



# Remediation Summary and Site Closure Request

September 26, 2019

A handwritten signature in blue ink, appearing to read "Jared Stoffel", written over a horizontal line.

Prepared by:  
Jared Stoffel, PG  
Project Manager

**Cabo Wabo 25 Federal Com  
#003H (2RP-5473)**

**Prepared For:**

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A handwritten signature in blue ink, appearing to read "Curt Stanley", written over a horizontal line.

Reviewed and Approved by:  
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## 1.0 Introduction and 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 Cabo Wabo 25 Federal Com #003H (the Site). The legal description of the Site is Unit Letter "I", Section 25, Township 25 South, Range 29 East, in Eddy County, New Mexico. The subject property is owned by the United States Federal Government and administered by the Department of Interior, Bureau of Land Management (BLM). The GPS coordinates for the Site are N 32.0973°, W 103.9297°. A topographical map is provided as **Figure 1**. Photographs are provided in the photolog as **Appendix A**.

On May 17, 2019, COG discovered a produced water release had occurred at the Site. The Release was attributed to a hole in a flow line, which impacted a lease road and the adjacent pasture. On the discovery date, COG notified the New Mexico Oil and Conservation Division (NMOCD) and New Mexico State Land Office (NMSLO) of the Release. The Release was assigned an NMOCD Reference number of 2RP-5473. During initial response activities, a vacuum truck was dispatched to recover all freestanding fluids. On June 4, 2019, the initial Release Notification and Corrective Action (Form C-141) was submitted to the NMOCD. The Form C-141 indicated twenty-two (22) barrels (bbls) of produced water was released. No produced water was recovered during initial response activities. The release affected an area measuring approximately nineteen thousand five hundred (19,500) square feet (sq. ft.). 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) did not identify any registered water wells in Section 25, Township 25 South, Range 29 East. The nearest water well, with well log information, cataloged in the NMOSE groundwater database is two and two tenths (2.2) miles to the east of the Release site. The water well has a depth to groundwater of approximately 277 feet bgs. Each water well cataloged in the NMOSE groundwater database within a three (3) mile radius around the Release site exhibited depth to groundwater of greater than one-hundred (100) feet bgs. In addition, the reference map utilized by the NMOCD indicates groundwater should be encountered at approximately one-hundred seventy-five (175) to two-hundred (200) feet 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 Site. An aerial map of the Site location is provided as **Figure 2**. NMOSE depth to groundwater data is provided in **Appendix B**.

Based on the depth to groundwater at the Cabo Wabo 25 Federal Com #003H, the NMOCD *Closure Criteria for Soils Impacted by a Release* are the least stringent closure criteria listed. The Cabo Wabo 25 Federal Com #003H is located in the 'low karst' area as defined by the BLM publicly available Karst Potential Map, provided as **Figure 3**. The top four (4) feet of the Release area were held to a more stringent chloride concentration criteria to satisfy NMAC 19.15.29.13.D(1). COG will utilize the least stringent NMOCD Closure Criteria for Soils Impacted by a Release for the Cabo Wabo 25 Federal Com #003H as follows:

- Benzene – 10 mg/kg



- Benzene, toluene, ethylbenzene, and xylenes (BTEX) – 50 mg/kg
- Gasoline and Diesel Range Organics (GRO + DRO) – 1,000 mg/kg
- Total Petroleum Hydrocarbons (TPH) – 2,500 mg/kg
- Chloride – 20,000 mg/kg (600 mg/kg at four feet bgs and shallower)

## 2.0 Initial Delineation Investigation

July 29, 2019, an initial investigation was conducted at the Release Site. During the initial investigation activities, seven (7) delineation trenches (TT-1, TT-2, TT-3, TT-4, TT-5, TT-6, and TT-7) were advanced within the Release margins in an effort to characterize the vertical extent of soil impact based on regulatory guidelines listed in Table 1 of NMAC 19.15.29.12. Forty-eight (48) delineation soil samples (TT-1 @ 0-1', TT-1 @ 2', TT-1 @ 3', TT-1 @ 4', TT-1 @ 5', TT-1 @ 6', TT-2 @ 0-1', TT-2 @ 2', TT-2 @ 3', TT-2 @ 4', TT-2 @ 5', TT-2 @ 6', TT-2 @ 7', TT-2 @ 8', TT-3 @ 0-1', TT-3 @ 2', TT-3 @ 3', TT-3 @ 4', TT-3 @ 5', TT-3 @ 6', TT-4 @ 0-1', TT-4 @ 2', TT-4 @ 3', TT-4 @ 4', TT-4 @ 5', TT-4 @ 6', TT-5 @ 0-1', TT-5 @ 2', TT-5 @ 3', TT-5 @ 4', TT-5 @ 5', TT-5 @ 6', TT-5 @ 7', TT-6 @ 0-1', TT-6 @ 2', TT-6 @ 3', TT-6 @ 4', TT-6 @ 5', TT-6 @ 6', TT-6 @ 7', TT-6 @ 8', TT-7 @ 0-1', TT-7 @ 2', TT-7 @ 3', TT-7 @ 4', TT-7 @ 5', TT-7 @ 6', and TT-7 @ 7') were collected from the seven (7) delineation trenches, and submitted to Cardinal Labs in Hobbs, NM for chloride analysis. A review of laboratory analytical results indicated chloride concentrations were below NMOCD regulatory guidelines in the submitted soil samples, with the exception of TT-2 @ 0-1', TT-4 @ 2', TT-6 @ 2', TT-6 @ 3', and TT-6 @ 5'. Please reference **Figure 4 – Excavation and Sample Location Map**.

The results of the chloride delineation activities indicated that only areas represented by delineation trench locations TT-2, TT-4, and TT-6 warranted excavation, and the areas represented by delineation trench locations TT-1, TT-3, TT-5, and TT-7 were not impacted above the NMOCD regulatory guidelines at any sampled depth. The high-traffic lease road through the center of the Release area was not sampled or excavated due to the safety concerns and as to not interrupt access to nearby infrastructure, specifically to the electrical substation adjacent to the Release Site.

## 3.0 Summary of Soil Remediation Activities

On August 12, 2019, remediation activities commenced at the Release Site. The excavation began in the area represented by delineation trench location TT-2, which was excavated to a depth of approximately one and a half (1.5) feet bgs. Excavated soil was stockpiled on polyurethane liners pending final disposition at an NMOCD approved disposal facility.

On August 13, 2019, fifteen (15) five-point composite floor confirmation soil samples (FL-A01-1.5', FL-A02-1.5', FL-A03-1.5', FL-A04-1.5', FL-A05-1.5', FL-A06-1.5', FL-A07-1.5', FL-A08-1.5', FL-A09-1.5', FL-A10-1.5', FL-A11-1.5', FL-A12-1.5', FL-A13-1.5', FL-A14-1.5', and FL-A15-1.5') were collected from the base of the excavation on a one (1) soil sample per two-hundred (200) square foot basis and submitted to the laboratory for chloride and/or TPH and BTEX analyses. Subsequently, excavation commenced in the areas represented by delineation trench locations TT-4 and TT-6, which were excavated to a depth of approximately two and a half (2.5)

feet and approximately five and a half (5.5) feet bgs, respectively. A review of the analytical results indicated each soil sample submitted for TPH and BTEX analyses was below laboratory reporting limits (RL). Each soil sample submitted exhibited chloride concentrations below NMOCD regulatory guidelines, with the exception of FL-A06-1.5', FL-A07-1.5', FL-A10-1.5', FL-A11-1.5', and FL-A13-1.5'.

On August 14, 2019, fourteen (14) five-point composite floor confirmation soil samples (FL-B01-2.5', FL-B02-2.5', FL-B03-2.5', FL-B04-2.5', FL-B05-2.5', FL-B06-2.5', FL-B07-2.5', FL-B08-2.5', FL-B09-2.5', FL-B10-2.5', FL-C01-5.5', FL-C02-5.5', FL-C03-5.5', and FL-C04-5.5') were collected and submitted to the laboratory for chloride and/or TPH and BTEX analyses. Subsequently, excavation commenced in the areas represented by soil samples FL-A06-1.5, FL-A07-1.5, FL-A10-1.5, FL-A11-1.5, and FL-A13-1.5, which were excavated to depths of approximately four (4) feet (FL-A06-1.5'), five and a half (5.5) feet (FL-A07-1.5, FL-A10-1.5, and FL-A13-1.5), and two (2) feet (FL-A11-1.5') bgs. A review of the analytical data indicated each soil sample submitted for TPH and BTEX analyses exhibited BTEX and TPH concentrations below the laboratory RL. Each soil sample submitted for chloride analyses exhibited chloride concentrations below the NMOCD regulatory guidelines.

On August 15, 2019, one (1) five-point composite floor confirmation soil sample (FL-A11-2') was collected from the area represented by soil sample FL-A11-1.5' and six (6) five-point composite sidewall samples (SW-A01-9", SW-A02-9", SW-B01-15", SW-B02-15", SW-C01-33", and SW-C02-33") were collected from the sidewalls of the excavation and were submitted to the laboratory for chloride and/or TPH and BTEX analyses. A review of the analytical data indicated each soil sample submitted for TPH and BTEX analyses exhibited BTEX and TPH concentrations below the laboratory RL. Each soil sample submitted for chloride analyses exhibited chloride concentrations below the NMOCD regulatory guidelines.

On August 19, 2019, mechanical excavation immediately adjacent to the EnLink high pressure pipeline completed, and four (4) five-point composite floor confirmation soil samples (FL-A06-5', FL-A07-4', FL-A10-5.5', and FL-A13-5.5') were collected from the areas represented by soil samples FL-A06-1.5', FL-A07-1.5', FL-A10-1.5', and FL-A13-1.5', respectively. Soil samples were submitted to the laboratory for chloride and/or TPH and BTEX analyses. A review of the analytical data indicated each soil sample submitted for TPH and BTEX analyses exhibited BTEX and TPH concentrations below the laboratory RL. Each soil sample submitted for chloride analyses exhibited chloride concentrations below the NMOCD regulatory guidelines.

On August 26, 2019, hydrovac excavation of the soil immediately adjacent to the EnLink high pressure line commenced, per EnLink requirement. The soil around the line was hydroexcavated to an approximate depth of five and a half (5.5) feet bgs in the areas represented by soil samples FL-A07-5.5', FL-A10-5.5', and FL-A13-5.5'.

Following a final review of the analytical data, the excavation was backfilled to grade with locally sourced non-impacted 'like' material. The impacted material was transported under manifest to an NMOCD approved disposal facility. Confirmation soil sample locations are depicted in **Figure**

4. A summary of analytical data is shown in **Table 1**. Laboratory analytical reports are provided in **Appendix D**.

## 4.0 Site Closure Request

Remediation activities were conducted in accordance with NMCOD regulatory guidelines. Laboratory analytical results from excavation confirmation soil samples indicated TPH, BTEX, and/or chloride concentrations were below the NMOCD regulatory guidelines in the submitted confirmation soil samples. The impacted soil was transported to the R360 Red Bluff 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 Cabo Wabo 25 Federal Com #003H.

## 5.0 Limitation

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.

## 6.0 Distribution

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10 Desta Dr STE 150E  
Midland, Texas 79705

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 <sub>6</sub> -C <sub>10</sub> (mg/kg)	DRO C <sub>10</sub> -C <sub>28</sub> (mg/kg)	GRO + DRO C <sub>6</sub> -C <sub>28</sub> (mg/kg)	ORO C <sub>28</sub> C <sub>35</sub> (mg/kg)	TPH C <sub>6</sub> -C <sub>35</sub> (mg/kg)	Chloride (mg/kg)
TT-1 @ 0-1'	7/29/19	0-1'	In-Situ	-	-	-	-	-	-	-	<5.00
TT-1 @ 2'	7/29/19	2'	In-Situ	-	-	-	-	-	-	-	5.16
TT-1 @ 3'	7/29/19	3'	In-Situ	-	-	-	-	-	-	-	7.05
TT-1 @ 4'	7/29/19	4'	In-Situ	-	-	-	-	-	-	-	<4.99
TT-1 @ 5'	7/29/19	5'	In-Situ	-	-	-	-	-	-	-	<4.99
TT-1 @ 6'	7/29/19	6'	In-Situ	-	-	-	-	-	-	-	6.24
TT-2 @ 0-1'	7/29/19	0-1'	Excavated	-	-	-	-	-	-	-	<b>1,120</b>
TT-2 @ 2'	7/29/19	2'	In-Situ	-	-	-	-	-	-	-	21.4
TT-2 @ 3'	7/29/19	3'	In-Situ	-	-	-	-	-	-	-	73.9
TT-2 @ 4'	7/29/19	4'	In-Situ	-	-	-	-	-	-	-	6.79
TT-2 @ 5'	7/29/19	5'	In-Situ	-	-	-	-	-	-	-	<4.99
TT-2 @ 6'	7/29/19	6'	In-Situ	-	-	-	-	-	-	-	<4.99
TT-2 @ 7'	7/29/19	7'	In-Situ	-	-	-	-	-	-	-	<4.96
TT-2 @ 8'	7/29/19	8'	In-Situ	-	-	-	-	-	-	-	5.83
TT-3 @ 0-1'	7/29/19	0-1'	In-Situ	-	-	-	-	-	-	-	375
TT-3 @ 2'	7/29/19	2'	In-Situ	-	-	-	-	-	-	-	13.0
TT-3 @ 3'	7/29/19	3'	In-Situ	-	-	-	-	-	-	-	6.04
TT-3 @ 4'	7/29/19	4'	In-Situ	-	-	-	-	-	-	-	37.6
TT-3 @ 5'	7/29/19	5'	In-Situ	-	-	-	-	-	-	-	<4.99
TT-3 @ 6'	7/29/19	6'	In-Situ	-	-	-	-	-	-	-	18.3
TT-4 @ 0-1'	7/29/19	0-1'	Excavated	-	-	-	-	-	-	-	532
TT-4 @ 2'	7/29/19	2'	Excavated	-	-	-	-	-	-	-	<b>1,250</b>
TT-4 @ 3'	7/29/19	3'	In-Situ	-	-	-	-	-	-	-	429
TT-4 @ 4'	7/29/19	4'	In-Situ	-	-	-	-	-	-	-	6.69
TT-4 @ 5'	7/29/19	5'	In-Situ	-	-	-	-	-	-	-	<4.98
NMOCD Closure Criteria				10	50	-	-	1,000	-	2,500	20000 (600)

