling Date: 01/04/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: N - 2 @ S (H900029-16)

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/09/2019	ND	2.19	109	2.00	1.43	
Toluene*	<0.050	0.050	01/09/2019	ND	2.23	111	2.00	0.594	
Ethylbenzene*	<0.050	0.050	01/09/2019	ND	2.24	112	2.00	1.72	
Total Xylenes*	<0.150	0.150	01/09/2019	ND	6.78	113	6.00	0.793	
Total BTX	<0.300	0.300	01/09/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.7 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	01/09/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/09/2019	ND	198	98.8	200	2.20	
DRO >C10-C28*	<10.0	10.0	01/09/2019	ND	216	108	200	1.53	
EXT DRO >C28-C36	<10.0	10.0	01/09/2019	ND					

Surrogate: 1-Chlorooctane 84.8 % 41-142

Surrogate: 1-Chlorooctadecane 81.8 % 37.6-147

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Analytical Results For:

TRC
JARED STOFFEL
10 DESTA DR. SUITE 150 E
MIDLAND TX, 79705
Fax To:

Received: 01/07/2019
Reported: 01/14/2019
Project Name: FEDERAL 18 #004 SWD
Project Number: NONE GIVEN
Project Location: CONCHO - LEA CO NM

Sampling Date: 01/04/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: S - 2 @ S (H900029-17)

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/09/2019	ND	2.19	109	2.00	1.43	
Toluene*	<0.050	0.050	01/09/2019	ND	2.23	111	2.00	0.594	
Ethylbenzene*	<0.050	0.050	01/09/2019	ND	2.24	112	2.00	1.72	
Total Xylenes*	<0.150	0.150	01/09/2019	ND	6.78	113	6.00	0.793	
Total BTX	<0.300	0.300	01/09/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.7 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	01/09/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/09/2019	ND	198	98.8	200	2.20	
DRO >C10-C28*	<10.0	10.0	01/09/2019	ND	216	108	200	1.53	
EXT DRO >C28-C36	<10.0	10.0	01/09/2019	ND					

Surrogate: 1-Chlorooctane 97.2 % 41-142

Surrogate: 1-Chlorooctadecane 95.7 % 37.6-147

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Analytical Results For:

TRC
JARED STOFFEL
10 DESTA DR. SUITE 150 E
MIDLAND TX, 79705
Fax To:

Received: 01/07/2019
Reported: 01/14/2019
Project Name: FEDERAL 18 #004 SWD
Project Number: NONE GIVEN
Project Location: CONCHO - LEA CO NM

Sampling Date: 01/04/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: E - 2 @ S (H900029-18)

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/09/2019	ND	2.19	109	2.00	1.43	
Toluene*	<0.050	0.050	01/09/2019	ND	2.23	111	2.00	0.594	
Ethylbenzene*	<0.050	0.050	01/09/2019	ND	2.24	112	2.00	1.72	
Total Xylenes*	<0.150	0.150	01/09/2019	ND	6.78	113	6.00	0.793	
Total BTX	<0.300	0.300	01/09/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.2 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	128	16.0	01/09/2019	ND	416	104	400	3.77		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/09/2019	ND	198	98.8	200	2.20	
DRO >C10-C28*	<10.0	10.0	01/09/2019	ND	216	108	200	1.53	
EXT DRO >C28-C36	<10.0	10.0	01/09/2019	ND					

Surrogate: 1-Chlorooctane 87.3 % 41-142

Surrogate: 1-Chlorooctadecane 84.0 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TRC
JARED STOFFEL
10 DESTA DR. SUITE 150 E
MIDLAND TX, 79705
Fax To:

Received: 01/07/2019
Reported: 01/14/2019
Project Name: FEDERAL 18 #004 SWD
Project Number: NONE GIVEN
Project Location: CONCHO - LEA CO NM

Sampling Date: 01/04/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: W - 2 @ S (H900029-19)

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/09/2019	ND	2.19	109	2.00	1.43	
Toluene*	<0.050	0.050	01/09/2019	ND	2.23	111	2.00	0.594	
Ethylbenzene*	<0.050	0.050	01/09/2019	ND	2.24	112	2.00	1.72	
Total Xylenes*	<0.150	0.150	01/09/2019	ND	6.78	113	6.00	0.793	
Total BTX	<0.300	0.300	01/09/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.3 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	01/09/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/09/2019	ND	198	98.8	200	2.20	
DRO >C10-C28*	<10.0	10.0	01/09/2019	ND	216	108	200	1.53	
EXT DRO >C28-C36	<10.0	10.0	01/09/2019	ND					

Surrogate: 1-Chlorooctane 91.5 % 41-142

Surrogate: 1-Chlorooctadecane 89.9 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 TRC
 JARED STOFFEL
 10 DESTA DR. SUITE 150 E
 MIDLAND TX, 79705
 Fax To:

 Received: 01/07/2019
 Reported: 01/14/2019
 Project Name: FEDERAL 18 #004 SWD
 Project Number: NONE GIVEN
 Project Location: CONCHO - LEA CO NM

 Sampling Date: 01/04/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: N - 3 @ 1' (H900029-20)

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/09/2019	ND	2.19	109	2.00	1.43	
Toluene*	<0.050	0.050	01/09/2019	ND	2.23	111	2.00	0.594	
Ethylbenzene*	<0.050	0.050	01/09/2019	ND	2.24	112	2.00	1.72	
Total Xylenes*	<0.150	0.150	01/09/2019	ND	6.78	113	6.00	0.793	
Total BTEX	<0.300	0.300	01/09/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.6 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	01/09/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/09/2019	ND	198	98.8	200	2.20	
DRO >C10-C28*	<10.0	10.0	01/09/2019	ND	216	108	200	1.53	
EXT DRO >C28-C36	<10.0	10.0	01/09/2019	ND					

Surrogate: 1-Chlorooctane 97.0 % 41-142

Surrogate: 1-Chlorooctadecane 98.8 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

 TRC
 JARED STOFFEL
 10 DESTA DR. SUITE 150 E
 MIDLAND TX, 79705
 Fax To:

 Received: 01/07/2019
 Reported: 01/14/2019
 Project Name: FEDERAL 18 #004 SWD
 Project Number: NONE GIVEN
 Project Location: CONCHO - LEA CO NM

 Sampling Date: 01/04/2019
 Sampling Type: Soil
 Sampling Condition: Cool & Intact
 Sample Received By: Tamara Oldaker

Sample ID: S - 3 @ 1' (H900029-21)

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/09/2019	ND	2.19	109	2.00	1.43	
Toluene*	<0.050	0.050	01/09/2019	ND	2.23	111	2.00	0.594	
Ethylbenzene*	<0.050	0.050	01/09/2019	ND	2.24	112	2.00	1.72	
Total Xylenes*	<0.150	0.150	01/09/2019	ND	6.78	113	6.00	0.793	
Total BTX	<0.300	0.300	01/09/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.1 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	01/09/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/09/2019	ND	198	98.8	200	2.20	
DRO >C10-C28*	<10.0	10.0	01/09/2019	ND	216	108	200	1.53	
EXT DRO >C28-C36	<10.0	10.0	01/09/2019	ND					

Surrogate: 1-Chlorooctane 93.7 % 41-142

Surrogate: 1-Chlorooctadecane 91.8 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TRC
JARED STOFFEL
10 DESTA DR. SUITE 150 E
MIDLAND TX, 79705
Fax To:

Received: 01/07/2019
Reported: 01/14/2019
Project Name: FEDERAL 18 #004 SWD
Project Number: NONE GIVEN
Project Location: CONCHO - LEA CO NM

Sampling Date: 01/04/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: E - 3 @ 1' (H900029-22)

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/09/2019	ND	2.19	109	2.00	1.43	
Toluene*	<0.050	0.050	01/09/2019	ND	2.23	111	2.00	0.594	
Ethylbenzene*	<0.050	0.050	01/09/2019	ND	2.24	112	2.00	1.72	
Total Xylenes*	<0.150	0.150	01/09/2019	ND	6.78	113	6.00	0.793	
Total BTX	<0.300	0.300	01/09/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.0 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	01/09/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/09/2019	ND	198	98.8	200	2.20	
DRO >C10-C28*	<10.0	10.0	01/09/2019	ND	216	108	200	1.53	
EXT DRO >C28-C36	<10.0	10.0	01/09/2019	ND					

