



Armando Martinez
Operations Lead, Portfolio Operations Central

VIA ELECTRONIC MAIL

August 15, 2024

New Mexico Oil Conservation Division, District II
811 S. First Ct
Artesia, NM 88210

**Re: South Culebra Bluff Unit 3
2023 Soil and Groundwater Assessment Report
2RP-599 & 2RP-3984
Eddy County, New Mexico**

Dear whom it concerns,

Please find enclosed for your files, copies of the following:

- South Culebra Bluff Unit 3 – 2023 Soil and Groundwater Assessment Report

The 2023 Soil and Groundwater Assessment Report was prepared by Arcadis U.S., Inc. (Arcadis) on behalf of Chevron Environmental Management Company (CEMC).

Please do not hesitate to call Sarah Johnson with Arcadis at 432.227.0266 or myself at 575.586.7639, should you have any questions.

Sincerely,

A handwritten signature in blue ink, appearing to read "Armando Martinez".

Armando Martinez

Encl. South Culebra Bluff Unit 3 - 2RP-599 & 2RP-3984 2023 Soil and Groundwater Assessment Report

cc. Amy Barnhill, Chevron/MCBU

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Chevron Environmental Management Company

2023 Soil and Groundwater Assessment Report

**South Culebra Bluff Unit 3
Case No. 2RP-599 & 2RP-3984**

August 15, 2024

2023 Soil and Groundwater Assessment Report

2023 Soil Assessment Report

South Culebra Bluff Unit 3

Case No. 2RP-599 & 2RP-3984

August 15, 2024

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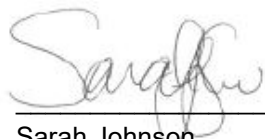
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2023 Soil and Groundwater Assessment Report

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Appendices

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2023 Soil and Groundwater Assessment Report

1 Introduction

Arcadis U.S., Inc. (Arcadis) has prepared this Soil and Groundwater Assessment Report (Report), on behalf of Chevron Environmental Management Company (CEMC), summarizing soil and groundwater assessment activities for the South Culebra Bluff (SCB) Unit 3 (Site). The Site is located approximately 1.5 miles from Loving in Unit G, Section 23, Township 23 South, Range 28 East, Eddy County, New Mexico (see **Figure 1**). There are currently two open New Mexico Oil Conservation Division (NMOCD) remediation permits (RPs) (2RP-3984 and 2RP-599) associated with the Site.

2 Project Summary

2.1 2RP-3984 – Wellhead Area

On January 11, 2006, during a routine inspection conducted by the NMOCD, the inspector observed staining and standing fluids around the wellhead (iCLB0601142847).

On January 27, 2006, White Buffalo Environmental Services (WBESI) submitted a remediation plan to the NMOCD to address the staining and standing fluids. WBESI proposed to complete site remediation activities in accordance with the historical NMOCD soil screening standards of 50 milligrams per kilogram (mg/kg) for benzene, toluene, ethylbenzene, total xylenes (BTEX) and 1,000 mg/kg for total petroleum hydrocarbons (TPH). Depth to groundwater less than 50 feet below ground surface (bgs) required vertical delineation for chloride to 250 mg/kg. On January 30, 2006, NMOCD approved the remediation work plan with limitations outlined in the *Remediation Work Plan Conditions of Approval – South Culebra Bluff Unit No. 3*.

Between March and May 2006, WBESI subcontracted Range Resources to complete the site remediation (excavation) activities proposed in the approved remediation work plan. The summary report submitted to NMOCD (WBESI July 2006) indicated that no soil sample analytical results were reported above the applicable historical remediation limits of 50 mg/kg for BTEX, 1,000 mg/kg for TPH, and 250 mg/kg for chloride.

WBESI submitted the response to the *Letter of Violation for Range Operating New Mexico, Inc. Inspection, South Culebra Bluff (SCB) Unit No. 003* dated July 10, 2006, which concluded that remedial activities were completed and requested closure from NMOCD. The request for closure was denied by the NMOCD on September 12, 2019.

2.2 2RP-599 – Tank Battery

Per the Initial C-141 Form submitted to the NMOCD on January 26, 2011, an eroded tank union caused the pump to fail and shut off on January 25, 2011. As a result of the pump failure, approximately 250 barrels (bbls) of produced water were released within the firewalls of the tank battery with 210 bbls reportedly recovered. Incident number nKMW1103249928 was assigned for this release.

Safety and Environmental Solutions, Inc. (SES) conducted a limited site assessment at the Site tank battery on January 27, 2011, inclusive of installing two test trenches with a backhoe to depths of approximately six feet bgs at both locations. Per the *Range Operating New Mexico, Inc. SCB #3 Battery Delineation Report/Work Plan* dated February 19, 2011, prepared by SES, soil samples were collected from both trenches at multiple depths and

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concentrations of chloride and TPH were detected above the applicable historical NMOCD screening criteria for the Site of 1,000 mg/kg for TPH and 250 mg/kg for chloride. BTEX was not detected in any of the samples collected. The impacted area was not delineated due to numerous underground lines within the bermed area. SES requested approval for the accessible area to be excavated to a depth of 1-foot bgs and that additional assessment/remediation activities be deferred until the facility is decommissioned and abandoned. No additional information is currently available on the NMOCD database, and it is unknown if the proposed excavation activities were conducted.

Chevron acquired the lease for this well in October 2018. On July 17, 2019, Arcadis requested, on behalf of CEMC, a review of documentation and NMOCD approval for closure at the Site for the area surrounding the wellhead (2RP-3984). On September 12, 2019, the NMOCD rejected the closure request for the Site, citing previous sampling results exceeded the current New Mexico Administration Code (NMAC) soil screening levels of 50 mg/kg for BTEX, 100 mg/kg for TPH, and 600 mg/kg for chloride for sites with depth to groundwater less than 50 feet bgs.