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TT-4 @ 6'	7/29/19	6'	In-Situ	-	-	-	-	-	-	-	7.55
TT-5 @ 0-1'	7/29/19	0-1'	In-Situ	-	-	-	-	-	-	-	<5.00
TT-5 @ 2'	7/29/19	2'	In-Situ	-	-	-	-	-	-	-	<4.95
TT-5 @ 3'	7/29/19	3'	In-Situ	-	-	-	-	-	-	-	<4.97
TT-5 @ 4'	7/29/19	4'	In-Situ	-	-	-	-	-	-	-	5.16
TT-5 @ 5'	7/29/19	5'	In-Situ	-	-	-	-	-	-	-	<5.03
TT-5 @ 6'	7/29/19	6'	In-Situ	-	-	-	-	-	-	-	<5.02
TT-5 @ 7'	7/29/19	7'	In-Situ	-	-	-	-	-	-	-	5.80
TT-6 @ 0-1'	7/29/19	0-1'	Excavated	-	-	-	-	-	-	-	99.1
TT-6 @ 2'	7/29/19	2'	Excavated	-	-	-	-	-	-	-	<b>1,110</b>
TT-6 @ 3'	7/29/19	3'	Excavated	-	-	-	-	-	-	-	<b>2,760</b>
TT-6 @ 4'	7/29/19	4'	Excavated	-	-	-	-	-	-	-	187
TT-6 @ 5'	7/29/19	5'	Excavated	-	-	-	-	-	-	-	4,950
TT-6 @ 6'	7/29/19	6'	In-Situ	-	-	-	-	-	-	-	23.3
TT-6 @ 7'	7/29/19	7'	In-Situ	-	-	-	-	-	-	-	71.7
TT-6 @ 8'	7/29/19	8'	In-Situ	-	-	-	-	-	-	-	104
TT-7 @ 0-1'	7/29/19	0-1'	In-Situ	-	-	-	-	-	-	-	32.9
TT-7 @ 2'	7/29/19	2'	In-Situ	-	-	-	-	-	-	-	17.2
TT-7 @ 3'	7/29/19	3'	In-Situ	-	-	-	-	-	-	-	32.3
TT-7 @ 4'	7/29/19	4'	In-Situ	-	-	-	-	-	-	-	<5.04
TT-7 @ 5'	7/29/19	5'	In-Situ	-	-	-	-	-	-	-	9.41
TT-7 @ 6'	7/29/19	6'	In-Situ	-	-	-	-	-	-	-	6.49
TT-7 @ 7'	7/29/19	7'	In-Situ	-	-	-	-	-	-	-	11.7
FL - A01 - 1.5'	8/13/19	1.5'	In-Situ	-	-	-	-	-	-	-	352
FL - A02 - 1.5'	8/13/19	1.5'	In-Situ	-	-	-	-	-	-	-	32.0
FL - A03 - 1.5'	8/13/19	1.5'	In-Situ	-	-	-	-	-	-	-	112
NMOCD Closure Criteria				10	50	-	-	1,000	-	2,500	20000 (600)

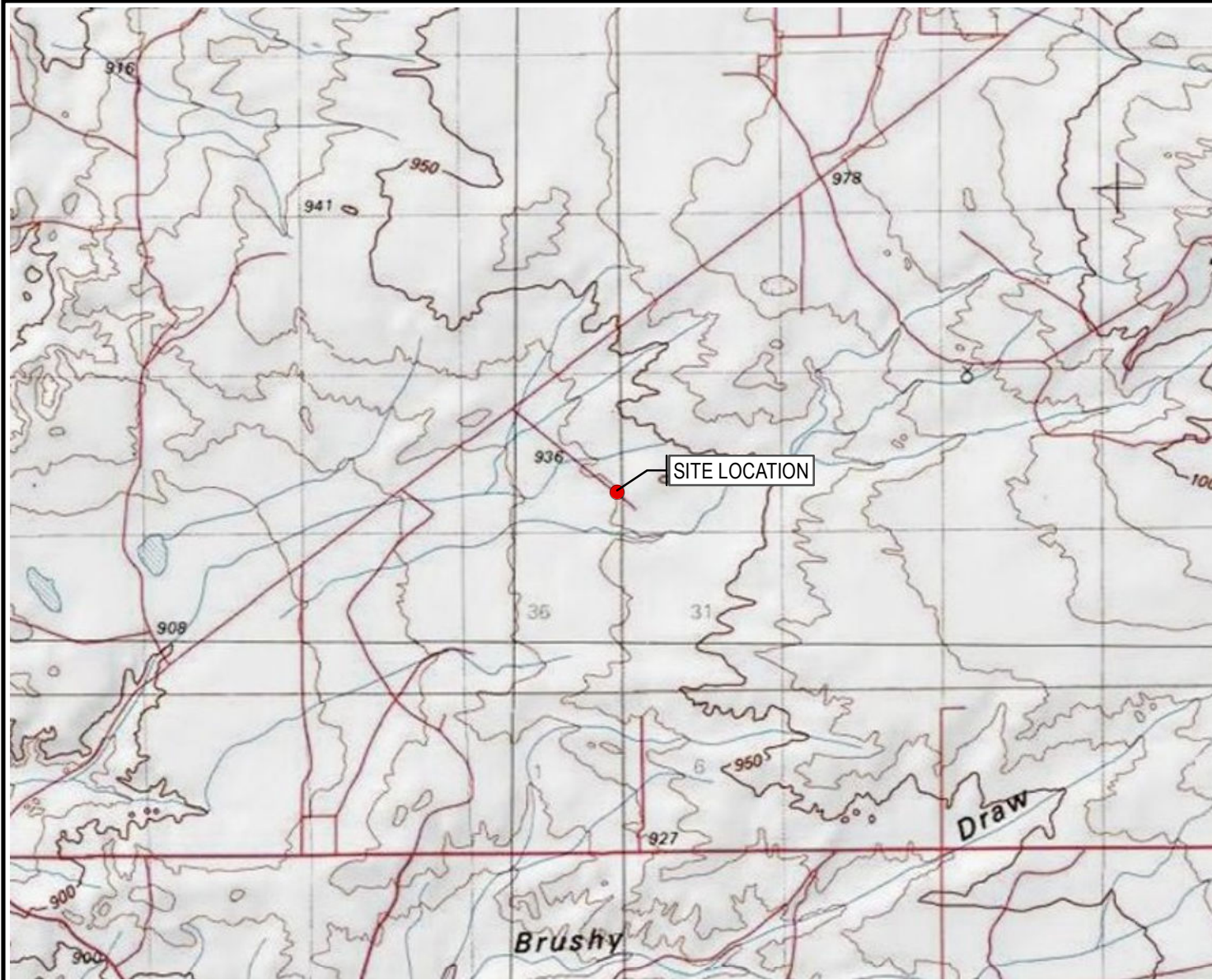
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Sample ID	Date	Depth	Soil Status	SW 846 8021B		SW 846 8015M Ext.					E 300
				Benzene (mg/kg)	BTEX (mg/kg)	GRO C <sub>6</sub> -C <sub>10</sub> (mg/kg)	DRO C <sub>10</sub> -C <sub>28</sub> (mg/kg)	GRO + DRO C <sub>6</sub> -C <sub>28</sub> (mg/kg)	ORO C <sub>28</sub> C <sub>35</sub> (mg/kg)	TPH C <sub>6</sub> -C <sub>35</sub> (mg/kg)	Chloride (mg/kg)
FL - A04 - 1.5'	8/13/19	1.5'	In-Situ	-	-	-	-	-	-	-	32.0
FL - A05 - 1.5'	8/13/19	1.5'	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
FL - A06 - 1.5'	8/13/19	1.5'	Excavated	-	-	-	-	-	-	-	<b>2,120</b>
FL - A07 - 1.5'	8/13/19	1.5'	Excavated	-	-	-	-	-	-	-	<b>672</b>
FL - A08 - 1.5'	8/13/19	1.5'	In-Situ	-	-	-	-	-	-	-	256
FL - A09 - 1.5'	8/13/19	1.5'	In-Situ	-	-	-	-	-	-	-	272
FL - A10 - 1.5'	8/13/19	1.5'	Excavated	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<b>2,600</b>
FL - A11 - 1.5'	8/13/19	1.5'	Excavated	-	-	-	-	-	-	-	<b>624</b>
FL - A12 - 1.5'	8/13/19	1.5'	In-Situ	-	-	-	-	-	-	-	336
FL - A13 - 1.5'	8/13/19	1.5'	Excavated	-	-	-	-	-	-	-	<b>640</b>
FL - A14 - 1.5'	8/13/19	1.5'	In-Situ	-	-	-	-	-	-	-	<16.0
FL - A15 - 1.5'	8/13/19	1.5'	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
FL - B01 - 2.5'	8/14/19	2.5'	In-Situ	-	-	-	-	-	-	-	336
FL - B02 - 2.5'	8/14/19	2.5'	In-Situ	-	-	-	-	-	-	-	96.0
FL - B03 - 2.5'	8/14/19	2.5'	In-Situ	-	-	-	-	-	-	-	48.0
FL - B04 - 2.5'	8/14/19	2.5'	In-Situ	-	-	-	-	-	-	-	576
FL - B05 - 2.5'	8/14/19	2.5'	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	448
FL - B06 - 2.5'	8/14/19	2.5'	In-Situ	-	-	-	-	-	-	-	80.0
FL - B07 - 2.5'	8/14/19	2.5'	In-Situ	-	-	-	-	-	-	-	416
FL - B08 - 2.5'	8/14/19	2.5'	In-Situ	-	-	-	-	-	-	-	48.0
FL - B09 - 2.5'	8/14/19	2.5'	In-Situ	-	-	-	-	-	-	-	80.0
FL - B10 - 2.5'	8/14/19	2.5'	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	560
FL - C01 - 5.5'	8/14/19	5.5'	In-Situ	-	-	-	-	-	-	-	80.0
FL - C02 - 5.5'	8/14/19	5.5'	In-Situ	-	-	-	-	-	-	-	160
FL - C03 - 5.5'	8/14/19	5.5'	In-Situ	-	-	-	-	-	-	-	128
FL - C04 - 5.5'	8/14/19	5.5'	In-Situ	-	-	-	-	-	-	-	32.0
FL - A11 - 2'	8/15/19	2'	In-Situ	-	-	-	-	-	-	-	< 16.0
NMOCD Closure Criteria				10	50	-	-	1,000	-	2,500	20000 (600)

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 <sub>6</sub> -C <sub>10</sub> (mg/kg)	DRO C <sub>10</sub> -C <sub>28</sub> (mg/kg)	GRO + DRO C <sub>6</sub> -C <sub>28</sub> (mg/kg)	ORO C <sub>28</sub> - C <sub>35</sub> (mg/kg)	TPH C <sub>6</sub> -C <sub>35</sub> (mg/kg)	Chloride (mg/kg)
SW - A01 - 9"	8/15/19	9"	In-Situ	-	-	-	-	-	-	-	64.0
SW - A02 - 9"	8/15/19	9"	In-Situ	-	-	-	-	-	-	-	128.0
SW - B01 - 15"	8/15/19	15"	In-Situ	-	-	-	-	-	-	-	32.0
SW - B02 - 15"	8/15/19	15"	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
SW - C01- 33"	8/15/19	33"	In-Situ	-	-	-	-	-	-	-	<16.0
SW- C02 - 33"	8/15/19	33"	In-Situ	-	-	-	-	-	-	-	16.0
FL - A06 - 5'	8/19/19	5'	In-Situ	-	-	-	-	-	-	-	128
FL - A07 - 4'	8/19/19	4'	In-Situ	-	-	-	-	-	-	-	<16.0
FL - A10 - 5.5'	8/19/19	5.5'	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
FL - A13 -5.5'	8/19/19	5.5'	In-Situ	-	-	-	-	-	-	-	48.0
NMOCD Closure Criteria				10	50	-	-	1,000	-	2,500	20000 (600)





# LEGEND

● Site Location

BASEMAP FROM USGS 7.5 MINUTE  
TOPOGRAPHIC QUADRANGLE SERIES  
- ROSS RANCH, NM.



0 0.5 1  
MILES

1" = 1 MILES

1:63,360



505 East Huntland Drive  
Suite #250  
Austin, TX 78752  
Phone: 512.329.6080

TRC - GIS

PROJECT:

**CABO WABO 25 FEDERAL 3H  
EDDY COUNTY, NM**

TITLE:

**TOPOGRAPHIC MAP**

DRAWN BY: S. RAY

CHECKED BY:

APPROVED BY:

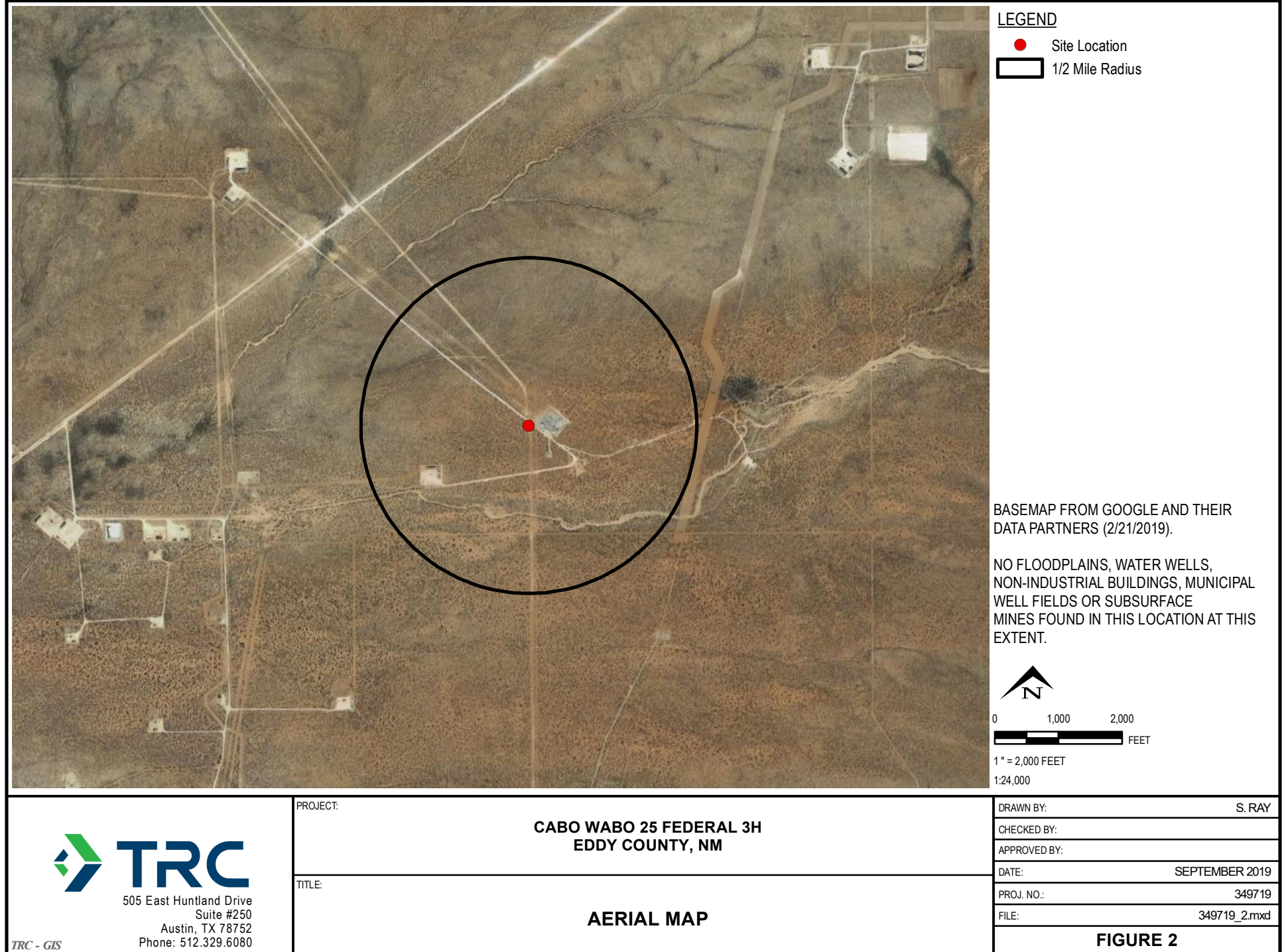
DATE: SEPTEMBER 2019

PROJ. NO.: 349719

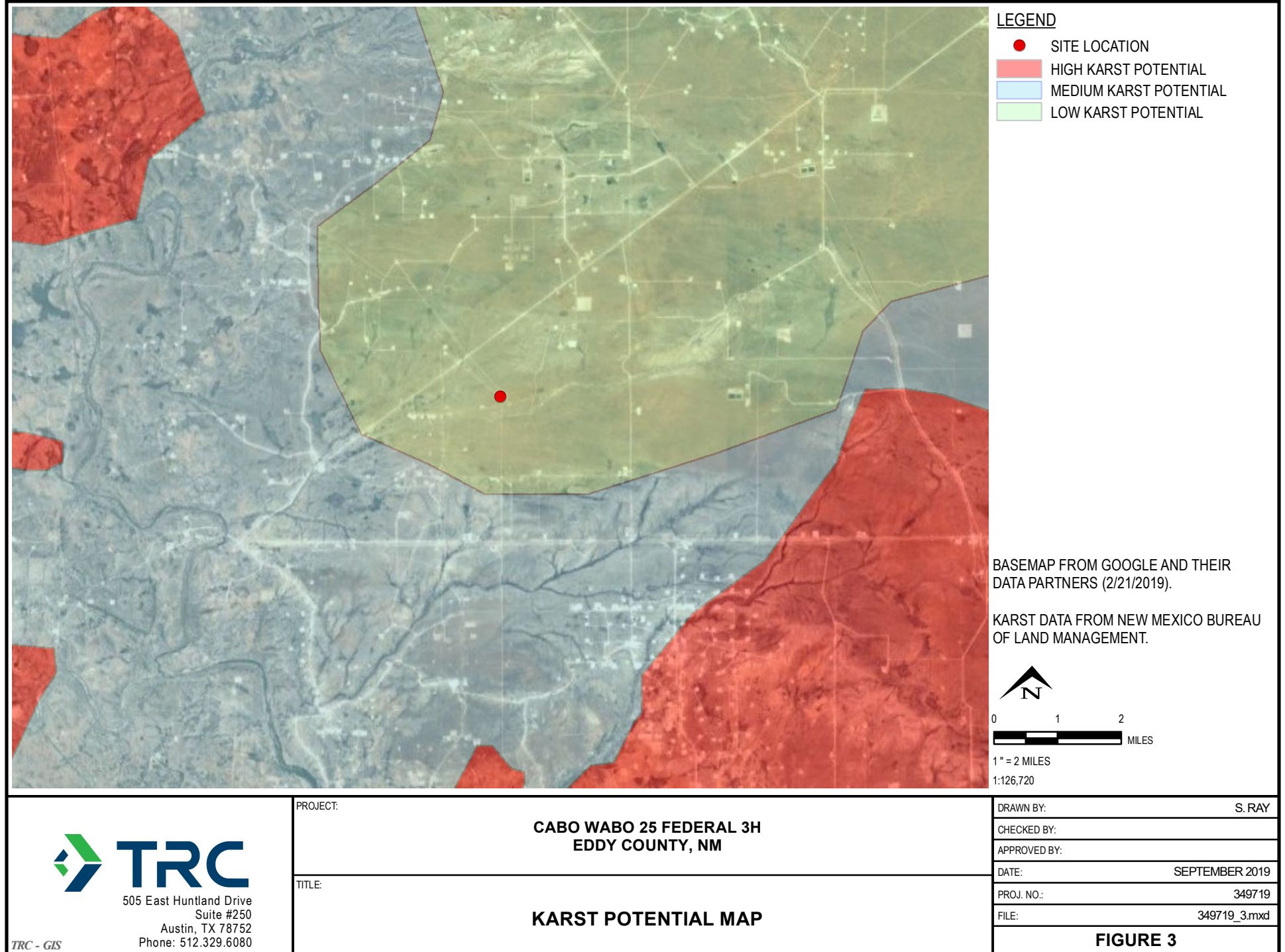
FILE: 349719\_1.mxd

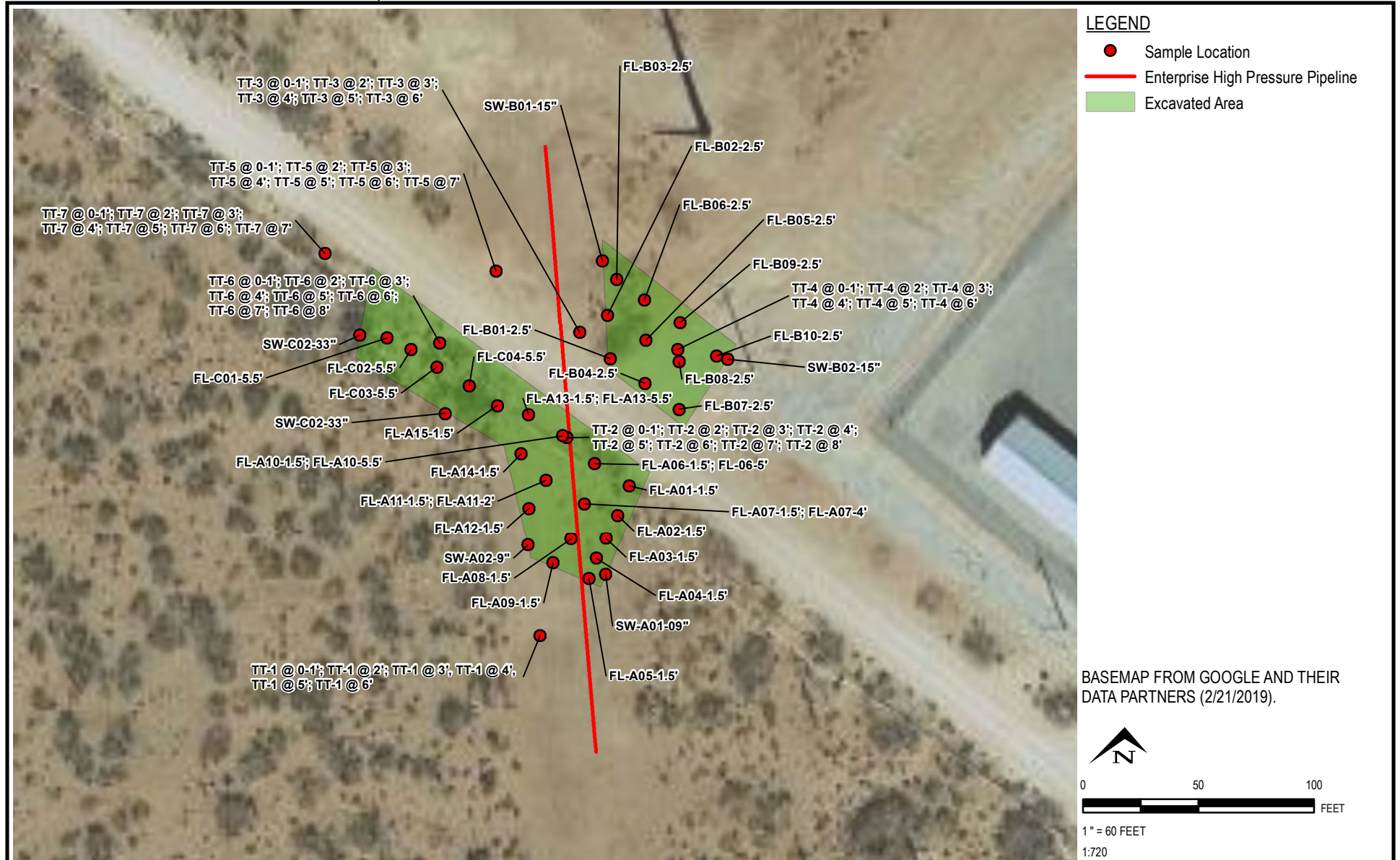
**FIGURE 1**












 <p>505 East Huntland Drive Suite #250 Austin, TX 78752 Phone: 512.329.6080</p> <p>TRC - GIS</p>	<p>PROJECT:</p> <p><b>CABO WABO 25 FEDERAL 3H EDDY COUNTY, NM</b></p>	<p>DRAWN BY: S. RAY</p>
	<p>TITLE:</p>	<p>CHECKED BY:</p>
		<p>APPROVED BY:</p>
		<p>DATE: SEPTEMBER 2019</p>
		<p>PROJ. NO.: 349719</p>
		<p>FILE: 349719_4.mxd</p>
		<p><b>FIGURE 4</b></p>

## **Appendix A: Photographic Documentation**



## Photographic Documentation

### Photograph No. 1

**Date:**

**7/3/2019**

**Direction:**

**North**

**Description:**

**View of the  
impacted area.**



### Photograph No. 2

**Date:**

**7/3/2019**

**Direction:**

**East**

**Description:**

**View of the  
impacted area.**





## Photographic Documentation

**Photograph No. 3**

**Date:**

**7/3/2019**

**Direction:**

**Northwest**

**Description: View  
of impacted area.**



**Photograph No. 4**

**Date:**

**6/12/2018**

**Direction:**

**Northwest**

**Description: View  
of impacted area.**





## Photographic Documentation

### Photograph No. 5

Date:

7/29/2019

Direction:

North

Description:

View of trench  
delineation.



### Photograph No. 6

Date:

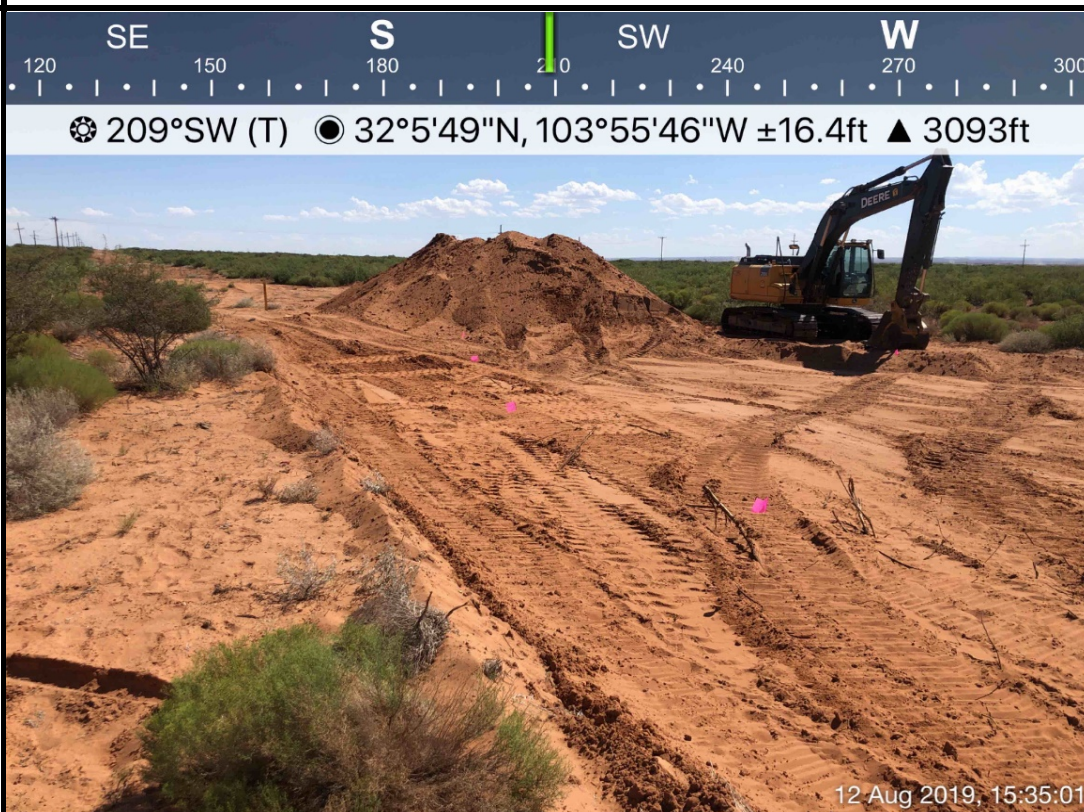
8/12/2019

Direction:

West

Description:

View of  
excavation  
activities.





## Photographic Documentation

### Photograph No. 5

Date:

8/12/2019

Direction:

North

Description:

View of  
excavation  
activities.



### Photograph No. 6

Date:

8/13/2019

Direction:

North

Description:

View of  
excavation  
activities.





## Photographic Documentation

### Photograph No. 7

Date:

8/13/2019

Direction:

North

Description:

View of  
excavation  
activities.



### Photograph No. 8

Date:

8/15/2019

Direction:

East

Description:

View of  
excavation  
activities.





## Photographic Documentation

### Photograph No. 9

Date:

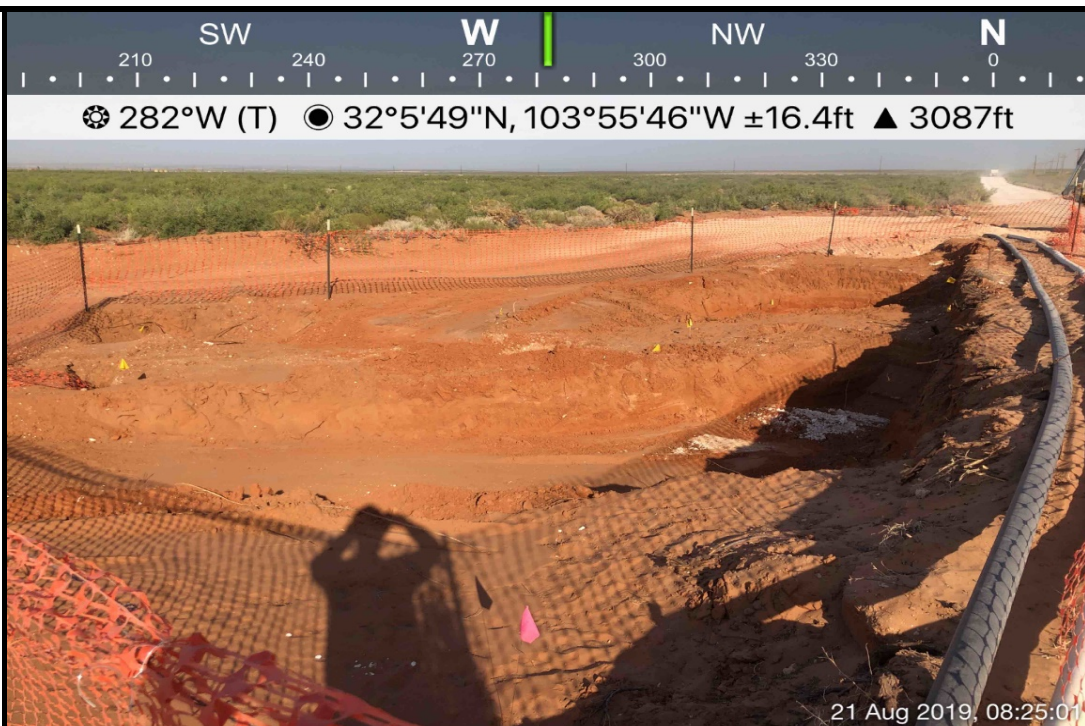
8/21/2019

Direction:

West

Description:

View of  
additional  
excavation  
activities in  
Area A.