Surrogate: 1-Chlorooctane 97.4 % 41-142

Surrogate: 1-Chlorooctadecane 95.3 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

TRC
JARED STOFFEL
10 DESTA DR. SUITE 150 E
MIDLAND TX, 79705
Fax To:

Received: 01/07/2019
Reported: 01/14/2019
Project Name: FEDERAL 18 #004 SWD
Project Number: NONE GIVEN
Project Location: CONCHO - LEA CO NM

Sampling Date: 01/04/2019
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Tamara Oldaker

Sample ID: W - 3 @ 1' (H900029-23)

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/09/2019	ND	2.19	109	2.00	1.43	
Toluene*	<0.050	0.050	01/09/2019	ND	2.23	111	2.00	0.594	
Ethylbenzene*	<0.050	0.050	01/09/2019	ND	2.24	112	2.00	1.72	
Total Xylenes*	<0.150	0.150	01/09/2019	ND	6.78	113	6.00	0.793	
Total BTX	<0.300	0.300	01/09/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 94.9 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	01/09/2019	ND	416	104	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/09/2019	ND	198	98.8	200	2.20	
DRO >C10-C28*	<10.0	10.0	01/09/2019	ND	216	108	200	1.53	
EXT DRO >C28-C36	<10.0	10.0	01/09/2019	ND					

Surrogate: 1-Chlorooctane 93.2 % 41-142

Surrogate: 1-Chlorooctadecane 90.8 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager

Notes and Definitions

QM-07	The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager



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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: TRC Solutions				BILL TO				ANALYSIS REQUEST											
Project Manager: JOE LOWERY JARED STEFFEL				P.O. #:															
Address: 10 Desta Drive Suite 150E				Company: COBACHO															
City: Midland				Attn: BECKY HASKELL															
State: TX zip: 79705				Address:															
Phone #: 432-466-4450				City:															
Fax #:				State:															
Project #:				Zip:															
Project Location: FEDERAL RD #2004 SUBD				Phone #:															
Sample Name: RECKY GRUFFIN				Fax #:															
FOR LAB USE ONLY																			
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME								
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :									ACID/BASE:	ICE / COOL
H900028	HA-10-S	G1	X							1-4-19	9:00	X	X	X					
	HA-20-S										9:10	X	X	X					
	HA-30-S										9:20	X	X	X					
	HA-40-S										9:30	X	X	X					
	HA-50-S										9:40	X	X	X					
	HA-60-S										9:50	X	X	X					
	HA-60-1'										9:50	X	X	X					
	HA-60-2'										10:10	X	X	X					
	HA-70-S										10:20	X	X	X					
	HA-70-1'										10:30	X	X	X					

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Relinquished By:	Date: 1-7-19	Received By:	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Add'l Phone #: _____
Relinquished By:	Time: 1:30 PM	Received By:	Fax Result: <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Add'l Fax #: _____
Delivered By: (Circle One) Sampler - UPS Bus Other:	Time:	CHECKED BY: (Initials)	REMARKS:

2 COBACHO@TRCSOLUTIONS.COM
COOPER@TRCSOLUTIONS.COM
HASKELL@COBACHO.COM
JSTEFFEL@TRCSOLUTIONS.COM



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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: TRC Solutions										BILL TO										ANALYSIS REQUEST									
Project Manager: Joel Lowry										P.O. #:																			
Address: 10 Desta Drive Suite 150E										Company: CONDCHO																			
City: Midland										Attn: RECKY HASTELL																			
State: TX zip: 79705										Address:																			
Phone #: 432-466-4450										City:																			
Fax #: 432-466-4450										State:																			
Project #: 432-466-4450										Zip:																			
Project Location: LETA CAMP										Phone #:																			
Sample Name: RECKY HASTELL										Fax #:																			
FOR LAB USE ONLY										MATRIX										PRESERV									
										SAMPLING																			
Lab I.D.										Sample I.D.																			
HA-7021										(G)RAB OR (C)OMP.																			
11										# CONTAINERS																			
12										GROUNDWATER																			
13										WASTEWATER																			
14										SOIL																			
15										OIL																			
16										SLUDGE																			
17										OTHER :																			
18										ACID/BASE:																			
19										ICE / COOL																			
										OTHER :																			
										DATE																			
										TIME																			
										1-4-9																			
										10:40																			
										10:50																			
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										11:50																			
										12:00																			



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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

[illegible]



Certificate of Analysis Summary 615149

TRC Solutions, Inc, Midland, TX

Project Name: Federal 18 SWD



Project Id:

Contact: B Cooper

Project Location:

Date Received in Lab: Wed Feb-20-19 12:49 pm

Report Date: 20-MAR-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	615149-001	615149-002	615149-003	615149-004	615149-005	615149-006
	<i>Field Id:</i>	1 Sec 1 @ 6"	1 Sec 2 @ 6"	1 Sec 3 @ 6"	1 Sec 4 @ 6"	1 Sec 5 @ 6"	1 Sec 6 @ 6"
	<i>Depth:</i>	6- In	6- In	6- In	6- In	6- In	6- In
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Feb-15-19 00:00	Feb-15-19 00:00	Feb-15-19 00:00	Feb-15-19 00:00	Feb-15-19 00:00	Feb-15-19 00:00
Chloride by EPA 300 SUB: T104704215-19-29	<i>Extracted:</i>	Feb-26-19 09:07	Feb-26-19 09:07	Feb-26-19 09:07	Feb-26-19 09:07	Feb-26-19 09:07	Feb-26-19 09:07
	<i>Analyzed:</i>	Feb-26-19 10:32	Feb-26-19 11:08	Feb-26-19 11:20	Feb-26-19 11:32	Feb-26-19 11:44	Feb-26-19 12:20
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		252 10.0	1120 9.98	365 9.96	3970 9.94	777 9.98	2370 10.0

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

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

Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 615149

TRC Solutions, Inc, Midland, TX

Project Name: Federal 18 SWD



Project Id:

Contact: B Cooper

Project Location:

Date Received in Lab: Wed Feb-20-19 12:49 pm

Report Date: 20-MAR-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	615149-007	615149-008	615149-009	615149-010	615149-011	615149-012
	<i>Field Id:</i>	1 Sec 7 @ 6"	1 Sec 8 @ 6"	1 Sec 9 @ 6"	1 Sec 10 @ 6"	1 Sec 11 @ 6"	1 Sec 12 @ 6"
	<i>Depth:</i>	6- In	6- In	6- In	6- In	6- In	6- In
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Feb-15-19 00:00	Feb-15-19 00:00	Feb-15-19 00:00	Feb-15-19 00:00	Feb-15-19 00:00	Feb-15-19 00:00
Chloride by EPA 300 SUB: T104704215-19-29	<i>Extracted:</i>	Feb-26-19 09:07	Feb-26-19 09:07	Feb-26-19 09:07	Feb-26-19 09:07	Feb-20-19 16:15	Feb-20-19 16:15
	<i>Analyzed:</i>	Feb-26-19 12:32	Feb-26-19 12:44	Feb-26-19 12:56	Feb-26-19 13:08	Feb-21-19 10:34	Feb-21-19 10:56
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		549 9.98	396 10.0	613 9.90	969 9.96	132 4.95	911 4.99

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 615149

TRC Solutions, Inc, Midland, TX

Project Name: Federal 18 SWD



Project Id:

Contact: B Cooper

Project Location:

Date Received in Lab: Wed Feb-20-19 12:49 pm

Report Date: 20-MAR-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	615149-013	615149-014	615149-015	615149-016	615149-017	615149-018
	<i>Field Id:</i>	1 Sec 13 @ 6"	1 Sec 14 @ 6"	1 Sec 15 @ 6"	1 W 1	1 W 2	1 W 3
	<i>Depth:</i>	6- In	6- In	6- In	6- In	6- In	6- In
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Feb-15-19 00:00	Feb-15-19 00:00	Feb-15-19 00:00	Feb-15-19 00:00	Feb-15-19 00:00	Feb-15-19 00:00
Chloride by EPA 300 SUB: T104704215-19-29	<i>Extracted:</i>	Feb-20-19 16:15	Feb-20-19 16:15	Feb-20-19 16:15	Feb-20-19 16:15	Feb-20-19 16:15	Feb-20-19 16:15
	<i>Analyzed:</i>	Feb-21-19 11:02	Feb-21-19 11:08	Feb-21-19 11:14	Feb-21-19 11:21	Feb-21-19 11:27	Feb-21-19 11:33
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		999 5.00	912 4.97	177 4.98	4120 25.0	2510 24.8	354 4.95