Arcadis performed a subsequent soil assessment on April 1-2, 2020, collecting 16 total soil samples with a hand auger (8 within the tank battery area and 8 within the prior wellhead release area) at depths from the surface to 6 feet bgs. The samples: (SS-1 through SS-16) were analyzed for chloride, TPH as gasoline range organics (TPH-GRO), TPH as diesel range organics (TPH-DRO), TPH as oil range organics (TPH-ORO), and BTEX by United States Environmental Protection Agency (USEPA) Methods 300, 8015 and 8021B, respectively. Analytical results from multiple soil sample locations exceeded applicable screening levels.

On September 13-16, 2021, Arcadis personnel collected soil samples at eleven locations (SS-17 through SS-27) surrounding the tank battery (RP2-599) and fifteen locations (SS-28 through SS-42) surrounding the well head (RP2-3984). The soil samples were collected with a backhoe at depths ranging from the surface to approximately 13 feet bgs. The soil samples were analyzed for chloride, TPH-GRO, TPH-DRO, and TPH-ORO by USEPA Methods 300, 8015 and 8021B, respectively.

A cumulative soil sample location map is included as **Figure 2** and a summary of the cumulative soil sample analytical results is presented in **Table 1**.

3 2023 Soil Assessment

On August 21 through 24, 2023, Arcadis personnel collected 54 soil samples from five test trench locations (SB-43 through SB-47) and one temporary monitoring well location (TMW-1) surrounding the former wellhead (2RP-3984), one temporary monitoring well location distant from historical operational areas on the pad to assess background groundwater concentrations (TMW-2), and from five test trench locations (SB-48 through SB-52) and one temporary monitoring well location (TMW-3) near the former tank battery (2RP-599). The test trench and temporary monitoring well locations were determined based on the analytical results from the previous assessment.

The test trenches were advanced using a backhoe and the temporary monitoring well locations were advanced using air rotary equipment. Soil samples were collected at depths ranging from the surface (0-0.5' bgs) to approximately 40 feet bgs. The soil cuttings were returned to their respective test trench and boring locations. The borings were plugged using bentonite chips. Soils were characterized and logged by a field geologist based on the Unified Soil Classification System (USCS), including texture, structure, and consistency at each sample

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location from surface to total or refusal depths encountered within each test trench and boring. Boring logs for test trenches and soil borings are included in **Appendix B**.

The soil samples were collected in four-ounce jars provided by Pace Analytical Laboratory (Pace) in Mt. Juliet, Tennessee. Upon receipt by the laboratory, the soil samples were analyzed for chloride by USEPA Method 300, total TPH by USEPA Method 8015, and BTEX by USEPA Method 8260. The soil boring and temporary monitoring well locations are presented in **Figure 3**. A photographic log is presented in **Appendix C**.

4 2023 Soil Analytical Results

The soil analytical results were compared to the revised New Mexico Administrative Code (NMAC) closure screening levels for the specific analytical constituents specified in *Table 1 – Closure Criteria for Soils Impacted by a Release* within revised Rule 19.15.29. The specific analytical constituents for this Site include chloride, TPH and BTEX for depth to groundwater less than 50 feet bgs. A summary of the cumulative soil sample analytical results is presented in **Table 1**. Copies of the certified analytical reports and chain-of-custody documentation from Pace are presented in **Appendix D**. The soil analytical map is presented in **Figure 4**.

4.1 Chloride

Chloride exceeded the NMAC standard of 600 mg/kg in 23 of the 54 soil samples collected, with concentrations ranging from 600 mg/kg at SB-43 (8 feet bgs) to 3,870 mg/kg at SB-52 (6 feet bgs).

4.2 Total TPH

Total TPH exceeded the NMAC standard of 100 mg/kg in two of the 54 soil samples collected, with concentrations at 146 mg/kg at TW-3 (4 feet bgs) and 229 mg/kg at SB-49 (6 feet bgs).

4.3 BTEX

BTEX did not exceed the NMAC standard of 50 mg/kg in any of the 54 soil samples collected.

5 2023 Groundwater Assessment

On August 22, 2023, three temporary monitoring wells (TMW-1, TMW-2, and TMW-3) were installed to approximately 48 feet bgs. The temporary monitoring wells were constructed with two-inch diameter schedule 80 PVC casing and slotted screen. The top of the screen was installed two feet above the groundwater table and extend into the groundwater bearing unit. A sandpack was installed from the bottom of the well to two feet above the screened interval. The wells were purged, developed, gauged, sampled, and plugged within 72 hours of installation. The wells were properly plugged with bentonite chips. The groundwater samples were collected in bottles provided by Pace in Mt. Juliet, Tennessee. Upon receipt by the laboratory, the groundwater samples were analyzed for chloride by USEPA Method 300.0, total TPH by USEPA Method 8015M, total dissolved solids (TDS) by Method 2540C, and BTEX by USEPA Method 8260. The temporary monitoring well locations are presented in **Figure 3**.

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6 2023 Groundwater Analytical Results

The groundwater analytical results were compared to the applicable New Mexico Water Quality Control Commission (NMWQCC) Groundwater Standards. A summary of the groundwater sample analytical results is presented in **Table 2**. Copies of the certified analytical reports and chain-of-custody documentation from Pace are presented in **Appendix D**. The groundwater analytical map is presented in **Figure 5**.

6.1 BTEX

Benzene, toluene, ethylbenzene, and total xylenes were reported below the NMWQCC screening standard of 0.005 milligrams per liter (mg/L), 0.75 mg/L, 0.75 mg/L, and 0.62 mg/L, respectively for all groundwater samples collected.

6.2 Chloride

Chloride exceeded the NMWQCC screening standard of 250 mg/L in all three groundwater samples collected (inclusive of the background location – TMW-2), with concentrations of 1,790 mg/L at TMW-1, 1,830 mg/L at TMW-2 and 1,780 mg/L at TMW-3.

