

Remediation Summary and Site Closure Request

July 3, 2019

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Carmen 3 Federal Com #1H (2RP-5198)

Prepared For:

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ACRONYM LIST

bbls	barrels
bgs	below ground surface
BLM	Bureau of Land Management
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
COG	COG Operating, LLC
DRO	Diesel Range Organics
Form C-141	Release Notification and Corrective Action
GRO	Gasoline Range Organics
NMOCD	New Mexico Oil and Conservation Division
ORO	Oil Range Organics
TPH	Total Petroleum Hydrocarbons
TRC	TRC Environmental Corporation



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 Site known as the Carmen 3 Federal Com #1H (the Site). The legal description of the Site is Unit Letter "E", Section 3, Township 17 South, Range 30 East, in Eddy County, New Mexico. The subject property is owned by the United States Department of the Interior and is administered by the Bureau of Land Management (BLM). The GPS coordinates for the Site are 32.86436° N 103.96689° W. A topographical map is provided as **Figure 1** and an aerial view of the site location is shown on **Figure 2**. Photographic documentation is provided as **Appendix A**.

The Release occurred on January 1, 2019. Details of the Release are unknown, as the driver transported the truck to the Transwood yard and abandoned the vehicle with no opportunity to question the driver. On the discovery date, COG notified the New Mexico Oil and Conservation Division (NMOCD) and BLM of the Release. HollyFrontier Companies LLC subsequently filed the initial Release Notification and Corrective Action (Form C-141) for the Release, which was assigned NMOCD Remediation Permit number 2RP-5198. During initial response activities, a vacuum truck was dispatched to recover all free-standing fluids. The initial C-141 indicated two hundred seventy five (275) barrels (bbls) of crude oil was released, and an unknown volume of crude oil was recovered. The Release affected an area measuring approximately thirteen thousand (13,000) square feet (sq. ft.). The majority of the Release was confined to the caliche production pad, with the exception of the area to the southwest, which affected approximately three thousand two hundred (3,200) sq. ft. of the adjacent pasture area. A copy of the submitted Form C-141 for the Release is provided in **Appendix B**.

A groundwater database maintained by The New Mexico Office of the State Engineer (NMOSE) identified no registered water wells in Section 3, Township 17 South, Range 30 East. A reference map utilized by the NMOCD indicates groundwater should be encountered at a depth greater than three hundred fifty (350) feet below ground surface (bgs). No water wells were observed within one-thousand (1,000) feet of the Site. No surface water was observed within one-thousand (1,000) feet of the Release. Depth to groundwater information is shown in **Appendix D**. The FEMA floodplain database indicates the Release Site is outside the 500-year floodplain as shown in **Figure 3**. The BLM karst database indicated low karst potential for the Release Site as shown in **Figure 4**. Based on the depth to groundwater, the NMOCD Closure Criteria for Soils Impacted by a Release at the Carmen 3 Federal Com #001H Release Site are as follows:

- Benzene 10 mg/kg
- Benzene, toluene, ethylbenzene, and xylenes (BTEX) 50 mg/kg
- Total Petroleum Hydrocarbons (TPH) 2,500 mg/kg (Pad), 100 mg/kg (Pasture Surface)

• Gasoline Range Organics + Diesel Range Organics (GRO + DRO) 1,000 mg/kg (Pad) 100 mg/kg (Pasture Surface)

• Chloride – 20,000 mg/kg (Pad), 600 mg/kg (Pasture Surface)



2.0 Initial Delineation Investigation

On February 1, 2019, initial delineation activities commenced at the Release Site. A total of six (6) trenches were advanced within the Release margins to achieve vertical delineation of TPH, BTEX and chloride concentrations. Additionally, eleven (11) soil samples were collected from outside the Release margin to achieve horizontal delineation of TPH, BTEX and chloride concentrations. The locations of the trenches and horizontal delineation soil samples are shown on **Figure 5**.

Trench TT 1 was advanced in the area between the flare and the pumpjack. Three (3) soil samples (TT 1 @ 0-6", TT 1 @ 6-12", and TT 1 @ 2') were collected from Trench TT 1 and were submitted to the laboratory for TPH, BTEX and chloride analyses. The submitted soil samples from Trench TT 1 exhibited concentrations below NMOCD regulatory guidelines for TPH, BTEX, and chlorides, with the exception of soil sample TT 1 @ 0-6", which exhibited GRO + DRO concentrations above NMOCD regulatory guidelines.

Trench TT 2 was advanced in the area between the pumpjack and the tank battery. Four (4) soil samples (TT 2 @ 0-6", TT 2 @ 6-12", TT 2 @ 2', and TT 2 @ 3') were collected from Trench TT 2 and were submitted to the laboratory for TPH, BTEX, and chloride analyses. The submitted soil samples from Trench TT 2 exhibited concentrations below NMOCD regulatory guidelines for BTEX, TPH and chlorides.

Trench TT 3 was advanced in the area south of the separators and northwest of the pumpjack. Five (5) soil samples (TT 3 @ 0-6", TT 3 @ 6-12", TT 3 @ 2', TT 3 @ 3', and TT 3 @ 4') were collected from Trench TT 3 and submitted to the laboratory for TPH, BTEX, and chloride analyses. The submitted soil samples from Trench TT 3 exhibited concentrations below NMOCD regulatory guidelines for BTEX, TPH, and chlorides, with the exception of soil sample TT 3 0-6", which exhibited a total BTEX concentration above the NMOCD regulatory guidelines.

Trench TT 4, was advanced near the western margin of the pad between the western flare and the tank battery. Six (6) soil samples (TT 4 @ 0-6", TT 4 @ 6"-1', TT 4 @ 2', TT 4 @ 3', TT 4 @ 4', and TT 4 @ 5') were collected from Trench TT 4 and submitted to the laboratory for TPH, BTEX and chloride analyses. Soil samples TT 4 @ 0-6", TT 4 @ 6"-1', TT 4 @ 2', and TT 4 @ 4' exhibited total BTEX, GRO + DRO, and TPH concentrations above NMOCD regulatory guidelines. Additionally, soil sample TT 4 @ 6"-1', TT 4 @ 2', and TT 4 @ 4' exhibited benzene concentrations above NMOCD regulatory guidelines. Soil samples TT 4 @ 3' and TT 4 @ 5' were below NMOCD regulatory guidelines for all constituents of concern.

Trench TT 5, was advanced near the southeast edge of the western flare berm. Seven (7) soil samples (TT 5 @ 0-6", TT 5 @ 6"-1', TT 5 @ 2', TT 5 @ 3', TT 5 @ 4', TT 5 @ 5', and TT 5 @ 6') were collected from Trench TT 5 and were submitted to the laboratory for TPH, BTEX, and chloride analyses. The submitted soil samples from Trench TT 5 exhibited concentrations below NMOCD regulatory guidelines, with the exception of soil sample TT 5 @ 0-6", which exhibited benzene, BTEX, GRO + DRO, and TPH concentrations above NMOCD regulatory guidelines.

Trench TT 6, was advanced near the terminus of the flow path which affected the native pasture beyond the caliche pad. Three (3) soil samples (TT 6 @ 0-6", TT 6 @ 6"-1', and TT 6 @ 2') were collected from Trench TT 6 and were submitted for TPH, BTEX, and chloride analyses.



Soil samples TT 6 @ 0-6" and TT 6 @ 6"-1' exhibited benzene, BTEX, GRO + DRO, and/or TPH concentrations above NMOCD regulatory guidelines. Soil sample TT 6 @ 2' exhibited concentrations below NMOCD regulatory guidelines for all constituents of concern.

In addition, eleven (11) soil samples (TT 6 N @ 1', TT 6 S @ 1', TT 6 W @ 1', TT 6 E @ 1', TT 5 S @ 3', TT 5 E @ 3', TT 4 W @ 2.5', TT 3 S @ 2', TT 1 S @ 1', TT 1 N @ 1', and TT 1 E @ 1') were collected from outside the release margins at a depth reflective of the inferred sidewall sample depth, based on field screening activities conducted during the advancement of the vertical delineation trenches. Collected soil samples were submitted to the laboratory for TPH, BTEX, and chloride analyses. Each horizontal delineation soil sample collected exhibited concentrations below NMOCD regulatory guidelines for each constituent of concern.

3.0 Summary of Soil Remediation Activities

On March 22, 2019, an alternative sampling plan for confirmation soil sampling frequency and location was submitted to the NMOCD. On March 25, 2019, excavation activities commenced without an approved NMOCD workplan, and pending the approval of the alternative sampling plan. The areas represented by delineation trenches TT 4, TT 5, and TT 6 were excavated initially, as the areas did not impede normal trucking operations at the tank battery. The area represented by Trench TT 4 was excavated to a depth of approximately four and a half (4.5) feet below ground surface (bgs). The area represented by Trench TT 5 was excavated to a depth of approximately one (1) to two and a half (2.5) feet bgs. The area represented by Trench TT 6 was excavated to a depth of approximately one and a half (1.5) feet bgs. Impacted soil was stockpiled on a polyurethane liner pending final disposition. Excavation activities ceased after the excavation of Trenches TT 4, TT 5, and TT 6, pending NMOCD approval of the alternative sampling plan.

On May 3, 2019, the excavated areas represented by Trenches TT 4, TT 5, and TT 6 were sampled according to the NMOCD-approved alternative sampling plan. Four (4) five-point composite confirmation soil samples (A4-FL-1-4.5, A4-FL-2-4.5, A4-SW-1-2.25, and A4-SW-2-2.25) were collected from the floor and sidewalls of the area represented by Trench TT 4. Six (6) five-point composite confirmation soil samples (A5-SW-1-1, A5-SW-2-1, A5-FL-1-1, A5-FL-2-1.5, A5-FL-3-2, and A5-FL-3-2.5) were collected from the floor and sidewalls of the area represented by Trench TT 5. Eight (8) five-point composite confirmation soil samples (A6-SW-1-0.75, A6-SW-2-0.75, A6-SW-3-0.75, A6-SW-4-0.75, A6-FL-1-1.5, A6-FL-2-1.5, A6-FL-3-1.5, and A6-FL-4-1.5) were collected from the area represented by Trench TT 6. Collected soil samples were submitted to the laboratory for TPH, BTEX, and/or chloride analyses. Soil samples exhibited concentrations below NMOCD guidelines for all constituents of concern, with the exception of soil samples A4-SW-1-2.25, A5-SW-1-1, A6-SW-1-0.75, A6-FL-1-1.5, A6-FL-2-1.5, A6-FL-3-1.5, and A6-FL-4-1.5, which exhibited GRO + DRO and/or TPH concentrations above NMOCD regulatory guidelines.

After a review of the analytical results, the areas represented by confirmation soil samples A4-SW-1-2.25, A5-SW-1-1, and A6-SW-1-0.75 were excavated horizontally to remove impacted soil. Additionally, the areas represented by soil samples A6-FL-1-1.5, A6-FL-2-1.5, A6-FL-3-1.5, and A6-FL-4-1.5 were further excavated vertically to a depth of approximately four (4) feet bgs, which fulfills the NMAC 19.15.29.13.D.1 requirement of the upper four (4) feet of areas off the production equipment and facilities to be remediated to the most stringent NMOCD regulatory guidelines. At depths greater than four (4) feet bgs, the regulatory guidelines are dictated only by



the depth to groundwater and the associated regulatory guidelines outlined in Table 1 of NMAC 10.15.29 Closure Criteria for Soils Impacted by a Release.

On May 20, 2019, the areas which had been further excavated due to concentrations exceeding NMOCD standards were sampled. Seven (7) five-point composite soil samples (A4-SW-1-2.25R, A5-SW-1-1R, A6-SW-1B, A6-FL-1-4, A6-FL-2-4, A6-FL-3-4, and A6-FL-4-4) were collected and submitted to the laboratory for TPH, BTEX, and/or chloride analyses. The collected soil samples exhibited TPH, BTEX, and chloride concentrations below NMOCD guidelines. After a review of the analytical results, areas A4, A5 and A6 were backfilled with locally sourced non-impacted topsoil and contoured to match the appropriate grade. Areas A4 and A5 were capped with locally sourced non-impacted caliche and matched to the grade of the pad.

On May 21, 2019, excavation of the area represented by Trench TT 3 to a depth of nine (9) inches bgs commenced and one (1) five-point composite soil sample (A3-FL-1-0.75) was collected and submitted for TPH, BTEX, and chloride analyses. The area was backfilled to grade with locally sourced non-impacted caliche immediately following sample collection to maintain trucking access to the tank battery. A review of the analytical results indicated the soil sample exhibited concentraions below NMOCD regulatory guidelines for each constituent of concern.

On May 22, 2019, excavation of the area represented by Trench TT 2 to a depth of approximately three (3) inches bgs commenced. Four (4) five-point composite soil samples (A2-SW-1-0.1, A2-SW-3-0.1, A2-FL-1-0.25, and A2-FL-2-0.25) were collected and submitted to the laboratory for TPH, BTEX, and/or chloride analyses. The area was backfilled to grade with locally sourced non-impacted caliche immediately following sample collection to maintain trucking access to the tank battery. A review of the analytical results indicated the collected soil samples exhibited concentrations below NMOCD regulatory guidelines for each constituent of concern.

On May 30, 2019, excavation of the remainder of area represented by Trench TT 2 and the area represented by Trench TT 1 commenced. The remainder of the area represented by Trench TT 2 was excavated to a depth of approximately three (3) inches bgs. The area represented by Trench TT 1 was excavated to a depth of approximately nine (9) inches to twelve (12) inches bgs. Twelve (12) five-point composite soil samples (A2-FL-3-0.25, A2-FL-4-0.25, A2-SW-2-0.1, A1-SW-1-0.5, A1-SW-2-0.35, A1-SW-3-0.35, A1-FL-1-0.75, A1-FL-2-0.5, A1-FL-3-0.75, A1-FL-4-0.5, A1-FL-5-0.5, and A1-FL-6-1.0) were collected and submitted to the laboratory for TPH, BTEX, and/or chloride analyses. The area was backfilled to grade with locally sourced non-impacted caliche immediately following sample collection to maintain trucking access to the tank battery. A review of the analytical results indicated the collected soil samples exhibited concentrations below NMOCD regulatory guidelines for each constituent apart from soil samples A2-FL-3-0.25, A2-SW-2-0.1, A1-SW-2-0.35, and A1-FL-2-0.5.

On June 6, 2019, further horizontal excavation of the areas represented by soil samples A1-SW-2-0.35 and A2-SW-2-0.1 and further vertical excavation of the areas represented by soil samples A1-FL-2-0.5 and A2-FL-3-0.25 commenced. Horizontal and vertical excavation continued until olfactory and visual signs indicated the soil to be below NMOCD regulatory guidelines. Four (4) five-point composite soil samples, one (1) soil sample from each area of additional excavation, were collected and submitted to the laboratory for TPH and BTEX analyses. The areas were backfilled to grade with locally sourced non-impacted caliche immediately following sample collection to maintain trucking access to the tank battery. A review of the analytical results indicated the collected soil samples exhibited concentrations below NMOCD



regulatory guidelines for each constituent of concern. The locations of all confirmation soil samples are shown on **Figure 6**.

Approximately 1,400 cubic yards of impacted material was transported to an NMOCDapproved disposal facility. The affected facility has been returned to grade on the pad and been contoured to match the existing grade in the pasture. No further remedial action is recommended at this time.

4.0 Site Closure Request

Remediation activities were conducted in accordance with NMCOD 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 an NMOCD-approved disposal facility, and the Site was returned to grade with locally sourced non-impacted backfill material. Based on laboratory analytical results and field activities conducted to date, TRC recommends COG provide copies of this Remediation Summary and Site Closure Request to the NMOCD and BLM and request closure status to the Carmen 3 Federal Com #1H.

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.



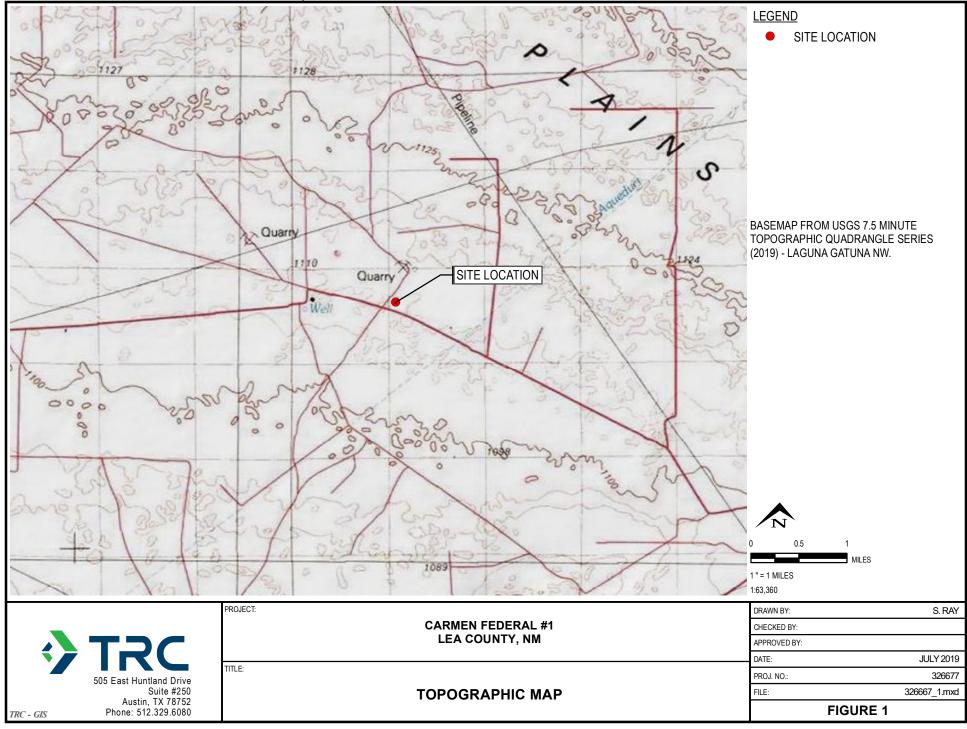
6.0 Distribution

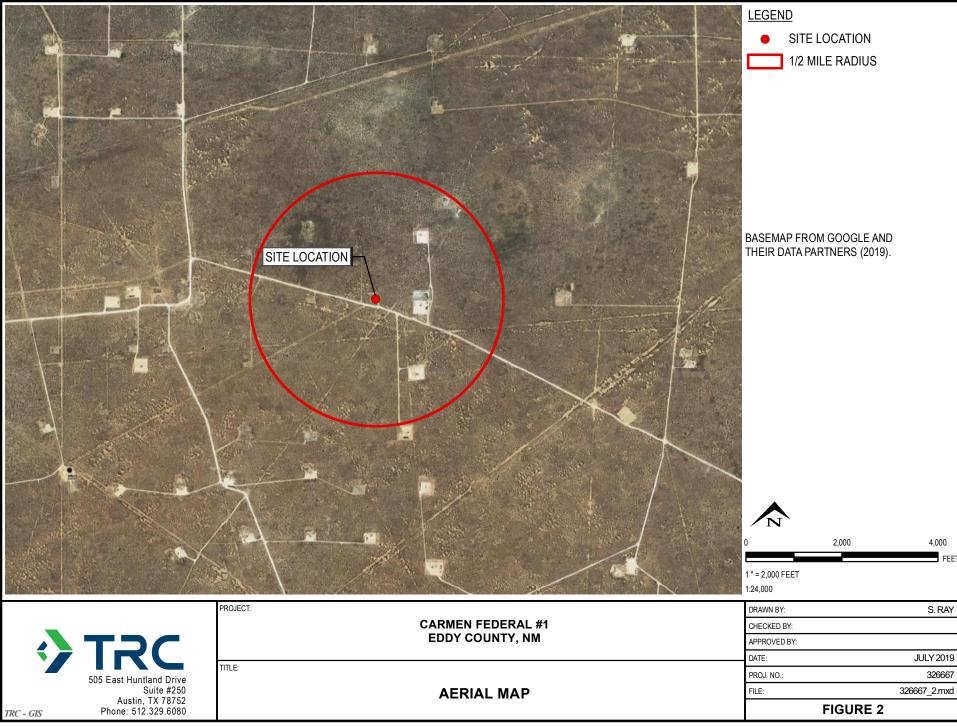
- Copy 1: Mike Bratcher New Mexico Energy, Minerals and Natural Resources Department Oil Conservation Division, District 2 811 S. First Street Artesia, NM 88210
- Copy 2: Jim Amos U.S. Department of the Interior Carlsbad Field Office 620 E Greene Street Carlsbad, New Mexico 88220
- Copy 3: Rebecca Haskell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

						Table 1					
				Conce	ntrations o	f BTEX, TPH, a	and/or Chloride i	in Soil			
				SW 840	5 8021B			SW 846 8015M I	Ext.		E 300
Sample ID	Date	Depth	Soil Status	Benzene (mg/kg)	BTEX (mg/kg)	GRO C ₆ -C ₁₀ (mg/kg)	DRO C ₁₀ -C ₂₈ (mg/kg)	GRO + DRO C ₆₋ C ₂₈ (mg/kg)	ORO C ₂₈ -C ₃₆ (mg/kg)	TPH C ₆ -C ₃₆ (mg/kg)	Chloride (mg/kg)
TT1 @ 0-6"	2/1/19	0-6"	Excavated	0.573	46.0	317	1,360	1,677	176	1,853	48.0
TT1 @ 6"-1'	2/1/19	6"-1'	Excavated	< 0.050	< 0.300	<10.0	21.3	21.3	<10.0	21.3	48.0
TT1 @ 2'	2/1/19	2'	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	80.0
TT1 N @ 1'	2/1/19	1'	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
TT1 S @1'	2/1/19	1'	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
TT1 E @ 1'	2/1/19	1'	In-Situ	< 0.050	< 0.300	<10.0	69.8	69.8	12.0	81.8	48.0
-				<u>.</u>					•		
A1-SW-1- 0.5	5/29/19	0.5"	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	
A1-SW-2-0.35	5/29/19	0.35"	Excavated	< 0.050	1.90	33.9	1280	1314	160	1474	
A1-SW-2-0.35R	6/6/19	0.35"	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	
A1-SW-3- 0.35	5/29/19	0.35"	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	
A1-FL-1- 0.75	5/29/19	0.75"	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	
A1-FL-2- 0.5	5/29/19	0.5"	Excavated	< 0.050	3.91	<10.0	1,090	1,090	154	1,244	288
A1-FL-2- 0.75	6/6/19	0.75"	In-Situ	< 0.050	< 0.300	<10.0	132	132	<10.0	132	
A1-FL-3- 0.75	5/29/19	0.75"	In-Situ	< 0.050	< 0.300	<10.0	308	308	<10.0	308	
A1-FL-4- 0.5	5/29/19	0.5"	In-Situ	< 0.050	0.425	<10.0	855	855	132	987	
A1-FL-5- 0.5	5/29/19	0.5"	In-Situ	< 0.050	2.38	33.1	669	702.1	51.8	753.9	96.0
A1-FL-6- 1.0	5/29/19	1'	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	
			•	<u>.</u>					•		
TT2 @ 0-6"	2/1/19	0-6"	Excavated	< 0.050	0.813	<10.0	90.8	90.8	<10.0	90.8	160
TT2 @ 6"-1'	2/1/19	6"-1'	Excavated	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	320
TT2 @ 2'	2/1/19	2'	Excavated	< 0.050	< 0.300	<10.0	76.6	76.6	<10.0	76.6	48.0
TT2 @ 3'	2/1/19	3'	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
					1						
A2-SW-1-0.1	5/23/19	0.1"	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
A2-SW-2-0.1	5/29/19	0.1"	Excavated	< 0.050	0.708	<10.0	1,290	1,290	242	1,532	
A2-SW-2-0.1R	6/6/19	0.1"	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	
A2-SW-3- 0.1	5/23/19	0.1"	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	96.0
A2-FL-1- 0.25	5/23/19	0.25"	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
A2-FL-2- 0.25	5/23/19	0.25"	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	96.0
A2-FL-3- 0.25	5/29/19	0.25"	Excavated	< 0.050	8.12	<50.0	3,270	3,270	175	3,445	
A2-FL-3- 0.5	6/6/19	0.5	In-Situ	< 0.050	< 0.300	<10.0	203	203	14.0	217.0	
A2-FL-4- 0.25	5/29/19	0.25"	In-Situ	< 0.050	< 0.300	<10.0	317	317	<10.0	317	64.0
	NMOCD Clos	sure Criteria		10	50	-	-	1,000	-	2,500	Pad (10,000) Pasture (600)