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Jessica Kramer
Project Assistant



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TRC Solutions, Inc, Midland, TX

Project Name: Federal 18 SWD



Project Id:

Contact: B Cooper

Project Location:

Date Received in Lab: Wed Feb-20-19 12:49 pm

Report Date: 20-MAR-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	615149-019	615149-020	615149-021	615149-022	615149-023	615149-024
	<i>Field Id:</i>	2 W 4	2 Sec 1 @ 2'	2 Sec 2 @ 2'	2 Sec 3 @ 2'	2 Sec 4 @ 2'	2 Sec 5 @ 2.5'
	<i>Depth:</i>	6- In	2- ft	2- ft	2- ft	2- ft	2.5- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Feb-15-19 00:00	Feb-15-19 00:00	Feb-15-19 00:00	Feb-15-19 00:00	Feb-15-19 00:00	Feb-15-19 00:00
Chloride by EPA 300 SUB: T104704215-19-29	<i>Extracted:</i>	Feb-21-19 10:30	Feb-21-19 13:00	Feb-21-19 13:00	Feb-21-19 13:00	Feb-21-19 13:00	Feb-21-19 13:00
	<i>Analyzed:</i>	Feb-21-19 13:02	Feb-21-19 18:57	Feb-21-19 19:03	Feb-21-19 19:22	Feb-21-19 19:28	Feb-21-19 19:50
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		72.7 5.00	199 4.99	92.7 5.00	146 4.95	384 4.95	210 4.95

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 615149

TRC Solutions, Inc, Midland, TX

Project Name: Federal 18 SWD



Project Id:

Contact: B Cooper

Project Location:

Date Received in Lab: Wed Feb-20-19 12:49 pm

Report Date: 20-MAR-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	615149-025	615149-026	615149-027	615149-028	615149-029	615149-030
	<i>Field Id:</i>	2 Sec 6 @ 2.5'	2 Sec 7 @ 2.5'	2 Sec 8 @ 2.5'	2 Sec 9 @ 2.5'	2 Sec 10 @ 2.5'	2 Sec 11 @ 2'
	<i>Depth:</i>	2.5- ft	2.5- ft	2.5- ft	2.5- ft	2.5- ft	2- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Feb-15-19 00:00	Feb-15-19 00:00	Feb-15-19 00:00	Feb-15-19 00:00	Feb-15-19 00:00	Feb-15-19 00:00
Chloride by EPA 300 SUB: T104704215-19-29	<i>Extracted:</i>	Feb-21-19 13:00	Feb-21-19 13:00	Feb-21-19 13:00	Feb-21-19 13:00	Feb-21-19 13:00	Feb-20-19 16:15
	<i>Analyzed:</i>	Feb-21-19 19:56	Feb-21-19 20:02	Feb-21-19 20:08	Feb-21-19 20:14	Feb-21-19 20:21	Feb-21-19 09:05
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		67.3 4.99	28.2 5.00	<4.97 4.97	<4.99 4.99	<4.96 4.96	219 4.95

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 615149

TRC Solutions, Inc, Midland, TX

Project Name: Federal 18 SWD



Project Id:

Contact: B Cooper

Project Location:

Date Received in Lab: Wed Feb-20-19 12:49 pm

Report Date: 20-MAR-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	615149-031	615149-032	615149-033	615149-034	615149-035	615149-036
	<i>Field Id:</i>	2 Sec 12 @ 2'	2 Sec 13 @ 2'	2 Sec 14 @ 2.5'	2 Sec 15 @ 2.5'	2 Sec 16 @ 2.5'	2 Sec 17 @ 2.5'
	<i>Depth:</i>	2- ft	2- ft	2.5- ft	2.5- ft	2.5- ft	2.5- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Feb-15-19 00:00	Feb-15-19 00:00	Feb-15-19 00:00	Feb-15-19 00:00	Feb-15-19 00:00	Feb-15-19 00:00
Chloride by EPA 300 SUB: T104704215-19-29	<i>Extracted:</i>	Feb-20-19 16:15	Feb-20-19 16:15	Feb-20-19 16:15	Feb-20-19 16:15	Feb-20-19 16:15	Feb-20-19 16:15
	<i>Analyzed:</i>	Feb-21-19 09:11	Feb-21-19 09:17	Feb-21-19 09:39	Feb-21-19 09:45	Feb-21-19 09:51	Feb-21-19 09:57
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		62.5 4.95	229 4.95	239 4.95	76.3 4.95	<4.97 4.97	<4.99 4.99

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Jessica Kramer

Jessica Kramer
Project Assistant



Certificate of Analysis Summary 615149

TRC Solutions, Inc, Midland, TX

Project Name: Federal 18 SWD



Project Id:

Contact: B Cooper

Project Location:

Date Received in Lab: Wed Feb-20-19 12:49 pm

Report Date: 20-MAR-19

Project Manager: Jessica Kramer

Analysis Requested	Lab Id:	615149-037	615149-038	615149-039			
	Field Id:	2 W 1	2 W 2	2 W 3			
	Depth:	1- ft	1- ft	1- ft			
	Matrix:	SOIL	SOIL	SOIL			
	Sampled:	Feb-15-19 00:00	Feb-15-19 00:00	Feb-15-19 00:00			
Chloride by EPA 300 SUB: T104704215-19-29	Extracted:	Feb-20-19 16:15	Feb-20-19 16:15	Feb-20-19 16:15			
	Analyzed:	Feb-21-19 10:03	Feb-21-19 10:10	Feb-21-19 10:28			
	Units/RL:	mg/kg RL	mg/kg RL	mg/kg RL			
Chloride		<5.00 5.00	58.7 5.00	<4.95 4.95			

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Jessica Kramer

Jessica Kramer
Project Assistant

Analytical Report 615149

for
TRC Solutions, Inc

Project Manager: B Cooper

Federal 18 SWD

20-MAR-19

Collected By: Client



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

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

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

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-18)
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)
Xenco-Atlanta (LELAP Lab ID #04176)
Xenco-Tampa: Florida (E87429), North Carolina (483)
Xenco-Lakeland: Florida (E84098)



20-MAR-19

Project Manager: **B Cooper**
TRC Solutions, Inc
2057 Commerce
Midland, TX 79703

Reference: XENCO Report No(s): **615149**
Federal 18 SWD
Project Address:

B Cooper:

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) 615149. 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. 615149 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

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

Respectfully,

Jessica Kramer
Project Assistant

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TRC Solutions, Inc, Midland, TX