### Photograph No. 10

Date:

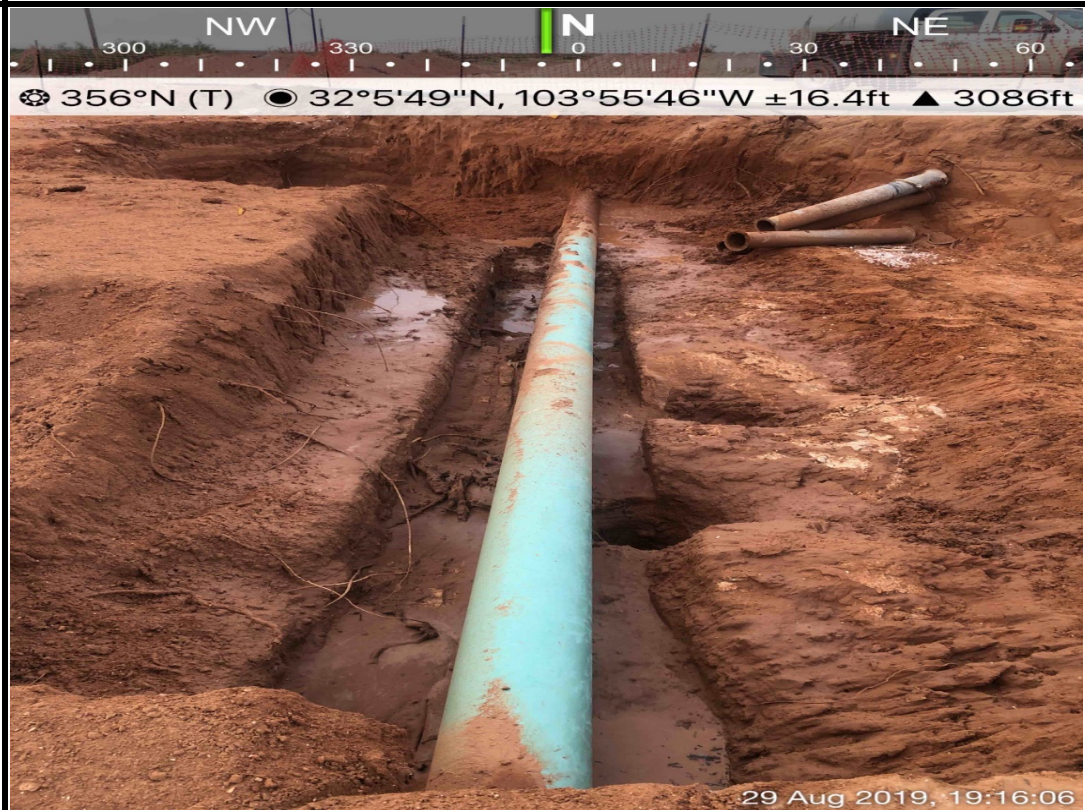
8/30/2019

Direction:

East

Description:

View of the  
Enlink high  
pressure  
pipeline.





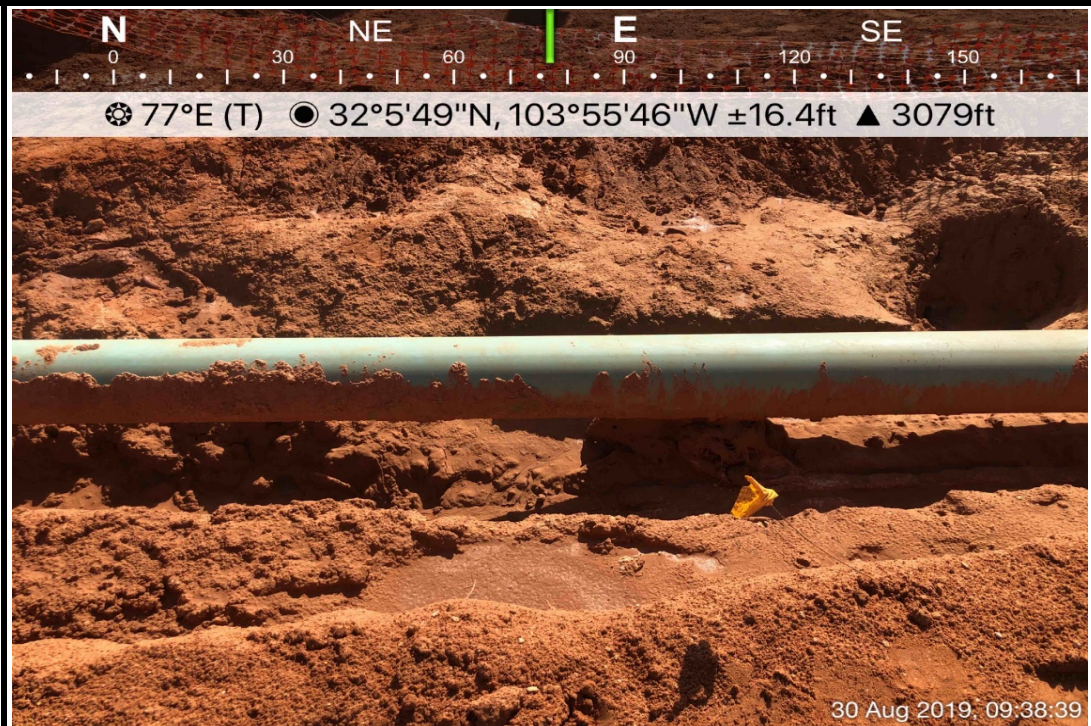
## Photographic Documentation

**Photograph No.**  
**11**

**Date:**  
**8/30/2019**

**Direction:**  
**East**

**Description:**  
**View of the**  
**Enlink high**  
**pressure**  
**pipeline.**



**Photograph No.**  
**12**

**Date:**  
**9/4/2019**

**Direction:**  
**West**

**Description:**  
**View of**  
**remediated after**  
**backfill**  
**activities.**





## Photographic Documentation

**Photograph No.**  
**13**

**Date:**  
**9/4/2019**

**Direction:**  
**North**

**Description:**  
**View of**  
**remediated area**  
**after backfill**  
**activities.**



**Photograph No.**  
**14**

**Date:**  
**9/4/2019**

**Direction:**  
**West**

**Description:**  
**View of the**  
**remediated area**  
**after backfill**  
**activities.**



## **Appendix B: Depth to Groundwater Data**



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

No records found.

**UTMNAD83 Radius Search (in meters):**

**Easting (X):** 600991.23

**Northing (Y):** 3551722

**Radius:** 305



# New Mexico Office of the State Engineer

## Wells with Well Log Information

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






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

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

(quarters are smallest to largest)

(NAD83 UTM in meters)

(in feet)

		POD										Log File				Depth	Depth		License				
POD Number	Code	Sub-basin	County	Source	q	q	q	6416	4	Sec	Tws	Rng	X	Y	Distance	Start Date	Finish Date	Date	Well	Water	Driller	Number	
<a href="#">C 03782 POD1</a>		CUB	ED	Artesian	4	3	3	28	25S	30E			604526	3551444		3545	01/16/2015	01/17/2015	02/19/2015	805	277	STEWART, JOEL H.	331
<a href="#">C 01360</a>		CUB	ED	Shallow	4	3	3	05	26S	30E			602997	3548152		4094	04/26/1952	05/15/1952	11/17/1953	770	173		95
<a href="#">C 01361</a>		CUB	ED	Shallow	3	4	3	05	26S	30E			603240	3548157		4214	05/16/1952	06/01/1952	11/17/1953	775	184		95
<a href="#">C 03581 POD1</a>		CUB	ED	Shallow	4	4	4	05	26S	30E			604298	3548291		4764	11/01/2012	11/09/2012	11/13/2012	800	320	SIRMAN, JOHN (LD)	1654
<a href="#">C 03483</a>		C	ED	Shallow	4	4	4	05	26S	30E			604296	3548251		4792	06/03/2011	06/08/2011	07/14/2011	700	200	BEAUREGARD, RICHARD	1509

Record Count: 5

### UTMNAD83 Radius Search (in meters):

**Easting (X):** 600991.23

**Northing (Y):** 3551722

**Radius:** 5000

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



## **Appendix C: Release Notification and Corrective Action (Form C-141)**

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: _____
<b><u>OCD Only</u></b>	
Received by: _____	Date: _____

Incident ID	
District RP	
Facility ID	
Application ID	

Site Assessment/Characterization

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

What is the shallowest depth to groundwater beneath the area affected by the release?	_____ (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Did the release impact areas <b>not</b> on an exploration, development, production, or storage site?	<input type="checkbox"/> Yes <input type="checkbox"/> No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

<p><b>Characterization Report Checklist:</b> <i>Each of the following items must be included in the report.</i></p> <ul style="list-style-type: none"><li><input type="checkbox"/> Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.</li><li><input type="checkbox"/> Field data</li><li><input type="checkbox"/> Data table of soil contaminant concentration data</li><li><input type="checkbox"/> Depth to water determination</li><li><input type="checkbox"/> Determination of water sources and significant watercourses within ½-mile of the lateral extents of the release</li><li><input type="checkbox"/> Boring or excavation logs</li><li><input type="checkbox"/> Photographs including date and GIS information</li><li><input type="checkbox"/> Topographic/Aerial maps</li><li><input type="checkbox"/> Laboratory data including chain of custody</li></ul>
--

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volume of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing the remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modified by site- and release-specific parameters.

Incident ID	
District RP	
Facility ID	
Application ID	

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

Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_

Signature: MB \_\_\_\_\_ Date: \_\_\_\_\_

email: \_\_\_\_\_ Telephone: \_\_\_\_\_

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

Incident ID	
District RP	
Facility ID	
Application ID	

## Closure

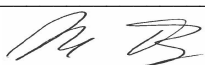
The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled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

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

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

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

Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_

Signature:  \_\_\_\_\_ Date: \_\_\_\_\_

email: \_\_\_\_\_ Telephone: \_\_\_\_\_

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

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

Closure Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

Printed Name: \_\_\_\_\_ Title: \_\_\_\_\_

## **Appendix D: Analytical Laboratory Reports**

# Analytical Report 632555

for  
**TRC Solutions, Inc**

**Project Manager: Jared Stoffel**

**Cabo Wabo 25 Federal 3H**

**02-AUG-19**

Collected By: Client



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

Xenco-Houston (EPA Lab Code: TX00122):  
Texas (T104704215-19-29), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)  
Oklahoma (2017-142), North Carolina (681)

Xenco-Dallas (EPA Lab Code: TX01468):  
Texas (T104704295-19-19), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-14)  
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-19-20)  
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-18)  
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)  
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)  
Xenco-Atlanta (LELAP Lab ID #04176)  
Xenco-Tampa: Florida (E87429), North Carolina (483)





02-AUG-19

Project Manager: **Jared Stoffel**  
**TRC Solutions, Inc**  
2057 Commerce  
Midland, TX 79703

Reference: XENCO Report No(s): **632555**  
**Cabo Wabo 25 Federal 3H**  
Project Address:

**Jared Stoffel:**

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) 632555. 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. 632555 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

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

*Certified and approved by numerous States and Agencies.*

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

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

## TRC Solutions, Inc, Midland, TX

Cabo Wabo 25 Federal 3H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
TT-3 @ 6'	S	07-29-19 09:30	6 ft	632555-001
TT-2 @ 8'	S	07-29-19 09:50	8 ft	632555-002
TT-6 @ 8'	S	07-29-19 10:00	8 ft	632555-003
TT-7 @ 7'	S	07-29-19 10:10	7 ft	632555-004
TT-1 @ 6'	S	07-29-19 10:20	6 ft	632555-005
TT-4 @ 6'	S	07-29-19 10:30	6 ft	632555-006
TT-1 @ 0-1'	S	07-29-19 10:40	0 - 1 ft	632555-007
TT-1 @ 2'	S	07-29-19 10:45	2 ft	632555-008
TT-1 @ 3'	S	07-29-19 10:50	3 ft	632555-009
TT-1 @ 4'	S	07-29-19 10:55	4 ft	632555-010
TT-1 @ 5'	S	07-29-19 11:00	5 ft	632555-011
TT-2 @ 0-1'	S	07-29-19 11:01	0 - 1 ft	632555-012
TT-2 @ 2'	S	07-29-19 11:05	2 ft	632555-013
TT-2 @ 3'	S	07-29-19 11:10	3 ft	632555-014
TT-2 @ 4'	S	07-29-19 11:15	4 ft	632555-015
TT-2 @ 5'	S	07-29-19 11:20	5 ft	632555-016
TT-2 @ 6'	S	07-29-19 11:25	6 ft	632555-017
TT-2 @ 7'	S	07-29-19 11:30	7 ft	632555-018
TT-3 @ 0-1'	S	07-29-19 11:40	0 - 1 ft	632555-019
TT-3 @ 2'	S	07-29-19 11:45	2 ft	632555-020
TT-3 @ 3'	S	07-29-19 11:50	3 ft	632555-021
TT-3 @ 4'	S	07-29-19 11:55	4 ft	632555-022
TT-3 @ 5'	S	07-29-19 12:00	5 ft	632555-023
TT-4 @ 0-1'	S	07-29-19 12:10	0 - 1 ft	632555-024
TT-4 @ 2'	S	07-29-19 12:15	2 ft	632555-025
TT-4 @ 3'	S	07-29-19 12:20	3 ft	632555-026
TT-4 @ 4'	S	07-29-19 12:25	4 ft	632555-027
TT-4 @ 5'	S	07-29-19 12:30	5 ft	632555-028
TT-5 @ 0-1'	S	07-29-19 12:40	0 - 1 ft	632555-029
TT-5 @ 2'	S	07-29-19 12:45	2 ft	632555-030
TT-5 @ 3'	S	07-29-19 12:50	3 ft	632555-031
TT-5 @ 4'	S	07-29-19 12:55	4 ft	632555-032
TT-5 @ 5'	S	07-29-19 13:00	5 ft	632555-033
TT-5 @ 6'	S	07-29-19 13:05	6 ft	632555-034
TT-5 @ 7'	S	07-29-19 13:10	7 ft	632555-035
TT-6 @ 0-1'	S	07-29-19 13:20	0 - 1 ft	632555-036
TT-6 @ 2'	S	07-29-19 13:25	2 ft	632555-037
TT-6 @ 3'	S	07-29-19 13:30	3 ft	632555-038
TT-6 @ 4'	S	07-29-19 13:35	4 ft	632555-039
TT-6 @ 5'	S	07-29-19 13:40	5 ft	632555-040
TT-6 @ 6'	S	07-29-19 13:45	6 ft	632555-041
TT-6 @ 7'	S	07-29-19 13:50	7 ft	632555-042
TT-7 @ 0-1'	S	07-29-19 14:00	0 - 1 ft	632555-043



## Sample Cross Reference 632555



### TRC Solutions, Inc, Midland, TX

Cabo Wabo 25 Federal 3H

TT-7 @ 2'	S	07-29-19 14:05	2 ft	632555-044
TT-7 @ 3'	S	07-29-19 14:10	3 ft	632555-045
TT-7 @ 4'	S	07-29-19 14:15	4 ft	632555-046
TT-7 @ 5'	S	07-29-19 14:20	5 ft	632555-047
TT-7 @ 6'	S	07-29-19 14:25	6 ft	632555-048



## CASE NARRATIVE

*Client Name: TRC Solutions, Inc*

*Project Name: Cabo Wabo 25 Federal 3H*

Project ID:  
Work Order Number(s): 632555

Report Date: 02-AUG-19  
Date Received: 07/31/2019

---

**Sample receipt non conformances and comments:**

None

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**Sample receipt non conformances and comments per sample:**

None

**Analytical non conformances and comments:**

Batch: LBA-3097147 Chloride by EPA 300

Lab Sample ID 632555-014 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered above QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 632555-004, -005, -006, -007, -008, -009, -010, -011, -012, -013, -014, -015, -016, -017, -018, -019, -020, -021, -022, -023.