6.3 Total Dissolved Solids

TDS exceeded the NMWQCC screening standard of 1,000 mg/L in all three groundwater samples collected (inclusive of the background location – TMW-2), with concentrations of 5,520 mg/L at TMW-1, 5,590 mg/L at TMW-2 and 5,220 mg/L at TMW-3.

7 Regional Irrigation Practices

Irrigation practices in the Loving, New Mexico area consist of pumping and distributing surface water from the Pecos River in conjunction with groundwater. According to the New Mexico Office of the State Engineer (NMOSE) database, there are several intertwined irrigation ditches leading out and across the Site from the Pecos River with permitted irrigation pumps.

According to the United States Geological Society (USGS) database, the salinity of the Pecos River exceeds 1,000 mg/L in many reaches of the study area within relative proximity to the Site (Ryder, 1996). Due to the naturally high levels of chloride in the Pecos River, and its use as an irrigation water source over a duration of nearly 90 years, the chloride concentrations in groundwater and soil in the surrounding irrigated agricultural areas are anticipated to contain elevated concentrations of chloride and other TDS constituents well above naturally occurring conditions.

Arcadis collected groundwater samples from two water wells (WW-2 and WW-3) in May and September 2019. The water wells are located within a 0.75-mile radius of the Site. The average chloride concentration in groundwater samples collected from the water wells was 2,170 mg/L. The regional groundwater concentration map is included as **Figure 6**.

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8 Recommendation

Analytical results associated with recent assessment activities conducted in 2023 indicated that the horizontal and vertical extent of chloride and TPH impact in soil has not been fully delineated near the former tank battery area (2RP-599, incident number nKMW1103249928). Additional soil assessment activities will be required to delineate TPH and chloride impact along the southern perimeter of the former tank battery area. Analytical results associated with recent assessment activities conducted in 2023 indicated that the horizontal and vertical extent of chloride and TPH impact in soil has been fully delineated near the former wellhead area (2RP-3984, inspection number iCLB0601142847).

Historical agricultural irrigation practices utilizing surface water from the adjacent Pecos River (documented with naturally occurring elevated chloride and TDS concentrations) have been conducted at and around the Site for approximately 90 years. Accumulation of chloride and other TDS constituents within the irrigated soils from these regional irrigation practices will continue to migrate to shallow groundwater and are expected to be at concentrations above applicable NMWQCC groundwater screening levels across the region. Based on results of analytical data collected from water wells and monitoring wells located outside of the release area confirming elevated concentrations of chloride and TDS in regional groundwater, Arcadis requests approval of a site-specific screening level of 2,500 mg/L for chloride and 6,500 mg/L for TDS for groundwater.

A Remediation Work Plan for 2RP-3984, inspection number iCLB0601142847, with proposed soil remediation activities is included as **Appendix E**. An Additional Assessment Work Plan for 2RP-599, incident number nKMW1103249928, with proposed additional soil assessment activities is included as **Appendix F**. A remediation work plan will be submitted for this area following evaluation of the findings from the assessment activities.

Tables

Table 1
2023 Soil Analytical Results
Chevron Environmental Management Company
South Culebra Bluff Unit 3
Loving, New Mexico