Federal 18 SWD

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
1 Sec 1 @ 6"	S	02-15-19 00:00	6 In	615149-001
1 Sec 2 @ 6"	S	02-15-19 00:00	6 In	615149-002
1 Sec 3 @ 6"	S	02-15-19 00:00	6 In	615149-003
1 Sec 4 @ 6"	S	02-15-19 00:00	6 In	615149-004
1 Sec 5 @ 6"	S	02-15-19 00:00	6 In	615149-005
1 Sec 6 @ 6"	S	02-15-19 00:00	6 In	615149-006
1 Sec 7 @ 6"	S	02-15-19 00:00	6 In	615149-007
1 Sec 8 @ 6"	S	02-15-19 00:00	6 In	615149-008
1 Sec 9 @ 6"	S	02-15-19 00:00	6 In	615149-009
1 Sec 10 @ 6"	S	02-15-19 00:00	6 In	615149-010
1 Sec 11 @ 6"	S	02-15-19 00:00	6 In	615149-011
1 Sec 12 @ 6"	S	02-15-19 00:00	6 In	615149-012
1 Sec 13 @ 6"	S	02-15-19 00:00	6 In	615149-013
1 Sec 14 @ 6"	S	02-15-19 00:00	6 In	615149-014
1 Sec 15 @ 6"	S	02-15-19 00:00	6 In	615149-015
1 W 1	S	02-15-19 00:00	6 In	615149-016
1 W 2	S	02-15-19 00:00	6 In	615149-017
1 W 3	S	02-15-19 00:00	6 In	615149-018
2 W 4	S	02-15-19 00:00	6 In	615149-019
2 Sec 1 @ 2'	S	02-15-19 00:00	2 ft	615149-020
2 Sec 2 @ 2'	S	02-15-19 00:00	2 ft	615149-021
2 Sec 3 @ 2'	S	02-15-19 00:00	2 ft	615149-022
2 Sec 4 @ 2'	S	02-15-19 00:00	2 ft	615149-023
2 Sec 5 @ 2.5'	S	02-15-19 00:00	2.5 ft	615149-024
2 Sec 6 @ 2.5'	S	02-15-19 00:00	2.5 ft	615149-025
2 Sec 7 @ 2.5'	S	02-15-19 00:00	2.5 ft	615149-026
2 Sec 8 @ 2.5'	S	02-15-19 00:00	2.5 ft	615149-027
2 Sec 9 @ 2.5'	S	02-15-19 00:00	2.5 ft	615149-028
2 Sec 10 @ 2.5'	S	02-15-19 00:00	2.5 ft	615149-029
2 Sec 11 @ 2'	S	02-15-19 00:00	2 ft	615149-030
2 Sec 12 @ 2'	S	02-15-19 00:00	2 ft	615149-031
2 Sec 13 @ 2'	S	02-15-19 00:00	2 ft	615149-032
2 Sec 14 @ 2.5'	S	02-15-19 00:00	2.5 ft	615149-033
2 Sec 15 @ 2.5'	S	02-15-19 00:00	2.5 ft	615149-034
2 Sec 16 @ 2.5'	S	02-15-19 00:00	2.5 ft	615149-035
2 Sec 17 @ 2.5'	S	02-15-19 00:00	2.5 ft	615149-036
2 W 1	S	02-15-19 00:00	1 ft	615149-037
2 W 2	S	02-15-19 00:00	1 ft	615149-038
2 W 3	S	02-15-19 00:00	1 ft	615149-039



CASE NARRATIVE

Client Name: TRC Solutions, Inc

Project Name: Federal 18 SWD

Project ID:

Work Order Number(s): 615149

Report Date: 20-MAR-19

Date Received: 02/20/2019

Sample receipt non conformances and comments:

None

Sample receipt non conformances and comments per sample:

None

Analytical non conformances and comments:

Batch: LBA-3079947 Chloride by EPA 300

Lab Sample ID 615149-038 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 615149-011, -012, -013, -014, -015, -016, -017, -018, -030, -031, -032, -033, -034, -035, -036, -037, -038, -039.

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

Batch: LBA-3080063 Inorganic Anions by EPA 300

Lab Sample ID 615149-021 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 615149-020, -021, -022, -023, -024, -025, -026, -027, -028, -029.

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



Certificate of Analytical Results 615149



TRC Solutions, Inc, Midland, TX

Federal 18 SWD

Sample Id: 1 Sec 1 @ 6"

Matrix: Soil

Date Received: 02.20.19 12.49

Lab Sample Id: 615149-001

Date Collected: 02.15.19 00.00

Sample Depth: 6 In

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture:

Analyst: JYM

Date Prep: 02.26.19 09.07

Basis: Wet Weight

Seq Number: 3080409

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	252	10.0	mg/kg	02.26.19 10.32		1



Certificate of Analytical Results 615149



TRC Solutions, Inc, Midland, TX

Federal 18 SWD

Sample Id: **1 Sec 2 @ 6"**

Matrix: Soil

Date Received: 02.20.19 12.49

Lab Sample Id: 615149-002

Date Collected: 02.15.19 00.00

Sample Depth: 6 In

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture:

Analyst: JYM

Date Prep: 02.26.19 09.07

Basis: Wet Weight

Seq Number: 3080409

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	1120	9.98	mg/kg	02.26.19 11.08		1



Certificate of Analytical Results 615149



TRC Solutions, Inc, Midland, TX

Federal 18 SWD

Sample Id: **1 Sec 3 @ 6"**

Matrix: Soil

Date Received: 02.20.19 12.49

Lab Sample Id: 615149-003

Date Collected: 02.15.19 00.00

Sample Depth: 6 In

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture:

Analyst: JYM

Date Prep: 02.26.19 09.07

Basis: Wet Weight

Seq Number: 3080409

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	365	9.96	mg/kg	02.26.19 11.20		1



Certificate of Analytical Results 615149



TRC Solutions, Inc, Midland, TX

Federal 18 SWD

Sample Id: 1 Sec 4 @ 6"

Matrix: Soil

Date Received: 02.20.19 12.49

Lab Sample Id: 615149-004

Date Collected: 02.15.19 00.00

Sample Depth: 6 In

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture:

Analyst: JYM

Date Prep: 02.26.19 09.07

Basis: Wet Weight

Seq Number: 3080409

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	3970	9.94	mg/kg	02.26.19 11.32		1



Certificate of Analytical Results 615149



TRC Solutions, Inc, Midland, TX

Federal 18 SWD

Sample Id: 1 Sec 5 @ 6"

Matrix: Soil

Date Received: 02.20.19 12.49

Lab Sample Id: 615149-005

Date Collected: 02.15.19 00.00

Sample Depth: 6 In

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture:

Analyst: JYM

Date Prep: 02.26.19 09.07

Basis: Wet Weight

Seq Number: 3080409

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	777	9.98	mg/kg	02.26.19 11.44		1



Certificate of Analytical Results 615149



TRC Solutions, Inc, Midland, TX

Federal 18 SWD

Sample Id: **1 Sec 6 @ 6"**

Matrix: Soil

Date Received: 02.20.19 12.49

Lab Sample Id: 615149-006

Date Collected: 02.15.19 00.00

Sample Depth: 6 In

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture:

Analyst: JYM

Date Prep: 02.26.19 09.07

Basis: Wet Weight

Seq Number: 3080409

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2370	10.0	mg/kg	02.26.19 12.20		1



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TRC Solutions, Inc, Midland, TX

Federal 18 SWD

Sample Id: **1 Sec 7 @ 6"**

Matrix: Soil

Date Received: 02.20.19 12.49

Lab Sample Id: 615149-007

Date Collected: 02.15.19 00.00

Sample Depth: 6 In

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture:

Analyst: JYM

Date Prep: 02.26.19 09.07

Basis: Wet Weight

Seq Number: 3080409

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	549	9.98	mg/kg	02.26.19 12.32		1



Certificate of Analytical Results 615149



TRC Solutions, Inc, Midland, TX

Federal 18 SWD

Sample Id: 1 Sec 8 @ 6"

Matrix: Soil

Date Received: 02.20.19 12.49

Lab Sample Id: 615149-008

Date Collected: 02.15.19 00.00

Sample Depth: 6 In

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture:

Analyst: JYM

Date Prep: 02.26.19 09.07

Basis: Wet Weight

Seq Number: 3080409

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	396	10.0	mg/kg	02.26.19 12.44		1



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TRC Solutions, Inc, Midland, TX

Federal 18 SWD

Sample Id: 1 Sec 9 @ 6"

Matrix: Soil

Date Received: 02.20.19 12.49

Lab Sample Id: 615149-009

Date Collected: 02.15.19 00.00

Sample Depth: 6 In

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture:

Analyst: JYM

Date Prep: 02.26.19 09.07

Basis: Wet Weight

Seq Number: 3080409

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	613	9.90	mg/kg	02.26.19 12.56		1



Certificate of Analytical Results 615149



TRC Solutions, Inc, Midland, TX

Federal 18 SWD

Sample Id: **1 Sec 10 @ 6"**

Matrix: Soil

Date Received: 02.20.19 12.49

Lab Sample Id: 615149-010

Date Collected: 02.15.19 00.00

Sample Depth: 6 In

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: JYM

% Moisture:

Analyst: JYM

Date Prep: 02.26.19 09.07

Basis: Wet Weight

Seq Number: 3080409

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	969	9.96	mg/kg	02.26.19 13.08		1



Certificate of Analytical Results 615149



TRC Solutions, Inc, Midland, TX

Federal 18 SWD

Sample Id: 1 Sec 11 @ 6"

Matrix: Soil

Date Received: 02.20.19 12.49

Lab Sample Id: 615149-011

Date Collected: 02.15.19 00.00

Sample Depth: 6 In

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.20.19 16.15

Basis: Wet Weight

Seq Number: 3079947

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	132	4.95	mg/kg	02.21.19 10.34		1