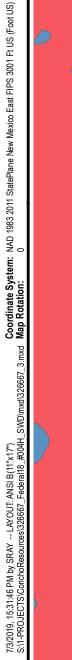
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				Conce	ntrations o	f BTEX, TPH, ۂ	nd/or Chloride i	n Soil			
				SW 840	5 8021B			SW 846 8015M I	Ext.		E 300
Sample ID	Date	Depth	Soil Status	Benzene (mg/kg)	BTEX (mg/kg)	GRO C ₆ -C ₁₀ (mg/kg)	DRO C ₁₀ -C ₂₈ (mg/kg)	GRO + DRO C ₆₋ C ₂₈ (mg/kg)	ORO C ₂₈ -C ₃₆ (mg/kg)	TPH C ₆ -C ₃₆ (mg/kg)	Chloride (mg/kg)
TT3 @ 0-6"	2/1/19	0-6"	Excavated	5.88	116	232	744	976	101	1,077	80.0
TT3 @ 6"-1'	2/1/19	6"-1'	Excavated	< 0.050	< 0.300	<10.0	12.4	12.4	<10.0	12.4	176
TT3 @ 2'	2/1/19	2'	Excavated	< 0.050	0.531	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
TT3 @ 3'	2/1/19	3'	Excavated	< 0.050	< 0.300	<10.0	11.2	11.2	<10.0	11.2	112
TT3 @4'	2/1/19	4'	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
TT3 S @ 2'	2/1/19	2'	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
					1						
A3-FL-1- 0.75	5/22/19	0.75	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	160
											•
TT4 @ 0-6"	2/1/19	0-6"	Excavated	9.52	247	2,740	7,880	10,620	833	11,453	128
TT4 @ 6"-1'	2/1/19	6"-1'	Excavated	26.9	456	3,940	8,270	12,210	1,100	13,310	64.0
TT4 @ 2'	2/1/19	2'	Excavated	11.9	271	2,910	7,800	10,710	1,020	11,730	<16.0
TT4 @ 3'	2/1/19	3'	Excavated	0.105	1.52	<10.0	106	106	<10.0	106	32.0
TT4 @4'	2/1/19	4'	Excavated	14.2	273	3,080	8,950	12,030	1,190	13,220	48.0
TT4 @ 5'	2/1/19	5'	In-Situ	< 0.050	< 0.300	<10.0	20.6	20.6	12.0	32.6	48.0
TT4 W @ 2.5'	2/1/19	2.5'	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
<u> </u>					1						
A4- SW-1- 2.25'	5/3/19	2.25'	Excavated	< 0.050	1.94	88.2	3,070	3,158	680	3,838	
A4- SW-1- 2.25' R	5/13/19	2.25'	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	
A4- SW-2- 2.25'	5/3/19	2.25'	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	
A4- FL-1- 4.5'	5/3/19	4.5'	In-Situ	< 0.050	2.89	39.8	915	955	201	1,156	32.0
A4- FL-2- 4.5'	5/3/19	4.5'	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	
									•		
TT5 @ 0-6"	2/1/19	0-6"	Excavated	15.7	296	1,000	2,180	3,180	163	3,343	160
TT5 @ 6"-1'	2/1/19	6"-1'	Excavated	< 0.050	0.434	<10.0	17.2	17.2	<10.0	17.2	96.0
TT5 @ 2'	2/1/19	2'	Excavated	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
TT5 @ 3'	2/1/19	3'	Excavated	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
TT5 @ 4'	2/1/19	4'	Excavated	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
TT5 @ 5'	2/1/19	5'	Excavated	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
TT5 @ 6'	2/1/19	6'	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
TT5 S @ 3'	2/1/19	3'	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
TT5 E @ 3'	2/1/19	3'	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
~	NMOCD Clos	sure Criteria		10	50	-	-	1,000	-	2,500	Pad (10,000) Pasture (600)

						Table 1					
				Conce	ntrations o	f BTEX, TP <u>H,</u> a	nd/or Chloride i	n Soil			
				SW 846	5 8021B	SW 846 8015M Ext.					E 300
Sample ID	Date	Depth	Soil Status	Benzene (mg/kg)	BTEX (mg/kg)	GRO C ₆ -C ₁₀ (mg/kg)	DRO C ₁₀ -C ₂₈ (mg/kg)	GRO + DRO C ₆₋ C ₂₈ (mg/kg)	ORO C ₂₈ -C ₃₆ (mg/kg)	TPH C ₆ -C ₃₆ (mg/kg)	Chloride (mg/kg)
A5- SW-1- 1'	5/3/19	1'	Excavated	< 0.050	2.47	27.2	1,440	1,467	380	1,847	
A5- SW-1- 1' R	5/13/19	1'	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	
A5- SW-2- 1'	5/3/19	1'	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	
A5- FL-1- 1'	5/3/19	1'	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	48.0
A5- FL-2- 1.5'	5/3/19	1.5'	In-Situ	< 0.050	< 0.300	<10.0	68.4	68.4	13.5	81.9	
A5- FL-3- 2'	5/3/19	2'	In-Situ	< 0.050	< 0.300	<10.0	69.9	69.9	14.2	84.1	
A5- FL-4- 2.5'	5/3/19	2.5'	In-Situ	< 0.050	< 0.300	<10.0	19.9	19.9	<10.0	19.9	
TT6 @ 0-6"	2/1/19	0-6"	Excavated	19.7	903	9,980	32,800	42,780	4,900	47,680	64.0
TT6 @ 6"-1'	2/1/19	6"-1'	Excavated	7.12	422	4,830	12,000	16,830	1,890	18,720	<16.0
TT6 @ 2'	2/1/19	2'	In-Situ	< 0.050	0.421	<10.0	53.0	53.0	41.0	94.0	<16.0
TT6 N @ 1'	2/1/19	1'	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
TT6 S @ 1'	2/1/19	1'	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
TT6 E @ 1'	2/1/19	1'	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
TT6 W @ 1'	2/1/19	1'	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	<16.0
A6- SW-1- 0.75'	5/3/19	0.75'	Excavated	< 0.050	< 0.300	<10.0	249	249	83.6	332.6	
A6- SW-1B- 2'	5/20/19	2'	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
A6- SW-2- 0.75'	5/3/19	0.75'	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	
A6- SW-3- 0.75'	5/3/19	0.75'	In-Situ	< 0.050	< 0.300	<10.0	<10.0	<10.0	<10.0	<10.0	
A6- SW-4- 0.75'	5/3/19	0.75'	In-Situ	< 0.050	< 0.300	13.6	25.7	39.3	<10.0	39.3	
A6- FL-1- 1.5'	5/3/19	1.5'	Excavated	< 0.050	< 0.300	<10.0	353	353	97.1	450.1	<16.0
A6- FL-1- 4'	5/20/19	4'	In-Situ	< 0.050	< 0.300	<10.0	87.9	87.9	<10.0	87.9	
A6- FL-2- 1.5'	5/3/19	1.5'	Excavated	< 0.050	< 0.300	20.5	856	876.5	190	1,066.5	
A6- FL-2- 4'	5/20/19	4'	In-Situ	< 0.050	< 0.300	<10.0	71.9	71.9	<10.0	71.9	32.0
A6- FL-3- 1.5'	5/3/19	1.5'	Excavated	0.100	15.2	158	6,360	6,518	1,550	8,068	
A6- FL-3- 4'	5/20/19	4'	In-Situ	< 0.050	< 0.300	<10.0	139	139	15.0	154.0	
A6- FL-4- 1.5'	5/3/19	1.5'	Excavated	< 0.050	1.40	29.3	1,610	1,639.3	391	2,030.3	
A6- FL-4- 4'	5/20/19	4'	In-Situ	< 0.050	< 0.300	<10.0	20.7	20.7	<10.0	20.7	
	NMOCD Clos	sure Criteria		10	50	-	-	1,000	-	2,500	Pad (10,000) Pasture (600)









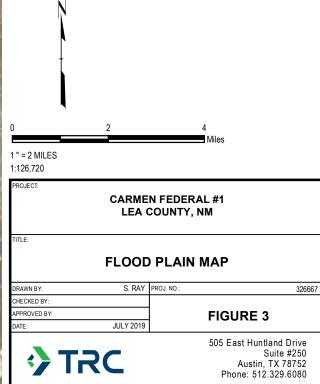




LEGEND

• SITE LOCATION

A - 100 YEAR FLOODPLAIN (1 % CHANCE OF FLOODING) X - 500 YEAR FLOODPLAIN (0.2 % CHANCE OF FLOODING)



326667_3.mxd



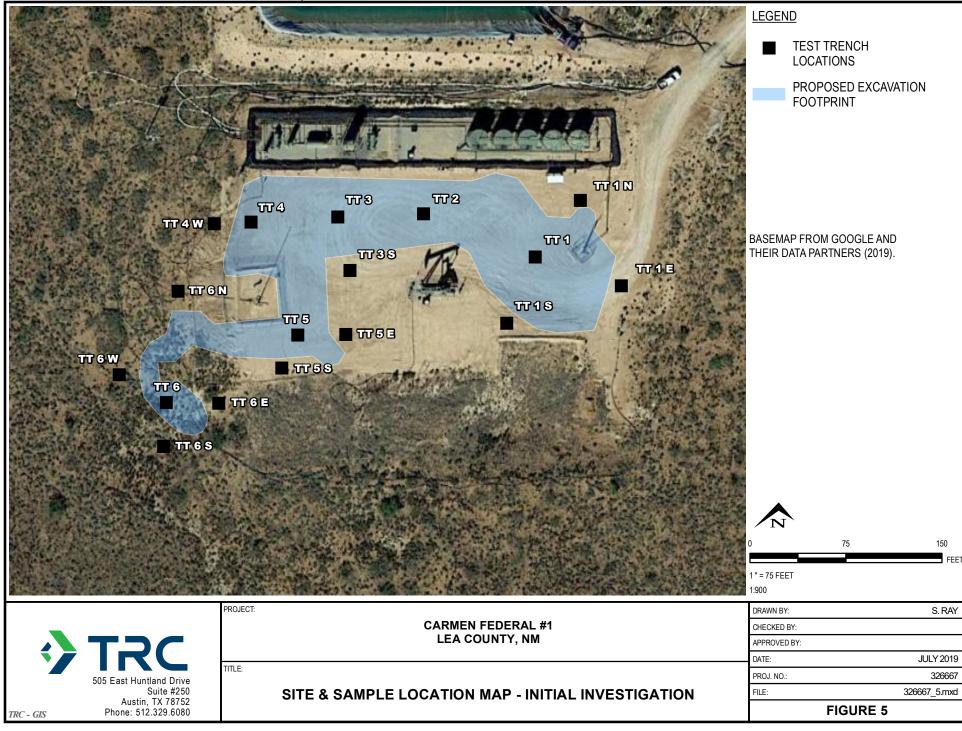
LEGEND

SITE LOCATION

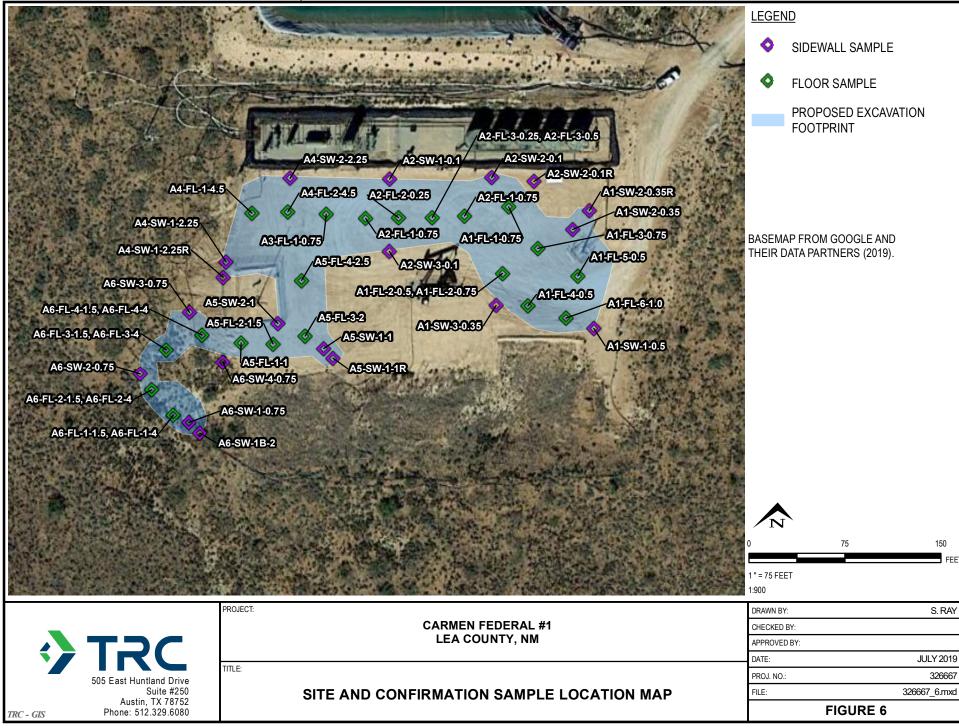
LOW KARST POTENTIAL MEDIUM KARST POTENTIAL HIGH KARST POTENTIAL

N		PROJECT:		N FEDER COUNTY,	
		TITLE:	KARST P		AL MAP
		DRAWN BY:	S. RAY	PROJ. NO.:	326667
		CHECKED BY:			
1		APPROVED BY:			FIGURE 4
	4	DATE:	JULY 2019		
	1 " = 2 MILES 1:126,720		TRC		505 East Huntland Drive Suite #250 Austin, TX 78752 Phone: 512.329.6080
		FILE NO.:			326667_4.mxd

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Appendix A: Laboratory Analytical Reports



February 04, 2019

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

RE: CARMEN FED #1

Enclosed are the results of analyses for samples received by the laboratory on 02/01/19 16:35.

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.

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

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

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

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

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

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

Sincerely,

Celey D. Keine

Celey D. Keene Lab Director/Quality Manager



TRC 10 DESTA DR. SUITE 150 E MIDLAND TX, 79705	Project: Project Number: Project Manager: Fax To:		Reported: 04-Feb-19 18:19
--	--	--	------------------------------

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TT 1 @ 0-6"	H900378-01	Soil	01-Feb-19 00:00	01-Feb-19 16:35
TT 1 @ 6"-1'	H900378-02	Soil	01-Feb-19 00:00	01-Feb-19 16:35
TT 1 @ 2'	H900378-03	Soil	01-Feb-19 00:00	01-Feb-19 16:35
TT 2 @ 0-6"	H900378-04	Soil	01-Feb-19 00:00	01-Feb-19 16:35
TT 2 @ 6"-1'	H900378-05	Soil	01-Feb-19 00:00	01-Feb-19 16:35
TT 2 @ 2'	H900378-06	Soil	01-Feb-19 00:00	01-Feb-19 16:35
TT 2 @ 3'	H900378-07	Soil	01-Feb-19 00:00	01-Feb-19 16:35
TT 3 @ 0-6"	H900378-08	Soil	01-Feb-19 00:00	01-Feb-19 16:35
ΤΤ 3 @ 6"-1'	H900378-09	Soil	01-Feb-19 00:00	01-Feb-19 16:35
ΤΤ 3 @ 2'	H900378-10	Soil	01-Feb-19 00:00	01-Feb-19 16:35
ΤΤ3@3'	H900378-11	Soil	01-Feb-19 00:00	01-Feb-19 16:35
TT 3 @ 4'	H900378-12	Soil	01-Feb-19 00:00	01-Feb-19 16:35
ΤΤ4@ 0-6"	H900378-13	Soil	01-Feb-19 00:00	01-Feb-19 16:35
TT 4 @ 6"-1'	H900378-14	Soil	01-Feb-19 00:00	01-Feb-19 16:35
ΤΤ 4 @ 2'	H900378-15	Soil	01-Feb-19 00:00	01-Feb-19 16:35
ΤΤ4@3'	H900378-16	Soil	01-Feb-19 00:00	01-Feb-19 16:35
ΤΤ 4 @ 4'	H900378-17	Soil	01-Feb-19 00:00	01-Feb-19 16:35
TT 4 @ 5'	H900378-18	Soil	01-Feb-19 00:00	01-Feb-19 16:35
TT 5 @ 0-6"	H900378-19	Soil	01-Feb-19 00:00	01-Feb-19 16:35
〒5@ 6"-1'	H900378-20	Soil	01-Feb-19 00:00	01-Feb-19 16:35
TT 6 N @ 1'	H900378-21	Soil	01-Feb-19 00:00	01-Feb-19 16:35
ΤΤ6S@1'	H900378-22	Soil	01-Feb-19 00:00	01-Feb-19 16:35
TT 6 W @ 1'	H900378-23	Soil	01-Feb-19 00:00	01-Feb-19 16:35
TT 6 E @ 1'	H900378-24	Soil	01-Feb-19 00:00	01-Feb-19 16:35
TT 5 S @ 3'	H900378-25	Soil	01-Feb-19 00:00	01-Feb-19 16:35
TT 5 E@ 3'	H900378-26	Soil	01-Feb-19 00:00	01-Feb-19 16:35
TT 4 W @ 2.5'	H900378-27	Soil	01-Feb-19 00:00	01-Feb-19 16:35

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

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



TRC 10 DESTA DR. SUITE 150 E MIDLAND TX, 79705		Project: Project Number: Project Manager: Fax To:		Reported: 04-Feb-19 18:19
TT 3 S @ 2'	H900378-28	Soil	01-Feb-19 00:00	01-Feb-19 16:35
TT 1 S@ 1'	H900378-29	Soil	01-Feb-19 00:00	01-Feb-19 16:35
TT 1 N @ 1'	H900378-30	Soil	01-Feb-19 00:00	01-Feb-19 16:35
TT 5 @ 2'	H900378-31	Soil	01-Feb-19 00:00	01-Feb-19 16:35
TT 5 @ 3'	H900378-32	Soil	01-Feb-19 00:00	01-Feb-19 16:35
TT 5 @ 4'	H900378-33	Soil	01-Feb-19 00:00	01-Feb-19 16:35
TT 5 @ 5'	H900378-34	Soil	01-Feb-19 00:00	01-Feb-19 16:35
TT 5 @ 6'	H900378-35	Soil	01-Feb-19 00:00	01-Feb-19 16:35
ΤΤ 6 @ 0-6"	H900378-36	Soil	01-Feb-19 00:00	01-Feb-19 16:35
⊤ 6 @ 6"-1'	H900378-37	Soil	01-Feb-19 00:00	01-Feb-19 16:35
TT 6 @ 2'	H900378-38	Soil	01-Feb-19 00:00	01-Feb-19 16:35
TT 1 E @ 1'	H900378-39	Soil	01-Feb-19 00:00	01-Feb-19 16:35

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



TRC 10 DESTA DR. SUITE 150 E MIDLAND TX, 79705	Project:CARMEN FED #1Reported:Project Number:NONE GIVEN04-Feb-19 18:19Project Manager:BRIAN COOPERFax To:Fax To:							19		
			TT 1 H9003	l @ 0-6 378-01 (Se						
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
Inorganic Compounds										
Chloride	48.0		16.0	mg/kg	4	9020403	AC	04-Feb-19	4500-Cl-B	
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	0.573		0.500	mg/kg	500	9020301	ms	03-Feb-19	8021B	
Toluene*	10.1		0.500	mg/kg	500	9020301	ms	03-Feb-19	8021B	
Ethylbenzene*	14.3		0.500	mg/kg	500	9020301	ms	03-Feb-19	8021B	
Total Xylenes*	21.0		1.50	mg/kg	500	9020301	ms	03-Feb-19	8021B	
Total BTEX	46.0		3.00	mg/kg	500	9020301	ms	03-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			110 %	73.3	-129	9020301	ms	03-Feb-19	8021B	
Petroleum Hydrocarbons by GC	FID									
GRO C6-C10*	317		10.0	mg/kg	1	9020304	MS	03-Feb-19	8015B	
DRO >C10-C28*	1360		10.0	mg/kg	1	9020304	MS	03-Feb-19	8015B	
EXT DRO >C28-C36	176		10.0	mg/kg	1	9020304	MS	03-Feb-19	8015B	
Surrogate: 1-Chlorooctane			105 %	41-	142	9020304	MS	03-Feb-19	8015B	
Surrogate: 1-Chlorooctadecane			121 %	37.6	-147	9020304	MS	03-Feb-19	8015B	

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



TRC 10 DESTA DR. SUITE 150 E MIDLAND TX, 79705	Project: CARMEN FED #1 Reported: Project Number: NONE GIVEN 04-Feb-19 18:19 Project Manager: BRIAN COOPER Fax To: TT 1 © (!! 1!									
				l @ 6''- 378-02 (Se						
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	tories					
<u>Inorganic Compounds</u> Chloride	48.0		16.0	mg/kg	4	9020403	AC	04-Feb-19	4500-Cl-B	
Volatile Organic Compounds by	y EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	9020301	ms	03-Feb-19	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	9020301	ms	03-Feb-19	8021B	
Ethylbenzene*	0.069		0.050	mg/kg	50	9020301	ms	03-Feb-19	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	9020301	ms	03-Feb-19	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	9020301	ms	03-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			101 %	73.3	-129	9020301	ms	03-Feb-19	8021B	
Petroleum Hydrocarbons by G	C FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	9020304	MS	03-Feb-19	8015B	
DRO >C10-C28*	21.3		10.0	mg/kg	1	9020304	MS	03-Feb-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9020304	MS	03-Feb-19	8015B	
Surrogate: 1-Chlorooctane			86.1 %	41-	142	9020304	MS	03-Feb-19	8015B	
Surrogate: 1-Chlorooctadecane			84.1 %	37.6	-147	9020304	MS	03-Feb-19	8015B	

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



TRC 10 DESTA DR. SUITE 150 E MIDLAND TX, 79705	Project:CARMEN FED #1Reported:Project Number:NONE GIVEN04-Feb-19 18:19Project Manager:BRIAN COOPERFax To:Fax To:									19
				T 1 @ 2' 378-03 (Se	oil)					
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
Inorganic Compounds										
Chloride	80.0		16.0	mg/kg	4	9020403	AC	04-Feb-19	4500-Cl-B	
Volatile Organic Compounds	by EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	9020301	ms	03-Feb-19	8021B	
Toluene*	0.109		0.050	mg/kg	50	9020301	ms	03-Feb-19	8021B	
Ethylbenzene*	0.085		0.050	mg/kg	50	9020301	ms	03-Feb-19	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	9020301	ms	03-Feb-19	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	9020301	ms	03-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)		98.9 %	73.3	-129	9020301	ms	03-Feb-19	8021B	
Petroleum Hydrocarbons by (GC FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	9020304	MS	03-Feb-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9020304	MS	03-Feb-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9020304	MS	03-Feb-19	8015B	
Surrogate: 1-Chlorooctane			77.4 %	41-	142	9020304	MS	03-Feb-19	8015B	
Surrogate: 1-Chlorooctadecane			73.6 %	37.6	-147	9020304	MS	03-Feb-19	8015B	

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



TRC 10 DESTA DR. SUITE 150 E MIDLAND TX, 79705			Project Num Project Mana Fax TT 2	ber: NO	AN COOPE			C	Reported:)4-Feb-19 18:	19
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
Inorganic Compounds										
Chloride	160		16.0	mg/kg	4	9020403	AC	04-Feb-19	4500-Cl-B	
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	9020301	ms	03-Feb-19	8021B	
Toluene*	0.153		0.050	mg/kg	50	9020301	ms	03-Feb-19	8021B	
Ethylbenzene*	0.265		0.050	mg/kg	50	9020301	ms	03-Feb-19	8021B	
Total Xylenes*	0.395		0.150	mg/kg	50	9020301	ms	03-Feb-19	8021B	
Total BTEX	0.813		0.300	mg/kg	50	9020301	ms	03-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			101 %	73.3	-129	9020301	ms	03-Feb-19	8021B	
Petroleum Hydrocarbons by GC	C FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	9020304	MS	03-Feb-19	8015B	
DRO >C10-C28*	90.8		10.0	mg/kg	1	9020304	MS	03-Feb-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9020304	MS	03-Feb-19	8015B	
Surrogate: 1-Chlorooctane			79.8 %	41-	142	9020304	MS	03-Feb-19	8015B	
Surrogate: 1-Chlorooctadecane			78.8 %	37.6	-147	9020304	MS	03-Feb-19	8015B	

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TRC 10 DESTA DR. SUITE 150 E MIDLAND TX, 79705			Project Num Project Mana Fax TT 2	ber: NOI ger: BRI To:	AN COOPE			C	Reported:)4-Feb-19 18:	19
				378-05 (So)11) 					
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
Inorganic Compounds										
Chloride	320		16.0	mg/kg	4	9020403	AC	04-Feb-19	4500-Cl-B	
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	9020301	ms	03-Feb-19	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	9020301	ms	03-Feb-19	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	9020301	ms	03-Feb-19	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	9020301	ms	03-Feb-19	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	9020301	ms	03-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			100 %	73.3	-129	9020301	ms	03-Feb-19	8021B	
Petroleum Hydrocarbons by GC	FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	9020304	MS	03-Feb-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9020304	MS	03-Feb-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9020304	MS	03-Feb-19	8015B	
Surrogate: 1-Chlorooctane			74.5 %	41-	142	9020304	MS	03-Feb-19	8015B	
Surrogate: 1-Chlorooctadecane			69.8 %	37.6	-147	9020304	MS	03-Feb-19	8015B	