Sample I.D. No.	Sample Depth (feet bgs)	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	Total TPH	Chloride
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
NMAC Standards			10	--	--	--	50	100	600
SS-1	0 - 6"	04/01/20	<0.000695	<0.00152	<0.00113	<0.00125	<0.00152	1,972	7,060
	1'6"	04/01/20	<0.000694	<0.00152	<0.00112	<0.00124	<0.00152	410	3,810
SS-2	0 - 6"	04/01/20	<0.000655	<0.00144	<0.00106	<0.00118	<0.00144	535	1,780
	2'	04/01/20	<0.000648	<0.00142	<0.00105	<0.00116	<0.00142	458	3,860
SS-3	4'	04/01/20	<0.000702	<0.00154	<0.00114	<0.00126	<0.00154	220	6,050
	0 - 6"	04/01/20	<0.000671	<0.00147	<0.00109	<0.00120	<0.00147	13,870	5400 F1 F2
SS-4	0 - 6"	04/01/20	<0.000739	<0.00162	<0.00120	<0.00133	<0.00162	5,081	1,950 B
	2'	04/01/20	<0.000685	<0.00150	<0.00111	<0.00123	<0.00150	8,122	5,150
SS-5	4'	04/01/20	<0.000754	<0.00165	<0.00122	<0.00135	<0.00165	10,129	422 B
	0 - 6"	04/01/20	<0.000786	<0.00172	<0.00127	<0.00141	<0.00172	125	9,610
SS-6	2'	04/01/20	<0.000895	<0.00196	<0.00145	<0.00160	<0.00196	35	12,400
	4'	04/01/20	<0.000713	<0.00156	<0.00115	<0.00128	<0.00156	30	10,100
SS-7	0 - 6"	04/01/20	<0.000692	<0.00152	<0.00112	<0.00124	<0.00152	400	626 B
	2'	04/01/20	<0.000623	<0.00137	<0.00101	<0.00112	<0.00137	949	11,300
SS-8	4'	04/01/20	<0.000642	0.00207 J	<0.00104	<0.00115	0.00207 J	3,269	6,700
	0 - 6"	04/01/20	<0.000691	<0.00151	<0.00112	<0.00124	<0.00151	1,809	3,000
SS-9	0 - 6"	04/01/20	<0.000649	<0.00142	<0.00105	<0.00116	<0.00142	171	6,950
	2'	04/02/20	<0.000630	0.00162 J	<0.00102	<0.00113	0.00162 J	12,772	393
SS-10	4'	04/02/20	<0.000679	<0.00149	<0.00110	<0.00122	<0.00149	9,672	472
	0 - 6"	04/02/20	<0.000653	<0.00143	<0.00106	<0.00117	<0.00143	8,481	190
SS-11	2'	04/02/20	<0.000722	<0.00158	<0.00117	<0.00130	<0.00158	568	660
	0 - 6"	04/02/20	<0.000766	<0.00168	<0.00124	<0.00137	<0.00168	482	1,620
SS-12	1'10"	04/02/20	<0.000699	<0.00153	<0.00113	<0.00125	<0.00153	1,832	493
	0 - 6"	04/02/20	<0.000646	0.00227 J	<0.00105	<0.00116	0.00227 J	1,988	245
SS-13	2'	04/02/20	<0.000692	0.00336 J	<0.00112	<0.00124	0.00336 J	437	431
	0 - 6"	04/02/20	<0.000680	<0.00149	<0.00110	<0.00122	<0.00149	5,221	1,260
SS-14	2'	04/02/20	<0.000813	0.121	0.00141 J	0.0607	0.18311	1,205	6,740
	0 - 6"	04/02/20	<0.000730	0.00342 J	<0.00118	<0.00131	0.00342 J	3,481	331
SS-15	2'	04/02/20	<0.000730	<0.00160	<0.00118	<0.00131	<0.00160	1,411	864
	4'	04/02/20	<0.000682	<0.00149	<0.00110	<0.00122	<0.00149	229	230
SS-16	6'	04/02/20	<0.000785	<0.00172	<0.00127	<0.00141	<0.00172	78	497
	0 - 6"	04/02/20	<0.000729	<0.00160	<0.00118	<0.00131	<0.00160	2,533	758
SS-17	2'	04/02/20	<0.000735	<0.00161	<0.00119	<0.00132	<0.00161	1,693	787
	0 - 6"	04/02/20	<0.000659	<0.00144	<0.00107	<0.00118	<0.00144	16,291	219 B
SS-18	2'	04/02/20	<0.000696	<0.00152	<0.00113	<0.00125	<0.00152	4,202	286 F1
	3' - 4'	09/13/21	--	--	--	--	--	39	1,570
SS-19	6' - 7'	09/13/21	--	--	--	--	--	6.25	2,180
	7' - 8'	09/13/21	--	--	--	--	--	0.704	1,590
SS-20	9' - 10'	09/13/21	--	--	--	--	--	837	1,780
	3' - 4'	09/13/21	--	--	--	--	--	32.2	2,440
SS-21	6' - 7'	09/13/21	--	--	--	--	--	4.00	3,930
	10' - 11'	09/13/21	--	--	--	--	--	6.49	2,830
SS-22	3' - 4'	09/13/21	--	--	--	--	--	546	17,500
	6' - 7'	09/13/21	--	--	--	--	--	1.34	3,370
SS-23	11' - 12'	09/13/21	--	--	--	--	--	10.3	3,450
	3' - 4'	09/13/21	--	--	--	--	--	100	2,740
SS-24	6' - 7'	09/13/21	--	--	--	--	--	143	1,680
	9' - 10'	09/13/21	--	--	--	--	--	20,880	3,160
SS-25	12 - 13'	09/13/21	--	--	--	--	--	8,037	6,620
	3' - 4'	09/14/21	--	--	--	--	--	439	5,710
SS-26	6' - 7'	09/14/21	--	--	--	--	--	1.18	306
	9' - 10'	09/14/21	--	--	--	--	--	1.01	1,310
SS-27	3' - 4'	09/14/21	--	--	--	--	--	0.55	310
	6' - 7'	09/14/21	--	--	--	--	--	1.04	541
SS-28	9' - 10'	09/14/21	--	--	--	--	--	5.05	203
	0 - 0.5'	09/14/21	--	--	--	--	--	14.6	5,850
SS-29	1' - 2'	09/14/21	--	--	--	--	--	129	2,720
	3' - 4'	09/14/21	--	--	--	--	--	2.89	2,980
SS-30	5' - 6'	09/14/21	--	--	--	--	--	3.62	4,120
	7' - 8'	09/14/21	--	--	--	--	--	0.0398	873



Table 1
2023 Soil Analytical Results
Chevron Environmental Management Company
South Culebra Bluff Unit 3
Loving, New Mexico