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



# Certificate of Analysis Summary 632555

TRC Solutions, Inc, Midland, TX

Project Name: Cabo Wabo 25 Federal 3H



Project Id:

Contact: Jared Stoffel

Project Location:

Date Received in Lab: Wed Jul-31-19 09:59 am

Report Date: 02-AUG-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	632555-001	632555-002	632555-003	632555-004	632555-005	632555-006
	<i>Field Id:</i>	TT-3 @ 6'	TT-2 @ 8'	TT-6 @ 8'	TT-7 @ 7'	TT-1 @ 6'	TT-4 @ 6'
	<i>Depth:</i>	6- ft	8- ft	8- ft	7- ft	6- ft	6- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jul-29-19 09:30	Jul-29-19 09:50	Jul-29-19 10:00	Jul-29-19 10:10	Jul-29-19 10:20	Jul-29-19 10:30
Chloride by EPA 300	<i>Extracted:</i>	Jul-31-19 12:00	Jul-31-19 12:00	Jul-31-19 12:00	Jul-31-19 13:30	Jul-31-19 13:30	Jul-31-19 13:30
	<i>Analyzed:</i>	Jul-31-19 17:44	Jul-31-19 18:06	Jul-31-19 18:13	Jul-31-19 15:50	Jul-31-19 16:31	Jul-31-19 16:44
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		18.3 4.95	5.83 4.96	104 4.99	11.7 4.95	6.24 4.95	7.55 4.99

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Jessica Kramer  
Project Assistant



# Certificate of Analysis Summary 632555

TRC Solutions, Inc, Midland, TX

Project Name: Cabo Wabo 25 Federal 3H



Project Id:

Contact: Jared Stoffel

Project Location:

Date Received in Lab: Wed Jul-31-19 09:59 am

Report Date: 02-AUG-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	632555-007	632555-008	632555-009	632555-010	632555-011	632555-012
	<i>Field Id:</i>	TT-1 @ 0-1'	TT-1 @ 2'	TT-1 @ 3'	TT-1 @ 4'	TT-1 @ 5'	TT-2 @ 0-1'
	<i>Depth:</i>	0-1 ft	2- ft	3- ft	4- ft	5- ft	0-1 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jul-29-19 10:40	Jul-29-19 10:45	Jul-29-19 10:50	Jul-29-19 10:55	Jul-29-19 11:00	Jul-29-19 11:01
<b>Chloride by EPA 300</b>	<i>Extracted:</i>	Jul-31-19 13:30	Jul-31-19 13:30	Jul-31-19 13:30	Jul-31-19 13:30	Jul-31-19 13:30	Jul-31-19 13:30
	<i>Analyzed:</i>	Jul-31-19 16:58	Jul-31-19 17:11	Jul-31-19 17:52	Jul-31-19 18:06	Jul-31-19 18:19	Jul-31-19 18:33
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		<5.00 5.00	5.16 5.00	7.05 4.99	<4.99 4.99	<4.99 4.99	1120 4.98

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Jessica Kramer  
Project Assistant



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TRC Solutions, Inc, Midland, TX

Project Name: Cabo Wabo 25 Federal 3H



Project Id:

Contact: Jared Stoffel

Project Location:

Date Received in Lab: Wed Jul-31-19 09:59 am

Report Date: 02-AUG-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	632555-013	632555-014	632555-015	632555-016	632555-017	632555-018
	<i>Field Id:</i>	TT-2 @ 2'	TT-2 @ 3'	TT-2 @ 4'	TT-2 @ 5'	TT-2 @ 6'	TT-2 @ 7'
	<i>Depth:</i>	2- ft	3- ft	4- ft	5- ft	6- ft	7- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jul-29-19 11:05	Jul-29-19 11:10	Jul-29-19 11:15	Jul-29-19 11:20	Jul-29-19 11:25	Jul-29-19 11:30
Chloride by EPA 300	<i>Extracted:</i>	Jul-31-19 13:30	Jul-31-19 13:30	Jul-31-19 13:30	Jul-31-19 13:30	Jul-31-19 13:30	Jul-31-19 13:30
	<i>Analyzed:</i>	Jul-31-19 18:46	Jul-31-19 19:00	Jul-31-19 19:41	Jul-31-19 19:54	Jul-31-19 20:35	Jul-31-19 20:49
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		21.4 4.99	73.9 4.98	6.79 4.99	<4.99 4.99	<4.99 4.99	<4.96 4.96

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Jessica Kramer  
Project Assistant



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TRC Solutions, Inc, Midland, TX

Project Name: Cabo Wabo 25 Federal 3H



Project Id:

Contact: Jared Stoffel

Project Location:

Date Received in Lab: Wed Jul-31-19 09:59 am

Report Date: 02-AUG-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	632555-019	632555-020	632555-021	632555-022	632555-023	632555-024
	<i>Field Id:</i>	TT-3 @ 0-1'	TT-3 @ 2'	TT-3 @ 3'	TT-3 @ 4'	TT-3 @ 5'	TT-4 @ 0-1'
	<i>Depth:</i>	0-1 ft	2- ft	3- ft	4- ft	5- ft	0-1 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jul-29-19 11:40	Jul-29-19 11:45	Jul-29-19 11:50	Jul-29-19 11:55	Jul-29-19 12:00	Jul-29-19 12:10
Chloride by EPA 300	<i>Extracted:</i>	Jul-31-19 13:30	Jul-31-19 13:30	Jul-31-19 13:30	Jul-31-19 13:30	Jul-31-19 13:30	Aug-01-19 11:00
	<i>Analyzed:</i>	Jul-31-19 21:02	Jul-31-19 21:16	Jul-31-19 21:29	Jul-31-19 21:43	Jul-31-19 21:57	Aug-01-19 11:47
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		375 4.98	13.0 4.99	6.04 4.99	37.6 4.96	<4.99 4.99	532 4.96

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*Jessica Kramer*

Jessica Kramer  
Project Assistant





# Certificate of Analysis Summary 632555

TRC Solutions, Inc, Midland, TX

Project Name: Cabo Wabo 25 Federal 3H



Project Id:

Contact: Jared Stoffel

Project Location:

Date Received in Lab: Wed Jul-31-19 09:59 am

Report Date: 02-AUG-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	632555-025	632555-026	632555-027	632555-028	632555-029	632555-030
	<i>Field Id:</i>	TT-4 @ 2'	TT-4 @ 3'	TT-4 @ 4'	TT-4 @ 5'	TT-5 @ 0-1'	TT-5 @ 2'
	<i>Depth:</i>	2- ft	3- ft	4- ft	5- ft	0-1 ft	2- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jul-29-19 12:15	Jul-29-19 12:20	Jul-29-19 12:25	Jul-29-19 12:30	Jul-29-19 12:40	Jul-29-19 12:45
Chloride by EPA 300	<i>Extracted:</i>	Aug-01-19 11:00	Aug-01-19 11:00	Aug-01-19 11:00	Aug-01-19 11:00	Aug-01-19 11:00	Aug-01-19 11:00
	<i>Analyzed:</i>	Aug-01-19 12:03	Aug-01-19 12:08	Aug-01-19 12:14	Aug-01-19 12:19	Aug-01-19 12:35	Aug-01-19 12:41
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		1250 5.05	429 4.96	6.69 5.04	<4.98 4.98	<5.00 5.00	<4.95 4.95

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*Jessica Kramer*

Jessica Kramer  
Project Assistant



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Project Id:

Contact: Jared Stoffel

Project Location:

Date Received in Lab: Wed Jul-31-19 09:59 am

Report Date: 02-AUG-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	632555-031	632555-032	632555-033	632555-034	632555-035	632555-036
	<i>Field Id:</i>	TT-5 @ 3'	TT-5 @ 4'	TT-5 @ 5'	TT-5 @ 6'	TT-5 @ 7'	TT-6 @ 0-1'
	<i>Depth:</i>	3- ft	4- ft	5- ft	6- ft	7- ft	0-1 ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jul-29-19 12:50	Jul-29-19 12:55	Jul-29-19 13:00	Jul-29-19 13:05	Jul-29-19 13:10	Jul-29-19 13:20
<b>Chloride by EPA 300</b>	<i>Extracted:</i>	Aug-01-19 11:00	Aug-01-19 11:00	Aug-01-19 11:00	Aug-01-19 11:00	Aug-01-19 11:00	Aug-01-19 11:00
	<i>Analyzed:</i>	Aug-01-19 12:46	Aug-01-19 12:52	Aug-01-19 12:57	Aug-01-19 13:03	Aug-01-19 13:19	Aug-01-19 13:24
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		<4.97 4.97	5.16 4.99	<5.03 5.03	<5.02 5.02	5.80 4.98	99.1 4.95

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Jessica Kramer  
Project Assistant



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TRC Solutions, Inc, Midland, TX

Project Name: Cabo Wabo 25 Federal 3H



Project Id:

Contact: Jared Stoffel

Project Location:

Date Received in Lab: Wed Jul-31-19 09:59 am

Report Date: 02-AUG-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	632555-037	632555-038	632555-039	632555-040	632555-041	632555-042
	<i>Field Id:</i>	TT-6 @ 2'	TT-6 @ 3'	TT-6 @ 4'	TT-6 @ 5'	TT-6 @ 6'	TT-6 @ 7'
	<i>Depth:</i>	2- ft	3- ft	4- ft	5- ft	6- ft	7- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jul-29-19 13:25	Jul-29-19 13:30	Jul-29-19 13:35	Jul-29-19 13:40	Jul-29-19 13:45	Jul-29-19 13:50
<b>Chloride by EPA 300</b>	<i>Extracted:</i>	Aug-01-19 11:00	Aug-01-19 11:00	Aug-01-19 11:00	Aug-01-19 11:00	Aug-01-19 11:00	Aug-01-19 11:00
	<i>Analyzed:</i>	Aug-01-19 13:40	Aug-01-19 13:46	Aug-01-19 13:51	Aug-01-19 13:57	Aug-01-19 14:02	Aug-01-19 14:08
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		1110 4.99	2760 24.9	187 4.98	4950 24.9	23.3 5.02	71.7 5.05

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Project Assistant



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TRC Solutions, Inc, Midland, TX

Project Name: Cabo Wabo 25 Federal 3H



Project Id:

Contact: Jared Stoffel

Project Location:

Date Received in Lab: Wed Jul-31-19 09:59 am

Report Date: 02-AUG-19

Project Manager: Jessica Kramer

<i>Analysis Requested</i>	<i>Lab Id:</i>	632555-043	632555-044	632555-045	632555-046	632555-047	632555-048
	<i>Field Id:</i>	TT-7 @ 0-1'	TT-7 @ 2'	TT-7 @ 3'	TT-7 @ 4'	TT-7 @ 5'	TT-7 @ 6'
	<i>Depth:</i>	0-1 ft	2- ft	3- ft	4- ft	5- ft	6- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jul-29-19 14:00	Jul-29-19 14:05	Jul-29-19 14:10	Jul-29-19 14:15	Jul-29-19 14:20	Jul-29-19 14:25
Chloride by EPA 300	<i>Extracted:</i>	Aug-01-19 11:00	Aug-01-19 08:30	Aug-01-19 08:30	Aug-01-19 08:30	Aug-01-19 08:30	Aug-01-19 08:30
	<i>Analyzed:</i>	Aug-01-19 14:13	Aug-01-19 12:27	Aug-01-19 12:33	Aug-01-19 12:52	Aug-01-19 12:59	Aug-01-19 13:18
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		32.9 5.05	17.2 4.97	32.3 4.98	<5.04 5.04	9.41 5.05	6.49 5.03

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Jessica Kramer  
Project Assistant

- 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



## BS / BSD Recoveries



Project Name: Cabo Wabo 25 Federal 3H

Work Order #: 632555

Project ID:

Analyst: SPC

Date Prepared: 07/31/2019

Date Analyzed: 07/31/2019

Lab Batch ID: 3097144

Sample: 7683282-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

### BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<5.00	250	269	108	250	269	108	0	90-110	20	

Analyst: SPC

Date Prepared: 07/31/2019

Date Analyzed: 07/31/2019

Lab Batch ID: 3097147

Sample: 7683284-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

### BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<5.00	250	253	101	250	254	102	0	90-110	20	

Analyst: SPC

Date Prepared: 08/01/2019

Date Analyzed: 08/01/2019

Lab Batch ID: 3097154

Sample: 7683285-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

### BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<5.00	250	254	102	250	255	102	0	90-110	20	

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

Blank Spike Recovery [D] =  $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] =  $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



## BS / BSD Recoveries



**Project Name: Cabo Wabo 25 Federal 3H**

**Work Order #:** 632555

**Analyst:** SPC

**Date Prepared:** 08/01/2019

**Project ID:**

**Date Analyzed:** 08/01/2019

**Lab Batch ID:** 3097295

**Sample:** 7683286-1-BKS

**Batch #:** 1

**Matrix:** Solid

**Units:** mg/kg

### BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

<b>Chloride by EPA 300</b>	<b>Blank Sample Result [A]</b>	<b>Spike Added [B]</b>	<b>Blank Spike Result [C]</b>	<b>Blank Spike %R [D]</b>	<b>Spike Added [E]</b>	<b>Blank Spike Duplicate Result [F]</b>	<b>Blk. Spk Dup. %R [G]</b>	<b>RPD %</b>	<b>Control Limits %R</b>	<b>Control Limits %RPD</b>	<b>Flag</b>
<b>Analytes</b>											
Chloride	<5.00	250	269	108	250	267	107	1	90-110	20	

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

Blank Spike Recovery [D] =  $100 * (C)/[B]$

Blank Spike Duplicate Recovery [G] =  $100 * (F)/[E]$

All results are based on MDL and Validated for QC Purposes



# Form 3 - MS / MSD Recoveries



Project Name: Cabo Wabo 25 Federal 3H

Work Order # : 632555

Project ID:

Lab Batch ID: 3097144

QC- Sample ID: 632289-003 S

Batch #: 1 Matrix: Soil

Date Analyzed: 07/31/2019

Date Prepared: 07/31/2019

Analyst: SPC

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	22.9	253	298	109	253	297	108	0	90-110	20	

Lab Batch ID: 3097144

QC- Sample ID: 632555-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 07/31/2019

Date Prepared: 07/31/2019

Analyst: SPC

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	18.3	248	283	107	248	282	106	0	90-110	20	

Lab Batch ID: 3097147

QC- Sample ID: 632555-004 S

Batch #: 1 Matrix: Soil

Date Analyzed: 07/31/2019

Date Prepared: 07/31/2019

Analyst: SPC

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	11.7	248	268	103	248	270	104	1	90-110	20	

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

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

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

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





# Form 3 - MS / MSD Recoveries



Project Name: Cabo Wabo 25 Federal 3H

Work Order # : 632555

Project ID:

Lab Batch ID: 3097147

QC- Sample ID: 632555-014 S

Batch #: 1 Matrix: Soil

Date Analyzed: 07/31/2019

Date Prepared: 07/31/2019

Analyst: SPC

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	73.9	249	350	111	249	350	111	0	90-110	20	X

Lab Batch ID: 3097154

QC- Sample ID: 632555-045 S

Batch #: 1 Matrix: Soil

Date Analyzed: 08/01/2019

Date Prepared: 08/01/2019

Analyst: SPC

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	32.3	249	294	105	249	294	105	0	90-110	20	