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TRC 10 DESTA DR. SUITE 150 MIDLAND TX, 79705	E	Project:CARMEN FED #1Reported:Project Number:NONE GIVEN04-Feb-19 18:19Project Manager:BRIAN COOPERFax To:Fax To:								
				5 2 @ 2' 378-06 (Se	oil)					
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
Inorganic Compounds										
Chloride	48.0		16.0	mg/kg	4	9020403	AC	04-Feb-19	4500-Cl-B	
Volatile Organic Compounds	by EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	9020301	ms	03-Feb-19	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	9020301	ms	03-Feb-19	8021B	
Ethylbenzene*	0.052		0.050	mg/kg	50	9020301	ms	03-Feb-19	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	9020301	ms	03-Feb-19	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	9020301	ms	03-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PII))		101 %	73.3	-129	9020301	ms	03-Feb-19	8021B	
Petroleum Hydrocarbons by	GC FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	9020304	MS	03-Feb-19	8015B	
DRO >C10-C28*	76.6		10.0	mg/kg	1	9020304	MS	03-Feb-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9020304	MS	03-Feb-19	8015B	
Surrogate: 1-Chlorooctane			86.2 %	41-	142	9020304	MS	03-Feb-19	8015B	
Surrogate: 1-Chlorooctadecane			85.3 %	37.6	-147	9020304	MS	03-Feb-19	8015B	

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TRC 10 DESTA DR. SUITE 150 E MIDLAND TX, 79705	Project:CARMEN FED #1Reported:Project Number:NONE GIVEN04-Feb-19 18:19Project Manager:BRIAN COOPERFax To:Fax To:									19
				2 @ 3' 378-07 (So	oil)					
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
Inorganic Compounds Chloride	32.0		16.0	mg/kg	4	9020403	AC	04-Feb-19	4500-Cl-B	
Volatile Organic Compounds b		8021		0.0						
Benzene*	< 0.050		0.050	mg/kg	50	9020301	ms	03-Feb-19	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	9020301	ms	03-Feb-19	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	9020301	ms	03-Feb-19	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	9020301	ms	03-Feb-19	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	9020301	ms	03-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			99.8 %	73.3	-129	9020301	ms	03-Feb-19	8021B	
Petroleum Hydrocarbons by G	C FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	9020304	MS	03-Feb-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9020304	MS	03-Feb-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9020304	MS	03-Feb-19	8015B	
Surrogate: 1-Chlorooctane			87.3 %	41-	142	9020304	MS	03-Feb-19	8015B	
Surrogate: 1-Chlorooctadecane			82.4 %	37.6	-147	9020304	MS	03-Feb-19	8015B	

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TRC 10 DESTA DR. SUITE 150 E MIDLAND TX, 79705			Project Num Project Mana Fax	ber: NO	AN COOPE			C	Reported:)4-Feb-19 18:	19
			H9003	378-08 (Se	oil)					
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	tories					
Inorganic Compounds										
Chloride	80.0		16.0	mg/kg	4	9020403	AC	04-Feb-19	4500-Cl-B	
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	5.88		0.500	mg/kg	500	9020301	ms	03-Feb-19	8021B	
Toluene*	34.9		0.500	mg/kg	500	9020301	ms	03-Feb-19	8021B	
Ethylbenzene*	32.9		0.500	mg/kg	500	9020301	ms	03-Feb-19	8021B	
Total Xylenes*	42.4		1.50	mg/kg	500	9020301	ms	03-Feb-19	8021B	
Total BTEX	116		3.00	mg/kg	500	9020301	ms	03-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			108 %	73.3	-129	9020301	ms	03-Feb-19	8021B	
Petroleum Hydrocarbons by GC	FID									
GRO C6-C10*	232		10.0	mg/kg	1	9020304	MS	03-Feb-19	8015B	
DRO >C10-C28*	744		10.0	mg/kg	1	9020304	MS	03-Feb-19	8015B	
EXT DRO >C28-C36	101		10.0	mg/kg	1	9020304	MS	03-Feb-19	8015B	
Surrogate: 1-Chlorooctane			95.5 %	41-	142	9020304	MS	03-Feb-19	8015B	
Surrogate: 1-Chlorooctadecane			101 %	37.6	-147	9020304	MS	03-Feb-19	8015B	

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TRC 10 DESTA DR. SUITE 150 E MIDLAND TX, 79705			Project Num Project Mana Fax	ber: NO	AN COOPE			C	Reported: 14-Feb-19 18:	19
				378-09 (Se						
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	tories					
Inorganic Compounds										
Chloride	176		16.0	mg/kg	4	9020403	AC	04-Feb-19	4500-Cl-B	
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	9020301	ms	03-Feb-19	8021B	
Toluene*	0.052		0.050	mg/kg	50	9020301	ms	03-Feb-19	8021B	
Ethylbenzene*	0.055		0.050	mg/kg	50	9020301	ms	03-Feb-19	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	9020301	ms	03-Feb-19	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	9020301	ms	03-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			101 %	73.3	-129	9020301	ms	03-Feb-19	8021B	
Petroleum Hydrocarbons by GO	C FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	9020304	MS	03-Feb-19	8015B	
DRO >C10-C28*	12.4		10.0	mg/kg	1	9020304	MS	03-Feb-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9020304	MS	03-Feb-19	8015B	
Surrogate: 1-Chlorooctane			84.4 %	41-	142	9020304	MS	03-Feb-19	8015B	
Surrogate: 1-Chlorooctadecane			81.4 %	37.6	-147	9020304	MS	03-Feb-19	8015B	

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Celey D. Keene, Lab Director/Quality Manager



TRC 10 DESTA DR. SUITE 150 E MIDLAND TX, 79705	Project:CARMEN FED #1Reported:Project Number:NONE GIVEN04-Feb-19 18:19Project Manager:BRIAN COOPERFax To:Fax To:									
				7 3 @ 2' 378-10 (Se						
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
Inorganic Compounds	22.0		16.0		4	9020405	AC	04-Feb-19	4500-Cl-B	
Chloride	32.0		16.0	mg/kg	4	9020405	AC	04-Feb-19	4500-CI-B	
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	9020301	ms	03-Feb-19	8021B	
Toluene*	0.156		0.050	mg/kg	50	9020301	ms	03-Feb-19	8021B	
Ethylbenzene*	0.155		0.050	mg/kg	50	9020301	ms	03-Feb-19	8021B	
Total Xylenes*	0.220		0.150	mg/kg	50	9020301	ms	03-Feb-19	8021B	
Total BTEX	0.531		0.300	mg/kg	50	9020301	ms	03-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			100 %	73.3	-129	9020301	ms	03-Feb-19	8021B	
Petroleum Hydrocarbons by GC	C FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	9020304	MS	03-Feb-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9020304	MS	03-Feb-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9020304	MS	03-Feb-19	8015B	
Surrogate: 1-Chlorooctane			89.1 %	41-	142	9020304	MS	03-Feb-19	8015B	
Surrogate: 1-Chlorooctadecane			85.8 %	37.6	-147	9020304	MS	03-Feb-19	8015B	

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Celey D. Keene, Lab Director/Quality Manager



TRC 10 DESTA DR. SUITE 150 E MIDLAND TX, 79705	Project:CARMEN FED #1Reported:Project Number:NONE GIVEN04-Feb-19 18:19Project Manager:BRIAN COOPERFax To:Fax To:									19
				' 3 @ 3' 378-11 (Se	oil)					
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
Inorganic Compounds Chloride	112		16.0	mg/kg	4	9020405	AC	04-Feb-19	4500-Cl-B	
Volatile Organic Compounds b		8021	10.0	88						
Benzene*	<0.050	5021	0.050	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Ethylbenzene*	0.053		0.050	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			92.5 %	73.3	-129	9020302	MS	03-Feb-19	8021B	
Petroleum Hydrocarbons by G	C FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	9020305	MS	04-Feb-19	8015B	
DRO >C10-C28*	11.2		10.0	mg/kg	1	9020305	MS	04-Feb-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9020305	MS	04-Feb-19	8015B	
Surrogate: 1-Chlorooctane			79.9 %	41-	142	9020305	MS	04-Feb-19	8015B	
Surrogate: 1-Chlorooctadecane			75.3 %	37.6	-147	9020305	MS	04-Feb-19	8015B	

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Celey D. Keene, Lab Director/Quality Manager



TRC 10 DESTA DR. SUITE 150 E MIDLAND TX, 79705	Project:CARMEN FED #1Reported:Project Number:NONE GIVEN04-Feb-19 18:19Project Manager:BRIAN COOPERFax To:Fax To:									19
				5 3 @ 4' 378-12 (So	oil)					
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
<u>Inorganic Compounds</u> Chloride	32.0		16.0	mg/kg	4	9020405	AC	04-Feb-19	4500-Cl-B	
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			89.7 %	73.3	-129	9020302	MS	03-Feb-19	8021B	
Petroleum Hydrocarbons by GC	C FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	9020305	MS	04-Feb-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9020305	MS	04-Feb-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9020305	MS	04-Feb-19	8015B	
Surrogate: 1-Chlorooctane			89.8 %	41-	142	9020305	MS	04-Feb-19	8015B	
Surrogate: 1-Chlorooctadecane			91.5 %	37.6	-147	9020305	MS	04-Feb-19	8015B	

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TRC 10 DESTA DR. SUITE 150 E MIDLAND TX, 79705			Project Num Project Mana Fax	ber: NO ger: BRI To:	AN COOPE			C	Reported:)4-Feb-19 18:	19
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Labora	tories					
Inorganic Compounds Chloride	128		16.0	mg/kg	4	9020405	AC	04-Feb-19	4500-Cl-B	
Volatile Organic Compounds by		90.21	10.0		·	20100		011001)	1000 01 12	S-04
Benzene*	<u>9.52</u>	0021	0.500	mg/kg	500	9020302	MS	03-Feb-19	8021B	5-04
Toluene*	9.32 64.4		0.500	mg/kg	500	9020302	MS	03-Feb-19	8021B	
Ethylbenzene*	78.1		0.500	mg/kg	500	9020302	MS	03-Feb-19	8021B	
Total Xylenes*	95.1		1.50	mg/kg	500	9020302	MS	03-Feb-19	8021B	
Total BTEX	247		3.00	mg/kg	500	9020302	MS	03-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			139 %	73.3	-129	9020302	MS	03-Feb-19	8021B	
Petroleum Hydrocarbons by GC	FID									S-06
GRO C6-C10*	2740		100	mg/kg	10	9020305	MS	04-Feb-19	8015B	
DRO >C10-C28*	7880		100	mg/kg	10	9020305	MS	04-Feb-19	8015B	
EXT DRO >C28-C36	833		100	mg/kg	10	9020305	MS	04-Feb-19	8015B	
Surrogate: 1-Chlorooctane			207 %	41-	142	9020305	MS	04-Feb-19	8015B	
Surrogate: 1-Chlorooctadecane			267 %	37.6	-147	9020305	MS	04-Feb-19	8015B	

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TRC 10 DESTA DR. SUITE 150 E MIDLAND TX, 79705	Project: CARMEN FED #1 Reported: Project Number: NONE GIVEN 04-Feb-19 18:19 Project Manager: BRIAN COOPER Fax To: TT 4 @ 6''-1' H900378-14 (Soil) Reput										
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes	
			Cardina	l Laborat	tories						
Inorganic Compounds											
Chloride	64.0		16.0	mg/kg	4	9020405	AC	04-Feb-19	4500-Cl-B		
Volatile Organic Compounds by	EPA Method	8021									
Benzene*	26.9		1.00	mg/kg	1000	9020302	MS	03-Feb-19	8021B		
Toluene*	154		1.00	mg/kg	1000	9020302	MS	03-Feb-19	8021B		
Ethylbenzene*	129		1.00	mg/kg	1000	9020302	MS	03-Feb-19	8021B		
Total Xylenes*	146		3.00	mg/kg	1000	9020302	MS	03-Feb-19	8021B		
Total BTEX	456		6.00	mg/kg	1000	9020302	MS	03-Feb-19	8021B		
Surrogate: 4-Bromofluorobenzene (PID)			126 %	73.3	-129	9020302	MS	03-Feb-19	8021B		
Petroleum Hydrocarbons by GC	FID									S-06	
GRO C6-C10*	3940		100	mg/kg	10	9020305	MS	04-Feb-19	8015B		
DRO >C10-C28*	8270		100	mg/kg	10	9020305	MS	04-Feb-19	8015B		
EXT DRO >C28-C36	1100		100	mg/kg	10	9020305	MS	04-Feb-19	8015B		
Surrogate: 1-Chlorooctane			209 %	41-	142	9020305	MS	04-Feb-19	8015B	_	
Surrogate: 1-Chlorooctadecane			274 %	37.6	-147	9020305	MS	04-Feb-19	8015B		

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TRC 10 DESTA DR. SUITE 150 E MIDLAND TX, 79705	Project: CARMEN FED #1 Reported: Project Number: NONE GIVEN 04-Feb-19 18:19 Project Manager: BRIAN COOPER Fax To: TT 4 \odot 21									
				` 4 @ 2' 378-15 (Se						
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	tories					
Inorganic Compounds										
Chloride	<16.0		16.0	mg/kg	4	9020405	AC	04-Feb-19	4500-Cl-B	
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	11.9		1.00	mg/kg	1000	9020302	MS	03-Feb-19	8021B	
Toluene*	77.6		1.00	mg/kg	1000	9020302	MS	03-Feb-19	8021B	
Ethylbenzene*	82.8		1.00	mg/kg	1000	9020302	MS	03-Feb-19	8021B	
Total Xylenes*	98.8		3.00	mg/kg	1000	9020302	MS	03-Feb-19	8021B	
Total BTEX	271		6.00	mg/kg	1000	9020302	MS	03-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			122 %	73.3	-129	9020302	MS	03-Feb-19	8021B	
<u>Petroleum Hydrocarbons by GC</u>	C FID									S-06
GRO C6-C10*	2910		100	mg/kg	10	9020305	MS	04-Feb-19	8015B	
DRO >C10-C28*	7800		100	mg/kg	10	9020305	MS	04-Feb-19	8015B	
EXT DRO >C28-C36	1020		100	mg/kg	10	9020305	MS	04-Feb-19	8015B	
Surrogate: 1-Chlorooctane			203 %	41-	142	9020305	MS	04-Feb-19	8015B	
Surrogate: 1-Chlorooctadecane			271 %	37.6	-147	9020305	MS	04-Feb-19	8015B	

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Celey D. Keene, Lab Director/Quality Manager



TRC 10 DESTA DR. SUITE 150 E MIDLAND TX, 79705	Project:CARMEN FED #1Reported:Project Number:NONE GIVEN04-Feb-19 18:19Project Manager:BRIAN COOPERFax To:Fax To:									
				` 4 @ 3' 378-16 (Se	oil)					
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
Inorganic Compounds										
Chloride	32.0		16.0	mg/kg	4	9020405	AC	04-Feb-19	4500-Cl-B	
Volatile Organic Compounds h	oy EPA Method 8	8021								
Benzene*	0.105		0.050	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Toluene*	0.406		0.050	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Ethylbenzene*	0.400		0.050	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Total Xylenes*	0.608		0.150	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Total BTEX	1.52		0.300	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID))		106 %	73.3	-129	9020302	MS	03-Feb-19	8021B	
Petroleum Hydrocarbons by G	GC FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	9020305	MS	04-Feb-19	8015B	
DRO >C10-C28*	106		10.0	mg/kg	1	9020305	MS	04-Feb-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9020305	MS	04-Feb-19	8015B	
Surrogate: 1-Chlorooctane			85.0 %	41-	142	9020305	MS	04-Feb-19	8015B	
Surrogate: 1-Chlorooctadecane			84.0 %	37.6	-147	9020305	MS	04-Feb-19	8015B	

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Celey D. Keene, Lab Director/Quality Manager



TRC 10 DESTA DR. SUITE 150 E MIDLAND TX, 79705	Project: CARMEN FED #1 Reported: Project Number: NONE GIVEN 04-Feb-19 18:19 Project Manager: BRIAN COOPER Fax To: TT 4 @ 4' H900378-17 (Soil)										
			Reporting	578-17 (SC)11)						
Analyte	Result	MDL	Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes	
			Cardina	l Laborat	ories						
Inorganic Compounds											
Chloride	48.0		16.0	mg/kg	4	9020405	AC	04-Feb-19	4500-Cl-B		
Volatile Organic Compounds by	EPA Method	8021									
Benzene*	14.2		1.00	mg/kg	1000	9020302	MS	04-Feb-19	8021B		
Toluene*	79.2		1.00	mg/kg	1000	9020302	MS	04-Feb-19	8021B		
Ethylbenzene*	79.6		1.00	mg/kg	1000	9020302	MS	04-Feb-19	8021B		
Total Xylenes*	99.8		3.00	mg/kg	1000	9020302	MS	04-Feb-19	8021B		
Total BTEX	273		6.00	mg/kg	1000	9020302	MS	04-Feb-19	8021B		
Surrogate: 4-Bromofluorobenzene (PID)			111 %	73.3	-129	9020302	MS	04-Feb-19	8021B		
Petroleum Hydrocarbons by GC	FID									S-06	
GRO C6-C10*	3080		100	mg/kg	10	9020305	MS	04-Feb-19	8015B		
DRO >C10-C28*	8950		100	mg/kg	10	9020305	MS	04-Feb-19	8015B		
EXT DRO >C28-C36	1190		100	mg/kg	10	9020305	MS	04-Feb-19	8015B		
Surrogate: 1-Chlorooctane			221 %	41-	142	9020305	MS	04-Feb-19	8015B		
Surrogate: 1-Chlorooctadecane			311 %	37.6	-147	9020305	MS	04-Feb-19	8015B		

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Celey D. Keene, Lab Director/Quality Manager



TRC 10 DESTA DR. SUITE 150 E MIDLAND TX, 79705		Project:CARMEN FED #1Reported:Project Number:NONE GIVEN04-Feb-19 18:19Project Manager:BRIAN COOPERFax To:Fax To:									
				5' 4 @ 5' 378-18 (Se	oil)						
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes	
			Cardina	l Laborat	ories						
<u>Inorganic Compounds</u> Chloride	48.0		16.0	mg/kg	4	9020405	AC	04-Feb-19	4500-Cl-B		
Volatile Organic Compounds I	oy EPA Method 8	8021									
Benzene*	< 0.050		0.050	mg/kg	50	9020302	MS	04-Feb-19	8021B		
Toluene*	0.123		0.050	mg/kg	50	9020302	MS	04-Feb-19	8021B		
Ethylbenzene*	0.073		0.050	mg/kg	50	9020302	MS	04-Feb-19	8021B		
Total Xylenes*	< 0.150		0.150	mg/kg	50	9020302	MS	04-Feb-19	8021B		
Total BTEX	< 0.300		0.300	mg/kg	50	9020302	MS	04-Feb-19	8021B		
Surrogate: 4-Bromofluorobenzene (PID,)		98.2 %	73.3	-129	9020302	MS	04-Feb-19	8021B		
Petroleum Hydrocarbons by G	GC FID										
GRO C6-C10*	<10.0		10.0	mg/kg	1	9020305	MS	04-Feb-19	8015B		
DRO >C10-C28*	20.6		10.0	mg/kg	1	9020305	MS	04-Feb-19	8015B		
EXT DRO >C28-C36	12.0		10.0	mg/kg	1	9020305	MS	04-Feb-19	8015B		
Surrogate: 1-Chlorooctane			90.7 %	41-	142	9020305	MS	04-Feb-19	8015B		
Surrogate: 1-Chlorooctadecane			88.3 %	37.6	-147	9020305	MS	04-Feb-19	8015B		

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TRC 10 DESTA DR. SUITE 150 E MIDLAND TX, 79705			Project Num Project Mana Fax TT 5	ber: NO	AN COOPE			C	Reported:)4-Feb-19 18:	19
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
Inorganic Compounds										
Chloride	160		16.0	mg/kg	4	9020405	AC	04-Feb-19	4500-Cl-B	
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	15.7		0.500	mg/kg	500	9020302	MS	03-Feb-19	8021B	
Toluene*	95.0		0.500	mg/kg	500	9020302	MS	03-Feb-19	8021B	
Ethylbenzene*	83.4		0.500	mg/kg	500	9020302	MS	03-Feb-19	8021B	
Total Xylenes*	102		1.50	mg/kg	500	9020302	MS	03-Feb-19	8021B	
Total BTEX	296		3.00	mg/kg	500	9020302	MS	03-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			123 %	73.3	-129	9020302	MS	03-Feb-19	8021B	
Petroleum Hydrocarbons by GC	FID									
GRO C6-C10*	1000		50.0	mg/kg	5	9020305	MS	04-Feb-19	8015B	
DRO >C10-C28*	2180		50.0	mg/kg	5	9020305	MS	04-Feb-19	8015B	
EXT DRO >C28-C36	163		50.0	mg/kg	5	9020305	MS	04-Feb-19	8015B	
Surrogate: 1-Chlorooctane			127 %	41-	142	9020305	MS	04-Feb-19	8015B	
Surrogate: 1-Chlorooctadecane			137 %	37.6	-147	9020305	MS	04-Feb-19	8015B	

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TRC 10 DESTA DR. SUITE 150 E MIDLAND TX, 79705	Project: CARMEN FED #1 Reported: Project Number: NONE GIVEN 04-Feb-19 18:19 Project Manager: BRIAN COOPER Fax To: TT 5 @ 6''-1' H900378-20 (Soil) Reporting											
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes		
			Cardina	l Laborat	ories							
Inorganic Compounds												
Chloride	96.0		16.0	mg/kg	4	9020405	AC	04-Feb-19	4500-Cl-B			
Volatile Organic Compounds by	EPA Method	8021										
Benzene*	< 0.050		0.050	mg/kg	50	9020302	MS	03-Feb-19	8021B			
Toluene*	0.118		0.050	mg/kg	50	9020302	MS	03-Feb-19	8021B			
Ethylbenzene*	0.123		0.050	mg/kg	50	9020302	MS	03-Feb-19	8021B			
Total Xylenes*	0.193		0.150	mg/kg	50	9020302	MS	03-Feb-19	8021B			
Total BTEX	0.434		0.300	mg/kg	50	9020302	MS	03-Feb-19	8021B			
Surrogate: 4-Bromofluorobenzene (PID)			93.8 %	73.3	-129	9020302	MS	03-Feb-19	8021B			
Petroleum Hydrocarbons by GC	C FID											
GRO C6-C10*	<10.0		10.0	mg/kg	1	9020305	MS	04-Feb-19	8015B			
DRO >C10-C28*	17.2		10.0	mg/kg	1	9020305	MS	04-Feb-19	8015B			
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9020305	MS	04-Feb-19	8015B			
Surrogate: 1-Chlorooctane			81.0 %	41-	142	9020305	MS	04-Feb-19	8015B			
Surrogate: 1-Chlorooctadecane			78.9 %	37.6	-147	9020305	MS	04-Feb-19	8015B			

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TRC 10 DESTA DR. SUITE 150 E MIDLAND TX, 79705	Project:CARMEN FED #1Reported:Project Number:NONE GIVEN04-Feb-19 18:19Project Manager:BRIAN COOPERFax To:Fax To:									
				6 N@ 1 378-21 (Se						
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
<u>Inorganic Compounds</u> Chloride	16.0		16.0	mg/kg	4	9020405	AC	04-Feb-19	4500-Cl-B	
Volatile Organic Compounds by	y EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			88.8 %	73.3	-129	9020302	MS	03-Feb-19	8021B	
Petroleum Hydrocarbons by G	C FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	9020305	MS	04-Feb-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9020305	MS	04-Feb-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9020305	MS	04-Feb-19	8015B	
Surrogate: 1-Chlorooctane			89.2 %	41-	142	9020305	MS	04-Feb-19	8015B	
Surrogate: 1-Chlorooctadecane			83.3 %	37.6	-147	9020305	MS	04-Feb-19	8015B	

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Celey D. Keene, Lab Director/Quality Manager