Sample I.D. No.	Sample Depth (feet bgs)	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	Total TPH	Chloride
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
NMAC Standards			10	--	--	--	50	100	600
SS-24	0 - 0.5'	09/14/21	--	--	--	--	--	77	713
	1' - 2'	09/14/21	--	--	--	--	--	99	3,010
	3' - 4'	09/14/21	--	--	--	--	--	120	6,730
	6' - 7'	09/14/21	--	--	--	--	--	1.61	434
	9' - 10'	09/14/21	--	--	--	--	--	1.17	717
SS-25	0 - 0.5'	09/14/21	--	--	--	--	--	58	390
	3' - 4'	09/14/21	--	--	--	--	--	1.81	847
	5' - 6'	09/14/21	--	--	--	--	--	0.995	591
	7' - 8'	09/14/21	--	--	--	--	--	0.572	432
SS-26	9' - 10'	09/14/21	--	--	--	--	--	1.89	3,830
SS-27	9' - 10'	09/14/21	--	--	--	--	--	2.77	2,670
SS-28	0 - 0.5'	09/15/21	--	--	--	--	--	0.751	1,270
	1' - 2'	09/15/21	--	--	--	--	--	1.02	772
	3' - 4'	09/15/21	--	--	--	--	--	0.452	546
	5' - 6'	09/15/21	--	--	--	--	--	0.696	1,110
	7' - 8'	09/15/21	--	--	--	--	--	0.799	1,160
SS-29	0 - 0.5'	09/15/21	--	--	--	--	--	10.54	649
	1' - 2'	09/15/21	--	--	--	--	--	6.07	1,820
	3' - 4'	09/15/21	--	--	--	--	--	1.06	40.5
	5' - 6'	09/15/21	--	--	--	--	--	0.878	57.9
SS-30	0 - 0.5'	09/15/21	--	--	--	--	--	9,740	1,730
	1' - 2'	09/15/21	--	--	--	--	--	7.79	2,190
	3' - 4'	09/15/21	--	--	--	--	--	0.637	638
	5' - 6'	09/15/21	--	--	--	--	--	3.02	628
	7' - 8'	09/15/21	--	--	--	--	--	0.539	429
SS-31	0 - 0.5'	09/15/21	--	--	--	--	--	251	4,390
	1' - 2'	09/15/21	--	--	--	--	--	0.746	1,270
	3' - 4'	09/15/21	--	--	--	--	--	0.0702	744
	5' - 6'	09/15/21	--	--	--	--	--	<2.78	393
	7' - 8'	09/15/21	--	--	--	--	--	0.524	545
SS-32	0 - 0.5'	09/15/21	--	--	--	--	--	5,120	1,570
	1' - 2'	09/15/21	--	--	--	--	--	559	2,460
	3' - 4'	09/15/21	--	--	--	--	--	0.514	2,100
	5' - 6'	09/15/21	--	--	--	--	--	<2.78	2,560
	7' - 8'	09/15/21	--	--	--	--	--	1.24	704
SS-33	0 - 0.5'	09/15/21	--	--	--	--	--	3,800	1,220
	1' - 2'	09/15/21	--	--	--	--	--	0.783	616
	3' - 4'	09/15/21	--	--	--	--	--	<2.69	1,230
	5' - 6'	09/15/21	--	--	--	--	--	<2.07	772
SS-34	0 - 0.5'	09/15/21	--	--	--	--	--	1,391	2,640
	1' - 2'	09/15/21	--	--	--	--	--	107	395
	3' - 4'	09/15/21	--	--	--	--	--	<2.85	1,770
	5' - 6'	09/15/21	--	--	--	--	--	<2.41	167
SS-35	0 - 0.5'	09/16/21	--	--	--	--	--	12	11,000
	1' - 2'	09/16/21	--	--	--	--	--	<2.15	1,950
	3' - 4'	09/16/21	--	--	--	--	--	2.45	1,390
	5' - 6'	09/16/21	--	--	--	--	--	1.17	955
SS-36	0 - 0.5'	09/16/21	--	--	--	--	--	4.61	1,470
	1' - 2'	09/16/21	--	--	--	--	--	<2.85	4,410
	3' - 4'	09/16/21	--	--	--	--	--	<2.90	2,830
SS-37	0 - 0.5'	09/16/21	--	--	--	--	--	0.503	2,600
	1' - 2'	09/16/21	--	--	--	--	--	<2.28	1,970
	3' - 4'	09/16/21	--	--	--	--	--	<2.15	1,750
	5' - 6'	09/16/21	--	--	--	--	--	<2.02	915
SS-38	0 - 0.5'	09/16/21	--	--	--	--	--	99	741
	1' - 2'	09/16/21	--	--	--	--	--	<2.05	185 J3
	3' - 4'	09/16/21	--	--	--	--	--	0.425	269
SS-39	0 - 0.5'	09/16/21	--	--	--	--	--	389	81.2
	1' - 2'	09/16/21	--	--	--	--	--	30	68.6
	3' - 4'	09/16/21	--	--	--	--	--	<2.32	20.7 J

Table 1
2023 Soil Analytical Results
Chevron Environmental Management Company
South Culebra Bluff Unit 3
Loving, New Mexico