Lab Batch ID: 3097154

QC- Sample ID: 632558-002 S

Batch #: 1 Matrix: Soil

Date Analyzed: 08/01/2019

Date Prepared: 08/01/2019

Analyst: SPC

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	344	250	617	109	250	619	110	0	90-110	20	

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

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

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

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



# Form 3 - MS / MSD Recoveries



Project Name: Cabo Wabo 25 Federal 3H

Work Order # : 632555

Project ID:

Lab Batch ID: 3097295

QC- Sample ID: 632555-024 S

Batch #: 1 Matrix: Soil

Date Analyzed: 08/01/2019

Date Prepared: 08/01/2019

Analyst: SPC

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	532	248	779	100	248	775	98	1	90-110	20	

Lab Batch ID: 3097295

QC- Sample ID: 632555-034 S

Batch #: 1 Matrix: Soil

Date Analyzed: 08/01/2019

Date Prepared: 08/01/2019

Analyst: SPC

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	3.11	251	276	109	251	273	108	1	90-110	20	

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

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

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

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

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334  
Midland, TX (432-704-5440) EL Paso, TX (915)585-3443 Lubbock, TX (806)794-1296  
Phoenix, AZ (480-335-0900) Atlanta, GA (770-449-8800) Tampa, FL (813)575-392-7550

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Page 1 of 5

Project Manager:	Jared Stoffel	Bill to: (if different)	Ike Tavaraz
Company Name:	TRC	Company Name:	COG
Address:	10 Desta Dr. STE 150 E	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	
Phone:	(432) 238-3003	Email:	JStoffel@trccompanies.com

Work Order Comments	
Program: UST/PST <input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RRC <input type="checkbox"/> Superfund <input type="checkbox"/>	
State of Project:	
Reporting Level II <input type="checkbox"/> Level III <input type="checkbox"/> PST/UST <input type="checkbox"/> TRRP <input type="checkbox"/> Level IV <input type="checkbox"/>	
Deliverables: EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other:	

Project Name:	Cabo Wabo 25 Federal 3H	Turn Around
Project Number:		Routine <input type="checkbox"/>
P.O. Number:		Rush: <del>24hrs</del> 72hrs
Sampler's Name:	Tania Babu	Due Date: 72hrs








  

SAMPLE RECEIPT			
Temperature (°C):	Temp Blank:	Yes	No
Received In tact:	Yes	No	Thermometer ID
Cooler Custody Seals:	Yes	No	N/A
Sample Custody Seals:	Yes	No	N/A
			Correction Factor:
			Total Containers:

Project Name:		Cabo Wabo 25 Federal 3H		Turn Around		ANALYSIS REQUEST																Work Order Notes			
Project Number:				Routine <input type="checkbox"/>																		TAT starts the day received by the lab, if received by 4:30pm  <b>Sample Comments</b>			
P.O. Number:				Rush: <del>24hrs</del> 72 hrs																					
Sampler's Name:		Tania Babu		Due Date: 72hrs																					
<b>SAMPLE RECEIPT</b>				Temp Blank:		Yes <input checked="" type="radio"/> No <input type="radio"/>		Wet Ice:		Yes <input checked="" type="radio"/> No <input type="radio"/>															
Temperature (°C):		CUBA		Thermometer ID																					
Received Intact:		Yes <input checked="" type="radio"/> No <input type="radio"/>																							
Cooler Custody Seals:		Yes <input checked="" type="radio"/> No <input type="radio"/> N/A		Correction Factor:		66.2																			
Sample Custody Seals:		Yes <input checked="" type="radio"/> No <input type="radio"/> N/A		Total Containers:																					
<b>Sample Identification</b>				<b>Matrix</b>		<b>Date Sampled</b>		<b>Time Sampled</b>		<b>Depth</b>		<b>Number of Containers</b>													
												<b>Chloride (E300)</b>													
TT-3 @ 6'				SS		7/29/2019		9:30		6'		1												X	
TT-2 @ 8'				SS		7/29/2019		9:50		8'		1												X	
TT-6 @ 8'				SS		7/29/2019		10:00		8'		1												X	
TT-7 @ 7'				SS		7/29/2019		10:10		7'		1												X	
TT-1 @ 6'				SS		7/29/2019		10:20		6'		1												X	
TT-4 @ 6'				SS		7/29/2019		10:30		6'		1												X	
TT-1 @ 0-1'				SS		7/29/2019		10:40		0-1'		1												X	
TT-1 @ 2'				SS		7/29/2019		10:45		2'		1												X	
TT-1 @ 3'				SS		7/29/2019		10:50		3'		1										X			
TT-1 @ 4'				SS		7/29/2019		10:55		4'		1										X			

[illegible]

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Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 		7/31/19			
2 					
3 					
4 					
5 					
6 					



Page 2 of 5

Project Name:	Cabo Wabo 25 Federal 3H	Turn Around	ANALYSIS REQUEST							Work Order Notes
Project Number:		Routine <input type="checkbox"/>								
P. O. Number:		Rush: 24hrs 72hrs								
Sampler's Name:	Tania Babu	Due Date: 72hrs								

[illegible]Revised Date 051418 Rev. 2018.1





# Chain of Custody

Work Order No:

638555

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334  
Midland, TX (432) 704-5440 El Paso, TX (915) 585-3443 Lubbock, TX (806) 794-1296  
Hobbs, NM (575) 392-7550 Phoenix, AZ (480) 355-0900 Atlanta, GA (770) 449-8800 Tampa, FL (813) 620-2000

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Page 3 of 5

Project Manager:	Jared Stoffel	Bill to: (if different)	Ike Tavearez
Company Name:	TRC	Company Name:	COG
Address:	10 Desta Dr. STE 150 E	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	
Phone:	(432) 238-3003	Email:	JStoffel@trccompanies.com

Project Name:	Cabo Wabo 25 Federal 3H	Turn Around	
Project Number:		Routine <input type="checkbox"/>	
P.O. Number:		Rush: 24hrs <input checked="" type="checkbox"/>	
Sampler's Name:	Tania Babu	Due Date: 72hrs	

Temp Blank:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Wet Ice:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Received Intact:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Thermometer ID	
Cooler Custody Seals:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Correction Factor:	
Sample Custody Seals:	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Total Containers:	

Project Name:		Cabo Wabo 25 Federal 3H			Turn Around		ANALYSIS REQUEST												Work Order Notes																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn  
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U 1631 / 245.1 / 7470 / 7471 : Hg

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Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1		7/31/19			2
3		7/31/19			4
5					6



# Chain of Custody

Work Order No:

432555

Houston, TX (281) 240-4200 Dallas, TX (214) 902-0300 San Antonio, TX (210) 509-3334  
Midland, TX (432-704-5440) El Paso, TX (915)585-3443 Lubbock, TX (806)794-1296  
Phoenix, AZ (480-355-0900) Atlanta, GA (770-449-8800) Tampa, FL (813-620-2000)

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Page 4 of 5

Project Manager:	Jared Stoffel	Bill to: (if different)	Ike Tavarez
Company Name:	TRC	Company Name:	COG
Address:	10 Desta Dr. STE 150 E	Address:	
City, State ZIP:	Midland, TX 79705	City, State ZIP:	
Phone:	(432) 238-3003	Email:	jstoffel@trccompanies.com
<b>Work Order Comments</b>			
Program: <input type="checkbox"/> UST/PST <input type="checkbox"/> PRP <input type="checkbox"/> Brownfields <input type="checkbox"/> RRC <input type="checkbox"/> Superfund <input type="checkbox"/>			
State of Project:			
Reporting Level: <input type="checkbox"/> Level II <input type="checkbox"/> Level III <input type="checkbox"/> PST/UST <input type="checkbox"/> RRP <input type="checkbox"/> Level IV <input type="checkbox"/>			
Deliverables: EDD <input type="checkbox"/> ADAPT <input type="checkbox"/> Other:			

Project Name:	Cabo Wabo 25 Federal 3H	Turn Around	
Project Number:		Route <input type="checkbox"/> 18	
P.O. Number:		Rush: 24hrs <input checked="" type="checkbox"/> 72 hrs	
Sampler's Name:	Tania Babu	Due Date:	7/2 hrs

<b>SAMPLE RECEIPT</b>	Temp Blank:	Yes <input checked="" type="checkbox"/> No	Wet Ice:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Temperature (°C):	0.0	Thermometer ID		
Received In tact:	Yes <input checked="" type="checkbox"/> No	Correction Factor:		
Cooler Custody Seals:	Yes <input checked="" type="checkbox"/> No	Total Containers:		
Sample Custody Seals:	Yes <input checked="" type="checkbox"/> No			

Sample Identification	Matrix	Date Sampled	Time Sampled	Depth	Number of Containers	Chloride (E300)	ANALYSIS REQUEST	Work Order Notes
TT-5 @ 3'	SS	7/29/2019	12:50	3'	1	X		
TT-5 @ 4'	SS	7/29/2019	12:55	4'	1	X		
TT-5 @ 5'	SS	7/29/2019	13:00	5'	1	X		
TT-5 @ 6'	SS	7/29/2019	13:05	6'	1	X		
TT-5 @ 7'	SS	7/29/2019	13:10	7'	1	X		
TT-6 @ 0-1'	SS	7/29/2019	13:20	0-1'	1	X		
TT-6 @ 2'	SS	7/29/2019	13:25	2'	1	X		
TT-6 @ 3'	SS	7/29/2019	13:30	3'	1	X		
TT-6 @ 4'	SS	7/29/2019	13:35	4'	1	X		
TT-6 @ 5'	SS	7/29/2019	13:40	5'	1	X		

Total 200.7 / 6010 200.8 / 6020: 8RCRA 13PPM Texas 11 Al Sb As Ba Be B Cd Ca Cr Co Cu Fe Pb Mg Mn Mo Ni K Se Ag SiO2 Na Sr Ti Sn U V Zn  
Circle Method(s) and Metal(s) to be analyzed TCLP / SPLP 6010: 8RCRA Sb As Ba Be Cd Cr Co Cu Pb Mn Mo Ni Se Ag Ti U 1631 / 245.1 / 7470 / 7471 : Hg

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Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1	2	7/31/19	4		
3		09/09	6		
5					





5

ANALYSIS REQUEST						Work Order Notes	
Project Name:		Cabo Wabo 25 Federal 3H	Turn Around				
Project Number:			Routine	<input type="checkbox"/>	TB		
P.O. Number:			Rush:	24hrs	72 hrs		
Sampler's Name:		Tania Babu	Due Date:		72hrs		
SAMPLE RECEIPT	Temp Blank:	Yes No	Wet Ice:	(Yes) No			
Temperature ('C):	MBC/H	Thermometer ID					
Received Intact:	(Yes) No						
Cooler Custody Seals:	Yes (No)	N/A	Correction Factor:				
Sample Custody Seals:	Yes (No)	N/A	Total Containers:				
Number of Containers							
(E300)							
TAT starts the day received by the lab, if received by 4:30pm							

[illegible]

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Relinquished by: (Signature)	Received by: (Signature)	Date/Time	Relinquished by: (Signature)	Received by: (Signature)	Date/Time
1 		7/21/19	2		
3		0959	4		
5			6		



# XENCO Laboratories

## Prelogin/Nonconformance Report- Sample Log-In



Client: TRC Solutions, Inc

Date/ Time Received: 07/31/2019 09:59:00 AM

Work Order #: 632555

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

### Sample Receipt Checklist

### Comments

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

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

Analyst:

PH Device/Lot#:

Checklist completed by:

*Brianna Teel*

Brianna Teel

Date: 07/31/2019

Checklist reviewed by:

*Jessica Kramer*

Jessica Kramer

Date: 07/31/2019





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

---

August 14, 2019

JARED STOFFEL

TRC

10 DESTA DR. SUITE 150 E

MIDLAND, TX 79705

RE: CABO WABO 25 FEDERAL COM #003

Enclosed are the results of analyses for samples received by the laboratory on 08/13/19 13:55.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (\*). For a complete list of accredited analytes and matrices visit the TCEQ website at [www.tceq.texas.gov/field/qa/lab\\_accred\\_certif.html](http://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 "Mike Snyder". The signature is fluid and cursive, with the first name "Mike" and last name "Snyder" clearly distinguishable.

Mike Snyder For Celey D. Keene

Lab Director/Quality Manager



August 16, 2019

JARED STOFFEL

TRC

10 DESTA DR. SUITE 150 E

MIDLAND, TX 79705

RE: CABO WABO 25 FEDERAL COM #003

Enclosed are the results of analyses for samples received by the laboratory on 08/14/19 15:40.

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/ga/lab\\_accred\\_certif.html](http://www.tceq.texas.gov/field/ga/lab_accred_certif.html).

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

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

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

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

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

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

Sincerely,

Celey D. Keene

Lab Director/Quality Manager

**Analytical Results For:**TRC  
10 DESTA DR. SUITE 150 E  
MIDLAND TX, 79705Project: CABO WABO 25 FEDERAL COM #0  
Project Number: NONE GIVEN  
Project Manager: JARED STOFFEL  
Fax To:Reported:  
16-Aug-19 09:14

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
FL - B01 - 2.5'	H902792-01	Soil	14-Aug-19 09:00	14-Aug-19 15:40
FL - B02 - 2.5'	H902792-02	Soil	14-Aug-19 09:05	14-Aug-19 15:40
FL - B03 - 2.5'	H902792-03	Soil	14-Aug-19 09:10	14-Aug-19 15:40
FL - B04 - 2.5'	H902792-04	Soil	14-Aug-19 09:15	14-Aug-19 15:40
FL - B05 - 2.5'	H902792-05	Soil	14-Aug-19 09:20	14-Aug-19 15:40
FL - B06 - 2.5'	H902792-06	Soil	14-Aug-19 11:30	14-Aug-19 15:40
FL - B07 - 2.5'	H902792-07	Soil	14-Aug-19 09:30	14-Aug-19 15:40
FL - B08 - 2.5'	H902792-08	Soil	14-Aug-19 09:35	14-Aug-19 15:40
FL - B09 - 2.5'	H902792-09	Soil	14-Aug-19 11:35	14-Aug-19 15:40
FL - B10 - 2.5'	H902792-10	Soil	14-Aug-19 11:40	14-Aug-19 15:40
FL - C01 - 5.5'	H902792-11	Soil	14-Aug-19 12:30	14-Aug-19 15:40
FL - C02 - 5.5'	H902792-12	Soil	14-Aug-19 12:35	14-Aug-19 15:40
FL - C03 - 5.5'	H902792-13	Soil	14-Aug-19 12:40	14-Aug-19 15:40
FL - C04 - 5.5'	H902792-14	Soil	14-Aug-19 12:45	14-Aug-19 15:40

Client requested a re-extract for chloride on sample -04. Sample was re-extracted and analyzed. This is the revised report and will replace the one sent on 08/15/19.