TRC 10 DESTA DR. SUITE 150 E MIDLAND TX, 79705	Project:CARMEN FED #1Reported:Project Number:NONE GIVEN04-Feb-19 18:19Project Manager:BRIAN COOPERFax To:Fax To:									
				6 S@ 1 378-22 (Se						
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
Inorganic Compounds Chloride	<16.0		16.0	mg/kg	4	9020405	AC	04-Feb-19	4500-Cl-B	
			16.0	mg/kg	4	9020403	AC	04-Feb-19	4300-СІ-В	
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			88.4 %	73.3	-129	9020302	MS	03-Feb-19	8021B	
Petroleum Hydrocarbons by GC	C FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	9020305	MS	04-Feb-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9020305	MS	04-Feb-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9020305	MS	04-Feb-19	8015B	
Surrogate: 1-Chlorooctane			86.7%	41-	142	9020305	MS	04-Feb-19	8015B	
Surrogate: 1-Chlorooctadecane			80.9 %	37.6		9020305	MS	04-Feb-19	8015B	

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Celey D. Keene, Lab Director/Quality Manager



TRC 10 DESTA DR. SUITE 150 E MIDLAND TX, 79705	Project:CARMEN FED #1Reported:Project Number:NONE GIVEN04-Feb-19 18:19Project Manager:BRIAN COOPERFax To:Fax To:									
				6 W@ 3 378-23 (Se						
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
Inorganic Compounds										
Chloride	<16.0		16.0	mg/kg	4	9020405	AC	04-Feb-19	4500-Cl-B	
Volatile Organic Compounds b	oy EPA Method 8	021								
Benzene*	< 0.050		0.050	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)	1		95.0 %	73.3	-129	9020302	MS	03-Feb-19	8021B	
Petroleum Hydrocarbons by G	C FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	9020305	MS	04-Feb-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9020305	MS	04-Feb-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9020305	MS	04-Feb-19	8015B	
Surrogate: 1-Chlorooctane			83.1 %	41-	142	9020305	MS	04-Feb-19	8015B	
Surrogate: 1-Chlorooctadecane			77.2 %	37.6	-147	9020305	MS	04-Feb-19	8015B	

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Celey D. Keene, Lab Director/Quality Manager



TRC 10 DESTA DR. SUITE 150 E MIDLAND TX, 79705	Project:CARMEN FED #1Reported:Project Number:NONE GIVEN04-Feb-19 18:19Project Manager:BRIAN COOPERFax To:Fax To:									
				6 E @ 1 378-24 (Se						
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
Inorganic Compounds Chloride	32.0		16.0	mg/kg	4	9020405	AC	04-Feb-19	4500-Cl-B	
			10.0	mg/kg	4	9020403	AC	04-1-00-19	4300-СІ-В	
Volatile Organic Compounds b	÷	8021								
Benzene*	< 0.050		0.050	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			96.9 %	73.3	-129	9020302	MS	03-Feb-19	8021B	
Petroleum Hydrocarbons by G	C FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	9020305	MS	04-Feb-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9020305	MS	04-Feb-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9020305	MS	04-Feb-19	8015B	
Surrogate: 1-Chlorooctane			80.8 %	41-	142	9020305	MS	04-Feb-19	8015B	
Surrogate: 1-Chlorooctadecane			74.7 %	37.6	-147	9020305	MS	04-Feb-19	8015B	

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Celey D. Keene, Lab Director/Quality Manager



TRC 10 DESTA DR. SUITE 150 E MIDLAND TX, 79705	Project:CARMEN FED #1Reported:Project Number:NONE GIVEN04-Feb-19 18:19Project Manager:BRIAN COOPERFax To:Fax To:									
				5 S@ 3 378-25 (Se						
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
<u>Inorganic Compounds</u> Chloride	32.0		16.0	mg/kg	4	9020405	AC	04-Feb-19	4500-Cl-B	
Volatile Organic Compounds by	y EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			91.2 %	73.3	-129	9020302	MS	03-Feb-19	8021B	
Petroleum Hydrocarbons by G	C FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	9020305	MS	04-Feb-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9020305	MS	04-Feb-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9020305	MS	04-Feb-19	8015B	
Surrogate: 1-Chlorooctane			83.1 %	41-	142	9020305	MS	04-Feb-19	8015B	
Surrogate: 1-Chlorooctadecane			76.4 %	37.6	-147	9020305	MS	04-Feb-19	8015B	

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Celey D. Keene, Lab Director/Quality Manager



TRC 10 DESTA DR. SUITE 150 E MIDLAND TX, 79705	Project:CARMEN FED #1Reported:Project Number:NONE GIVEN04-Feb-19 18:19Project Manager:BRIAN COOPERFax To:Fax To:									
				5 E @ 3 378-26 (Se						
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
<u>Inorganic Compounds</u> Chloride	16.0		16.0	mg/kg	4	9020405	AC	04-Feb-19	4500-Cl-B	
Volatile Organic Compounds b	<u>y EPA Method 8</u>	3021								
Benzene*	< 0.050		0.050	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			89.6 %	73.3	-129	9020302	MS	03-Feb-19	8021B	
Petroleum Hydrocarbons by G	C FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	9020119	MS	04-Feb-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9020119	MS	04-Feb-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9020119	MS	04-Feb-19	8015B	
Surrogate: 1-Chlorooctane			92.9 %	41-	142	9020119	MS	04-Feb-19	8015B	
Surrogate: 1-Chlorooctadecane			91.2 %	37.6	-147	9020119	MS	04-Feb-19	8015B	

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Celey D. Keene, Lab Director/Quality Manager



TRC 10 DESTA DR. SUITE 150 E MIDLAND TX, 79705	Project: CARMEN FED #1 Reported: Project Number: NONE GIVEN 04-Feb-19 18:19 Project Manager: BRIAN COOPER Fax To: TTT 4 NL C A THE									
				W @ 2 378-27 (Se						
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
<u>Inorganic Compounds</u> Chloride	32.0		16.0	mg/kg	4	9020405	AC	04-Feb-19	4500-Cl-B	
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			95.5 %	73.3	-129	9020302	MS	03-Feb-19	8021B	
Petroleum Hydrocarbons by GC	C FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	9020119	MS	04-Feb-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9020119	MS	04-Feb-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9020119	MS	04-Feb-19	8015B	
Surrogate: 1-Chlorooctane			88.3 %	41-	142	9020119	MS	04-Feb-19	8015B	
Surrogate: 1-Chlorooctadecane			86.3 %	37.6	-147	9020119	MS	04-Feb-19	8015B	

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Celey D. Keene, Lab Director/Quality Manager



TRC 10 DESTA DR. SUITE 150 E MIDLAND TX, 79705	Project:CARMEN FED #1Reported:Project Number:NONE GIVEN04-Feb-19 18:19Project Manager:BRIAN COOPERFax To:Fax To:									
				3 S@ 2 378-28 (Se						
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
<u>Inorganic Compounds</u> Chloride	16.0		16.0	mg/kg	4	9020405	AC	04-Feb-19	4500-Cl-B	
Volatile Organic Compounds by	y EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			93.8 %	73.3	-129	9020302	MS	03-Feb-19	8021B	
Petroleum Hydrocarbons by G	C FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	9020119	MS	04-Feb-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9020119	MS	04-Feb-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9020119	MS	04-Feb-19	8015B	
Surrogate: 1-Chlorooctane			87.2 %	41-	142	9020119	MS	04-Feb-19	8015B	
Surrogate: 1-Chlorooctadecane			88.4 %	37.6	-147	9020119	MS	04-Feb-19	8015B	

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TRC 10 DESTA DR. SUITE 150 E MIDLAND TX, 79705	Project:CARMEN FED #1Reported:Project Number:NONE GIVEN04-Feb-19 18:19Project Manager:BRIAN COOPERFax To:Fax To:									
				1 S@ 1 378-29 (So						
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
Inorganic Compounds Chloride	48.0		16.0	mg/kg	4	9020405	AC	04-Feb-19	4500-Cl-B	
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			90.0 %	73.3	-129	9020302	MS	03-Feb-19	8021B	
Petroleum Hydrocarbons by GC	FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	9020119	MS	04-Feb-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9020119	MS	04-Feb-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9020119	MS	04-Feb-19	8015B	
Surrogate: 1-Chlorooctane			88.0 %	41-	142	9020119	MS	04-Feb-19	8015B	
Surrogate: 1-Chlorooctadecane			88.1 %	37.6	-147	9020119	MS	04-Feb-19	8015B	

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TRC 10 DESTA DR. SUITE 150 E MIDLAND TX, 79705	Project:CARMEN FED #1Reported:Project Number:NONE GIVEN04-Feb-19 18:19Project Manager:BRIAN COOPERFax To:Fax To:									
				1 N@ 1 378-30 (Se						
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
Inorganic Compounds Chloride	48.0		16.0	mg/kg	4	9020406	AC	04-Feb-19	4500-Cl-B	
Volatile Organic Compounds by		8021		0.0						
Benzene*	< 0.050		0.050	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	9020302	MS	03-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			95.6 %	73.3	-129	9020302	MS	03-Feb-19	8021B	
Petroleum Hydrocarbons by G	C FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	9020119	MS	04-Feb-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9020119	MS	04-Feb-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9020119	MS	04-Feb-19	8015B	
Surrogate: 1-Chlorooctane			86.8 %	41-	142	9020119	MS	04-Feb-19	8015B	
Surrogate: 1-Chlorooctadecane			86.4 %	37.6	-147	9020119	MS	04-Feb-19	8015B	

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TRC 10 DESTA DR. SUITE 150 E MIDLAND TX, 79705	Project:CARMEN FED #1Reported:Project Number:NONE GIVEN04-Feb-19 18:19Project Manager:BRIAN COOPERFax To:Fax To:									
				5 @ 2' 378-31 (Se						
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
<u>Inorganic Compounds</u> Chloride	48.0		16.0	mg/kg	4	9020406	AC	04-Feb-19	4500-Cl-B	
Volatile Organic Compounds by	y EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	9020303	ms	04-Feb-19	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	9020303	ms	04-Feb-19	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	9020303	ms	04-Feb-19	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	9020303	ms	04-Feb-19	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	9020303	ms	04-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			98.9 %	73.3	-129	9020303	ms	04-Feb-19	8021B	
Petroleum Hydrocarbons by GG	C FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	9020119	MS	04-Feb-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9020119	MS	04-Feb-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9020119	MS	04-Feb-19	8015B	
Surrogate: 1-Chlorooctane			87.4 %	41-	142	9020119	MS	04-Feb-19	8015B	
Surrogate: 1-Chlorooctadecane			91.1 %	37.6	-147	9020119	MS	04-Feb-19	8015B	

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TRC 10 DESTA DR. SUITE 150 E MIDLAND TX, 79705	Project:CARMEN FED #1Reported:Project Number:NONE GIVEN04-Feb-19 18:19Project Manager:BRIAN COOPERFax To:Fax To:									
				5 @ 3' 378-32 (So	oil)					
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
<u>Inorganic Compounds</u> Chloride	16.0		16.0	mg/kg	4	9020406	AC	04-Feb-19	4500-Cl-B	
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	9020303	ms	04-Feb-19	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	9020303	ms	04-Feb-19	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	9020303	ms	04-Feb-19	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	9020303	ms	04-Feb-19	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	9020303	ms	04-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			99.7 %	73.3	-129	9020303	ms	04-Feb-19	8021B	
Petroleum Hydrocarbons by GC	C FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	9020119	MS	04-Feb-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9020119	MS	04-Feb-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9020119	MS	04-Feb-19	8015B	
Surrogate: 1-Chlorooctane			90.2 %	41-	142	9020119	MS	04-Feb-19	8015B	
Surrogate: 1-Chlorooctadecane			91.9 %	37.6	-147	9020119	MS	04-Feb-19	8015B	

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TRC 10 DESTA DR. SUITE 150 E MIDLAND TX, 79705	Project:CARMEN FED #1Reported:Project Number:NONE GIVEN04-Feb-19 18:19Project Manager:BRIAN COOPERFax To:Fax To:									
				5 @ 4' 378-33 (Se	oil)					
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
<u>Inorganic Compounds</u> Chloride	32.0		16.0	mg/kg	4	9020406	AC	04-Feb-19	4500-Cl-B	
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	9020303	ms	04-Feb-19	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	9020303	ms	04-Feb-19	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	9020303	ms	04-Feb-19	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	9020303	ms	04-Feb-19	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	9020303	ms	04-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			99.9 %	73.3	-129	9020303	ms	04-Feb-19	8021B	
Petroleum Hydrocarbons by GC	C FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	9020119	MS	04-Feb-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9020119	MS	04-Feb-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9020119	MS	04-Feb-19	8015B	
Surrogate: 1-Chlorooctane			93.1 %	41-	142	9020119	MS	04-Feb-19	8015B	
Surrogate: 1-Chlorooctadecane			92.6 %	37.6	-147	9020119	MS	04-Feb-19	8015B	

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TRC 10 DESTA DR. SUITE 150 E MIDLAND TX, 79705	Project:CARMEN FED #1Reported:Project Number:NONE GIVEN04-Feb-19 18:19Project Manager:BRIAN COOPERFax To:Fax To:									
				5 @ 5' 378-34 (Se	oil)					
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
<u>Inorganic Compounds</u> Chloride	32.0		16.0	mg/kg	4	9020406	AC	04-Feb-19	4500-Cl-B	
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	9020303	ms	04-Feb-19	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	9020303	ms	04-Feb-19	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	9020303	ms	04-Feb-19	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	9020303	ms	04-Feb-19	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	9020303	ms	04-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			101 %	73.3	-129	9020303	ms	04-Feb-19	8021B	
Petroleum Hydrocarbons by GC	C FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	9020119	MS	04-Feb-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9020119	MS	04-Feb-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9020119	MS	04-Feb-19	8015B	
Surrogate: 1-Chlorooctane			86.7 %	41-	142	9020119	MS	04-Feb-19	8015B	
Surrogate: 1-Chlorooctadecane			87.1 %	37.6	-147	9020119	MS	04-Feb-19	8015B	

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TRC 10 DESTA DR. SUITE 150 E MIDLAND TX, 79705	Project:CARMEN FED #1Reported:Project Number:NONE GIVEN04-Feb-19 18:19Project Manager:BRIAN COOPERFax To:Fax To:									
				5 @ 6' 378-35 (Se						
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
Inorganic Compounds										
Chloride	<16.0		16.0	mg/kg	4	9020406	AC	04-Feb-19	4500-Cl-B	
Volatile Organic Compounds b	y EPA Method	8021								
Benzene*	< 0.050		0.050	mg/kg	50	9020303	ms	04-Feb-19	8021B	
Toluene*	0.156		0.050	mg/kg	50	9020303	ms	04-Feb-19	8021B	
Ethylbenzene*	0.116		0.050	mg/kg	50	9020303	ms	04-Feb-19	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	9020303	ms	04-Feb-19	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	9020303	ms	04-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			101 %	73.3	-129	9020303	ms	04-Feb-19	8021B	
Petroleum Hydrocarbons by G	C FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	9020119	MS	04-Feb-19	8015B	
DRO >C10-C28*	<10.0		10.0	mg/kg	1	9020119	MS	04-Feb-19	8015B	
EXT DRO >C28-C36	<10.0		10.0	mg/kg	1	9020119	MS	04-Feb-19	8015B	
Surrogate: 1-Chlorooctane			88.9 %	41-	142	9020119	MS	04-Feb-19	8015B	
Surrogate: 1-Chlorooctadecane			86.7 %	37.6	-147	9020119	MS	04-Feb-19	8015B	

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TRC Project: CARMEN FED #1 Reported: 10 DESTA DR. SUITE 150 E Project Number: NONE GIVEN 04-Feb-19 18:19 MIDLAND TX, 79705 Project Manager: BRIAN COOPER Fax To: TT 6 @ 0-6'' H900378-36 (Soil)											
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes	
			Cardina	l Laborat	tories						
Inorganic Compounds	~ ~ ~		16.0			0000107		04 5 1 10	4500 CL D		
Chloride	64.0		16.0	mg/kg	4	9020406	AC	04-Feb-19	4500-Cl-B		
Volatile Organic Compounds by	EPA Method	8021									
Benzene*	19.7		2.00	mg/kg	2000	9020303	ms	04-Feb-19	8021B		
Toluene*	266		2.00	mg/kg	2000	9020303	ms	04-Feb-19	8021B		
Ethylbenzene*	270		2.00	mg/kg	2000	9020303	ms	04-Feb-19	8021B		
Total Xylenes*	347		6.00	mg/kg	2000	9020303	ms	04-Feb-19	8021B		
Total BTEX	903		12.0	mg/kg	2000	9020303	ms	04-Feb-19	8021B		
Surrogate: 4-Bromofluorobenzene (PID)			114 %	73.3	-129	9020303	ms	04-Feb-19	8021B		
Petroleum Hydrocarbons by GC	FID									S-06	
GRO C6-C10*	9980		100	mg/kg	10	9020119	MS	04-Feb-19	8015B		
DRO >C10-C28*	32800		100	mg/kg	10	9020119	MS	04-Feb-19	8015B		
EXT DRO >C28-C36	4900		100	mg/kg	10	9020119	MS	04-Feb-19	8015B		
Surrogate: 1-Chlorooctane			416 %	41-	142	9020119	MS	04-Feb-19	8015B		
Surrogate: 1-Chlorooctadecane			870 %	37.6	-147	9020119	MS	04-Feb-19	8015B		

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Celey D. Keene, Lab Director/Quality Manager



TRC 10 DESTA DR. SUITE 150 E MIDLAND TX, 79705	Project: CARMEN FED #1 Reported: Project Number: NONE GIVEN 04-Feb-19 18:19 Project Manager: BRIAN COOPER Fax To: TT 6 @ 6''-1' H900378-37 (Soil) Koil									
			H9003	878-37 (Se	oil)					
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	tories					
Inorganic Compounds										
Chloride	<16.0		16.0	mg/kg	4	9020406	AC	04-Feb-19	4500-Cl-B	
Volatile Organic Compounds by	EPA Method	8021								
Benzene*	7.12		2.00	mg/kg	2000	9020303	ms	04-Feb-19	8021B	
Toluene*	122		2.00	mg/kg	2000	9020303	ms	04-Feb-19	8021B	
Ethylbenzene*	127		2.00	mg/kg	2000	9020303	ms	04-Feb-19	8021B	
Total Xylenes*	165		6.00	mg/kg	2000	9020303	ms	04-Feb-19	8021B	
Total BTEX	422		12.0	mg/kg	2000	9020303	ms	04-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			110 %	73.3	-129	9020303	ms	04-Feb-19	8021B	
Petroleum Hydrocarbons by GC	FID									S-06
GRO C6-C10*	4830		100	mg/kg	10	9020119	MS	04-Feb-19	8015B	
DRO >C10-C28*	12000		100	mg/kg	10	9020119	MS	04-Feb-19	8015B	
EXT DRO >C28-C36	1890		100	mg/kg	10	9020119	MS	04-Feb-19	8015B	
Surrogate: 1-Chlorooctane			276 %	41-	142	9020119	MS	04-Feb-19	8015B	
Surrogate: 1-Chlorooctadecane			368 %	37.6	-147	9020119	MS	04-Feb-19	8015B	

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TRC 10 DESTA DR. SUITE 150 E MIDLAND TX, 79705			Project Num Project Mana	ber: NOI	-			(Reported:)4-Feb-19 18:	19
				6 @ 2' 378-38 (Se	oil)					
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
Inorganic Compounds										
Chloride	<16.0		16.0	mg/kg	4	9020406	AC	04-Feb-19	4500-Cl-B	
Volatile Organic Compounds b	y EPA Method 8	8021								
Benzene*	< 0.050		0.050	mg/kg	50	9020303	ms	04-Feb-19	8021B	
Toluene*	0.093		0.050	mg/kg	50	9020303	ms	04-Feb-19	8021B	
Ethylbenzene*	0.128		0.050	mg/kg	50	9020303	ms	04-Feb-19	8021B	
Total Xylenes*	0.200		0.150	mg/kg	50	9020303	ms	04-Feb-19	8021B	
Total BTEX	0.421		0.300	mg/kg	50	9020303	ms	04-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			102 %	73.3	-129	9020303	ms	04-Feb-19	8021B	
Petroleum Hydrocarbons by G	C FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	9020119	MS	04-Feb-19	8015B	
DRO >C10-C28*	53.0		10.0	mg/kg	1	9020119	MS	04-Feb-19	8015B	
EXT DRO >C28-C36	41.0		10.0	mg/kg	1	9020119	MS	04-Feb-19	8015B	
Surrogate: 1-Chlorooctane			88.3 %	41-	142	9020119	MS	04-Feb-19	8015B	_
Surrogate: 1-Chlorooctadecane			88.7 %	37.6	-147	9020119	MS	04-Feb-19	8015B	

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Celey D. Keene, Lab Director/Quality Manager



TRC 10 DESTA DR. SUITE 150 E MIDLAND TX, 79705			Project Num Project Mana	ber: NOI	-			(Reported:)4-Feb-19 18:	19
				1 E @ 1 378-39 (Se						
Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
			Cardina	l Laborat	ories					
<u>Inorganic Compounds</u> Chloride	48.0		16.0	mg/kg	4	9020406	AC	04-Feb-19	4500-Cl-B	
Volatile Organic Compounds b	y EPA Method 8	8021								
Benzene*	< 0.050		0.050	mg/kg	50	9020303	ms	04-Feb-19	8021B	
Toluene*	< 0.050		0.050	mg/kg	50	9020303	ms	04-Feb-19	8021B	
Ethylbenzene*	< 0.050		0.050	mg/kg	50	9020303	ms	04-Feb-19	8021B	
Total Xylenes*	< 0.150		0.150	mg/kg	50	9020303	ms	04-Feb-19	8021B	
Total BTEX	< 0.300		0.300	mg/kg	50	9020303	ms	04-Feb-19	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			100 %	73.3	-129	9020303	ms	04-Feb-19	8021B	
Petroleum Hydrocarbons by G	C FID									
GRO C6-C10*	<10.0		10.0	mg/kg	1	9020119	MS	04-Feb-19	8015B	
DRO >C10-C28*	69.8		10.0	mg/kg	1	9020119	MS	04-Feb-19	8015B	
EXT DRO >C28-C36	12.0		10.0	mg/kg	1	9020119	MS	04-Feb-19	8015B	
Surrogate: 1-Chlorooctane			88.6 %	41-	142	9020119	MS	04-Feb-19	8015B	
Surrogate: 1-Chlorooctadecane			88.4 %	37.6	-147	9020119	MS	04-Feb-19	8015B	

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Celey D. Keene, Lab Director/Quality Manager



Inorganic Compounds - Quality Control

Cardinal Laboratories										
	Dk	Reporting	TT '	Spike	Source	%REC	%REC	RPD	RPD	NL (
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 9020403 - General Prep - Wet Chem										
Blank (9020403-BLK1)				Prepared: ()3-Feb-19 A	Analyzed: 04	4-Feb-19			
Chloride	ND	16.0	mg/kg							
LCS (9020403-BS1)				Prepared: ()3-Feb-19 A	Analyzed: 04	4-Feb-19			
Chloride	432	16.0	mg/kg	400		108	80-120			
LCS Dup (9020403-BSD1)				Prepared: ()3-Feb-19 A	Analyzed: 04	4-Feb-19			
Chloride	432	16.0	mg/kg	400		108	80-120	0.00	20	
Batch 9020405 - General Prep - Wet Chem										
Blank (9020405-BLK1)				Prepared &	Analyzed:	04-Feb-19				
Chloride	ND	16.0	mg/kg							
LCS (9020405-BS1)				Prepared &	Analyzed:	04-Feb-19				
Chloride	432	16.0	mg/kg	400		108	80-120			
LCS Dup (9020405-BSD1)				Prepared &	Analyzed:	04-Feb-19				
Chloride	432	16.0	mg/kg	400	<u> </u>	108	80-120	0.00	20	
Batch 9020406 - General Prep - Wet Chem										
				Duana 1.0	A	04 E-h 10				
Blank (9020406-BLK1) Chloride	ND	16.0	ma/lea	Prepared &	Analyzed:	04-Feb-19				
Chioriae	ND	10.0	mg/kg							
LCS (9020406-BS1)				Prepared &	Analyzed:	04-Feb-19				
	416	16.0								

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TRCProject:CARMEN FED #1Reported:10 DESTA DR. SUITE 150 EProject Number:NONE GIVEN04-Feb-19 18:19MIDLAND TX, 79705Project Manager:BRIAN COOPER Fax To:Fax To:												
	Inorganic Co Card	•	s - Quality boratories									
Analyte R	Reporting esult Limit		Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes			

LCS Dup (9020406-BSD1)				Prepared & Analyzed:	04-Feb-19				
Chloride	416	16.0	mg/kg	400	104	80-120	0.00	20	

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Celey D. Keene, Lab Director/Quality Manager



TRC 10 DESTA DR. SUITE 150 E MIDLAND TX, 79705	Project: CARMEN FED #1 Project Number: NONE GIVEN Project Manager: BRIAN COOPER Fax To:	Reported: 04-Feb-19 18:19
	Volatile Organic Compounds by EPA Method 8021 - Quality Co	ontrol