Sample I.D. No.	Sample Depth (feet bgs)	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	Total TPH	Chloride
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
NMAC Standards			10	--	--	--	50	100	600
SS-40	0 - 0.5'	09/16/21	--	--	--	--	--	2.09	2,370
	1' - 2'	09/16/21	--	--	--	--	--	0.420	612 J3/J6
	3' - 4'	09/16/21	--	--	--	--	--	<2.44	508
	5' - 6'	09/16/21	--	--	--	--	--	148	315
	7' - 8'	09/16/21	--	--	--	--	--	215	243
SS-41	0 - 0.5'	09/16/21	--	--	--	--	--	44	633
	1' - 2'	09/16/21	--	--	--	--	--	1,364	1,310
	3' - 4'	09/16/21	--	--	--	--	--	1,597	503
	5' - 6'	09/16/21	--	--	--	--	--	<2.15	403
SS-42	0 - 0.5'	09/16/21	--	--	--	--	--	<2.368	3,230
	1 - 2'	09/16/21	--	--	--	--	--	1.18	2,120
	3' - 4'	09/16/21	--	--	--	--	--	<2.02	421
	5' - 6'	09/16/21	--	--	--	--	--	<2.40	142
SB-43	4'	08/21/2023	<0.000546	0.00187 J	<0.000861	<0.00103	0.00187 J	0.704 B J	1,100
	6'	08/21/2023	<0.000562	<0.00157	<0.000887	<0.00106	<0.00157	0.0252 B J	1,120
	8'	08/21/2023	<0.000525	0.00147 J	<0.000829	<0.000990	0.00147 J	0.0417 B J	600
	10'	08/21/2023	<0.000503	<0.00140	<0.000794	<0.000948	<0.00140	40.886 B J	446
SB-44	4'	08/21/2023	<0.000877	<0.00244	<0.00138	<0.00165	<0.00244	0.0687 B J	775
	4' (DUP)	08/21/2023	<0.000549	<0.00153	<0.000866	<0.00103	<0.00153	0.7764 B J	2,840
	6'	08/21/2023	<0.000704	<0.00196	<0.00111	<0.00133	<0.00196	0.0273 B J	99
	8'	08/21/2023	<0.000503	<0.00140	<0.000794	<0.000949	<0.00140	0.0344 B J	280
SB-45	4'	08/22/2023	<0.000575	0.00166 J	<0.000907	<0.00108	0.00166 J	1.1134 B J	287
SB-46	4'	08/22/2023	<0.000541	<0.00151	<0.000853	<0.00102	<0.00151	0.0469 B J	154 J3
SB-47	4'	08/22/2023	<0.000565	<0.00157	<0.000892	<0.00107	<0.00157	0.0465 B J	1,090
	6'	08/22/2023	<0.000569	<0.00158	<0.000897	0.00357 J	0.00357 J	0.0333 B J	1,680
	8'	08/22/2023	<0.000715	<0.00199	<0.00113	<0.00135	<0.00199	0.0323 B J	87
SB-48	4'	08/22/2023	<0.000560	<0.00156	<0.000884	<0.00106	<0.00156	1.2255 B J	2,650
	6'	08/22/2023	<0.000574	<0.00160	<0.000906	<0.00108	<0.0016	0.8781 B J	2,580
	8'	08/22/2023	<0.000557	<0.00155	<0.000880	<0.00105	<0.00155	0.0914 B J	2,000
	10'	08/22/2023	<0.000590	<0.00164	<0.000931	<0.00111	<0.00164	13.3212 B J	2,330
SB-49	4'	08/24/2023	<0.000543	<0.00151	<0.000858	<0.00102	<0.00151	0.664 J	143
	6'	08/24/2023	<0.000533	<0.00148	<0.000841	<0.00100	<0.00148	228.7	249
	8'	08/24/2023	<0.000628	<0.00175	<0.000991	<0.00118	<0.00175	<1.89	651
SB-50	4'	08/24/2023	<0.000547	<0.00152	<0.000863	<0.00103	<0.00152	0.637 J	289
	6'	08/24/2023	<0.000574	<0.00160	<0.000906	<0.00108	<0.00160	1.00 J	265
	8'	08/24/2023	<0.000628	<0.00175	<0.000991	<0.00118	<0.00175	0.5684 B J	280
	10'	08/24/2023	<0.000647	<0.00180	<0.00102	<0.00122	<0.00180	<1.92	183
	12'	08/24/2023	<0.000639	<0.00178	<0.00101	<0.00120	<0.00178	2.07 J	227
SB-51	4'	08/24/2023	<0.000561	<0.00156	<0.000886	<0.00106	<0.00156	2.55 J	1,290
	6'	08/24/2023	<0.000577	<0.00161	<0.000911	<0.00109	<0.00161	8.67 J	1,130
	8'	08/24/2023	<0.000605	<0.00168	<0.000955	<0.00114	<0.00168	0.362 J	703
	10'	08/24/2023	<0.000552	<0.00154	<0.000872	<0.00104	<0.00154	<1.76	507
SB-52	4'	08/24/2023	<0.000572	<0.00159	<0.000903	<0.00108	<0.00159	5.63	3,350
	6'	08/24/2023	<0.000569	<0.00158	<0.000898	<0.00107	<0.00158	7.361 J	3,870
	8'	08/24/2023	<0.000578	<0.00161	<0.000912	<0.00109	<0.00161	3.69 J	3,090
	10'	08/24/2023	<0.000521	<0.00145	<0.000822	<0.000982	<0.00145	<1.70	1,310
TW-1	4'	08/22/2023	<0.000589	<0.00164	<0.000930	<0.00111	<0.00164	2.21 J	836
	10'	08/22/2023	<0.000486	<0.00135	<0.000767	<0.000916	<0.00135	0.6357 B J	89
	15'	08/22/2023	<0.000482	<0.00134	<0.000761	<0.000909	<0.00134	1.01 J	91
	20'	08/22/2023	<0.000508	<0.00141	<0.000801	<0.000957	<0.00141	0.0303 B J	247
	25'	08/22/2023	<0.000491	<0.00137	<0.000774	<0.000925	<0.00137	0.4134 B J	92
	30'	08/22/2023	<0.000493	<0.00137	<0.000778	<0.000929	<0.00137	0.5213 B J	57
	35'	08/22/2023	<0.000494	<0.00137	<0.000779	<0.000930	<0.00137	0.7532 B J	65
TW-2	40'	08/22/2023	<0.000543	<0.00151	<0.000857	<0.00102	<0.00151	0.0426 B J	269
	4'	08/22/2023	<0.000563	<0.00157	<0.000888	0.00108 J	0.00108 J	4.08 J	689
	10'	08/22/2023	<0.000827	<0.00230	<0.00131	<0.00156	<0.00230	<2.23	293
	15'	08/22/2023	<0.000615	<0.00171	<0.000971	<0.00116	<0.00171	0.0348 B J	430
	20'	08/22/2023	<0.000512	<0.00142	<0.000808	<0.000964	<0.00142	0.0413 B J	970
	25'	08/22/2023	<0.000524	<0.00146	<0.000826	<0.000987	<0.00146	0.0299 B J	1,840
	30'	08/22/2023	<0.000609	<0.00170	<0.000961	<0.00115	<0.00170	0.0392 B J	143
	35'	08/22/2023	<0.000570	<0.00159	<0.000899	<0.00107	<0.00159	0.0364 B J	67

Table 1
2023 Soil Analytical Results
Chevron Environmental Management Company
South Culebra Bluff Unit 3
Loving, New Mexico



Sample I.D. No.	Sample Depth (feet bgs)	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	Total TPH	Chloride
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
NMAC Standards			10	--	--	--	50	100	600
TW-3	4'	08/22/2023	<0.000521	<0.00145	<0.000822	<0.000981	<0.00145	145.8236 B J	21.5
	10'	08/22/2023	<0.000581	0.00211 J	<0.000917	0.00131 J	0.00342 J	0.0251 B J	22.2 J
	15'	08/22/2023	<0.000525	<0.00146	<0.000829	<0.000990	<0.00146	0.0442 B J	119
	20'	08/22/2023	<0.000506	<0.00141	<0.000799	<0.000954	<0.00141	1.5177 B J	247
	25'	08/22/2023	<0.000486	<0.00135	<0.000768	<0.000917	<0.00135	0.9389 B J	143
	30'	08/22/2023	<0.000566	<0.00158	<0.000894	<0.00107	<0.00158	0.3504 B J	29
	35'	08/22/2023	<0.000523	0.00151 J	<0.000825	<0.000985	0.00151 J	2.6999 B J	113