Certificate of Analytical Results 615149



TRC Solutions, Inc, Midland, TX

Federal 18 SWD

Sample Id: 1 Sec 12 @ 6"

Matrix: Soil

Date Received: 02.20.19 12.49

Lab Sample Id: 615149-012

Date Collected: 02.15.19 00.00

Sample Depth: 6 In

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.20.19 16.15

Basis: Wet Weight

Seq Number: 3079947

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	911	4.99	mg/kg	02.21.19 10.56		1



Certificate of Analytical Results 615149



TRC Solutions, Inc, Midland, TX

Federal 18 SWD

Sample Id: 1 Sec 13 @ 6"

Matrix: Soil

Date Received: 02.20.19 12.49

Lab Sample Id: 615149-013

Date Collected: 02.15.19 00.00

Sample Depth: 6 In

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.20.19 16.15

Basis: Wet Weight

Seq Number: 3079947

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	999	5.00	mg/kg	02.21.19 11.02		1



Certificate of Analytical Results 615149



TRC Solutions, Inc, Midland, TX

Federal 18 SWD

Sample Id: 1 Sec 14 @ 6"

Matrix: Soil

Date Received: 02.20.19 12.49

Lab Sample Id: 615149-014

Date Collected: 02.15.19 00.00

Sample Depth: 6 In

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.20.19 16.15

Basis: Wet Weight

Seq Number: 3079947

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	912	4.97	mg/kg	02.21.19 11.08		1



Certificate of Analytical Results 615149



TRC Solutions, Inc, Midland, TX

Federal 18 SWD

Sample Id: 1 Sec 15 @ 6"

Matrix: Soil

Date Received: 02.20.19 12.49

Lab Sample Id: 615149-015

Date Collected: 02.15.19 00.00

Sample Depth: 6 In

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.20.19 16.15

Basis: Wet Weight

Seq Number: 3079947

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	177	4.98	mg/kg	02.21.19 11.14		1



Certificate of Analytical Results 615149



TRC Solutions, Inc, Midland, TX

Federal 18 SWD

Sample Id: **1 W 1**
Lab Sample Id: 615149-016

Matrix: Soil
Date Collected: 02.15.19 00.00

Date Received: 02.20.19 12.49
Sample Depth: 6 In

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3079947

Date Prep: 02.20.19 16.15

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	4120	25.0	mg/kg	02.21.19 11.21		5



Certificate of Analytical Results 615149



TRC Solutions, Inc, Midland, TX

Federal 18 SWD

Sample Id: 1 W 2
Lab Sample Id: 615149-017

Matrix: Soil
Date Collected: 02.15.19 00.00

Date Received: 02.20.19 12.49
Sample Depth: 6 In

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.20.19 16.15

Basis: Wet Weight

Seq Number: 3079947

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	2510	24.8	mg/kg	02.21.19 11.27		5



Certificate of Analytical Results 615149



TRC Solutions, Inc, Midland, TX

Federal 18 SWD

Sample Id: **1 W 3**
Lab Sample Id: 615149-018

Matrix: Soil
Date Collected: 02.15.19 00.00

Date Received: 02.20.19 12.49
Sample Depth: 6 In

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3079947

Date Prep: 02.20.19 16.15

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	354	4.95	mg/kg	02.21.19 11.33		1



Certificate of Analytical Results 615149



TRC Solutions, Inc, Midland, TX

Federal 18 SWD

Sample Id: **2 W 4**
Lab Sample Id: 615149-019

Matrix: Soil
Date Collected: 02.15.19 00.00

Date Received: 02.20.19 12.49
Sample Depth: 6 In

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3080062

Date Prep: 02.21.19 10.30

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	72.7	5.00	mg/kg	02.21.19 13.02		1



Certificate of Analytical Results 615149



TRC Solutions, Inc, Midland, TX

Federal 18 SWD

Sample Id: 2 Sec 1 @ 2'

Matrix: Soil

Date Received: 02.20.19 12.49

Lab Sample Id: 615149-020

Date Collected: 02.15.19 00.00

Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.21.19 13.00

Basis: Wet Weight

Seq Number: 3080063

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	199	4.99	mg/kg	02.21.19 18.57		1



Certificate of Analytical Results 615149



TRC Solutions, Inc, Midland, TX

Federal 18 SWD

Sample Id: 2 Sec 2 @ 2'

Matrix: Soil

Date Received: 02.20.19 12.49

Lab Sample Id: 615149-021

Date Collected: 02.15.19 00.00

Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.21.19 13.00

Basis: Wet Weight

Seq Number: 3080063

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	92.7	5.00	mg/kg	02.21.19 19.03		1



Certificate of Analytical Results 615149



TRC Solutions, Inc, Midland, TX

Federal 18 SWD

Sample Id: 2 Sec 3 @ 2'

Matrix: Soil

Date Received: 02.20.19 12.49

Lab Sample Id: 615149-022

Date Collected: 02.15.19 00.00

Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.21.19 13.00

Basis: Wet Weight

Seq Number: 3080063

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	146	4.95	mg/kg	02.21.19 19.22		1



Certificate of Analytical Results 615149



TRC Solutions, Inc, Midland, TX

Federal 18 SWD

Sample Id: 2 Sec 4 @ 2'

Matrix: Soil

Date Received: 02.20.19 12.49

Lab Sample Id: 615149-023

Date Collected: 02.15.19 00.00

Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.21.19 13.00

Basis: Wet Weight

Seq Number: 3080063

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	384	4.95	mg/kg	02.21.19 19.28		1



Certificate of Analytical Results 615149



TRC Solutions, Inc, Midland, TX

Federal 18 SWD

Sample Id: 2 Sec 5 @ 2.5'

Matrix: Soil

Date Received: 02.20.19 12.49

Lab Sample Id: 615149-024

Date Collected: 02.15.19 00.00

Sample Depth: 2.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.21.19 13.00

Basis: Wet Weight

Seq Number: 3080063

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	210	4.95	mg/kg	02.21.19 19.50		1



Certificate of Analytical Results 615149



TRC Solutions, Inc, Midland, TX

Federal 18 SWD

Sample Id: 2 Sec 6 @ 2.5'

Matrix: Soil

Date Received: 02.20.19 12.49

Lab Sample Id: 615149-025

Date Collected: 02.15.19 00.00

Sample Depth: 2.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.21.19 13.00

Basis: Wet Weight

Seq Number: 3080063

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	67.3	4.99	mg/kg	02.21.19 19.56		1



Certificate of Analytical Results 615149



TRC Solutions, Inc, Midland, TX

Federal 18 SWD

Sample Id: 2 Sec 7 @ 2.5'

Matrix: Soil

Date Received: 02.20.19 12.49

Lab Sample Id: 615149-026

Date Collected: 02.15.19 00.00

Sample Depth: 2.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.21.19 13.00

Basis: Wet Weight

Seq Number: 3080063

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	28.2	5.00	mg/kg	02.21.19 20.02		1



Certificate of Analytical Results 615149



TRC Solutions, Inc, Midland, TX

Federal 18 SWD

Sample Id: 2 Sec 8 @ 2.5'

Matrix: Soil

Date Received: 02.20.19 12.49

Lab Sample Id: 615149-027

Date Collected: 02.15.19 00.00

Sample Depth: 2.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.21.19 13.00

Basis: Wet Weight

Seq Number: 3080063

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.97	4.97	mg/kg	02.21.19 20.08	U	1



Certificate of Analytical Results 615149



TRC Solutions, Inc, Midland, TX

Federal 18 SWD

Sample Id: 2 Sec 9 @ 2.5'

Matrix: Soil

Date Received: 02.20.19 12.49

Lab Sample Id: 615149-028

Date Collected: 02.15.19 00.00

Sample Depth: 2.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.21.19 13.00

Basis: Wet Weight

Seq Number: 3080063

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	02.21.19 20.14	U	1



Certificate of Analytical Results 615149



TRC Solutions, Inc, Midland, TX Federal 18 SWD

Sample Id: 2 Sec 10 @ 2.5'

Matrix: Soil

Date Received: 02.20.19 12.49

Lab Sample Id: 615149-029

Date Collected: 02.15.19 00.00

Sample Depth: 2.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.21.19 13.00