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		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 9020301 - Volatiles										
Blank (9020301-BLK1)				Prepared &	Analyzed:	03-Feb-19	1			
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)	0.102		mg/kg	0.100		102	73.3-129			
LCS (9020301-BS1)				Prepared &	Analyzed:	03-Feb-19)			
Benzene	2.20	0.050	mg/kg	2.00		110	72.2-131			
Toluene	2.08	0.050	mg/kg	2.00		104	71.7-126			
Ethylbenzene	2.03	0.050	mg/kg	2.00		101	68.9-126			
Total Xylenes	6.31	0.150	mg/kg	6.00		105	71.4-125			
Surrogate: 4-Bromofluorobenzene (PID)	0.0979		mg/kg	0.100		97.9	73.3-129			
LCS Dup (9020301-BSD1)				Prepared &	Analyzed:	03-Feb-19)			
Benzene	2.17	0.050	mg/kg	2.00		108	72.2-131	1.59	6.91	
Toluene	2.04	0.050	mg/kg	2.00		102	71.7-126	1.66	7.12	
Ethylbenzene	2.00	0.050	mg/kg	2.00		100	68.9-126	1.08	7.88	
Total Xylenes	6.27	0.150	mg/kg	6.00		104	71.4-125	0.689	7.46	
Surrogate: 4-Bromofluorobenzene (PID)	0.0982		mg/kg	0.100		98.2	73.3-129			
Batch 9020302 - Volatiles										
Blank (9020302-BLK1)				Prepared &	Analyzed:	03-Feb-19	•			
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	0.0972		mg/kg	0.100		97.2	73.3-129			

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TRC 10 DESTA DR. SUITE 150 E MIDLAND TX, 79705	Project: Project Number: Project Manager: Fax To:		Reported: 04-Feb-19 18:19
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Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardina	l La	borat	tories
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Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 9020302 - Volatiles										
LCS (9020302-BS1)				Prepared &	Analyzed:	03-Feb-19				
Benzene	1.90	0.050	mg/kg	2.00		95.0	72.2-131			
Toluene	1.94	0.050	mg/kg	2.00		96.8	71.7-126			
Ethylbenzene	1.88	0.050	mg/kg	2.00		94.2	68.9-126			
Total Xylenes	5.52	0.150	mg/kg	6.00		91.9	71.4-125			
Surrogate: 4-Bromofluorobenzene (PID)	0.0985		mg/kg	0.100		98.5	73.3-129			
LCS Dup (9020302-BSD1)				Prepared &	Analyzed:	03-Feb-19				
Benzene	1.86	0.050	mg/kg	2.00		93.0	72.2-131	2.15	6.91	
Toluene	1.89	0.050	mg/kg	2.00		94.3	71.7-126	2.61	7.12	
Ethylbenzene	1.79	0.050	mg/kg	2.00		89.5	68.9-126	5.13	7.88	
Total Xylenes	5.20	0.150	mg/kg	6.00		86.6	71.4-125	5.95	7.46	
Surrogate: 4-Bromofluorobenzene (PID)	0.0928		mg/kg	0.100		92.8	73.3-129			
Batch 9020303 - Volatiles										
Blank (9020303-BLK1)				Prepared &	Analyzed:	03-Feb-19				
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	0.0995		mg/kg	0.100		99.5	73.3-129			
LCS (9020303-BS1)				Prepared &	Analyzed:	03-Feb-19				
Benzene	2.17	0.050	mg/kg	2.00		108	72.2-131			
Toluene	2.06	0.050	mg/kg	2.00		103	71.7-126			
Ethylbenzene	2.04	0.050	mg/kg	2.00		102	68.9-126			
Total Xylenes	6.19	0.150	mg/kg	6.00		103	71.4-125			
Surrogate: 4-Bromofluorobenzene (PID)	0.0988		mg/kg	0.100		98.8	73.3-129			

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TRC 10 DESTA DR. SUITE 150 E MIDLAND TX, 79705	Project: Project Number: Project Manager: Fax To:		Reported: 04-Feb-19 18:19
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Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes				
Batch 9020303 - Volatiles														
LCS Dup (9020303-BSD1)	Prepared & Analyzed: 03-Feb-19													
Benzene	2.18	0.050	mg/kg	2.00		109	72.2-131	0.766	6.91					
Toluene	2.06	0.050	mg/kg	2.00		103	71.7-126	0.165	7.12					
Ethylbenzene	2.00	0.050	mg/kg	2.00		100	68.9-126	1.83	7.88					
Total Xylenes	6.10	0.150	mg/kg	6.00		102	71.4-125	1.33	7.46					
Surrogate: 4-Bromofluorobenzene (PID)	0.0971		mg/kg	0.100		97.1	73.3-129							

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MIDLAND TX, 79705	Project Manager: BRIAN COOPER Fax To: Petroleum Hydrocarbons by GC FID - Quality Contro	1
TRC 10 DESTA DR. SUITE 150 E	Project: CARMEN FED #1 Project Number: NONE GIVEN	Reported: 04-Feb-19 18:19

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch 9020119 - General Prep - Organics										
Blank (9020119-BLK1)				Prepared: (1-Feb-19 A	analyzed: 0	4-Feb-19			
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C36	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	47.2		mg/kg	50.0		94.4	41-142			
Surrogate: 1-Chlorooctadecane	47.7		mg/kg	50.0		95.3	37.6-147			
LCS (9020119-BS1)				Prepared: (1-Feb-19 A	analyzed: 0	4-Feb-19			
GRO C6-C10	255	10.0	mg/kg	200		128	76.5-133			
DRO >C10-C28	212	10.0	mg/kg	200		106	72.9-138			
Total TPH C6-C28	467	10.0	mg/kg	400		117	78-132			
Surrogate: 1-Chlorooctane	48.5		mg/kg	50.0		97.1	41-142			
Surrogate: 1-Chlorooctadecane	49.3		mg/kg	50.0		98.5	37.6-147			
LCS Dup (9020119-BSD1)				Prepared: (1-Feb-19 A	analyzed: 0	4-Feb-19			
GRO C6-C10	254	10.0	mg/kg	200		127	76.5-133	0.537	20.6	
DRO >C10-C28	216	10.0	mg/kg	200		108	72.9-138	1.75	20.6	
Total TPH C6-C28	470	10.0	mg/kg	400		117	78-132	0.508	18	
Surrogate: 1-Chlorooctane	48.2		mg/kg	50.0		96.3	41-142			
Surrogate: 1-Chlorooctadecane	49.0		mg/kg	50.0		98.0	37.6-147			

Blank (9020304-BLK1)		Prepared & Ar	nalyzed: 03-Feb-19	1		
GRO C6-C10	ND	10.0 r	ng/kg			
DRO >C10-C28	ND	10.0 r	ng/kg			
EXT DRO >C28-C36	ND	10.0 r	ng/kg			
Surrogate: 1-Chlorooctane	45.9	r	ng/kg 50.0	91.8	41-142	
Surrogate: 1-Chlorooctadecane	44.6	r	ng/kg 50.0	89.2	37.6-147	

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Celey D. Keene, Lab Director/Quality Manager



TRC 10 DESTA DR. SUITE 150 E MIDLAND TX, 79705		Project Ni Project Ma	umber:	Carmen fei None givei Brian cooi	N	Reported: 04-Feb-19 18:19					
	Petroleum	•	•		Quality C	ontrol					
		Cardir	ial La	ooratories							
Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes	
Batch 9020304 - General Prep - Orga	nics										
LCS (9020304-BS1)				Prepared &	Analyzed:	03-Feb-19)				
GRO C6-C10	176	10.0	mg/kg	200		88.0	76.5-133				
DRO >C10-C28	186	10.0	mg/kg	200		93.1	72.9-138				
Total TPH C6-C28	362	10.0	mg/kg	400		90.6	78-132				
Surrogate: 1-Chlorooctane	47.6		mg/kg	50.0		95.2	41-142				
Surrogate: 1-Chlorooctadecane	45.1		mg/kg	50.0		90.2	37.6-147				
LCS Dup (9020304-BSD1))									
GRO C6-C10	180	10.0	mg/kg	200		89.8	76.5-133	1.97	20.6		
DRO >C10-C28	189	10.0	mg/kg	200		94.6	72.9-138	1.62	20.6		
Fotal TPH C6-C28	369	10.0	mg/kg	400		92.2	78-132	1.79	18		
Surrogate: 1-Chlorooctane	50.0		mg/kg	50.0		100	41-142				
Surrogate: 1-Chlorooctadecane	46.0		mg/kg	50.0		92.0	37.6-147				
Batch 9020305 - General Prep - Orga	nics										
Blank (9020305-BLK1)				Prepared: 0	3-Feb-19 A	.nalyzed: 0	94-Feb-19				
GRO C6-C10	ND	10.0	mg/kg								
DRO >C10-C28	ND	10.0	mg/kg								
EXT DRO >C28-C36	ND	10.0	mg/kg								
Surrogate: 1-Chlorooctane	44.9		mg/kg	50.0		89.9	41-142				
Surrogate: 1-Chlorooctadecane	42.8		mg/kg	50.0		85.6	37.6-147				
LCS (9020305-BS1)				Prepared: 0	3-Feb-19 A	nalyzed: 0	94-Feb-19				
GRO C6-C10	213	10.0	mg/kg	200		106	76.5-133				
DRO >C10-C28	185	10.0	mg/kg	200		92.7	72.9-138				
Fotal TPH C6-C28	398	10.0	mg/kg	400		99.6	78-132				
Surrogate: 1-Chlorooctane	46.0		mg/kg	50.0		92.0	41-142				
Surrogate: 1-Chlorooctadecane	43.9		mg/kg	50.0		87.8	37.6-147				

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TRC 10 DESTA DR. SUITE 150 E MIDLAND TX, 79705	Project: Project Number: Project Manager: Fax To:		Reported: 04-Feb-19 18:19
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Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 9020305 - General Prep - Organics										
LCS Dup (9020305-BSD1)				Prepared: ()3-Feb-19 A	nalyzed: 0	4-Feb-19			
GRO C6-C10	214	10.0	mg/kg	200		107	76.5-133	0.638	20.6	
DRO >C10-C28	188	10.0	mg/kg	200		94.1	72.9-138	1.50	20.6	
Total TPH C6-C28	403	10.0	mg/kg	400		101	78-132	1.04	18	
Surrogate: 1-Chlorooctane	46.3		mg/kg	50.0		92.6	41-142			
Surrogate: 1-Chlorooctadecane	45.4		mg/kg	50.0		90.8	37.6-147			

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Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
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 SM4500CI-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

Sampler - UPS	Delivered By	Relinquished By:	Relinquished By:	PLEASE NOTE: Liability a analyses. All claims includi service. In no event shall C affiliates or successors arisi	10	9	8	7	e	74	7 U	2		Lab I.D.	FOR LAB USE ONLY	Sampler Name:	Project Location:	Project Name:	Project #:	Phone #:	City: N: dlar	Address: 10	Project Manager:	Company Name:				Page 52 of 55
- Bus - Other:	Delivered By: (Circle One)	A:	A:	PLEASE NOTE: Laburg and Ustrages, volutinals adding and clients exclusive timely to any neural volues of not use inclusion per or the relation of the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 90 days after conserving the explicit service. In no event shall Cardinal be liable for incidental or consequental damages, including without limitation, business interruptions, loss of ruse, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.	TT3 @ 2'	773@ 6"-11	773 2 0-6"	0	2 (1	110000	11/02/1	0	TTID n-K"	Sample I.D.		Kyle Schnaid	" Carnes Fee			2	e d	Pista Do	Brinn Cooper	TRC	101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476) (- ;	abora	
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		0	CHAIN-OF-CUST	CUSTODY AND ANALYSIS REQUEST
101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476	ò			
		BILL TO		ANALYSIS REQUEST
Project Manager: Scala Coolar		P.O. #:		
Address: 10 Desta D. Suited	105	Company: 606		
Midland State: The	Zip:	Attn:		
Phone #: Fax #:		Address:		
Project #: Project Owner:		City:		
Project Name:		State: Zip:		
Project Location: Corner Fed 41		Phone #:		
Sampler Name: Kyle Schnedt		Fax #:		
	. MATRIX	PRESERV. SAMPLING		
Lab I.D. Sample I.D.	(G)RAB OR (C)OMF # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE	OTHER : ACID/BASE: ICE / COOL OTHER : DATE	TIME CI- TPH BTES	
77303'	-	N 2-1-19	XXX	
12 TT30 4'				
13 774 @ 0-0"				
14 TT40 6"-1"				
15 7402				
19 77405				
18 77425				
19 77500-5"				
20 775 @ 6"-1'		that a half had finited to the amount maid	the the slight for the	
ability and clien nd any other ca ntal or consequ	ny claim arising whether based in contract eemed waived unless made in writing and without limitation, business interruptions.	or tort, shall be limited to me amount paid received by Cardinal within 30 days after loss of use, or loss of profits incurred by cli	r completion of the applicable lient, its subsidiaries,	
affiliates or successors arising out of or related to the performance of services hereunder by Ce	services hereunder by Cardinal, regardless of whether such claim is based	s based upon any of the above stated reasons or otherwise Phone Res	t: 🗆 Yes	
Relinquished By: Time: 35 Relinquished By: Date:	Received by:	Aldaphe	□ res	□ No Add'I Fax #:
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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

(UIU) UUUT UUU I MM (UIU) UUUT I						
Company Name: TRC		BILL TO			ANALYSIS REQUEST	Т
Project Manager: Brin Caple		P.O. #: 606				
" D. Suite 1	20	Company:				
City: M. J land State: TX		Attn:				
Phone #: Fax #:		Address:				
Project #: Project Owner:		City:				
Project Name:		State: Zip:				
Project Location: Common Fail # 1		Phone #:				
Sampler Name: Kyle Schwardt		Fax #:				
FOR LAB USE ONLY	P. MATRIX	PRESERV. SAMPLING	G			
Lab I.D. Sample I.D.	(G)RAB OR (C)OMI # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE	OTHER : ACID/BASE: ICE / COOL OTHER : DATE		BTEX		
21 TTGNOI	-	×	X	R		
22 776501						
23 776W@1'						
24 TTBEDI						
25 775503'						
26 TTSE@3'						
27 TTYW225'						
28 773502'						
29 1715 Q1'						
30 TTIN @1				_		
PLEASE NOTE: Liability and Damages, Cardinal's lability and cleant's exclusive remedy for any daim arising whether based in contract or fort, shall be-finited to the amount paid by the cleant for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidential or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, article to the the opticable date to the consequential damages, including without limitation of use so fues of the store of the above the opticable article to the total opticable interruption for the total opticable interruptions and the total opticable interruptions for the total opticable interruption is used to a total opticable article to the applicable interruption is used to a total opticable article total opticable interruptions for the applicable interruption opticable interruptions of the applicable article total opticable interruptions in the applicable interruption is used to a total opticable interruption is used to a total opticable article total opticable interruptions for the applicable article total opticable article total opticable interruption is used to a total opticable article total opticable interruption is used to a total opticable article total opticable interruptions in total opticable article total opticable article total opticable interruption is used to a total opticable article total opticable article total opticable article total opticable article total opticable interruption is used total opticable article total opticable article total opticable	ny claim arising whether based in contract eemed waived unless made in writing and without limitation, business interruptions, l	or fort, shall be limited to the amount paid d received by Cardinal within 30 days after loss of use, or loss of profits incurred by cit	by the client for the completion of the applicable ent, its subsidiaries,			
Relinquished By: Date: Received By: Phone Resu	Received By:	1 1 1 A	Phone Result:	Yes No	Add'l Phone #:	
ALA	Jamare.	Allatyc		Yes	Add'I Fax #:	
Relinquished By: Date: Time:	Received By:					
Delivered By: (Circle One)	Sample Condition Cool Intact	ion CHECKED BY: (Initials)				
Sampler - UPS - Bus - Other: 5,2 #		76				

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: TP/		BILL TO			ANALYSIS REQUEST	
Project Manager: Brind loo por		20				
Pesta	105	Company:			ć	
City: Midland State: TK	Zip:	Attn:				_
Phone #: Fax #:		Address:				
Project #: Project Owner:		City:				
Project Name:		State: Zip:				
Project Location: Carmen Ful #1		Phone #:				
Sampler Name: Kyle School, of		1				
FOR LAB USE ONLY	P. MATRIX	PRESERV, SAMPLING	ดิ	X		
Lab I.D. Sample I.D.	RAB OR (C)OMF ONTAINERS OUNDWATER STEWATER IL - UDGE	HER : ID/BASE: E / COOL HER :	61-	TPH BTE.		
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775						
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34 776@0-6"						
37 TT& @ 6"-1"						
2 217 85						
39 771501						
PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or but, shall be limited to the smount paid by the client for the applicable analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 and the molecular of the applicable analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 and the static completion of the applicable analyses. In no event shall Cardinal be liable for incidental demages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, service. In no event shall Cardinal be liable for incidental demages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, service.	r any claim arising whether based in contrac e deemed waived unless made in writing an ng without limitation, business interruptions,	x or tort, shall be imited to the amount paid dreceived by Cardinal within 30 days after loss of use, or loss of profits incurred by c	I by the client for the applicable for the applicable for the applicable for the subsidiaries.	œ		
affiliates or successors arising out of or related to the performance or services nereunour op Relinquished By: Date;	Tate; Received By: Phone Resident Ph				Add'l Phone #:	
and and a second	Memara .	Malafor		Yes	Add'I Fax #:	
Relinquished By: Time:	Necelved by.					
Delivered By: (Circle One)	Sample Condition	tion CHECKED BY: (Initials)				
Sampler - UPS - Bus - Other: 5,2 c	No	4				



May 10, 2019

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

RE: CARMEN FED #1

Enclosed are the results of analyses for samples received by the laboratory on 05/03/19 10:00.

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/ga/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keine

Celey D. Keene Lab Director/Quality Manager



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

Received:	05/03/2019	Sampling Date:	05/03/2019
Reported:	05/10/2019	Sampling Type:	Soil
Project Name:	CARMEN FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG-LOCO HILLS, NM		

Sample ID: A4 - FL - 1-4.5 (H901602-01)

BTEX 8021B	mg	/kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/08/2019	ND	2.09	104	2.00	3.25	
Toluene*	<0.050	0.050	05/08/2019	ND	2.18	109	2.00	1.96	
Ethylbenzene*	0.248	0.050	05/08/2019	ND	2.09	105	2.00	1.39	
Total Xylenes*	2.64	0.150	05/08/2019	ND	6.37	106	6.00	1.20	
Total BTEX	2.89	0.300	05/08/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	129	% 73.3-12	9						
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	05/07/2019	ND	432	108	400	3.77	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	39.8	10.0	05/06/2019	ND	205	103	200	4.85	
DRO >C10-C28*	915	10.0	05/06/2019	ND	197	98.4	200	6.99	
EXT DRO >C28-C36	201	10.0	05/06/2019	ND					
Surrogate: 1-Chlorooctane	109	% 41-142	2						
Surrogate: 1-Chlorooctadecane	108	% 37.6-14	7						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	05/03/2019	Sampling Date:	05/03/2019
Reported:	05/10/2019	Sampling Type:	Soil
Project Name:	CARMEN FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG-LOCO HILLS, NM		

Sample ID: A4 - FL - 2-4.5 (H901602-02)

BTEX 8021B	mg/	'kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/08/2019	ND	2.09	104	2.00	3.25	
Toluene*	<0.050	0.050	05/08/2019	ND	2.18	109	2.00	1.96	
Ethylbenzene*	<0.050	0.050	05/08/2019	ND	2.09	105	2.00	1.39	
Total Xylenes*	<0.150	0.150	05/08/2019	ND	6.37	106	6.00	1.20	
Total BTEX	<0.300	0.300	05/08/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	104 9	73.3-12	9						
TPH 8015M	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/06/2019	ND	205	103	200	4.85	
DRO >C10-C28*	<10.0	10.0	05/06/2019	ND	197	98.4	200	6.99	
EXT DRO >C28-C36	<10.0	10.0	05/06/2019	ND					
Surrogate: 1-Chlorooctane	108 9	% 41-142							
Surrogate: 1-Chlorooctadecane	99.2	% 37.6-14	7						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	05/03/2019	Sampling Date:	05/03/2019
Reported:	05/10/2019	Sampling Type:	Soil
Project Name:	CARMEN FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG-LOCO HILLS, NM		

Sample ID: A4 - SW - 1-2.25 (H901602-03)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/08/2019	ND	2.09	104	2.00	3.25	
Toluene*	<0.050	0.050	05/08/2019	ND	2.18	109	2.00	1.96	
Ethylbenzene*	0.130	0.050	05/08/2019	ND	2.09	105	2.00	1.39	
Total Xylenes*	1.81	0.150	05/08/2019	ND	6.37	106	6.00	1.20	
Total BTEX	1.94	0.300	05/08/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	123 9	% 73.3-12	9						
TPH 8015M	mg/	kg	Analyze	d By: MS					S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*									
	88.2	10.0	05/06/2019	ND	205	103	200	4.85	
DRO >C10-C28*	88.2 3070	10.0 10.0	05/06/2019 05/06/2019	ND ND	205 197	103 98.4	200 200	4.85 6.99	
DRO >C10-C28*	3070	10.0 10.0	05/06/2019 05/06/2019	ND					

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	05/03/2019	Sampling Date:	05/03/2019
Reported:	05/10/2019	Sampling Type:	Soil
Project Name:	CARMEN FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG-LOCO HILLS, NM		

Sample ID: A4 - SW - 2-2.25 (H901602-04)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/08/2019	ND	2.09	104	2.00	3.25	
Toluene*	<0.050	0.050	05/08/2019	ND	2.18	109	2.00	1.96	
Ethylbenzene*	<0.050	0.050	05/08/2019	ND	2.09	105	2.00	1.39	
Total Xylenes*	<0.150	0.150	05/08/2019	ND	6.37	106	6.00	1.20	
Total BTEX	<0.300	0.300	05/08/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	104 9	73.3-12	9						
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/06/2019	ND	205	103	200	4.85	
DRO >C10-C28*	<10.0	10.0	05/06/2019	ND	197	98.4	200	6.99	
EXT DRO >C28-C36	<10.0	10.0	05/06/2019	ND					
Surrogate: 1-Chlorooctane	102 9	% 41-142	?						
Surrogate: 1-Chlorooctadecane									

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	05/03/2019	Sampling Date:	05/03/2019
Reported:	05/10/2019	Sampling Type:	Soil
Project Name:	CARMEN FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG-LOCO HILLS, NM		

Sample ID: A5 - FL - 1-1 (H901602-05)

BTEX 8021B	mg/	'kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/09/2019	ND	2.04	102	2.00	0.687	
Toluene*	<0.050	0.050	05/09/2019	ND	2.12	106	2.00	0.499	
Ethylbenzene*	<0.050	0.050	05/09/2019	ND	2.06	103	2.00	0.667	
Total Xylenes*	<0.150	0.150	05/09/2019	ND	6.25	104	6.00	1.14	
Total BTEX	<0.300	0.300	05/09/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	107 9	73.3-12	9						
Chloride, SM4500Cl-B	mg/	'kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	05/07/2019	ND	432	108	400	3.77	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/06/2019	ND	205	103	200	4.85	
DRO >C10-C28*	<10.0	10.0	05/06/2019	ND	197	98.4	200	6.99	
EXT DRO >C28-C36	<10.0	10.0	05/06/2019	ND					
Surrogate: 1-Chlorooctane	105 9	% 41-142	,						
Surrogate: 1-Chlorooctadecane	98.0	% 37.6-14	7						

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	05/03/2019	Sampling Date:	05/03/2019
Reported:	05/10/2019	Sampling Type:	Soil
Project Name:	CARMEN FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG-LOCO HILLS, NM		

Sample ID: A5 - FL - 2-1.5 (H901602-06)

BTEX 8021B	mg/	'kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/09/2019	ND	2.04	102	2.00	0.687	
Toluene*	<0.050	0.050	05/09/2019	ND	2.12	106	2.00	0.499	
Ethylbenzene*	<0.050	0.050	05/09/2019	ND	2.06	103	2.00	0.667	
Total Xylenes*	<0.150	0.150	05/09/2019	ND	6.25	104	6.00	1.14	
Total BTEX	<0.300	0.300	05/09/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	105 9	73.3-12	9						
TPH 8015M	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/06/2019	ND	205	103	200	4.85	
DRO >C10-C28*	68.4	10.0	05/06/2019	ND	197	98.4	200	6.99	
EXT DRO >C28-C36	13.5	10.0	05/06/2019	ND					
Surrogate: 1-Chlorooctane	108 9	% 41-142	2						
Surrogate: 1-Chlorooctadecane	101 9	% 37.6-14							