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**TRC  
10 DESTA DR. SUITE 150 E  
MIDLAND TX, 79705Project: CABO WABO 25 FEDERAL COM #0  
Project Number: NONE GIVEN  
Project Manager: JARED STOFFEL  
Fax To:Reported:  
16-Aug-19 09:14**FL - B01 - 2.5'**  
**H902792-01 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories****Inorganic Compounds**

Chloride	336		16.0	mg/kg	4	9081508	AC	15-Aug-19	4500-Cl-B	
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Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**TRC  
10 DESTA DR. SUITE 150 E  
MIDLAND TX, 79705Project: CABO WABO 25 FEDERAL COM #0  
Project Number: NONE GIVEN  
Project Manager: JARED STOFFEL  
Fax To:Reported:  
16-Aug-19 09:14**FL - B02 - 2.5'****H902792-02 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories****Inorganic Compounds**

<b>Chloride</b>	<b>96.0</b>		16.0	mg/kg	4	9081508	AC	15-Aug-19	4500-Cl-B	
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Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**TRC  
10 DESTA DR. SUITE 150 E  
MIDLAND TX, 79705Project: CABO WABO 25 FEDERAL COM #0  
Project Number: NONE GIVEN  
Project Manager: JARED STOFFEL  
Fax To:Reported:  
16-Aug-19 09:14**FL - B03 - 2.5'**  
**H902792-03 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories****Inorganic Compounds**

<b>Chloride</b>	<b>48.0</b>		16.0	mg/kg	4	9081508	AC	15-Aug-19	4500-Cl-B	
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Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**TRC  
10 DESTA DR. SUITE 150 E  
MIDLAND TX, 79705Project: CABO WABO 25 FEDERAL COM #0  
Project Number: NONE GIVEN  
Project Manager: JARED STOFFEL  
Fax To:Reported:  
16-Aug-19 09:14**FL - B04 - 2.5'****H902792-04 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories****Inorganic Compounds**

<b>Chloride</b>	<b>576</b>		16.0	mg/kg	4	9081508	AC	15-Aug-19	4500-Cl-B	
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Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

### Analytical Results For:

TRC  
10 DESTA DR. SUITE 150 E  
MIDLAND TX, 79705

Project: CABO WABO 25 FEDERAL COM #0  
Project Number: NONE GIVEN  
Project Manager: JARED STOFFEL  
Fax To:

Reported:  
16-Aug-19 09:14

### FL - B05 - 2.5' H902792-05 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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### Cardinal Laboratories

#### Inorganic Compounds

Chloride	448		16.0	mg/kg	4	9081508	AC	15-Aug-19	4500-Cl-B	
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#### Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	9081413	ms	15-Aug-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9081413	ms	15-Aug-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9081413	ms	15-Aug-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9081413	ms	15-Aug-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9081413	ms	15-Aug-19	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			96.9 %		73.3-129	9081413	ms	15-Aug-19	8021B	
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#### Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	9081411	MS	15-Aug-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9081411	MS	15-Aug-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9081411	MS	15-Aug-19	8015B	

Surrogate: 1-Chlorooctane			103 %		41-142	9081411	MS	15-Aug-19	8015B	
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Surrogate: 1-Chlorooctadecane			107 %		37.6-147	9081411	MS	15-Aug-19	8015B	
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Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**TRC  
10 DESTA DR. SUITE 150 E  
MIDLAND TX, 79705Project: CABO WABO 25 FEDERAL COM #0  
Project Number: NONE GIVEN  
Project Manager: JARED STOFFEL  
Fax To:Reported:  
16-Aug-19 09:14**FL - B06 - 2.5'****H902792-06 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories****Inorganic Compounds**

<b>Chloride</b>	<b>80.0</b>		16.0	mg/kg	4	9081509	AC	15-Aug-19	4500-Cl-B	
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Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**TRC  
10 DESTA DR. SUITE 150 E  
MIDLAND TX, 79705Project: CABO WABO 25 FEDERAL COM #0  
Project Number: NONE GIVEN  
Project Manager: JARED STOFFEL  
Fax To:Reported:  
16-Aug-19 09:14**FL - B07 - 2.5'****H902792-07 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories****Inorganic Compounds**

<b>Chloride</b>	<b>416</b>		16.0	mg/kg	4	9081509	AC	15-Aug-19	4500-Cl-B	
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Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**TRC  
10 DESTA DR. SUITE 150 E  
MIDLAND TX, 79705Project: CABO WABO 25 FEDERAL COM #0  
Project Number: NONE GIVEN  
Project Manager: JARED STOFFEL  
Fax To:Reported:  
16-Aug-19 09:14**FL - B08 - 2.5'**  
**H902792-08 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories****Inorganic Compounds**

<b>Chloride</b>	<b>48.0</b>		16.0	mg/kg	4	9081509	AC	15-Aug-19	4500-Cl-B	
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Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**TRC  
10 DESTA DR. SUITE 150 E  
MIDLAND TX, 79705Project: CABO WABO 25 FEDERAL COM #0  
Project Number: NONE GIVEN  
Project Manager: JARED STOFFEL  
Fax To:Reported:  
16-Aug-19 09:14**FL - B09 - 2.5'****H902792-09 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories****Inorganic Compounds**

<b>Chloride</b>	<b>80.0</b>		16.0	mg/kg	4	9081509	AC	15-Aug-19	4500-Cl-B	
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Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

### Analytical Results For:

TRC  
10 DESTA DR. SUITE 150 E  
MIDLAND TX, 79705

Project: CABO WABO 25 FEDERAL COM #0  
Project Number: NONE GIVEN  
Project Manager: JARED STOFFEL  
Fax To:

Reported:  
16-Aug-19 09:14

### FL - B10 - 2.5' H902792-10 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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### Cardinal Laboratories

#### Inorganic Compounds

Chloride	560		16.0	mg/kg	4	9081509	AC	15-Aug-19	4500-Cl-B	
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#### Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	9081413	ms	15-Aug-19	8021B	
Toluene*	<0.050		0.050	mg/kg	50	9081413	ms	15-Aug-19	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	9081413	ms	15-Aug-19	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	9081413	ms	15-Aug-19	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	9081413	ms	15-Aug-19	8021B	

Surrogate: 4-Bromofluorobenzene (PID)			96.4 %		73.3-129	9081413	ms	15-Aug-19	8021B	
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#### Petroleum Hydrocarbons by GC FID

GRO C6-C10*	<10.0		10.0	mg/kg	1	9081411	MS	15-Aug-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9081411	MS	15-Aug-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9081411	MS	15-Aug-19	8015B	

Surrogate: 1-Chlorooctane			102 %		41-142	9081411	MS	15-Aug-19	8015B	
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Surrogate: 1-Chlorooctadecane			104 %		37.6-147	9081411	MS	15-Aug-19	8015B	
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Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



**Analytical Results For:**TRC  
10 DESTA DR. SUITE 150 E  
MIDLAND TX, 79705Project: CABO WABO 25 FEDERAL COM #0  
Project Number: NONE GIVEN  
Project Manager: JARED STOFFEL  
Fax To:Reported:  
16-Aug-19 09:14**FL - C01 - 5.5'**  
**H902792-11 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories****Inorganic Compounds**

<b>Chloride</b>	<b>80.0</b>		16.0	mg/kg	4	9081509	AC	15-Aug-19	4500-Cl-B	
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Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**TRC  
10 DESTA DR. SUITE 150 E  
MIDLAND TX, 79705Project: CABO WABO 25 FEDERAL COM #0  
Project Number: NONE GIVEN  
Project Manager: JARED STOFFEL  
Fax To:Reported:  
16-Aug-19 09:14**FL - C02 - 5.5'****H902792-12 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories****Inorganic Compounds**

<b>Chloride</b>	<b>160</b>		16.0	mg/kg	4	9081509	AC	15-Aug-19	4500-Cl-B	
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Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**TRC  
10 DESTA DR. SUITE 150 E  
MIDLAND TX, 79705Project: CABO WABO 25 FEDERAL COM #0  
Project Number: NONE GIVEN  
Project Manager: JARED STOFFEL  
Fax To:Reported:  
16-Aug-19 09:14**FL - C03 - 5.5'**  
**H902792-13 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
---------	--------	-----	--------------------	-------	----------	-------	---------	----------	--------	-------

**Cardinal Laboratories****Inorganic Compounds**

<b>Chloride</b>	<b>128</b>		16.0	mg/kg	4	9081509	AC	15-Aug-19	4500-Cl-B	
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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

**Analytical Results For:**TRC  
10 DESTA DR. SUITE 150 E  
MIDLAND TX, 79705Project: CABO WABO 25 FEDERAL COM #0  
Project Number: NONE GIVEN  
Project Manager: JARED STOFFEL  
Fax To:Reported:  
16-Aug-19 09:14**FL - C04 - 5.5'****H902792-14 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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**Cardinal Laboratories****Inorganic Compounds**

<b>Chloride</b>	<b>32.0</b>		16.0	mg/kg	4	9081509	AC	15-Aug-19	4500-Cl-B	
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Celey D. Keene, Lab Director/Quality Manager

### Analytical Results For:

TRC  
10 DESTA DR. SUITE 150 E  
MIDLAND TX, 79705

Project: CABO WABO 25 FEDERAL COM #0  
Project Number: NONE GIVEN  
Project Manager: JARED STOFFEL  
Fax To:

Reported:  
16-Aug-19 09:14

### Inorganic Compounds - Quality Control

#### Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

#### Batch 9081508 - 1:4 DI Water

##### Blank (9081508-BLK1)

Prepared &amp; Analyzed: 15-Aug-19

Chloride ND 16.0 mg/kg

##### LCS (9081508-BS1)

Prepared &amp; Analyzed: 15-Aug-19

Chloride 448 16.0 mg/kg 400 112 80-120

##### LCS Dup (9081508-BSD1)

Prepared &amp; Analyzed: 15-Aug-19

Chloride 416 16.0 mg/kg 400 104 80-120 7.41 20

#### Batch 9081509 - 1:4 DI Water

##### Blank (9081509-BLK1)

Prepared &amp; Analyzed: 15-Aug-19

Chloride ND 16.0 mg/kg

##### LCS (9081509-BS1)

Prepared &amp; Analyzed: 15-Aug-19

Chloride 416 16.0 mg/kg 400 104 80-120

##### LCS Dup (9081509-BSD1)

Prepared &amp; Analyzed: 15-Aug-19

Chloride 432 16.0 mg/kg 400 108 80-120 3.77 20

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Celey D. Keene, Lab Director/Quality Manager



### Analytical Results For:

TRC  
10 DESTA DR. SUITE 150 E  
MIDLAND TX, 79705

Project: CABO WABO 25 FEDERAL COM #0  
Project Number: NONE GIVEN  
Project Manager: JARED STOFFEL  
Fax To:

Reported:  
16-Aug-19 09:14

### Volatile Organic Compounds by EPA Method 8021 - Quality Control

#### Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch 9081413 - Volatiles

##### Blank (9081413-BLK1)

Prepared: 14-Aug-19 Analyzed: 15-Aug-19

Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	0.0973		mg/kg	0.100		97.3	73.3-129			

##### LCS (9081413-BS1)

Prepared: 14-Aug-19 Analyzed: 15-Aug-19

Benzene	1.97	0.050	mg/kg	2.00		98.5	72.2-131			
Toluene	2.13	0.050	mg/kg	2.00		107	71.7-126			
Ethylbenzene	2.02	0.050	mg/kg	2.00		101	68.9-126			
Total Xylenes	6.07	0.150	mg/kg	6.00		101	71.4-125			
Surrogate: 4-Bromofluorobenzene (PID)	0.0973		mg/kg	0.100		97.3	73.3-129			

##### LCS Dup (9081413-BSD1)

Prepared: 14-Aug-19 Analyzed: 15-Aug-19

Benzene	1.84	0.050	mg/kg	2.00		91.9	72.2-131	6.96	6.91	QR-02
Toluene	1.94	0.050	mg/kg	2.00		97.1	71.7-126	9.43	7.12	QR-02
Ethylbenzene	1.90	0.050	mg/kg	2.00		94.8	68.9-126	6.61	7.88	
Total Xylenes	5.74	0.150	mg/kg	6.00		95.6	71.4-125	5.65	7.46	
Surrogate: 4-Bromofluorobenzene (PID)	0.0962		mg/kg	0.100		96.2	73.3-129			

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Celey D. Keene, Lab Director/Quality Manager

### Analytical Results For:

TRC  
10 DESTA DR. SUITE 150 E  
MIDLAND TX, 79705

Project: CABO WABO 25 FEDERAL COM #0  
Project Number: NONE GIVEN  
Project Manager: JARED STOFFEL  
Fax To:

Reported:  
16-Aug-19 09:14

### Petroleum Hydrocarbons by GC FID - Quality Control

#### Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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#### Batch 9081411 - General Prep - Organics

##### Blank (9081411-BLK1)

Prepared: 14-Aug-19 Analyzed: 15-Aug-19

GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	54.4		mg/kg	50.0		109	41-142			
Surrogate: 1-Chlorooctadecane	57.6		mg/kg	50.0		115	37.6-147			

##### LCS (9081411-BS1)

Prepared &amp; Analyzed: 14-Aug-19

GRO C6-C10	215	10.0	mg/kg	200		108	76.5-133			
DRO >C10-C28	214	10.0	mg/kg	200		107	72.9-138			
Total TPH C6-C28	429	10.0	mg/kg	400		107	78-132			
Surrogate: 1-Chlorooctane	57.4		mg/kg	50.0		115	41-142			
Surrogate: 1-Chlorooctadecane	57.8		mg/kg	50.0		116	37.6-147			

##### LCS Dup (9081411-BSD1)

Prepared: 14-Aug-19 Analyzed: 15-Aug-19

GRO C6-C10	209	10.0	mg/kg	200		105	76.5-133	2.88	20.6	
DRO >C10-C28	207	10.0	mg/kg	200		104	72.9-138	3.21	20.6	
Total TPH C6-C28	416	10.0	mg/kg	400		104	78-132	3.04	18	
Surrogate: 1-Chlorooctane	55.4		mg/kg	50.0		111	41-142			
Surrogate: 1-Chlorooctadecane	56.2		mg/kg	50.0		112	37.6-147			

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Celey D. Keene, Lab Director/Quality Manager

### Notes and Definitions

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

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Celey D. Keene, Lab Director/Quality Manager

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

[illegible]



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

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Relinquished By:	Date: 8-14-19		Received By:	Jawara Shabazz	Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	Add'l Phone #:
	Time: 15:40					
Relinquished By:	Date:		Received By:		REMARKS:  Eash!!	
	Time:					
Delivered By: (Circle One)	3.2e	#97	Sample Condition			
Sampler - UPS - Bus - Other:	Constructed 3.6e		Cool <input type="checkbox"/> Yes <input type="checkbox"/> No	Intact <input type="checkbox"/> Yes <input type="checkbox"/> No	CHECKED BY: (Initials) VE.	



August 19, 2019

JARED STOFFEL

TRC

10 DESTA DR. SUITE 150 E

MIDLAND, TX 79705

RE: CABO WABO 25 FEDERAL COM #003

Enclosed are the results of analyses for samples received by the laboratory on 08/16/19 14:00.