Legend:
Bold and italicized analytes exceeds NMAC Standards
NMAC : New Mexico Administration Code
mg/kg: Milligram per Kilogram
'<' Indicates the analyte was not detected at or above the Method Detection Limit (MDL)
" ' " : Indicates one foot
" ' " : Indicates inches
" -- " Indicates Not Analyzed or Not Applicable
bgs: below ground surface
B: The same analyte is found in the associated blank.
J: The identification of the analyte is acceptable; the reported value is an estimate.
J3: The associated batch QC was outside the established quality control range for precision.
J6: The sample matrix interfered with the ability to make any accurate determination; spike value is low.
F1: MS and/or MSD recovery exceeds control limits
F2: MS/MSD RPD exceeds control limits
DUP: Duplicate Sample

Notes:
1. Chloride analyzed by Method EPA 300.0
2. Total Petroleum Hydrocarbons (TPH) - Diesel Range Organics (DRO) [C10-C28] and Oil Range Organics (ORO) [C28-36] analyzed by (GC) Method EPA 8015D
3. BTEX analyzed by EPA Method 8260B
4. Closure Criteria New Mexico Administrative Code 19.15.29.12.E(2)

Table 2
Groundwater Analytical Results
Chevron Environmental Management Company
South Culebra Bluff Unit 3
Loving, New Mexico



Sample I.D. No.	Date	Organic Compounds				Total Petroleum Hydrocarbons			Groundwater Quality	
		Benzene	Ethylbenzene	Toluene	Xylenes	C6-C10	C-10-C28	C28-C36	Chloride	Total Dissolved Solids
		(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
NMWQCC Human Health Standards for Groundwater ¹										
		0.005	0.75	0.75	0.62	--	--	--	250	1,000
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
TW-1	8/24/2023	<0.0000941	<0.000137	<0.000278	<0.000174	<0.0314	<0.0222	<0.0118	1,790	5,520
TW-2	8/24/2023	<0.0000941	<0.000137	<0.000278	<0.000174	<0.0314	<0.0222	0.0241 J	1,830	5,590
TW-3	8/24/2023	<0.0000941	<0.000137	<0.000278	<0.000174	<0.0314	<0.0222	<0.0118	1,780	5,220

Legend:

Bold values indicate concentrations above NMWQCC Other Standards for Domestic Water Supply.

NMWQCC Human Health Standards Per NMAC 20.6.2.3103A.

'<' Indicates the analyte was not detected at or above the Method Detection Limit (MDL)

mg/L: Milligram per Litre

BTEX: Benzene, Toluene, Ethylbenzene, and Total Xylenes

NMAC: New Mexico Administration Code

TPH GRO: Total Petroleum Hydrocarbons Gasoline Range Organics

TPH MRO: Total Petroleum Hydrocarbons Motor Oil Range Organics

TPH DRO: Total Petroleum Hydrocarbon Diesel Range Organics

" " " : Indicates one foot

USEPA: United States Environmental Protection Agency

J: The identification of the analyte is acceptable; the reported value is an estimate.

Notes:

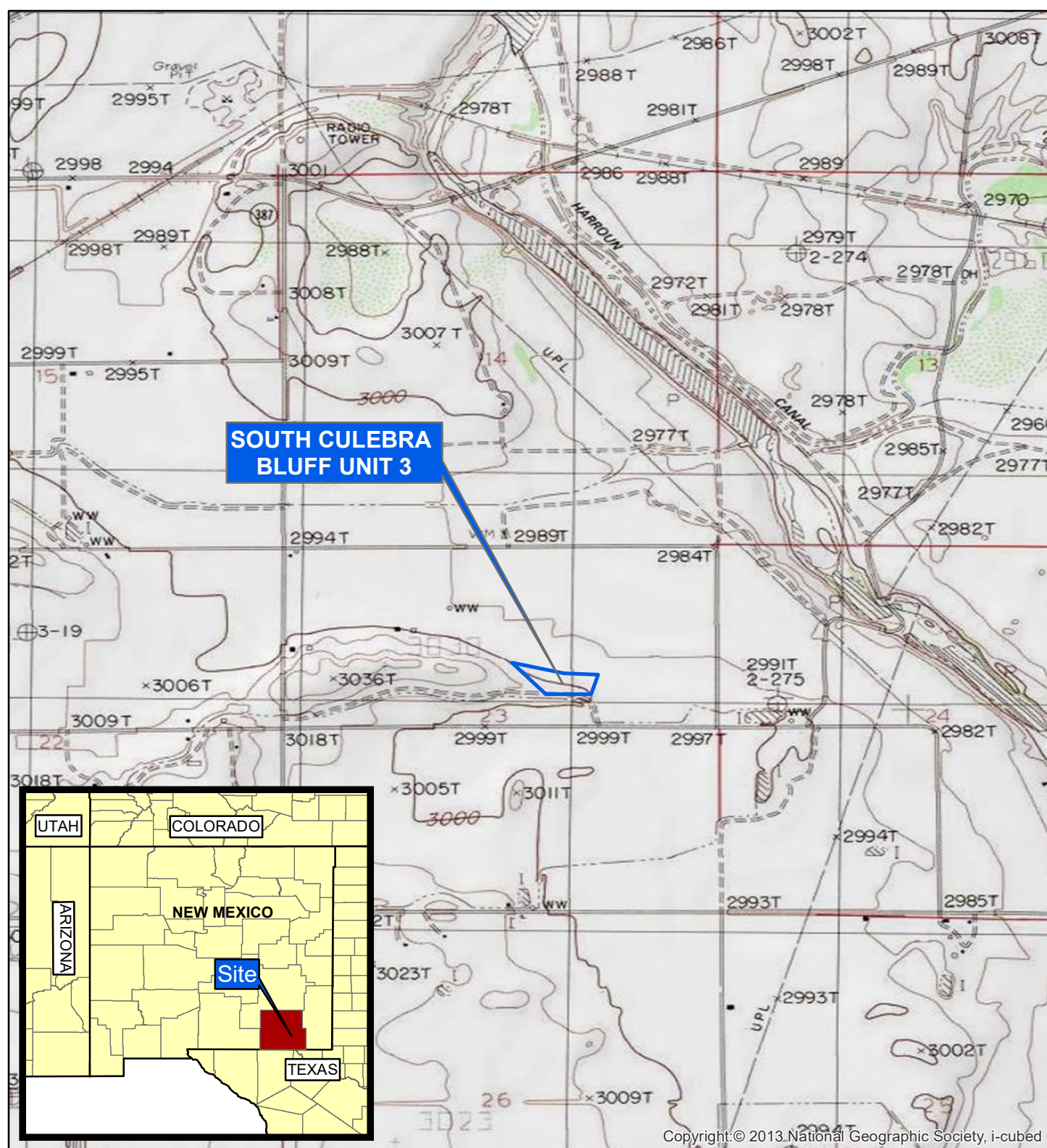
1. Chloride analyzed by USEPA Method 300.0