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	05/03/2019	Sampling Date:	05/03/2019
Reported:	05/10/2019	Sampling Type:	Soil
Project Name:	CARMEN FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG-LOCO HILLS, NM		

Sample ID: A5 - FL - 3-2 (H901602-07)

BTEX 8021B	mg/	'kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/09/2019	ND	2.04	102	2.00	0.687	
Toluene*	<0.050	0.050	05/09/2019	ND	2.12	106	2.00	0.499	
Ethylbenzene*	<0.050	0.050	05/09/2019	ND	2.06	103	2.00	0.667	
Total Xylenes*	<0.150	0.150	05/09/2019	ND	6.25	104	6.00	1.14	
Total BTEX	<0.300	0.300	05/09/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	106 9	73.3-12	9						
TPH 8015M	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/06/2019	ND	205	103	200	4.85	
DRO >C10-C28*	69.9	10.0	05/06/2019	ND	197	98.4	200	6.99	
EXT DRO >C28-C36	14.2	10.0	05/06/2019	ND					
Surrogate: 1-Chlorooctane	100 9	% 41-142	,						
Surrogate: 1-Chlorooctadecane	94.9	% 37.6-14	7						

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*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	05/03/2019	Sampling Date:	05/03/2019
Reported:	05/10/2019	Sampling Type:	Soil
Project Name:	CARMEN FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG-LOCO HILLS, NM		

Sample ID: A5 - FL - 4-2.5 (H901602-08)

BTEX 8021B	mg/	'kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/09/2019	ND	2.04	102	2.00	0.687	
Toluene*	<0.050	0.050	05/09/2019	ND	2.12	106	2.00	0.499	
Ethylbenzene*	<0.050	0.050	05/09/2019	ND	2.06	103	2.00	0.667	
Total Xylenes*	<0.150	0.150	05/09/2019	ND	6.25	104	6.00	1.14	
Total BTEX	<0.300	0.300	05/09/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	106 9	73.3-12	9						
TPH 8015M	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/06/2019	ND	205	103	200	4.85	
DRO >C10-C28*	19.9	10.0	05/06/2019	ND	197	98.4	200	6.99	
EXT DRO >C28-C36	<10.0	10.0	05/06/2019	ND					
Surrogate: 1-Chlorooctane	99.3	% 41-142	,						
Surrogate: 1-Chlorooctadecane	94.6	% 37.6-14	7						

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	05/03/2019	Sampling Date:	05/03/2019
Reported:	05/10/2019	Sampling Type:	Soil
Project Name:	CARMEN FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG-LOCO HILLS, NM		

Sample ID: A5 - SW - 1-1 (H901602-09)

BTEX 8021B	mg/	′kg	Analyze	d By: MS					S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/08/2019	ND	1.99	99.5	2.00	0.101	
Toluene*	0.237	0.050	05/08/2019	ND	2.22	111	2.00	3.97	
Ethylbenzene*	0.847	0.050	05/08/2019	ND	2.41	120	2.00	1.48	QM-07
Total Xylenes*	1.38	0.150	05/08/2019	ND	7.08	118	6.00	4.46	
Total BTEX	2.47	0.300	05/08/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	147 :	% 73.3-12	9						
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	27.2	10.0	05/06/2019	ND	205	103	200	4.85	
DRO >C10-C28*	1440	10.0	05/06/2019	ND	197	98.4	200	6.99	
EXT DRO >C28-C36	380	10.0	05/06/2019	ND					
Surrogate: 1-Chlorooctane	109	% 41-142	2						
Surrogate: 1-Chlorooctadecane	135	% 37.6-14	7						

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Celey D. Keene, Lab Director/Quality Manager



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

Received:	05/03/2019	Sampling Date:	05/03/2019
Reported:	05/10/2019	Sampling Type:	Soil
Project Name:	CARMEN FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG-LOCO HILLS, NM		

Sample ID: A5 - SW - 2-1 (H901602-10)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/08/2019	ND	1.99	99.5	2.00	0.101	
Toluene*	<0.050	0.050	05/08/2019	ND	2.22	111	2.00	3.97	
Ethylbenzene*	<0.050	0.050	05/08/2019	ND	2.41	120	2.00	1.48	
Total Xylenes*	<0.150	0.150	05/08/2019	ND	7.08	118	6.00	4.46	
Total BTEX	<0.300	0.300	05/08/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	107 %	73.3-12	9						
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/06/2019	ND	205	103	200	4.85	
DRO >C10-C28*	<10.0	10.0	05/06/2019	ND	197	98.4	200	6.99	
EXT DRO >C28-C36	<10.0	10.0	05/06/2019	ND					
Surrogate: 1-Chlorooctane	101 %	% 41-142							
Surrogate: 1-Chlorooctadecane	92.7 9	37.6-14	7						

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Received:	05/03/2019	Sampling Date:	05/03/2019
Reported:	05/10/2019	Sampling Type:	Soil
Project Name:	CARMEN FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG-LOCO HILLS, NM		

Sample ID: A6 - FL - 1-1.5 (H901602-11)

BTEX 8021B	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/08/2019	ND	1.99	99.5	2.00	0.101	
Toluene*	<0.050	0.050	05/08/2019	ND	2.22	111	2.00	3.97	
Ethylbenzene*	<0.050	0.050	05/08/2019	ND	2.41	120	2.00	1.48	
Total Xylenes*	<0.150	0.150	05/08/2019	ND	7.08	118	6.00	4.46	
Total BTEX	<0.300	0.300	05/08/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	120 9	% 73.3-12	9						
Chloride, SM4500Cl-B	mg/	′kg	Analyze	d By: HM					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	<16.0	16.0	05/07/2019	ND	432	108	400	3.77	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/06/2019	ND	205	103	200	4.85	
DRO >C10-C28*	353	10.0	05/06/2019	ND	197	98.4	200	6.99	
EXT DRO >C28-C36	97.1	10.0	05/06/2019	ND					
Surrogate: 1-Chlorooctane	107 9	% 41-142							
Surrogate: 1-Chlorooctadecane	108 9	% 37.6-14	7						

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Received:	05/03/2019	Sampling Date:	05/03/2019
Reported:	05/10/2019	Sampling Type:	Soil
Project Name:	CARMEN FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG-LOCO HILLS, NM		

Sample ID: A6 - FL - 2-1.5 (H901602-12)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/08/2019	ND	1.99	99.5	2.00	0.101	
Toluene*	<0.050	0.050	05/08/2019	ND	2.22	111	2.00	3.97	
Ethylbenzene*	0.051	0.050	05/08/2019	ND	2.41	120	2.00	1.48	
Total Xylenes*	<0.150	0.150	05/08/2019	ND	7.08	118	6.00	4.46	
Total BTEX	<0.300	0.300	05/08/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	121 9	6 73.3-12	9						
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	20.5	10.0	05/06/2019	ND	205	103	200	4.85	
DRO >C10-C28*	856	10.0	05/06/2019	ND	197	98.4	200	6.99	
EXT DRO >C28-C36	190	10.0	05/06/2019	ND					
Surrogate: 1-Chlorooctane	121 9	% 41-142	2						
Surrogate: 1-Chlorooctadecane	117 9	6 37.6-14	7						

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Received:	05/03/2019	Sampling Date:	05/03/2019
Reported:	05/10/2019	Sampling Type:	Soil
Project Name:	CARMEN FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG-LOCO HILLS, NM		

Sample ID: A6 - FL - 3-1.5 (H901602-13)

BTEX 8021B	mg/	kg	Analyze	d By: MS					S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	0.100	0.050	05/10/2019	ND	1.99	99.5	2.00	0.101	
Toluene*	2.90	0.050	05/10/2019	ND	2.22	111	2.00	3.97	
Ethylbenzene*	5.13	0.050	05/10/2019	ND	2.41	120	2.00	1.48	
Total Xylenes*	7.03	0.150	05/10/2019	ND	7.08	118	6.00	4.46	
Total BTEX	15.2	0.300	05/10/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	202 9	73.3-12	9						
TPH 8015M	mg/	kg	Analyze	d By: MS					S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	158	10.0	05/06/2019	ND	205	103	200	4.85	
DRO >C10-C28*	6360	10.0	05/06/2019	ND	197	98.4	200	6.99	
EXT DRO >C28-C36	1550	10.0	05/06/2019	ND					
Surrogate: 1-Chlorooctane	156 9	% 41-142	2						
Surrogate: 1-Chlorooctadecane	284 9	% 37.6-14							

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Received:	05/03/2019	Sampling Date:	05/03/2019
Reported:	05/10/2019	Sampling Type:	Soil
Project Name:	CARMEN FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG-LOCO HILLS, NM		

Sample ID: A6 - FL - 4-1.5 (H901602-14)

BTEX 8021B	mg/kg		Analyzed By: MS					S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/08/2019	ND	1.99	99.5	2.00	0.101	
Toluene*	0.088	0.050	05/08/2019	ND	2.22	111	2.00	3.97	
Ethylbenzene*	0.468	0.050	05/08/2019	ND	2.41	120	2.00	1.48	
Total Xylenes*	0.840	0.150	05/08/2019	ND	7.08	118	6.00	4.46	
Total BTEX	1.40	0.300	05/08/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	135 9	% 73.3-12	9						
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	29.3	10.0	05/06/2019	ND	205	103	200	4.85	
DRO >C10-C28*	1610	10.0	05/06/2019	ND	197	98.4	200	6.99	
EXT DRO >C28-C36	391	10.0	05/06/2019	ND					
Surrogate: 1-Chlorooctane	121 9	% 41-142	2						
Surrogate: 1-Chlorooctadecane	133 9	% 37.6-14	7						

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Celey D. Keene, Lab Director/Quality Manager



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Received:	05/03/2019	Sampling Date:	05/03/2019
Reported:	05/10/2019	Sampling Type:	Soil
Project Name:	CARMEN FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG-LOCO HILLS, NM		

Sample ID: A6 - SW - 1-0.75 (H901602-15)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/08/2019	ND	1.99	99.5	2.00	0.101	
Toluene*	<0.050	0.050	05/08/2019	ND	2.22	111	2.00	3.97	
Ethylbenzene*	<0.050	0.050	05/08/2019	ND	2.41	120	2.00	1.48	
Total Xylenes*	<0.150	0.150	05/08/2019	ND	7.08	118	6.00	4.46	
Total BTEX	<0.300	0.300	05/08/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	113 9	73.3-12	9						
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/06/2019	ND	205	103	200	4.85	
DRO >C10-C28*	249	10.0	05/06/2019	ND	197	98.4	200	6.99	
EXT DRO >C28-C36	83.6	10.0	05/06/2019	ND					
Surrogate: 1-Chlorooctane	105 9	% 41-142	?						

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Received:	05/03/2019	Sampling Date:	05/03/2019
Reported:	05/10/2019	Sampling Type:	Soil
Project Name:	CARMEN FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG-LOCO HILLS, NM		

Sample ID: A6 - SW - 2-0.75 (H901602-16)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/09/2019	ND	1.99	99.5	2.00	0.101	
Toluene*	<0.050	0.050	05/09/2019	ND	2.22	111	2.00	3.97	
Ethylbenzene*	<0.050	0.050	05/09/2019	ND	2.41	120	2.00	1.48	
Total Xylenes*	<0.150	0.150	05/09/2019	ND	7.08	118	6.00	4.46	
Total BTEX	<0.300	0.300	05/09/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	113 %	% 73.3-12	9						
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/06/2019	ND	205	103	200	4.85	
DRO >C10-C28*	<10.0	10.0	05/06/2019	ND	197	98.4	200	6.99	
EXT DRO >C28-C36	<10.0	10.0	05/06/2019	ND					
Surrogate: 1-Chlorooctane	103 9	% 41-142	2						

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Received:	05/03/2019	Sampling Date:	05/03/2019
Reported:	05/10/2019	Sampling Type:	Soil
Project Name:	CARMEN FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG-LOCO HILLS, NM		

Sample ID: A6 - SW - 3-0.75 (H901602-17)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/09/2019	ND	1.99	99.5	2.00	0.101	
Toluene*	<0.050	0.050	05/09/2019	ND	2.22	111	2.00	3.97	
Ethylbenzene*	<0.050	0.050	05/09/2019	ND	2.41	120	2.00	1.48	
Total Xylenes*	<0.150	0.150	05/09/2019	ND	7.08	118	6.00	4.46	
Total BTEX	<0.300	0.300	05/09/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	103 %	% 73.3-12	9						
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/06/2019	ND	205	103	200	4.85	
DRO >C10-C28*	<10.0	10.0	05/06/2019	ND	197	98.4	200	6.99	
EXT DRO >C28-C36	<10.0	10.0	05/06/2019	ND					
Surrogate: 1-Chlorooctane	103 9	% 41-142	?						
Surrogate: 1-Chlorooctadecane	104 %	37.6-14	-						

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Celey D. Keene, Lab Director/Quality Manager



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Received:	05/03/2019	Sampling Date:	05/03/2019
Reported:	05/10/2019	Sampling Type:	Soil
Project Name:	CARMEN FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG-LOCO HILLS, NM		

Sample ID: A6 - SW - 4-0.75 (H901602-18)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/09/2019	ND	1.99	99.5	2.00	0.101	
Toluene*	<0.050	0.050	05/09/2019	ND	2.22	111	2.00	3.97	
Ethylbenzene*	<0.050	0.050	05/09/2019	ND	2.41	120	2.00	1.48	
Total Xylenes*	<0.150	0.150	05/09/2019	ND	7.08	118	6.00	4.46	
Total BTEX	<0.300	0.300	05/09/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	93.9 9	73.3-12	9						
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	13.6	10.0	05/06/2019	ND	208	104	200	0.568	
DRO >C10-C28*	25.7	10.0	05/06/2019	ND	213	107	200	0.223	
EXT DRO >C28-C36	<10.0	10.0	05/06/2019	ND					
Surrogate: 1-Chlorooctane	96.8 9	% 41-142	,						
•	90.0	41-142							

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Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

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

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Celey D. Keene, Lab Director/Quality Manager

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: デルー		BILL TO				ANALYSIS REQUEST	
Project Manager: Jack Joge V		P.O. #:		-	_		
Address: 10 Dista Dr STE 150	m	Company: (いく					
State: TX	Zip: 797 os	Attn: Bucky Haste	ECN				
Phone #: (432) 738-3003 Fax #:		Address:					
Project #: Project Owner:	िर्फ	City:					
Project Name: Carmon Poderal	2	State: Zip:)	3)	3)		
Project Location: Low Hills, NM		Phone #:		>16	`0(
Sampler Name: Jury Storta		Fax #:	>1c	-1-	15		
FOR LAB USE ONLY	MATRIX	PRESERV. SAMPLING		10	(L		
	RS		-11	(14		
Lab I.D. Sample I.D.	DGE	ER : D/BASE: COOL ER :	ГРН	the set the	BTE		
	# C GR WA SOI OIL SLU	ACI ICE OTH	TIME				
1 A3-FL-1-4.5	×	k 1/5/2	X 0250	у. Ж	×		
-FL-2-			0825 V	×			
3 A4- 50=1= 2.25			0310 x	x	~		
4 A4-SW-2-2.25			5180	メ			
5 AS-FL-1-1			0750 7	イ	× ×		
6 AS-FL-2-1,5			5540	イイ			
7 AS-FL- 3-2			0600	х т	7		
8 AS-FL-4-225			2080	メ	7		
9 A5-SW= 1			offor X	×			
10 A5-52-1	w/ w/	₹ ¥	0745 ×		¢		
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attliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise Relipquished By:	rdinal, regardless of whether such claim is Received By:	based upon any of the above stated rea	Phone Result:		res 🗆 No	Add'l Phone #:	
Time: Icon	hunden a	11 July Loo	Fax Result: REMARKS:	□ Yes		Add'l Fax #:	
Refinquished By: Date:	Received By:	June J					
Time:							
Delivered By: (Circle One)	Sample Condition	n F					
Sampler - UPS - Bus - Other: 2.4°		To'					

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: 12C		BILLTO				ANALYSIS REQUEST	IEST
Project Manager: Jased Staff()		P.O. #:		_	_		
Address: 10 Dest Dr STE 150E		Company: しつら				-	
State: TX	zip: 79705	riky	Haskz II				
Phone #: (432) 23%~3003 Fax #: ~		Address:					
Project #: Project Owner:	: CoG	City:			\rangle		
Project Name: CACMIN Federal		State: Zip:		\ \) Dt		
Project Location: Loco Hills, NM		Phone #:	~		5		
Sampler Name: Jack Stoffel		Fax #:			52 (4		
FOR LAB USE ONLY	MATRIX	PRESERV. SAMPLING			-		12
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Lab I.D. Sample I.D.	RAB OR (C DNTAINEF DUNDWAT STEWATE	ier : D/Base: / Cool ier :	Coll	<u>PPH</u> BTC	BTEN		
	· # C GR WA SO OIL	AC ICE OT	TIME				
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12 AG-R-Z-1.5			5220	х х			
13 A6-FL- 3-1.5			0730	×			
14 AG-FL-4-1.5			5640	x			
15 AL- SU-1-0.75			0700	x			
16 A6-5W-2-0.75			2920	Y' K			
17 AG- SU-3-0.75			0120	1			
18 76-50-4-0.75	K + <	4 4	5120	*		-	
1 to.							
FLCHASE NV IE: Liquity and Unages, cardinals atomity and clents exclusive immedy or any clean atom ophta for the section ophta of the section ophta of the section ophta of the section of the applicable analyses. All cleans including those for neglence and any other cause whateover shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequental damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subclaries, affiliats or exclusive the services the section of the applicable affiliats or exclusions the section of the applicable because the section of	y claim arising whether based in contract leemed waived unless made in writing and without limitation, business interruptions, l	or tort, shall be limited to the amount pa I received by Cardinal within 30 days aft oss of use, or loss of profits incurred by	id by the client for the er completion of the ap client, its subsidiaries,	pplicable		20	
Relinquished By:	Received By:	A	Phone Result:		Yes 🗆 No	Add'I Phone #:	
	Jamara d	Unable	Fax Result: REMARKS:		Yes 🗆 No	Add'l Fax #:	
Time:	Received By:	J					
Delivered By: (Circle One)	Sample Condition	유					
Sampler - UPS - Bus - Other: 346	497 Pres Pres						



May 20, 2019

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

RE: CARMEN FED #1

Enclosed are the results of analyses for samples received by the laboratory on 05/13/19 9:00.

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/ga/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keine

Celey D. Keene Lab Director/Quality Manager



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

Received:	05/13/2019	Sampling Date:	05/13/2019
Reported:	05/20/2019	Sampling Type:	Soil
Project Name:	CARMEN FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG-LOCO HILLS, NM		

Sample ID: A4 - SW - 1-2.25 R (H901721-01)

BTEX 8021B	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/15/2019	ND	1.80	90.2	2.00	0.253	
Toluene*	<0.050	0.050	05/15/2019	ND	1.98	99.2	2.00	1.15	
Ethylbenzene*	0.075	0.050	05/15/2019	ND	2.00	100	2.00	2.59	
Total Xylenes*	<0.150	0.150	05/15/2019	ND	6.45	107	6.00	2.57	
Total BTEX	<0.300	0.300	05/15/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	101 9	73.3-12	9						
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/15/2019	ND	210	105	200	1.14	
DRO >C10-C28*	<10.0	10.0	05/15/2019	ND	213	106	200	2.47	
EXT DRO >C28-C36	<10.0	10.0	05/15/2019	ND					
Surrogate: 1-Chlorooctane	104 9	% 41-142	,						
Surrogate: 1-Chlorooctadecane	107 9	% 37.6-14	7						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	05/13/2019	Sampling Date:	05/13/2019
Reported:	05/20/2019	Sampling Type:	Soil
Project Name:	CARMEN FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG-LOCO HILLS, NM		

Sample ID: A5 - SW - 1-1 R (H901721-02)

BTEX 8021B	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/15/2019	ND	1.80	90.2	2.00	0.253	
Toluene*	<0.050	0.050	05/15/2019	ND	1.98	99.2	2.00	1.15	
Ethylbenzene*	<0.050	0.050	05/15/2019	ND	2.00	100	2.00	2.59	
Total Xylenes*	<0.150	0.150	05/15/2019	ND	6.45	107	6.00	2.57	
Total BTEX	<0.300	0.300	05/15/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	104 %	6 73.3-12	9						
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/15/2019	ND	210	105	200	1.14	
DRO >C10-C28*	<10.0	10.0	05/15/2019	ND	213	106	200	2.47	
EXT DRO >C28-C36	<10.0	10.0	05/15/2019	ND					
Surrogate: 1-Chlorooctane	82.5 9	% 41-142							
Surrogate: 1-Chlorooctadecane	83.2 9	% 37.6-14	7						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

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

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

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: JRC		BILL TO		ANALYSIS REQUEST
Project Manager: JACLE Stoffel		P.O. #:		
Address: 10 DLAN Dr STE 150E		Company: COC		
city: Midland State: TX z	Zip: 79705	Attn: Becky the	Skell	
Phone #: (432) 258-3005 Fax #:		Address:		
Project #: Project Owner:	606	City:		
Project Name: Calmen France		State: Zip:)	
Project Location: Loco H:115, NM		*#:	5	
Sampler Name: J. St-Rcl		Fax #:	15	
FOR LAB USE ONLY	MATRIX	PRESERV. SAMPLING	0	
	ERS ATER		18	
Lab I.D. Sample I.D.	(g)rab or # Containe groundw, wastewat Soil Dil Sludge	DTHER : ACID/BASE: CE / COOL DTHER : DTHER :	TPH BTE	
1 Ay-5W-1-2.25R	1 X	×	X X 0290	
2 A5- Su-1-1R	*	* 5/13/17	X X 5480	
PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable	ned waived unless made in writing and	or tort, shall be limited to the amount paid received by Cardinal within 30 days after	d by the client for the r completion of the applicable	
	Received By:	is based upon any of the above stated real	ult	D No
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Delivered By: (Circle One)	Sample C Cool In	ion CHECKED BY: (Initials)		
Sampler - UPS - Bus - Other: 0.12 #97		A		



May 24, 2019

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

RE: CARMEN FED #1

Enclosed are the results of analyses for samples received by the laboratory on 05/20/19 12:00.