Basis: Wet Weight

Seq Number: 3080063

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.96	4.96	mg/kg	02.21.19 20.21	U	1



Certificate of Analytical Results 615149



TRC Solutions, Inc, Midland, TX

Federal 18 SWD

Sample Id: 2 Sec 11 @ 2'

Matrix: Soil

Date Received: 02.20.19 12.49

Lab Sample Id: 615149-030

Date Collected: 02.15.19 00.00

Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.20.19 16.15

Basis: Wet Weight

Seq Number: 3079947

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	219	4.95	mg/kg	02.21.19 09.05		1



Certificate of Analytical Results 615149



TRC Solutions, Inc, Midland, TX

Federal 18 SWD

Sample Id: 2 Sec 12 @ 2'

Matrix: Soil

Date Received: 02.20.19 12.49

Lab Sample Id: 615149-031

Date Collected: 02.15.19 00.00

Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.20.19 16.15

Basis: Wet Weight

Seq Number: 3079947

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	62.5	4.95	mg/kg	02.21.19 09.11		1



Certificate of Analytical Results 615149



TRC Solutions, Inc, Midland, TX

Federal 18 SWD

Sample Id: 2 Sec 13 @ 2'

Matrix: Soil

Date Received: 02.20.19 12.49

Lab Sample Id: 615149-032

Date Collected: 02.15.19 00.00

Sample Depth: 2 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.20.19 16.15

Basis: Wet Weight

Seq Number: 3079947

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	229	4.95	mg/kg	02.21.19 09.17		1



Certificate of Analytical Results 615149



TRC Solutions, Inc, Midland, TX

Federal 18 SWD

Sample Id: 2 Sec 14 @ 2.5'

Matrix: Soil

Date Received: 02.20.19 12.49

Lab Sample Id: 615149-033

Date Collected: 02.15.19 00.00

Sample Depth: 2.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.20.19 16.15

Basis: Wet Weight

Seq Number: 3079947

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	239	4.95	mg/kg	02.21.19 09.39		1



Certificate of Analytical Results 615149



TRC Solutions, Inc, Midland, TX

Federal 18 SWD

Sample Id: 2 Sec 15 @ 2.5'

Matrix: Soil

Date Received: 02.20.19 12.49

Lab Sample Id: 615149-034

Date Collected: 02.15.19 00.00

Sample Depth: 2.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.20.19 16.15

Basis: Wet Weight

Seq Number: 3079947

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	76.3	4.95	mg/kg	02.21.19 09.45		1



Certificate of Analytical Results 615149



TRC Solutions, Inc, Midland, TX

Federal 18 SWD

Sample Id: 2 Sec 16 @ 2.5'

Matrix: Soil

Date Received: 02.20.19 12.49

Lab Sample Id: 615149-035

Date Collected: 02.15.19 00.00

Sample Depth: 2.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.20.19 16.15

Basis: Wet Weight

Seq Number: 3079947

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.97	4.97	mg/kg	02.21.19 09.51	U	1



Certificate of Analytical Results 615149



TRC Solutions, Inc, Midland, TX

Federal 18 SWD

Sample Id: 2 Sec 17 @ 2.5'

Matrix: Soil

Date Received: 02.20.19 12.49

Lab Sample Id: 615149-036

Date Collected: 02.15.19 00.00

Sample Depth: 2.5 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.20.19 16.15

Basis: Wet Weight

Seq Number: 3079947

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.99	4.99	mg/kg	02.21.19 09.57	U	1



Certificate of Analytical Results 615149



TRC Solutions, Inc, Midland, TX

Federal 18 SWD

Sample Id: 2 W 1
Lab Sample Id: 615149-037

Matrix: Soil
Date Collected: 02.15.19 00.00

Date Received: 02.20.19 12.49
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.20.19 16.15

Basis: Wet Weight

Seq Number: 3079947

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<5.00	5.00	mg/kg	02.21.19 10.03	U	1



Certificate of Analytical Results 615149



TRC Solutions, Inc, Midland, TX

Federal 18 SWD

Sample Id: **2 W 2**
Lab Sample Id: 615149-038

Matrix: Soil
Date Collected: 02.15.19 00.00

Date Received: 02.20.19 12.49
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Tech: CHE

Analyst: CHE

Seq Number: 3079947

Date Prep: 02.20.19 16.15

Prep Method: E300P

% Moisture:

Basis: Wet Weight

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	58.7	5.00	mg/kg	02.21.19 10.10		1



Certificate of Analytical Results 615149



TRC Solutions, Inc, Midland, TX

Federal 18 SWD

Sample Id: 2 W 3
Lab Sample Id: 615149-039

Matrix: Soil
Date Collected: 02.15.19 00.00

Date Received: 02.20.19 12.49
Sample Depth: 1 ft

Analytical Method: Chloride by EPA 300

Prep Method: E300P

Tech: CHE

% Moisture:

Analyst: CHE

Date Prep: 02.20.19 16.15

Basis: Wet Weight

Seq Number: 3079947

SUB: T104704215-19-29

Parameter	Cas Number	Result	RL	Units	Analysis Date	Flag	Dil
Chloride	16887-00-6	<4.95	4.95	mg/kg	02.21.19 10.28	U	1

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

** Surrogate recovered outside laboratory control limit.

BRL Below Reporting Limit.

RL Reporting Limit

MDL Method Detection Limit

SDL Sample Detection Limit

LOD Limit of Detection

PQL Practical Quantitation Limit

SQL Method Quantitation Limit

LOQ Limit of Quantitation

DL Method Detection Limit

NC Non-Calculable

SMP Client Sample

BLK

Method Blank

BKS/LCS Blank Spike/Laboratory Control Sample

BKSD/LCSD

Blank Spike Duplicate/Laboratory Control Sample Duplicate

MD/SD Method Duplicate/Sample Duplicate

MS

Matrix Spike

MSD: Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

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



QC Summary 615149

TRC Solutions, Inc Federal 18 SWD

Analytical Method: Chloride by EPA 300

Seq Number: 3079947

MB Sample Id: 7672216-1-BLK

Matrix: Solid

LCS Sample Id: 7672216-1-BKS

Prep Method: E300P

Date Prep: 02.20.19

LCSD Sample Id: 7672216-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	238	95	236	94	90-110	1	20	mg/kg	02.21.19 08:27	

Analytical Method: Chloride by EPA 300

Seq Number: 3080062

MB Sample Id: 7672217-1-BLK

Matrix: Solid

LCS Sample Id: 7672217-1-BKS

Prep Method: E300P

Date Prep: 02.21.19

LCSD Sample Id: 7672217-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<5.00	250	245	98	244	98	90-110	0	20	mg/kg	02.21.19 12:50	

Analytical Method: Chloride by EPA 300

Seq Number: 3080063

MB Sample Id: 7672291-1-BLK

Matrix: Solid

LCS Sample Id: 7672291-1-BKS

Prep Method: E300P

Date Prep: 02.21.19

LCSD Sample Id: 7672291-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.858	250	247	99	248	99	90-110	0	20	mg/kg	02.21.19 16:23	

Analytical Method: Chloride by EPA 300

Seq Number: 3080409

MB Sample Id: 7672470-1-BLK

Matrix: Solid

LCS Sample Id: 7672470-1-BKS

Prep Method: E300P

Date Prep: 02.26.19

LCSD Sample Id: 7672470-1-BSD

Parameter	MB Result	Spike Amount	LCS Result	LCS %Rec	LCSD Result	LCSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	<0.354	100	105	105	102	102	80-120	3	20	mg/kg	02.26.19 08:34	

Analytical Method: Chloride by EPA 300

Seq Number: 3079947

Parent Sample Id: 614383-008

Matrix: Soil

MS Sample Id: 614383-008 S

Prep Method: E300P

Date Prep: 02.20.19

MSD Sample Id: 614383-008 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	531	252	771	95	789	102	90-110	2	20	mg/kg	02.21.19 08:46	

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

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

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

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



QC Summary 615149

TRC Solutions, Inc Federal 18 SWD

Analytical Method: Chloride by EPA 300

Seq Number: 3079947

Parent Sample Id: 615149-038

Matrix: Soil

MS Sample Id: 615149-038 S

Prep Method: E300P

Date Prep: 02.20.19

MSD Sample Id: 615149-038 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	58.7	250	328	108	338	112	90-110	3	20	mg/kg	02.21.19 10:16	X