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](http://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,



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:	08/16/2019	Sampling Date:	08/15/2019
Reported:	08/19/2019	Sampling Type:	Soil
Project Name:	CABO WABO 25 FEDERAL COM #003	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	COG - EDDY CO NM		

**Sample ID: FL-ALL-2' (H902825-01)**

Chloride, SM4500CI-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/19/2019	ND	448	112	400	3.51	

**Sample ID: SW-A01-9" (H902825-02)**

Chloride, SM4500CI-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<b>64.0</b>	16.0	08/19/2019	ND	448	112	400	3.51	

**Sample ID: SW-A02-9" (H902825-03)**

Chloride, SM4500CI-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<b>128</b>	16.0	08/19/2019	ND	448	112	400	3.51	

**Sample ID: SW-B01-15" (H902825-04)**

Chloride, SM4500CI-B		mg/kg	Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<b>32.0</b>	16.0	08/19/2019	ND	448	112	400	3.51	

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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:	08/16/2019	Sampling Date:	08/15/2019
Reported:	08/19/2019	Sampling Type:	Soil
Project Name:	CABO WABO 25 FEDERAL COM #003	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	COG - EDDY CO NM		

**Sample ID: SW-B02-15" (H902825-05)**

BTX 8021B		mg/kg		Analyzed By: ms						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Benzene*	<0.050	0.050	08/18/2019	ND	1.81	90.4	2.00	3.70		
Toluene*	<0.050	0.050	08/18/2019	ND	1.92	95.9	2.00	3.11		
Ethylbenzene*	<0.050	0.050	08/18/2019	ND	2.05	102	2.00	1.25		
Total Xylenes*	<0.150	0.150	08/18/2019	ND	6.09	101	6.00	1.42		
Total BTX	<0.300	0.300	08/18/2019	ND						

Surrogate: 4-Bromofluorobenzene (PID) 98.1 % 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	<16.0	16.0	08/19/2019	ND	448	112	400	3.51		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/16/2019	ND	207	104	200	2.89	
DRO >C10-C28*	<10.0	10.0	08/16/2019	ND	198	98.9	200	6.97	
EXT DRO >C28-C36	<10.0	10.0	08/16/2019	ND					

Surrogate: 1-Chlorooctane 91.8 % 41-142

Surrogate: 1-Chlorooctadecane 101 % 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:	08/16/2019	Sampling Date:	08/15/2019
Reported:	08/19/2019	Sampling Type:	Soil
Project Name:	CABO WABO 25 FEDERAL COM #003	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Jodi Henson
Project Location:	COG - EDDY CO NM		

**Sample ID: SW-C01-33" (H902825-06)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier	
Chloride	<16.0	16.0	08/19/2019	ND	448	112	400	3.51		

**Sample ID: SW-C02-33" (H902825-07)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/19/2019	ND	448	112	400	3.51	

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Celey D. Keene, Lab Director/Quality Manager

**Notes and Definitions**

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

---

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Celey D. Keene, Lab Director/Quality Manager



# CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: <b>TRC Environmental</b>		P.O. #:		<b>BILL TO</b>											
Project Manager: <b>Jared Stoffer</b>		Company: <b>COG</b>		<b>ANALYSIS REQUEST</b>											
Address: <b>10 Delia Dr. STE 1506</b>		Attn:													
City: <b>Midland</b>		Address:													
Phone #: <b>432 520 7720</b>		City:													
Fax #: _____		State:													
Project #: _____		Zip:													
Project Name: <b>Cabo Wabo 25 fidal com # 003</b>		Phone #:													
Project Location: <b>Eddy County, NM</b>		Fax #:													
Sampler Name: <b>Bredden Biling</b>															
FOR LAB USE ONLY															
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX					PRESERV	SAMPLING					
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL	OTHER :	DATE	TIME	
<b>H902825</b>	<b>FL-A11'-2'</b>	<b>G</b>	<b>1</b>			<b>X</b>							<b>8/15/19</b>	<b>1015</b>	<b>X</b>
	<b>SW-A01-9"</b>		<b>1</b>										<b>8/15/19</b>	<b>0900</b>	<b>X</b>
	<b>SW-A02-9"</b>		<b>1</b>										<b>8/17/19</b>	<b>0905</b>	<b>X</b>
	<b>SW-B01-15"</b>		<b>1</b>										<b>8/17/19</b>	<b>0835</b>	<b>X</b>
	<b>SW-B02-15"</b>		<b>1</b>										<b>8/15/19</b>	<b>0840</b>	<b>X</b>
	<b>SW-C01-33"</b>		<b>1</b>										<b>8/15/19</b>	<b>0930</b>	<b>X</b>
	<b>SW-C02-33"</b>		<b>1</b>										<b>8/15/19</b>	<b>0935</b>	<b>X</b>
<div>Chlorides</div> <div>TPH</div> <div>BTEX</div>															

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Relinquished By: **[Signature]** Date: **8/16/19** Received By: **[Signature]** Time: **14:00**

Relinquished By: **[Signature]** Date: \_\_\_\_\_ Received By: **[Signature]** Time: \_\_\_\_\_

Delivered By: (Circle One) **2.30 + 4 corrected** Sample Condition **Intact** CHECKED BY: **[Signature]**

Sampler - UPS - Bus - Other: **2.30 2.70 #47** Cool ☒ Yes ☐ No

REMARKS: **RUST!!**

Phone Result: ☐ Yes ☐ No Add'l Phone #: \_\_\_\_\_

Fax Result: ☐ Yes ☐ No Add'l Fax #: \_\_\_\_\_

August 20, 2019

JARED STOFFEL

TRC

10 DESTA DR. SUITE 150 E

MIDLAND, TX 79705

RE: CABO WABO 25 FEDERAL COM #003

Enclosed are the results of analyses for samples received by the laboratory on 08/19/19 15:00.

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](http://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,



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:	08/19/2019	Sampling Date:	08/19/2019
Reported:	08/20/2019	Sampling Type:	Soil
Project Name:	CABO WABO 25 FEDERAL COM #003	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG - EDDY CO NM		

**Sample ID: FL - A07 - 4' (H902839-01)**

Chloride, SM4500CI-B			mg/kg		Analyzed By: AC				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/20/2019	ND	400	100	400	0.00	

**Sample ID: FL - A13 - 5.5' (H902839-02)**

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	08/20/2019	ND	400	100	400	0.00	

**Sample ID: FL - A10 - 5.5' (H902839-03)**

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	08/19/2019	ND	1.83	91.3	2.00	1.39	
Toluene*	<0.050	0.050	08/19/2019	ND	2.02	101	2.00	0.977	
Ethylbenzene*	<0.050	0.050	08/19/2019	ND	2.09	105	2.00	0.730	
Total Xylenes*	<0.150	0.150	08/19/2019	ND	6.33	105	6.00	0.921	
Total BTX	<0.300	0.300	08/19/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 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	08/20/2019	ND	400	100	400	0.00	

TPH 8015M			mg/kg		Analyzed By: MS				
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier

Cardinal Laboratories

\*=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:	08/19/2019	Sampling Date:	08/19/2019
Reported:	08/20/2019	Sampling Type:	Soil
Project Name:	CABO WABO 25 FEDERAL COM #003	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG - EDDY CO NM		

**Sample ID: FL - A10 - 5.5' (H902839-03)**

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/19/2019	ND	216	108	200	0.0102	
DRO >C10-C28*	<10.0	10.0	08/19/2019	ND	216	108	200	1.23	
EXT DRO >C28-C36	<10.0	10.0	08/19/2019	ND					
<hr/>									
Surrogate: 1-Chlorooctane	95.1 %	41-142							
Surrogate: 1-Chlorooctadecane	100 %	37.6-147							

**Sample ID: FL - A06 - 5' (H902839-04)**

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	08/20/2019	ND	400	100	400	0.00		

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Celey D. Keene, Lab Director/Quality Manager

### Notes and Definitions

QR-03	The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
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



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

[illegible]



**Analytical Results For:**

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

Received:	08/13/2019	Sampling Date:	08/13/2019
Reported:	08/14/2019	Sampling Type:	Soil
Project Name:	CABO WABO 25 FEDERAL COM #003	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG - EDDY CO NM		

**Sample ID: FL - A01 - 1.5' (H902771-01)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	352	16.0	08/14/2019	ND	400	100	400	3.92	

**Sample ID: FL - A02 - 1.5' (H902771-02)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/14/2019	ND	400	100	400	3.92	

**Sample ID: FL - A03 - 1.5' (H902771-03)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	08/14/2019	ND	400	100	400	3.92	

**Sample ID: FL - A04 - 1.5' (H902771-04)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	08/14/2019	ND	400	100	400	3.92	

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Mike Snyder For 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: 08/13/2019  
Reported: 08/14/2019  
Project Name: CABO WABO 25 FEDERAL COM #003  
Project Number: NONE GIVEN  
Project Location: COG - EDDY CO NM

Sampling Date: 08/13/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: FL - A05 - 1.5' (H902771-05)**

BTX 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/13/2019	ND	2.03	102	2.00	4.53	
Toluene*	<0.050	0.050	08/13/2019	ND	2.17	109	2.00	4.91	
Ethylbenzene*	<0.050	0.050	08/13/2019	ND	2.09	105	2.00	3.88	
Total Xylenes*	<0.150	0.150	08/13/2019	ND	6.34	106	6.00	4.13	
Total BTX	<0.300	0.300	08/13/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.4 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	08/14/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/13/2019	ND	201	101	200	3.72	
DRO >C10-C28*	<10.0	10.0	08/13/2019	ND	195	97.7	200	3.43	
EXT DRO >C28-C36	<10.0	10.0	08/13/2019	ND					

Surrogate: 1-Chlorooctane 77.5 % 41-142

Surrogate: 1-Chlorooctadecane 75.2 % 37.6-147

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\*=Accredited Analyte

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Mike Snyder For 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: 08/13/2019  
 Reported: 08/14/2019  
 Project Name: CABO WABO 25 FEDERAL COM #003  
 Project Number: NONE GIVEN  
 Project Location: COG - EDDY CO NM

 Sampling Date: 08/13/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL - A06 - 1.5' (H902771-06)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2120	16.0	08/14/2019	ND	400	100	400	3.92	

**Sample ID: FL - A07 - 1.5' (H902771-07)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	672	16.0	08/14/2019	ND	400	100	400	3.92	

**Sample ID: FL - A08 - 1.5' (H902771-08)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	256	16.0	08/14/2019	ND	400	100	400	3.92	

**Sample ID: FL - A09 - 1.5' (H902771-09)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	272	16.0	08/14/2019	ND	400	100	400	3.92	

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Mike Snyder For 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:	08/13/2019	Sampling Date:	08/13/2019
Reported:	08/14/2019	Sampling Type:	Soil
Project Name:	CABO WABO 25 FEDERAL COM #003	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG - EDDY CO NM		

**Sample ID: FL - A10 - 1.5' (H902771-10)**

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/13/2019	ND	2.03	102	2.00	4.53	
Toluene*	<0.050	0.050	08/13/2019	ND	2.17	109	2.00	4.91	
Ethylbenzene*	<0.050	0.050	08/13/2019	ND	2.09	105	2.00	3.88	
Total Xylenes*	<0.150	0.150	08/13/2019	ND	6.34	106	6.00	4.13	
Total BTEx	<0.300	0.300	08/13/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 97.9 % 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	2600	16.0	08/14/2019	ND	400	100	400	3.92		

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/14/2019	ND	201	101	200	3.72	
DRO >C10-C28*	<10.0	10.0	08/14/2019	ND	195	97.7	200	3.43	
EXT DRO >C28-C36	<10.0	10.0	08/14/2019	ND					

Surrogate: 1-Chlorooctane 80.2 % 41-142

Surrogate: 1-Chlorooctadecane 78.8 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Mike Snyder For 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: 08/13/2019  
Reported: 08/14/2019  
Project Name: CABO WABO 25 FEDERAL COM #003  
Project Number: NONE GIVEN  
Project Location: COG - EDDY CO NM

Sampling Date: 08/13/2019  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: FL - A11 - 1.5' (H902771-11)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	624	16.0	08/14/2019	ND	400	100	400	3.92	

**Sample ID: FL - A12 - 1.5' (H902771-12)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	16.0	08/14/2019	ND	400	100	400	3.92	

**Sample ID: FL - A13 - 1.5' (H902771-13)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	640	16.0	08/14/2019	ND	432	108	400	3.77	QM-07

**Sample ID: FL - A14 - 1.5' (H902771-14)**

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/14/2019	ND	432	108	400	3.77	

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\*=Accredited Analyte

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Mike Snyder For 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: 08/13/2019  
 Reported: 08/14/2019  
 Project Name: CABO WABO 25 FEDERAL COM #003  
 Project Number: NONE GIVEN  
 Project Location: COG - EDDY CO NM

 Sampling Date: 08/13/2019  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: FL - A15 - 1.5' (H902771-15)**

BTEx 8021B		mg/kg		Analyzed By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/13/2019	ND	2.03	102	2.00	4.53	
Toluene*	<0.050	0.050	08/13/2019	ND	2.17	109	2.00	4.91	
Ethylbenzene*	<0.050	0.050	08/13/2019	ND	2.09	105	2.00	3.88	
Total Xylenes*	<0.150	0.150	08/13/2019	ND	6.34	106	6.00	4.13	
Total BTEX	<0.300	0.300	08/13/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.5 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	08/14/2019	ND	432	108	400	3.77	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	08/14/2019	ND	201	101	200	3.72	
DRO >C10-C28*	<10.0	10.0	08/14/2019	ND	195	97.7	200	3.43	
EXT DRO >C28-C36	<10.0	10.0	08/14/2019	ND					


Surrogate: 1-Chlorooctane 79.2 % 41-142

Surrogate: 1-Chlorooctadecane 77.7 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Mike Snyder For 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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\*=Accredited Analyte

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Mike Snyder For Celey D. Keene, Lab Director/Quality Manager

**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

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

Company Name: TRC Environmental		<b>BILL TO</b>		<b>ANALYSIS REQUEST</b>																			
Project Manager: Jared Stoffel		P.O. #:																					
Address: 10 Desta Dr. STE 150E		Company: COG																					
City: Midland		Attn: <del>Harvey</del>																					
Phone #: (432) 520-7720		Address: Becky Hastall																					
Fax #: Project Owner:		City:																					
Project Name: Cabo Wabo 25 Federal Com #003		State:																					
Project Location: Eddy County, NM		Zip:																					
Sampler Name: Braeden Billings		Phone #:																					
Fax #:																							
FOR LAB USE ONLY																							
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.		MATRIX		PRESERV		SAMPLING															
		# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME											
1	FL-A01-1.5'	1	1	1	1	1	1	1	1	8/13/19	0830	X	Chlorides (E300) (4500)										
2	FL-A02-1.5'	1	1	1	1	1	1	1	1		0835	X	TPH										
3	FL-A03-1.5'	1	1	1	1	1	1	1	1		0840	X	BTEX										
4	FL-A04-1.5'	1	1	1	1	1	1	1	1		0845	X											
5	FL-A05-1.5'	1	1	1	1	1	1	1	1		0850	X											
6	FL-A06-1.5'	1	1	1	1	1	1	1	1		0855	X											
7	FL-A07-1.5'	1	1	1	1	1	1	1	1		0900	X											
8	FL-A08-1.5'	1	1	1	1	1	1	1	1		0905	X											
9	FL-A09-1.5'	1	1	1	1	1	1	1	1		0910	X											
10	FL-A10-1.5'	1	1	1	1	1	1	1	1		0915	X											

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Relinquished By: <i>[Signature]</i>	Date: 8-13-19	Received By: <i>[Signature]</i>	Date: 8-13-19
Relinquished By: <i>[Signature]</i>	Date: 13:55	Received By: <i>[Signature]</i>	Date: 13:55

Delivered By: (Circle One) 1.12 #497 Sample Condition Cool Intact ☒ Yes ☐ No ☐ No

Sampler - UPS - Bus - Other: Constructed 1.52

CHECKED BY: (Initials) YP.

REMARKS: Stoffel@trccompanies.com  
 Rhaskell@concho.com  
 ltavarez@concho.com  
 Rush!!

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

[illegible]