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/ga/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keine

Celey D. Keene Lab Director/Quality Manager



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

Received:	05/20/2019	Sampling Date:	05/20/2019
Reported:	05/24/2019	Sampling Type:	Soil
Project Name:	CARMEN FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG-LOCO HILLS, NM		

Sample ID: A6 - FL - 1-4 (H901804-01)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/21/2019	ND	1.59	79.3	2.00	7.78	
Toluene*	<0.050	0.050	05/21/2019	ND	1.72	85.8	2.00	7.14	
Ethylbenzene*	<0.050	0.050	05/21/2019	ND	1.64	82.1	2.00	6.86	
Total Xylenes*	<0.150	0.150	05/21/2019	ND	4.95	82.4	6.00	6.83	
Total BTEX	<0.300	0.300	05/21/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	91.0 9	73.3-12	9						
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/21/2019	ND	188	94.0	200	6.52	
DRO >C10-C28*	87.9	10.0	05/21/2019	ND	224	112	200	8.64	
EXT DRO >C28-C36	<10.0	10.0	05/21/2019	ND					
Surrogate: 1-Chlorooctane	82.8 9	% 41-142							
Surrogate: 1-Chlorooctadecane	91.9 9	% 37.6-14							

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	05/20/2019	Sampling Date:	05/20/2019
Reported:	05/24/2019	Sampling Type:	Soil
Project Name:	CARMEN FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG-LOCO HILLS, NM		

Sample ID: A6 - FL - 2-4 (H901804-02)

BTEX 8021B	mg/	′kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/21/2019	ND	1.59	79.3	2.00	7.78	
Toluene*	<0.050	0.050	05/21/2019	ND	1.72	85.8	2.00	7.14	
Ethylbenzene*	<0.050	0.050	05/21/2019	ND	1.64	82.1	2.00	6.86	
Total Xylenes*	<0.150	0.150	05/21/2019	ND	4.95	82.4	6.00	6.83	
Total BTEX	<0.300	0.300	05/21/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	94.3	% 73.3-12	9						
Chloride, SM4500Cl-B	mg/	′kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	16.0	05/24/2019	ND	416	104	400	0.00	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/21/2019	ND	188	94.0	200	6.52	
DRO >C10-C28*	71.9	10.0	05/21/2019	ND	224	112	200	8.64	
EXT DRO >C28-C36	<10.0	10.0	05/21/2019	ND					
Surrogate: 1-Chlorooctane	82.9	% 41-142	,						
Surrogate: 1-Chlorooctadecane	90.2	% 37.6-14	7						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	05/20/2019	Sampling Date:	05/20/2019
Reported:	05/24/2019	Sampling Type:	Soil
Project Name:	CARMEN FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG-LOCO HILLS, NM		

Sample ID: A6 - FL - 3-4 (H901804-03)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/21/2019	ND	1.59	79.3	2.00	7.78	
Toluene*	<0.050	0.050	05/21/2019	ND	1.72	85.8	2.00	7.14	
Ethylbenzene*	<0.050	0.050	05/21/2019	ND	1.64	82.1	2.00	6.86	
Total Xylenes*	<0.150	0.150	05/21/2019	ND	4.95	82.4	6.00	6.83	
Total BTEX	<0.300	0.300	05/21/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	92.9	% 73.3-12	9						
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/21/2019	ND	188	94.0	200	6.52	
DRO >C10-C28*	139	10.0	05/21/2019	ND	224	112	200	8.64	
EXT DRO >C28-C36	15.0	10.0	05/21/2019	ND					
Surrogate: 1-Chlorooctane	84.1	% 41-142	2						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	05/20/2019	Sampling Date:	05/20/2019
Reported:	05/24/2019	Sampling Type:	Soil
Project Name:	CARMEN FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG-LOCO HILLS, NM		

Sample ID: A6 - FL - 4-4 (H901804-04)

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	05/21/2019	ND	1.59	79.3	2.00	7.78	
Toluene*	<0.050	0.050	05/21/2019	ND	1.72	85.8	2.00	7.14	
Ethylbenzene*	<0.050	0.050	05/21/2019	ND	1.64	82.1	2.00	6.86	
Total Xylenes*	<0.150	0.150	05/21/2019	ND	4.95	82.4	6.00	6.83	
Total BTEX	<0.300	0.300	05/21/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	91.4	% 73.3-12	9						
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	05/22/2019	ND	190	95.2	200	8.64	
DRO >C10-C28*	20.7	10.0	05/22/2019	ND	210	105	200	16.0	
EXT DRO >C28-C36	<10.0	10.0	05/22/2019	ND					
Surrogate: 1-Chlorooctane	79.6	% 41-142	?						
Surrogate: 1-Chlorooctadecane									

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	05/20/2019	Sampling Date:	05/20/2019
Reported:	05/24/2019	Sampling Type:	Soil
Project Name:	CARMEN FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG-LOCO HILLS, NM		

Sample ID: A6 - SW - 1B-2 (H901804-05)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/21/2019	ND	1.59	79.3	2.00	7.78	
Toluene*	<0.050	0.050	05/21/2019	ND	1.72	85.8	2.00	7.14	
Ethylbenzene*	<0.050	0.050	05/21/2019	ND	1.64	82.1	2.00	6.86	
Total Xylenes*	<0.150	0.150	05/21/2019	ND	4.95	82.4	6.00	6.83	
Total BTEX	<0.300	0.300	05/21/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	92.9	% 73.3-12	9						
Chloride, SM4500Cl-B	mg/	'kg	Analyze	d By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	16.0	16.0	05/24/2019	ND	416	104	400	0.00	
TPH 8015M	mg/	kg	Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/22/2019	ND	190	95.2	200	8.64	
DRO >C10-C28*	<10.0	10.0	05/22/2019	ND	210	105	200	16.0	
EXT DRO >C28-C36	<10.0	10.0	05/22/2019	ND					
Surrogate: 1-Chlorooctane	88.3	% 41-142							
Surrogate: 1-Chlorooctadecane	96.7	% 37.6-14	7						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

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 SM4500CI-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

Celey D. Keine

Celey D. Keene, Lab Director/Quality Manager

Relinquished By: PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, City: Company Name: TRK Relinquished-By: Sampler Name: Project Location: Phone #: 432 - 738 - 300 > Fax #: Project Manager: Project Name: Sampler - UPS - Bus - Other: 1901804 Project #: Address: Delivered By: (Circle One) FOR LAB USE ONLY liates or successors arising out of or related to the performance Lab I.D. 1, Blend 5 0 W 3 ARDINAL aboratories A6-5W-13-101 East Marland, Hobbs, NM 88240 (575) 393-2326 FAX (575) 393-2476 46-シャンシン 1005 6. 10-12-4-4 000 >150 Jarce FC-J 52-2-4 Sample I.D. . 2 2 1-4 3 edera 25 Petro Project Owner: Time: 12:00 Date: Time: Date: services hereunder by Cardinal, 0 State:7 X 5-20-19 2.8 3TS Zip: 71 705 Received By: n (G)RAB OR (C)OMP. 1605 Received By ? 000 regardless of whether such claim is # CONTAINERS GROUNDWATER Sample Condition Cool Intact TYes TYes No No No WASTEWATER MATRIX SOIL OIL SLUDGE P.O. #: State: City: Attn: Back Company: OTHER Fax #: Phone #: Address: ACID/BASE: PRESERV CHECKED BY: (Initials) ICE / COOL AC BILL TO OTHER : Zip 5 DATE SAMPLING 00 Hestel 8 11:00 10:15 CHAIN-OF-CUSTODY AND ANALYSIS REQUEST Fax Result: Pyes No Add'I Fax #: REMARKS: JS& FRI@TRCCompanyes .com 10:4 Abrant RHykell @ concho. Com Dlooper !! Phone Result: sons or otherwise 10:00 Tavare2 TIME 8015 PF 1 □ Yes 80218 1500 I I No ANALYSIS Add'l Phone #: REQUEST 1 1

Page 8 of 8



May 31, 2019

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

RE: CARMEN FED #1

Enclosed are the results of analyses for samples received by the laboratory on 05/22/19 14:20.

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

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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. Keine

Celey D. Keene Lab Director/Quality Manager



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

Received:	05/22/2019	Sampling Date:	05/22/2019
Reported:	05/31/2019	Sampling Type:	Soil
Project Name:	CARMEN FED #1	Sampling Condition:	** (See Notes)
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG-LOCO HILLS, NM		

Sample ID: A3 - FL - 1-0.75 (H901848-01)

BTEX 8021B	mg/	′kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/29/2019	ND	1.90	94.8	2.00	2.24	
Toluene*	<0.050	0.050	05/29/2019	ND	2.06	103	2.00	1.93	
Ethylbenzene*	<0.050	0.050	05/29/2019	ND	1.98	98.9	2.00	0.752	
Total Xylenes*	<0.150	0.150	05/29/2019	ND	6.06	101	6.00	0.0359	
Total BTEX	<0.300	0.300	05/29/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	92.7	% 73.3-12	9						
Chloride, SM4500Cl-B	mg/	′kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	160	16.0	05/30/2019	ND	400	100	400	0.00	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/24/2019	ND	197	98.7	200	4.60	
DRO >C10-C28*	<10.0	10.0	05/24/2019	ND	199	99.3	200	9.33	
EXT DRO >C28-C36	<10.0	10.0	05/24/2019	ND					
Surrogate: 1-Chlorooctane	93.1	% 41-142	2						
Surrogate: 1-Chlorooctadecane	96.4	% 37.6-14	7						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

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

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager

	Page 4 of 4
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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

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Company Name:	TRC			SILLIC			
Project Manager:	Jacob Yol	たー	て.C. 用	1			
Address: (C)	Rester Dr. S	K KOE	Company:	106			
city: n.e	for State:	e:7X Zip: 71%	35 Attn: 15a	ty Hester 11)		
Phone #: 432	-738-3005 Fax #:		Address:				
Project #:	Proje	Project Owner: COC	City:))		
Project Name: C	Emer Febre) 20	State:	Zip:	1 3 60		
Project Location:	Loco Kills	int	Phone #:		11		
Sampler Name:	Brien Cale	5	Fax	1	2		
FOR LAB USE ONLY	1		MATRIX PRESERV.	/. SAMPLING	R		
		ERS ATER			CE CE		
Lab I.D.	Sample I.D.	(G)RAB OR # CONTAIN GROUNDW WASTEWA	Soil Oil Sludge Other : Acid/base Ice / Cool Other :	DATE	TPH BTEX		
1	A3-F2-1-07	-	X	52.17 1:00	++++		
	.1						
PLEASE NOTE: Liability and analyses, All claims including service. In no event shall Ca	PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client to the analyses. All claims including those for negligence and any other cause whatsoever shall be demended waved unless made in writing and received by Cardinal within 30 days after completion of the applicable analyses. All claims including those for negligence and any other cause whatsoever shall be demended waved unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In a event shall Cardinal be lable for incidental or consequental damages, including without limitation, business interruptions, loss of use, o loss of profits incurred by client, its subsidiaries, services in an event shall Cardinal be lable for incidental or consequental damages, including without limitation, business interruptions, loss of use, o loss of profits incurred by client, its subsidiaries, services the subsidiaries interruptions in the above stated reasons or otherwise.	sive remedy for any claim arising whether b tsoever shall be deemed walved unless ma images, including without limitation, busines s hereunder by Cardinal, regardless of whe	ased in contract or tort, shall be limit ide in writing and received by Cardin ss interruptions, loss of use, or loss o ther such claim is based upon any o	led to the amount paid by the clier al within 30 days after completion of profits incurred by client, its sub- f the above stated reasons or othe	plicab		
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Sampler - UPS	- Bus - Other:	6.10 #97 1		7	thought straight	raight to lab from field.	X
					•	11 11	

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May 31, 2019

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

RE: CARMEN FED #1

Enclosed are the results of analyses for samples received by the laboratory on 05/23/19 16:15.

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.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keine

Celey D. Keene Lab Director/Quality Manager



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

Received:	05/23/2019	Sampling Date:	05/23/2019
Reported:	05/31/2019	Sampling Type:	Soil
Project Name:	CARMEN FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG-LOCO HILLS, NM		

Sample ID: A2 - FL - 1-0.25 (H901856-01)

BTEX 8021B	mg,	′kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/29/2019	ND	1.90	94.8	2.00	2.24	
Toluene*	<0.050	0.050	05/29/2019	ND	2.06	103	2.00	1.93	
Ethylbenzene*	<0.050	0.050	05/29/2019	ND	1.98	98.9	2.00	0.752	
Total Xylenes*	<0.150	0.150	05/29/2019	ND	6.06	101	6.00	0.0359	
Total BTEX	<0.300	0.300	05/29/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	94.6	% 73.3-12	9						
Chloride, SM4500Cl-B mg/kg		Analyzed By: JH							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	48.0	16.0	05/30/2019	ND	400	100	400	0.00	
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/24/2019	ND	197	98.7	200	4.60	
DRO >C10-C28*	<10.0	10.0	05/24/2019	ND	199	99.3	200	9.33	
EXT DRO >C28-C36	<10.0	10.0	05/24/2019	ND					
Surrogate: 1-Chlorooctane	98.0	% 41-142	2						
Surrogate: 1-Chlorooctadecane	100	% 37.6-14	7						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	05/23/2019	Sampling Date:	05/23/2019
Reported:	05/31/2019	Sampling Type:	Soil
Project Name:	CARMEN FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG-LOCO HILLS, NM		

Sample ID: A2 - FL - 2-0.25 (H901856-02)

BTEX 8021B	mg/	/kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/29/2019	ND	1.90	94.8	2.00	2.24	
Toluene*	<0.050	0.050	05/29/2019	ND	2.06	103	2.00	1.93	
Ethylbenzene*	<0.050	0.050	05/29/2019	ND	1.98	98.9	2.00	0.752	
Total Xylenes*	<0.150	0.150	05/29/2019	ND	6.06	101	6.00	0.0359	
Total BTEX	<0.300	0.300	05/29/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	92.4	% 73.3-12	9						
Chloride, SM4500Cl-B	mg/	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	05/30/2019	ND	400	100	400	3.92	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/24/2019	ND	197	98.7	200	4.60	
DRO >C10-C28*	<10.0	10.0	05/24/2019	ND	199	99.3	200	9.33	
EXT DRO >C28-C36	<10.0	10.0	05/24/2019	ND					
Surrogate: 1-Chlorooctane	89.4	% 41-142	2						
Surrogate: 1-Chlorooctadecane	88.9	% 37.6-14	7						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	05/23/2019	Sampling Date:	05/23/2019
Reported:	05/31/2019	Sampling Type:	Soil
Project Name:	CARMEN FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG-LOCO HILLS, NM		

Sample ID: A2 - SW - 1-0.1 (H901856-03)

BTEX 8021B	mg/	'kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/29/2019	ND	1.90	94.8	2.00	2.24	
Toluene*	<0.050	0.050	05/29/2019	ND	2.06	103	2.00	1.93	
Ethylbenzene*	<0.050	0.050	05/29/2019	ND	1.98	98.9	2.00	0.752	
Total Xylenes*	<0.150	0.150	05/29/2019	ND	6.06	101	6.00	0.0359	
Total BTEX	<0.300	0.300	05/29/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	94.7	% 73.3-12	9						
Chloride, SM4500Cl-B	mg/	'kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	05/30/2019	ND	400	100	400	3.92	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/24/2019	ND	197	98.7	200	4.60	
DRO >C10-C28*	<10.0	10.0	05/24/2019	ND	199	99.3	200	9.33	
EXT DRO >C28-C36	<10.0	10.0	05/24/2019	ND					
Surrogate: 1-Chlorooctane	102 9	% 41-142							
Surrogate: 1-Chlorooctadecane	105 9	37.6-14	7						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	05/23/2019	Sampling Date:	05/23/2019
Reported:	05/31/2019	Sampling Type:	Soil
Project Name:	CARMEN FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG-LOCO HILLS, NM		

Sample ID: A2 - SW - 3-0.1 (H901856-04)

BTEX 8021B	mg/	'kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	05/29/2019	ND	1.98	98.8	2.00	4.49	
Toluene*	<0.050	0.050	05/29/2019	ND	2.14	107	2.00	4.44	
Ethylbenzene*	<0.050	0.050	05/29/2019	ND	2.00	100	2.00	3.13	
Total Xylenes*	<0.150	0.150	05/29/2019	ND	6.10	102	6.00	3.57	
Total BTEX	<0.300	0.300	05/29/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	93.0	% 73.3-12	9						
Chloride, SM4500Cl-B	mg/	'kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	05/30/2019	ND	400	100	400	3.92	
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/24/2019	ND	197	98.7	200	4.60	
DRO >C10-C28*	<10.0	10.0	05/24/2019	ND	199	99.3	200	9.33	
EXT DRO >C28-C36	<10.0	10.0	05/24/2019	ND					
Surrogate: 1-Chlorooctane	100 9	% 41-142	2						
Surrogate: 1-Chlorooctadecane	103 9	37.6-14	7						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

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

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

4

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

Sampler - UPS - Bus - Other: 1, 8 497 Fres Fres	Time:	Relinguished By: A Date: Received By:	Relinquished By: $S-23-19$ Received By:	TC-C-C Tube: Locump and user index, unitial stating and using sectors the user of any state of contract or tot, shall be inhied to the amount paid by the clark whatsever shall be deemed waved unless made in writing and received by Cardinal within 20 days after completion of the applica service. In no event shall Cardinal be liable for indidental or consequental damages, including without inhibition, business interruptions, loss of user, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.	DI EAGE NOTE: 1 ishlike and Damanon Continuing lishlike and alignship available a		4 A2-5W-3-8.1 C 1 1	3 42-5-2-2.1 (1)	2 42-52-2.25 61	1 1	(G)RAB OR (C)OMI # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE	FOR LAB USE ONLY		Project Location: Loco HX15, NM	Project Name: Lanco Parte al	Project #: Project Owner:	Phone #: 432-738-300 Rax #: 4	City: Noller State: 77 Zip: 71705	Address: 10 Deste Dr. STE 150 E	Project Manager: Jare Storte	Company Name: TRC
(Initials)	1	Uldat M T315F	Phone Result: Fax Result:	rorr, snall be invited to the annount paid by the clien seeived by Cardinal within 30 days after completion to is of use, or loss of profits incurred by client, its subs based upon any of the above stated reasons or othe			10.45	10:30	51:00 1 1	1	OTHER : ACID/BASE: ICE / COOL OTHER : DA	PRESERV. SAMPLING	Fax #:	Phone #:	State: Zip:	City:	Address:	Attn: Becky Itestell	Company: CoG	P.O. #:	BILL TO
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June 04, 2019

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

RE: CARMEN FED #1

Enclosed are the results of analyses for samples received by the laboratory on 05/30/19 9:55.

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/ga/lab_accred_certif.html.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keine

Celey D. Keene Lab Director/Quality Manager



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

Received:	05/30/2019	Sampling Date:	05/29/2019
Reported:	06/04/2019	Sampling Type:	Soil
Project Name:	CARMEN FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG-LOCO HILLS, NM		

Sample ID: A2 - FL - 3-0.25 (H901901-01)

BTEX 8021B	mg/	′kg	Analyze	d By: ms					S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/04/2019	ND	1.90	95.0	2.00	2.08	
Toluene*	0.072	0.050	06/04/2019	ND	2.05	103	2.00	4.89	
Ethylbenzene*	2.25	0.050	06/04/2019	ND	1.95	97.5	2.00	3.06	
Total Xylenes*	5.79	0.150	06/04/2019	ND	5.92	98.6	6.00	2.92	
Total BTEX	8.12	0.300	06/04/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	153	% 73.3-12	9						
TPH 8015M	mg/	′kg	Analyze	d By: MS					S-06
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<50.0	50.0	05/31/2019	ND	189	94.6	200	0.199	
DRO >C10-C28*	3270	50.0	05/31/2019	ND	189	94.7	200	4.09	
EXT DRO >C28-C36	175	50.0	05/31/2019	ND					
Surrogate: 1-Chlorooctane	174	% 41-142	2						
Surrogate: 1-Chlorooctadecane	183	% 37.6-14	-						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	05/30/2019	Sampling Date:	05/29/2019
Reported:	06/04/2019	Sampling Type:	Soil
Project Name:	CARMEN FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG-LOCO HILLS, NM		

Sample ID: A2 - FL - 4-0.25 (H901901-02)

BTEX 8021B	mg,	/kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/01/2019	ND	1.90	95.0	2.00	2.08	
Toluene*	<0.050	0.050	06/01/2019	ND	2.05	103	2.00	4.89	
Ethylbenzene*	<0.050	0.050	06/01/2019	ND	1.95	97.5	2.00	3.06	
Total Xylenes*	0.181	0.150	06/01/2019	ND	5.92	98.6	6.00	2.92	
Total BTEX	<0.300	0.300	06/01/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	109	% 73.3-12	9						
Chloride, SM4500Cl-B	mg,	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	06/03/2019	ND	416	104	400	3.92	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/31/2019	ND	189	94.6	200	0.199	
DRO >C10-C28*	317	10.0	05/31/2019	ND	189	94.7	200	4.09	
EXT DRO >C28-C36	<10.0	10.0	05/31/2019	ND					
Surrogate: 1-Chlorooctane	91.6	% 41-142	2						
Surrogate: 1-Chlorooctadecane	106	% 37.6-14	7						

Cardinal Laboratories

*=Accredited Analyte

Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	05/30/2019	Sampling Date:	05/29/2019
Reported:	06/04/2019	Sampling Type:	Soil
Project Name:	CARMEN FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG-LOCO HILLS, NM		

Sample ID: A2 - SW - 2-0.1 (H901901-03)

BTEX 8021B	mg/	′kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/01/2019	ND	1.90	95.0	2.00	2.08	
Toluene*	<0.050	0.050	06/01/2019	ND	2.05	103	2.00	4.89	
Ethylbenzene*	0.193	0.050	06/01/2019	ND	1.95	97.5	2.00	3.06	
Total Xylenes*	0.516	0.150	06/01/2019	ND	5.92	98.6	6.00	2.92	
Total BTEX	0.708	0.300	06/01/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	110 9	73.3-12	9						
TPH 8015M	mg/	′kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/31/2019	ND	189	94.6	200	0.199	
DRO >C10-C28*	1290	10.0	05/31/2019	ND	189	94.7	200	4.09	
EXT DRO >C28-C36	242	10.0	05/31/2019	ND					
Surrogate: 1-Chlorooctane	111 9	% 41-142	2						
Surrogate: 1-Chlorooctadecane	136 9	% 37.6-14	7						

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	05/30/2019	Sampling Date:	05/29/2019
Reported:	06/04/2019	Sampling Type:	Soil
Project Name:	CARMEN FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG-LOCO HILLS, NM		

Sample ID: A1 - SW - 1-0.5 (H901901-04)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/01/2019	ND	1.90	95.0	2.00	2.08	
Toluene*	<0.050	0.050	06/01/2019	ND	2.05	103	2.00	4.89	
Ethylbenzene*	<0.050	0.050	06/01/2019	ND	1.95	97.5	2.00	3.06	
Total Xylenes*	<0.150	0.150	06/01/2019	ND	5.92	98.6	6.00	2.92	
Total BTEX	<0.300	0.300	06/01/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	106 9	73.3-12	9						
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/31/2019	ND	189	94.6	200	0.199	
DRO >C10-C28*	<10.0	10.0	05/31/2019	ND	189	94.7	200	4.09	
EXT DRO >C28-C36	<10.0	10.0	05/31/2019	ND					
Surrogate: 1-Chlorooctane	85.0	% 41-142							
Surrogate: 1-Chlorooctadecane	86.0	% 37.6-14	7						

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Celey D. Keene, Lab Director/Quality Manager



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

Received:	05/30/2019	Sampling Date:	05/29/2019
Reported:	06/04/2019	Sampling Type:	Soil
Project Name:	CARMEN FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG-LOCO HILLS, NM		

Sample ID: A1 - SW - 2-0.35 (H901901-05)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/01/2019	ND	1.86	93.2	2.00	1.28	
Toluene*	0.053	0.050	06/01/2019	ND	1.98	99.0	2.00	0.494	
Ethylbenzene*	0.401	0.050	06/01/2019	ND	1.92	95.8	2.00	0.881	
Total Xylenes*	1.45	0.150	06/01/2019	ND	5.83	97.2	6.00	0.752	
Total BTEX	1.90	0.300	06/01/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	120 9	73.3-12	9						
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	33.9	10.0	05/31/2019	ND	189	94.6	200	0.199	
DRO >C10-C28*	1280	10.0	05/31/2019	ND	189	94.7	200	4.09	
EXT DRO >C28-C36	160	10.0	05/31/2019	ND					
Surrogate: 1-Chlorooctane	115 9	6 41-142	2						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



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Received:	05/30/2019	Sampling Date:	05/29/2019
Reported:	06/04/2019	Sampling Type:	Soil
Project Name:	CARMEN FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG-LOCO HILLS, NM		

Sample ID: A1 - SW - 3-0.35 (H901901-06)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/01/2019	ND	1.86	93.2	2.00	1.28	
Toluene*	<0.050	0.050	06/01/2019	ND	1.98	99.0	2.00	0.494	
Ethylbenzene*	<0.050	0.050	06/01/2019	ND	1.92	95.8	2.00	0.881	
Total Xylenes*	<0.150	0.150	06/01/2019	ND	5.83	97.2	6.00	0.752	
Total BTEX	<0.300	0.300	06/01/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	106 %	6 73.3-12	9						
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/31/2019	ND	189	94.6	200	0.199	
DRO >C10-C28*	<10.0	10.0	05/31/2019	ND	189	94.7	200	4.09	
EXT DRO >C28-C36	<10.0	10.0	05/31/2019	ND					
Surrogate: 1-Chlorooctane	85.0 9	% 41-142	?						
Surrogate: 1-Chlorooctadecane	85.7 9	% 37.6-14							

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Celey D. Keene, Lab Director/Quality Manager



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

Received:	05/30/2019	Sampling Date:	05/29/2019
Reported:	06/04/2019	Sampling Type:	Soil
Project Name:	CARMEN FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG-LOCO HILLS, NM		

Sample ID: A1 - FL - 1-0.75 (H901901-07)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/01/2019	ND	1.86	93.2	2.00	1.28	
Toluene*	<0.050	0.050	06/01/2019	ND	1.98	99.0	2.00	0.494	
Ethylbenzene*	<0.050	0.050	06/01/2019	ND	1.92	95.8	2.00	0.881	
Total Xylenes*	<0.150	0.150	06/01/2019	ND	5.83	97.2	6.00	0.752	
Total BTEX	<0.300	0.300	06/01/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	106 9	73.3-12	9						
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/31/2019	ND	189	94.6	200	0.199	
DRO >C10-C28*	<10.0	10.0	05/31/2019	ND	189	94.7	200	4.09	
EXT DRO >C28-C36	<10.0	10.0	05/31/2019	ND					
Surrogate: 1-Chlorooctane	85.9	% 41-142	,						
Surrogate: 1-Chlorooctadecane	87.0	% 37.6-14	7						

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Celey D. Keene, Lab Director/Quality Manager



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Received:	05/30/2019	Sampling Date:	05/29/2019
Reported:	06/04/2019	Sampling Type:	Soil
Project Name:	CARMEN FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG-LOCO HILLS, NM		

Sample ID: A1 - FL - 2-0.5 (H901901-08)