Analytical Method: Chloride by EPA 300

Seq Number: 3080062

Parent Sample Id: 615136-004

Matrix: Soil

MS Sample Id: 615136-004 S

Prep Method: E300P

Date Prep: 02.21.19

MSD Sample Id: 615136-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	1.12	248	262	105	263	106	90-110	0	20	mg/kg	02.21.19 14:38	

Analytical Method: Chloride by EPA 300

Seq Number: 3080062

Parent Sample Id: 615149-019

Matrix: Soil

MS Sample Id: 615149-019 S

Prep Method: E300P

Date Prep: 02.21.19

MSD Sample Id: 615149-019 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	72.7	250	325	101	320	99	90-110	2	20	mg/kg	02.21.19 13:08	

Analytical Method: Chloride by EPA 300

Seq Number: 3080063

Parent Sample Id: 615139-004

Matrix: Soil

MS Sample Id: 615139-004 S

Prep Method: E300P

Date Prep: 02.21.19

MSD Sample Id: 615139-004 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	353	249	582	92	593	96	90-110	2	20	mg/kg	02.21.19 16:41	

Analytical Method: Chloride by EPA 300

Seq Number: 3080063

Parent Sample Id: 615149-021

Matrix: Soil

MS Sample Id: 615149-021 S

Prep Method: E300P

Date Prep: 02.21.19

MSD Sample Id: 615149-021 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	92.7	250	372	112	361	107	90-110	3	20	mg/kg	02.21.19 19:10	X

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

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

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

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



QC Summary 615149

TRC Solutions, Inc Federal 18 SWD

Analytical Method: Chloride by EPA 300

Seq Number: 3080409

Parent Sample Id: 615149-001

Matrix: Soil

MS Sample Id: 615149-001 S

Prep Method: E300P

Date Prep: 02.26.19

MSD Sample Id: 615149-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	252	100	345	93	344	92	80-120	0	20	mg/kg	02.26.19 10:44	

Analytical Method: Chloride by EPA 300

Seq Number: 3080409

Parent Sample Id: 615624-001

Matrix: Solid

MS Sample Id: 615624-001 S

Prep Method: SW9056P

Date Prep: 02.26.19

MSD Sample Id: 615624-001 SD

Parameter	Parent Result	Spike Amount	MS Result	MS %Rec	MSD Result	MSD %Rec	Limits	%RPD	RPD Limit	Units	Analysis Date	Flag
Chloride	40.3	114	163	108	163	108	80-120	0	20	mg/kg	02.26.19 13:33	

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

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

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

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



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Stafford, Texas (281-240-4200)
Dallas Texas (214-902-0300)

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

Phoenix, Arizona (480-355-0900)

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1.002



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

CHAIN OF CUSTODY

Page 1 Of 1

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

www.xencolab.com

Phoenix, Arizona (480-355-0900)

Xenco Quote #

Xenco Job #

10/15/19
10/15/19

Client / Reporting Information				Project Information				Analytical Information				Matrix Codes				
Company Name / Branch: TRC Environmental Corporation Company Address: 10 Delea Dr, Suite 150E Midland, TX 79705 Email: Phone No: 432-466-4450				Project Name/Number: Project Location: Federal 18 SWD Invoice To:				Xenco Quote # Xenco Job #				Matrix Codes				
Project Contact: Jill Leary Samples Name: Kyle Schardt				Invoice:				TPH TX1005 Chloride E 300 NORM RCI TCLP Benzene TCLP RCRA 8 Metals Chloride TPH 8015 M Ext (NM)				W = Water S = Soil/Sed/Solid GW = Ground Water DW = Drinking Water P = Product SW = Surface water SL = Sludge OW = Ocean/Sea Water WI = Wipe O = Oil WW = Waste Water A = Air				
No. Field ID / Point of Collection				Collection				Number of preserved bottles				Field Comments				
				Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE
1				2 Sec 1 @ 2'	2'	2-5-19	S									
2				2 Sec 2 @ 2'	2'											
3				2 Sec 3 @ 2'	2'											
4				2 Sec 4 @ 2'	2'											
5				2 Sec 5 @ 2.5'	2.5'											
6				2 Sec 6 @ 2.5'	2.5'											
7				2 Sec 7 @ 2.5'	2.5'											
8				2 Sec 8 @ 2.5'	2.5'											
9				2 Sec 9 @ 2.5'	2.5'											
10				2 Sec 10 @ 2.5'	2.5'											
Turnaround Time (Business days)				Data Deliverable Information				Notes:								
<input type="checkbox"/> Same Day TAT				<input type="checkbox"/> 5 Day TAT				<input type="checkbox"/> Level II Std QC				<input type="checkbox"/> Level IV (Full Data Pkg / raw data)				
<input type="checkbox"/> Next Day EMERGENCY				<input type="checkbox"/> 7 Day TAT				<input type="checkbox"/> Level III Std QC + Forms				<input type="checkbox"/> TRRP Level IV				
<input type="checkbox"/> 2 Day EMERGENCY				<input checked="" type="checkbox"/> Contract TAT				<input type="checkbox"/> Level 3 (CLP Forms)				<input type="checkbox"/> UST / RG -411				
<input checked="" type="checkbox"/> 3 Day EMERGENCY				<input type="checkbox"/> TRRP Checklist				<input type="checkbox"/> TRRP Checklist								
TAT Starts Day received by Lab, if received by 5:00 pm																
SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY																
Brought in by Sample:				Date Time: 2-19-19				Received By: J. Schardt				Relinquished By: J. Schardt				
Relinquished by:				Date Time:				Received By:				Relinquished By:				
3				Date Time:				Received By:				Relinquished By:				
5				Date Time:				Received By:				Relinquished By:				
Relinquished by:				Date Time:				Received By:				Relinquished By:				
5				Date Time:				Received By:				Relinquished By:				
Preserved where applicable				On Ice				Cooler Temp.				Thermo. Corr. Factor				

Notices: Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xenco, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xenco will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the Client if such losses are due to circumstances beyond the control of Xenco. A minimum charge of \$75 will be applied to each project. Xenco's liability will be limited to the cost of samples. Any samples received by Xenco but not analyzed will be invoiced at \$5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.

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[illegible]



41 MAF
4705 2520 2036

TRK# 0201

STD - 20 FEB HOLD
MED STANDARD OVERNIGHT
MAFA LBB
TX-US



FedEx
EXPRESS



MIDLAND TX 79711
FEDEX EXPRESS SHIP CENTER
3600 COUNTY ROAD 1276 SOUTH

INVT (432) 563-1800

TO
HOBBS, NM 88240
UNITED STATES US
SERVICES ETC, LLC
4000 N GRINES
MIDLAND TX 79701

SHIP DATE: 19FEB19
ACTWGT: 51.00 LB
DIM: 21X18X14 IN
CD: 0909328 CAFE3211
BILL RECIPIENT

551C2/0E30/18C



Inter-Office Shipment

Page 1 of 2

IOS Number **122949**

Date/Time: 02/20/19 13:19

Created by: Brianna Teel

Please send report to: Jessica Kramer

Lab# From: **Midland**

Delivery Priority:

Address: 1211 W. Florida Ave, Midland TX 79701

Lab# To: **Houston**

Air Bill No.: 774520561734

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
615149-001	W	1 Sec 1 @ 6"	02/15/19 00:00	SW6010BTCLP	TCLP Metals by SW 1311/6010B	02/22/19	08/14/19	JKR	AG AS BA CD CR PB SE	
615149-001	S	1 Sec 1 @ 6"	02/15/19 00:00	E300_CL	Chloride by EPA 300	02/28/19	03/15/19	JKR	CL	
615149-001	W	1 Sec 1 @ 6"	02/15/19 00:00	SW7470A_TCLP	TCLP Mercury by SW-846 1311/7470A	02/22/19	03/15/19	JKR	HG	
615149-002	S	1 Sec 2 @ 6"	02/15/19 00:00	E300_CL	Chloride by EPA 300	02/28/19	03/15/19	JKR	CL	
615149-002	W	1 Sec 2 @ 6"	02/15/19 00:00	SW7470A_TCLP	TCLP Mercury by SW-846 1311/7470A	02/22/19	03/15/19	JKR	HG	
615149-002	W	1 Sec 2 @ 6"	02/15/19 00:00	SW6010BTCLP	TCLP Metals by SW 1311/6010B	02/22/19	08/14/19	JKR	AG AS BA CD CR PB SE	
615149-003	S	1 Sec 3 @ 6"	02/15/19 00:00	E300_CL	Chloride by EPA 300	02/28/19	03/15/19	JKR	CL	
615149-003	W	1 Sec 3 @ 6"	02/15/19 00:00	SW6010BTCLP	TCLP Metals by SW 1311/6010B	02/22/19	08/14/19	JKR	AG AS BA CD CR PB SE	
615149-003	W	1 Sec 3 @ 6"	02/15/19 00:00	SW7470A_TCLP	TCLP Mercury by SW-846 1311/7470A	02/22/19	03/15/19	JKR	HG	
615149-004	S	1 Sec 4 @ 6"	02/15/19 00:00	E300_CL	Chloride by EPA 300	02/28/19	03/15/19	JKR	CL	
615149-004	W	1 Sec 4 @ 6"	02/15/19 00:00	SW6010BTCLP	TCLP Metals by SW 1311/6010B	02/22/19	08/14/19	JKR	AG AS BA CD CR PB SE	
615149-004	W	1 Sec 4 @ 6"	02/15/19 00:00	SW7470A_TCLP	TCLP Mercury by SW-846 1311/7470A	02/22/19	03/15/19	JKR	HG	
615149-005	S	1 Sec 5 @ 6"	02/15/19 00:00	E300_CL	Chloride by EPA 300	02/28/19	03/15/19	JKR	CL	
615149-005	W	1 Sec 5 @ 6"	02/15/19 00:00	SW6010BTCLP	TCLP Metals by SW 1311/6010B	02/22/19	08/14/19	JKR	AG AS BA CD CR PB SE	
615149-005	W	1 Sec 5 @ 6"	02/15/19 00:00	SW7470A_TCLP	TCLP Mercury by SW-846 1311/7470A	02/22/19	03/15/19	JKR	HG	
615149-006	S	1 Sec 6 @ 6"	02/15/19 00:00	E300_CL	Chloride by EPA 300	02/28/19	03/15/19	JKR	CL	
615149-006	W	1 Sec 6 @ 6"	02/15/19 00:00	SW6010BTCLP	TCLP Metals by SW 1311/6010B	02/22/19	08/14/19	JKR	AG AS BA CD CR PB SE	
615149-006	W	1 Sec 6 @ 6"	02/15/19 00:00	SW7470A_TCLP	TCLP Mercury by SW-846 1311/7470A	02/22/19	03/15/19	JKR	HG	
615149-007	S	1 Sec 7 @ 6"	02/15/19 00:00	E300_CL	Chloride by EPA 300	02/28/19	03/15/19	JKR	CL	
615149-007	W	1 Sec 7 @ 6"	02/15/19 00:00	SW7470A_TCLP	TCLP Mercury by SW-846 1311/7470A	02/22/19	03/15/19	JKR	HG	
615149-007	W	1 Sec 7 @ 6"	02/15/19 00:00	SW6010BTCLP	TCLP Metals by SW 1311/6010B	02/22/19	08/14/19	JKR	AG AS BA CD CR PB SE	
615149-008	W	1 Sec 8 @ 6"	02/15/19 00:00	SW7470A_TCLP	TCLP Mercury by SW-846 1311/7470A	02/22/19	03/15/19	JKR	HG	
615149-008	S	1 Sec 8 @ 6"	02/15/19 00:00	E300_CL	Chloride by EPA 300	02/28/19	03/15/19	JKR	CL	
615149-008	W	1 Sec 8 @ 6"	02/15/19 00:00	SW6010BTCLP	TCLP Metals by SW 1311/6010B	02/22/19	08/14/19	JKR	AG AS BA CD CR PB SE	
615149-009	W	1 Sec 9 @ 6"	02/15/19 00:00	SW6010BTCLP	TCLP Metals by SW 1311/6010B	02/22/19	08/14/19	JKR	AG AS BA CD CR PB SE	



Inter-Office Shipment

Page 2 of 2

IOS Number **122949**

Date/Time: 02/20/19 13:19

Created by: Brianna Teel

Please send report to: Jessica Kramer

Lab# From: **Midland**

Delivery Priority:

Address: 1211 W. Florida Ave, Midland TX 79701

Lab# To: **Houston**

Air Bill No.: 774520561734

E-Mail: jessica.kramer@xenco.com

Sample Id	Matrix	Client Sample Id	Sample Collection	Method	Method Name	Lab Due	HT Due	PM	Analytes	Sign
615149-009	S	1 Sec 9 @ 6"	02/15/19 00:00	E300_CL	Chloride by EPA 300	02/28/19	03/15/19	JKR	CL	
615149-009	W	1 Sec 9 @ 6"	02/15/19 00:00	SW7470A_TCLP	TCLP Mercury by SW-846 1311/7470A	02/22/19	03/15/19	JKR	HG	
615149-010	W	1 Sec 10 @ 6"	02/15/19 00:00	SW6010BTCLP	TCLP Metals by SW 1311/6010B	02/22/19	08/14/19	JKR	AG AS BA CD CR PB SE	
615149-010	W	1 Sec 10 @ 6"	02/15/19 00:00	SW7470A_TCLP	TCLP Mercury by SW-846 1311/7470A	02/22/19	03/15/19	JKR	HG	
615149-010	S	1 Sec 10 @ 6"	02/15/19 00:00	E300_CL	Chloride by EPA 300	02/28/19	03/15/19	JKR	CL	

Inter Office Shipment or Sample Comments:

Relinquished By:

Jessica Kramer

Date Relinquished: 02/20/2019

Received By:

Monica Shakhshir

Date Received: 02/21/2019 09:40

Cooler Temperature: 0.6



XENCO Laboratories



Inter Office Report- Sample Receipt Checklist

Sent To: Houston

IOS #: 122949

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : HOU-068

Sent By: Brianna Teel

Date Sent: 02/20/2019 01:19 PM

Received By: Monica Shakhshir

Date Received: 02/21/2019 09:40 AM

Sample Receipt Checklist

Comments

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

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

NonConformance:

Corrective Action Taken:

Nonconformance Documentation

Contact: _____ Contacted by : _____ Date: _____

Checklist reviewed by:

Monica Shakhshir

Date: 02/21/2019



XENCO Laboratories

Prelogin/Nonconformance Report- Sample Log-In



Client: TRC Solutions, Inc

Date/ Time Received: 02/20/2019 12:49:00 PM

Work Order #: 615149

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

Sample Receipt Checklist

Comments

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

Brianna Teel

Date: 02/20/2019

Checklist reviewed by:

Jessica Kramer

Jessica Kramer

Date: 02/21/2019

Photographic Documentation

Photograph No. 1

Date:

2/15/2019

Direction:

South

Description:

**View of
excavated
(pasture) area.**



Photograph No. 2

Date:

2/15/2019

Direction:

North

Description:

**View of
excavated (pad)
area.**



Photographic Documentation

Photograph No.

3

Date:

2/18/2019

Direction:

East

Description:

**View of backfill
activities along
the road.**



Photograph No.

4

Date:

2/18/2019

Direction:

Southeast

Description:

**View of
backfilled area.**



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

State of New Mexico
Energy Minerals and Natural
Resources Department
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

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

Incident ID	
District RP	
Facility ID	
Application ID	

Release Notification

Responsible Party

Responsible Party	OGRID
Contact Name	Contact Telephone
Contact email	Incident # (assigned by OCD)
Contact mailing address	

Location of Release Source

Latitude _____ Longitude _____
(NAD 83 in decimal degrees to 5 decimal places)

Site Name	Site Type
Date Release Discovered	API# (if applicable)

Unit Letter	Section	Township	Range	County

Surface Owner: ☐ State ☐ Federal ☐ Tribal ☐ Private (Name: _____)

Nature and Volume of Release

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

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

Cause of Release

Incident ID	
District RP	
Facility ID	
Application ID	

Was this a major release as defined by 19.15.29.7(A) NMAC? <input type="checkbox"/> Yes <input type="checkbox"/> No	If YES, for what reason(s) does the responsible party consider this a major release?
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc)?	

Initial Response

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

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