BTEX 8021B	mg	/kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/01/2019	ND	1.86	93.2	2.00	1.28	
Toluene*	0.242	0.050	06/01/2019	ND	1.98	99.0	2.00	0.494	
Ethylbenzene*	1.19	0.050	06/01/2019	ND	1.92	95.8	2.00	0.881	
Total Xylenes*	2.48	0.150	06/01/2019	ND	5.83	97.2	6.00	0.752	
Total BTEX	3.91	0.300	06/01/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	119	% 73.3-12	9						
Chloride, SM4500Cl-B	mg	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	06/03/2019	ND	416	104	400	3.92	
TPH 8015M	mg	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/31/2019	ND	189	94.6	200	0.199	
DRO >C10-C28*	1090	10.0	05/31/2019	ND	189	94.7	200	4.09	
EXT DRO >C28-C36	154	10.0	05/31/2019	ND					
Surrogate: 1-Chlorooctane	107	% 41-142	2						
Surrogate: 1-Chlorooctadecane	123	% 37.6-14	7						

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Celez D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	05/30/2019	Sampling Date:	05/29/2019
Reported:	06/04/2019	Sampling Type:	Soil
Project Name:	CARMEN FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG-LOCO HILLS, NM		

Sample ID: A1 - FL - 3-0.75 (H901901-09)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/01/2019	ND	1.86	93.2	2.00	1.28	
Toluene*	<0.050	0.050	06/01/2019	ND	1.98	99.0	2.00	0.494	
Ethylbenzene*	0.052	0.050	06/01/2019	ND	1.92	95.8	2.00	0.881	
Total Xylenes*	<0.150	0.150	06/01/2019	ND	5.83	97.2	6.00	0.752	
Total BTEX	<0.300	0.300	06/01/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	107 %	6 73.3-12	9						
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/31/2019	ND	189	94.6	200	0.199	
DRO >C10-C28*	308	10.0	05/31/2019	ND	189	94.7	200	4.09	
EXT DRO >C28-C36	<10.0	10.0	05/31/2019	ND					
Surrogate: 1-Chlorooctane	95.6 9	% 41-142	?						
Surrogate: 1-Chlorooctadecane	120 %	6 37.6-14	7						

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Celey D. Keene, Lab Director/Quality Manager



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

Received:	05/30/2019	Sampling Date:	05/29/2019
Reported:	06/04/2019	Sampling Type:	Soil
Project Name:	CARMEN FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG-LOCO HILLS, NM		

Sample ID: A1 - FL - 4-0.5 (H901901-10)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/01/2019	ND	1.86	93.2	2.00	1.28	
Toluene*	<0.050	0.050	06/01/2019	ND	1.98	99.0	2.00	0.494	
Ethylbenzene*	0.115	0.050	06/01/2019	ND	1.92	95.8	2.00	0.881	
Total Xylenes*	0.310	0.150	06/01/2019	ND	5.83	97.2	6.00	0.752	
Total BTEX	0.425	0.300	06/01/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	108 9	6 73.3-12	9						
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	05/31/2019	ND	189	94.6	200	0.199	
DRO >C10-C28*	855	10.0	05/31/2019	ND	189	94.7	200	4.09	
EXT DRO >C28-C36	132	10.0	05/31/2019	ND					
Surrogate: 1-Chlorooctane	95.2	% 41-142	2						
Surrogate: 1-Chlorooctadecane	124 9	37.6-14	7						

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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	05/30/2019	Sampling Date:	05/29/2019
Reported:	06/04/2019	Sampling Type:	Soil
Project Name:	CARMEN FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG-LOCO HILLS, NM		

Sample ID: A1 - FL - 5-0.5 (H901901-11)

BTEX 8021B	mg,	/kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/01/2019	ND	1.86	93.2	2.00	1.28	
Toluene*	0.152	0.050	06/01/2019	ND	1.98	99.0	2.00	0.494	
Ethylbenzene*	0.690	0.050	06/01/2019	ND	1.92	95.8	2.00	0.881	
Total Xylenes*	1.54	0.150	06/01/2019	ND	5.83	97.2	6.00	0.752	
Total BTEX	2.38	0.300	06/01/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	117 9	% 73.3-12	9						
Chloride, SM4500Cl-B	mg/	/kg	Analyze	d By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	96.0	16.0	06/03/2019	ND	416	104	400	3.92	
TPH 8015M	mg/	/kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	33.1	10.0	06/01/2019	ND	189	94.6	200	0.199	
DRO >C10-C28*	669	10.0	06/01/2019	ND	189	94.7	200	4.09	
EXT DRO >C28-C36	51.8	10.0	06/01/2019	ND					
Surrogate: 1-Chlorooctane	104	% 41-142	2						
Surrogate: 1-Chlorooctadecane	108	% 37.6-14	7						

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Celey D. Keene, Lab Director/Quality Manager



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

Received:	05/30/2019	Sampling Date:	05/29/2019
Reported:	06/04/2019	Sampling Type:	Soil
Project Name:	CARMEN FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG-LOCO HILLS, NM		

Sample ID: A1 - FL - 6-1.0 (H901901-12)

BTEX 8021B	mg/	kg	Analyze	d By: ms					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/01/2019	ND	1.86	93.2	2.00	1.28	
Toluene*	<0.050	0.050	06/01/2019	ND	1.98	99.0	2.00	0.494	
Ethylbenzene*	<0.050	0.050	06/01/2019	ND	1.92	95.8	2.00	0.881	
Total Xylenes*	<0.150	0.150	06/01/2019	ND	5.83	97.2	6.00	0.752	
Total BTEX	<0.300	0.300	06/01/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	105 9	73.3-12	9						
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/01/2019	ND	189	94.6	200	0.199	
DRO >C10-C28*	<10.0	10.0	06/01/2019	ND	189	94.7	200	4.09	
EXT DRO >C28-C36	<10.0	10.0	06/01/2019	ND					
Surrogate: 1-Chlorooctane	89.2	% 41-142							
Surrogate: 1-Chlorooctadecane	88.6	% 37.6-14	7						

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Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

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Company Name:	KC					+			Γ		-	BILL		70						AN,	AL	ANALYSIS		EC	REQUEST	ST					
Project Manager:	Jucil Stoffe	5							P.C	P.O. #:											_					_		-			
Address: 10 Dest-	1. Dr STE	150E							Co	Company:	iny:	0	06	V												-		-		giant times	
City: Midland	i	State: TX	Zip:		sot 62	8	1		Attn:	2	Ra	F		Jas l	Haskell																
Phone #: (432) 27	238-3003	Fax #: /							Ad	Address:	S:																				
Project #:		Project Owner:	0	206	M				City:	Y.																					
Project Name:	smen Federal								State:	ite:		N	Zip:																		
Project Location:	Loco Hills, N	NA	-	1				i	Ph	Phone #:	*	1						00)													
Sampler Name: S	. Stoffer								Fax #:	¢#:								50													
FOR LAB USE ONLY			»,	_	-	M	MATRIX	×		PRE	PRESERV.	~	SA	SAMPLING	ING	5)	ZIË	(4											_		
Lab I.D.	Sample I.D.	Ģ	OR (C)OMF	AINERS	DWATER	WATER		1	:	19-21-22						f (8015	X (80)	oride (3												
Hadidol			(G)RAE	-		WASTE SOIL	OIL	SLUDG	OTHER	ACID/B	ICE / C	OTHER	P	DATE	TIME	TP	BTI	Ch													
1 A2-	-FL-3 - 0.25		C	-	_	×	<u>~</u>					S	5/29	1/19	1100	×	×				_			\square				-			
2 A2	-FL-4-0.25		0			×					×	য	5/29	119	1105	×	×	×													
3 A2	-SW - 2 - 0.1		0	-	-	×					×	J	5/29	1/19	1130	×	×														
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S AI	-SW-2 - 0.35	S	0	1-	-	×					×	1.051	5 29	9/19	1535	×	×				-		-	ļ		1					
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analyses. All claims including those for neglence and any other cause whateover shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidential or consequental damages, including without limitation, business interruptions, loss of use, or loss of profils incurred by client, it subsidiaries, affiliates or successors anising out of or related to the performance of services here under the Cardinal relatives of whether such chains is based upon and the above as the constraint of the applicable affiliates or successors anising out of or related to the performance of services here under the Cardinal relatives.	reges, caruinals habing and cire se for negligence and any other o I be liable for incidental or conse of or related to the performance	varurials insuity and utents exclusive temeby for any dater ansing whether based in contract or chr. Shall be limited to the amount paid by the clent for the registerioe and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the ary ble for incidential or consequential damages, including without limitation, busies interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, lated to the performance of services hereinder by Cardinal reparters of whether such actions are of the check on a sub-the construct action are an effect.	deemed g withou	n ansing waived l limitati	g wheth I unles on, but	s made siness	ed in o in writ interru	ing an otions.	t or tor d recei loss ol	ved by ved by	Cardin Cardin or loss	hal will of prof	the arr hin 30 c its incu	days af	aid by the client ter completion o client, its subsid	for the of the applicab diaries,	sle														1
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Page 16 of 16 aboratories

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

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Company Name:	TRL			BILL TO				ANALYSIS RE	REQUEST	L
Project Manager:	Juril Stoffel	5	8	P.O. #:						
Address: 10 D.	Di	150E		Company: CoG						
City: Mi Lland		State: TX	Sotht :diz	Attn: Becky Has	Haskell					
Phone #: (432)	232-3003	Fax #: /		Address:						
Project #:		Project Owner:	Cok	City:						
Project Name:	armen Federal			State: Zip:)			
Project Location:		3		Phone #:		2	50			
Sampler Name:	ō			Fax #:)	5			
FOR LAB USE ONLY	c.		MATRIX			ZIB	.4		-	
		7	NERS WATER		(4015	x (807	or 120 1			
H901901	Sample I.D.	Ģ	(G)RAB O # CONTAI GROUND WASTEW SOIL OIL	SLUDGE OTHER : ACID/BAS ICE / COO OTHER : DATE	TIME	BTE	Chie			
11	A1-FL-5- D.5		C i X	X 5/29/19	9 1602 X	×	×			
12	A1-FL-6-1.	0	C - X	X 5/29/19	Y OIAI P	×				
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PLEASE NOTE: Liability and analyses. All daims including service In no event shall Can	Damages, Cardinal's liability and clie those for negligence and any other or thinal be liable for incidental or conser	nt's exclusive remedy for a ause whatsoever shall be tuental damages, including	any claim arising whether based in a deemed waived unless made in wri dewithout limitation, business interru d without limitation.	PLEASE NOTE: Liability and Damages, Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service in no event thall Cardinal he liable for incidential or consecuential dramages including without limitation, business interruptors, buss of uses of profits incurred by client, its subsidiaries.	paid by the client for the after completion of the app ov client, its subsidiaries.	Jicable	-	-	-	L
affiliates or successors arising out of or related to the pe Relinquished By:	out of or related to the performance	Date:	Cardinal, regardless of whether such Received By:	mance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Date: Phone Ress Phone Ress	Phone Result:	: 🗆 Yes	I No	Add'l Phone #:		
Kun	24	Time: 0955	Jamar	2 Aldallyc	Fax Result: REMARKS:	□ Yes	□ <mark>No</mark>	Add'l Fax #:	~	
-		Time:		(
Delivered By: (Circle One)	(Circle One)		Sample Condition Cool Intact	Condition CHECKED BY: Intact (Initials)						
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June 07, 2019

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

RE: CARMEN FED #1

Enclosed are the results of analyses for samples received by the laboratory on 06/06/19 14:35.

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.

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

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

Accreditation applies to public drinking water matrices.

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

Sincerely,

Celey D. Keine

Celey D. Keene Lab Director/Quality Manager



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

Received:	06/06/2019	Sampling Date:	06/06/2019
Reported:	06/07/2019	Sampling Type:	Soil
Project Name:	CARMEN FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG-LOCO HILLS, NM		

Sample ID: A2 - SW - 2-0.1R (H901984-01)

BTEX 8021B	mg,	kg	Analyze	d By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/06/2019	ND	2.22	111	2.00	7.52	
Toluene*	<0.050	0.050	06/06/2019	ND	1.98	98.9	2.00	7.60	
Ethylbenzene*	<0.050	0.050	06/06/2019	ND	1.91	95.3	2.00	6.55	
Total Xylenes*	<0.150	0.150	06/06/2019	ND	5.71	95.2	6.00	5.36	
Total BTEX	<0.300	0.300	06/06/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	124	73.3-12	9						
TPH 8015M	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/06/2019	ND	186	93.2	200	6.21	
DRO >C10-C28*	<10.0	10.0	06/06/2019	ND	246	123	200	5.05	
EXT DRO >C28-C36	<10.0	10.0	06/06/2019	ND					
Surrogate: 1-Chlorooctane	89.1	% 41-142							
Surrogate: 1-Chlorooctadecane	94.1	% 37.6-14	7						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	06/06/2019	Sampling Date:	06/06/2019
Reported:	06/07/2019	Sampling Type:	Soil
Project Name:	CARMEN FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG-LOCO HILLS, NM		

Sample ID: A1 - SW - 2-0.35R (H901984-02)

BTEX 8021B	mg/	'kg	Analyze	d By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/06/2019	ND	2.22	111	2.00	7.52	
Toluene*	<0.050	0.050	06/06/2019	ND	1.98	98.9	2.00	7.60	
Ethylbenzene*	<0.050	0.050	06/06/2019	ND	1.91	95.3	2.00	6.55	
Total Xylenes*	<0.150	0.150	06/06/2019	ND	5.71	95.2	6.00	5.36	
Total BTEX	<0.300	0.300	06/06/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	118 9	73.3-12	9						
TPH 8015M	mg/	'kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/06/2019	ND	186	93.2	200	6.21	
DRO >C10-C28*	<10.0	10.0	06/06/2019	ND	246	123	200	5.05	
EXT DRO >C28-C36	<10.0	10.0	06/06/2019	ND					
Surrogate: 1-Chlorooctane	89.5	% 41-142	,						
Surrogate: 1-Chlorooctadecane	94.8	% 37.6-14	7						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	06/06/2019	Sampling Date:	06/06/2019
Reported:	06/07/2019	Sampling Type:	Soil
Project Name:	CARMEN FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG-LOCO HILLS, NM		

Sample ID: A1 - FL - 2-0.75 (H901984-03)

BTEX 8021B	mg/	kg	Analyze	d By: BF					S-04
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/06/2019	ND	2.22	111	2.00	7.52	
Toluene*	<0.050	0.050	06/06/2019	ND	1.98	98.9	2.00	7.60	
Ethylbenzene*	<0.050	0.050	06/06/2019	ND	1.91	95.3	2.00	6.55	
Total Xylenes*	<0.150	0.150	06/06/2019	ND	5.71	95.2	6.00	5.36	
Total BTEX	<0.300	0.300	06/06/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	165 %	73.3-12	9						
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/06/2019	ND	186	93.2	200	6.21	
DRO >C10-C28*	132	10.0	06/06/2019	ND	246	123	200	5.05	
EXT DRO >C28-C36	<10.0	10.0	06/06/2019	ND					
Surrogate: 1-Chlorooctane	86.6	% 41-142	,						
Surrogate: 1-Chlorooctadecane	98.0	% 37.6-14	7						

Cardinal Laboratories

*=Accredited Analyte

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



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

Received:	06/06/2019	Sampling Date:	06/06/2019
Reported:	06/07/2019	Sampling Type:	Soil
Project Name:	CARMEN FED #1	Sampling Condition:	Cool & Intact
Project Number:	NONE GIVEN	Sample Received By:	Tamara Oldaker
Project Location:	COG-LOCO HILLS, NM		

Sample ID: A2 - FL - 3-0.5 (H901984-04)

BTEX 8021B	mg/	kg	Analyze	d By: BF					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/06/2019	ND	2.22	111	2.00	7.52	
Toluene*	<0.050	0.050	06/06/2019	ND	1.98	98.9	2.00	7.60	
Ethylbenzene*	<0.050	0.050	06/06/2019	ND	1.91	95.3	2.00	6.55	
Total Xylenes*	<0.150	0.150	06/06/2019	ND	5.71	95.2	6.00	5.36	
Total BTEX	<0.300	0.300	06/06/2019	ND					
Surrogate: 4-Bromofluorobenzene (PID	120 9	73.3-12	9						
TPH 8015M	mg/	kg	Analyze	d By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	06/06/2019	ND	186	93.2	200	6.21	
DRO >C10-C28*	203	10.0	06/06/2019	ND	246	123	200	5.05	
EXT DRO >C28-C36	14.0	10.0	06/06/2019	ND					
Surrogate: 1-Chlorooctane	96.2	% 41-142	,						
Surrogate: 1-Chlorooctadecane	107 9	37.6-14	7						

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PLEASE NOTE: Liability and Damages. Cardinal's liability and clent's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, whother bits ubsidiaries, affiliates or successor arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager



Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-04	The RPD for the BS/BSD was outside of historical limits.
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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Celeg D. Keine

Celey D. Keene, Lab Director/Quality Manager

Page 6 of 7

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

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							City:			009		Project Owner:		Project #:
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	_					Ξ.	P.O. #:					5	" Jure Stoffe	Project Manager:
ANALYSIS REQUEST					BILL TO	BIL							TRC	Company Name:



Appendix B: Photographic Documentation



Photo 1 - View of excavation in A6 (5/3/19) facing northeast.



Photo 2- View of further excavation in area A6 (5/16/19) facing northeast.



Photo 3 - View of excavated area A5 (5/3/19) facing south.



Photo 4 - View of excavated area A4 (5/3/19) facing east.



Photo 5 - View of excavated area A1 (5/29/19) facing southeast.



Photo 6 - View of further excavation in areas A2 and A1 (6/6/19) facing east.



Photo 7 - View of the remediated areas A1, A2 and A3 facing east (6/6/19).



Photo 8 - View of remediated area A6 (5/17/19) facing southwest.



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

Incident ID	NAB1902442612
District RP	2RP-5198
Facility ID	fAB1902440237
Application ID	pAB1902440356

Release Notification

Responsible Party

Responsible Party: HollyFrontier Companies LLC**	OGRID# 229137 **#278421
Contact Name: Katharine E. Boyer	Contact Telephone: 214-954-6515
Contact email: Katharine.Boyer@HollyFrontier.com	Incident # (assigned by OCD) NAB1902442612
Contact mailing address: 2828 North Hardwood Street, Suite 1300,	Dallas, Texas 75201

Location of Release Source

Latitude <u>32.86436</u>

Longitude <u>- 103.96689</u>

(NAD 83 in decimal degrees to 5 decimal places)

Site Name: Carmen 3 Federal Com #1H	Site Type: Production Lease Operated by COG
Date Release Discovered: 1/7/2018 ** **1/07/2019 According to letter	API# (if applicable) 30-015-39286

Unit Letter	Section	Township	Range	County
Е	3	17S	30E	Eddy County

Surface Owner: 🗌 State 🛛 Federal 🗌 Tribal 🗌 Private (Name: Operator ____

Nature and Volume of Release

Mate	rial(s) Released (Select all that apply and attach calculations or specif	ic justification for the volumes provided below)
Crude Oil	Volume Released (bbls) 275 BBLS	Volume Recovered (bbls) Unknown
Produced Water	Volume Released (bbls)	Volume Recovered (bbls)
	Is the concentration of dissolved chloride in the produced water >10,000 mg/l?	Yes No
Condensate	Volume Released (bbls)	Volume Recovered (bbls)
Natural Gas	Volume Released (Mcf)	Volume Recovered (Mcf)
Other (describe)	Volume/Weight Released (provide units)	Volume/Weight Recovered (provide units)

Cause of Release:

HollyFrontier Companies LLC is submitting this form C-141 on behalf of Transwood Logistics Inc. A Transwood truck driver was loading crude onto his truck at the Concho (COG) production lease, Carmen 3 Federal Com #1H Well, Loco Hills, Eddy County, NM, and spilled approximately 275 barrels of crude onto the ground at the lease and across approximately six miles on Highway 82 and County Road 126. The estimate of 275 barrels includes an unknown volume of crude spilled onto HWY 82 and County Road 126. At this time, the root cause of the spill is unclear since the Transwood truck driver drove his truck to Transwood's truck yard after the spill occurred, parked it in the middle of the night and has disappeared. Transwood is taking the lead on the site characterization and cleanup.

Form	C-141
Page 2	

State of New Mexico Oil Conservation Division

Incident ID	NAB1902442612
District RP	2RP-5198
Facility ID	fAB1902440237
Application ID	pAB1902440356

Was this a major release as defined by	If YES, for what reason(s) does the responsible party consider this a major release?	
19.15.29.7(A) NMAC?	Yes, it is considered a major spill based on the amount of 275 barrels of crude that was spilled to the ground.	
🛛 Yes 🗌 No		
If YES, was immediate notice given to the OCD? By whom? To whom? When and by what means (phone, email, etc.)?		
It is unclear the details of the call into OCD, since a representative from Concho Resources, INC called in the spill to OCD.		

Initial Response

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

 \square The source of the release has been stopped.

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

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

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

If all the actions described above have <u>not</u> been undertaken, explain why:

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

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

Printed Name: Katharine E. Boyer

Signature

email: Kotharine.Boyer@HollyFrontier.com

Title: EHS Manager

Date: January 22, 2019

Telephone: 214-954-6515

OCD Only	
Received by:	Amplito Dotamente

Date: 1/24/2019

Form C-141 Page 3 State of New Mexico Oil Conservation Division

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?	🗌 Yes 🗌 No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	🗌 Yes 🗌 No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	🗌 Yes 🗌 No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	🗌 Yes 🗌 No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	🗌 Yes 🗌 No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	🗌 Yes 🗌 No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	🗌 Yes 🗌 No
Are the lateral extents of the release within 300 feet of a wetland?	🗌 Yes 🗌 No
Are the lateral extents of the release overlying a subsurface mine?	🗌 Yes 🗌 No
Are the lateral extents of the release overlying an unstable area such as karst geology?	🗌 Yes 🗌 No
Are the lateral extents of the release within a 100-year floodplain?	🗌 Yes 🗌 No
Did the release impact areas not on an exploration, development, production, or storage site?	🗌 Yes 🗌 No

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

Characterization Report Checklist: Each of the following items must be included in the report.

Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
Field data
Data table of soil contaminant concentration data
Depth to water determination
Determination of water sources and significant watercourses within 1/2-mile of the lateral extents of the release
Boring or excavation logs
Photographs including date and GIS information

- **Topographic**/Aerial maps
- Laboratory data including chain of custody

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

Form C-141	State of New Mexico	Incident ID
Page 4	Oil Conservation Division	District RP
		Facility ID
		Application ID
regulations all operators are public health or the environr failed to adequately investig addition, OCD acceptance o and/or regulations. Printed Name: Signature: email:	required to report and/or file certain release notifica ment. The acceptance of a C-141 report by the OCI ate and remediate contamination that pose a threat t f a C-141 report does not relieve the operator of res T	t of my knowledge and understand that pursuant to OCD rules and ations and perform corrective actions for releases which may endanger O does not relieve the operator of liability should their operations have o groundwater, surface water, human health or the environment. In ponsibility for compliance with any other federal, state, or local laws itle:
OCD Only Received by:		Date:

State of New Mexico Oil Conservation Division

Incident ID	
District RP	
Facility ID	
Application ID	

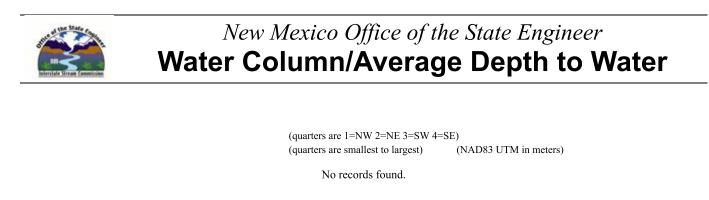
Closure

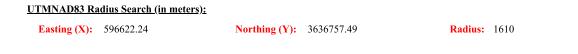
The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled 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 it	tems 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 must be notified 2 days prior to liner inspection)	of the liner integrity if applicable (Note: appropriate OCD District office
Laboratory analyses of final sampling (Note: appropriate OD	C District office must be notified 2 days prior to final sampling)
Description of remediation activities	
and regulations all operators are required to report and/or file certai may endanger public health or the environment. The acceptance of should their operations have failed to adequately investigate and re- human health or the environment. In addition, OCD acceptance of	ations. The responsible party acknowledges they must substantially onditions that existed prior to the release or their final land use in
Printed Name:	_ Title:
Signature:	Date:
email:	Telephone:
OCD Only	
Received by:	Date:
	of liability should their operations have failed to adequately investigate and water, human health, or the environment nor does not relieve the responsible for regulations.
Closure Approved by:	Date:
Printed Name:	Title:



Appendix D: Depth to Groundwater Data





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.

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WATER COLUMN/ AVERAGE DEPTH TO WATER