2. TPH analyzed by USEPA Method 8015M

3. BTEX analyzed by USEPA Method 8260B

4. Closure Criteria New Mexico Administrative Code 19.15.29.12.E(2)

Figures

**Legend**

Site Boundary

Notes:

1. Datum: D_WGS_1984
2. Source: United States Geological Survey 7.5 Minute Quadrangle Map

0 1,000 2,000 4,000
Feet



Chevron Environmental Management Company
South Culebra Bluff Unit 3
Eddy County, New Mexico

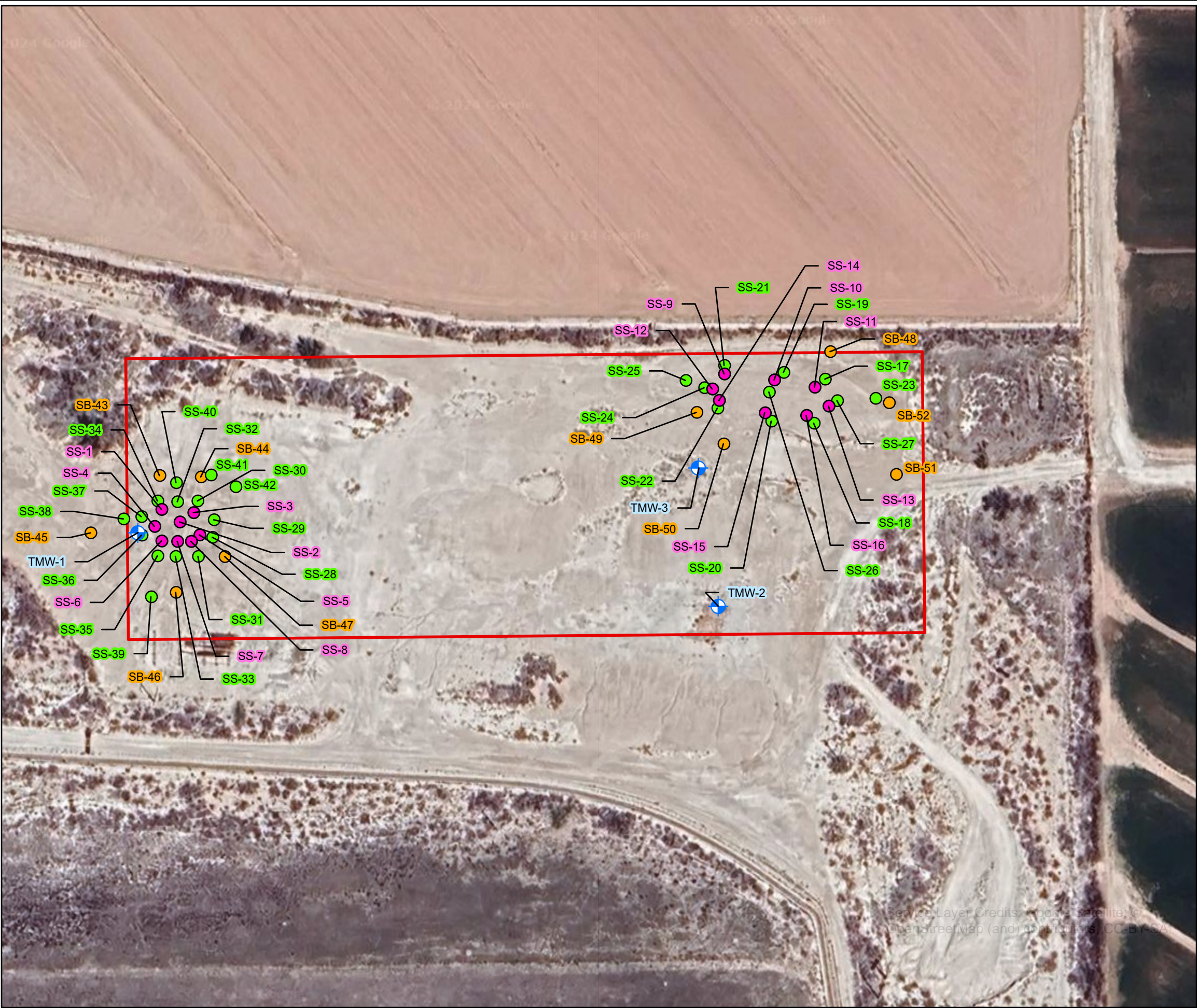
SITE LOCATION MAP

ARCADIS

FIGURE

1

City: Houston Div/Group: Remediation West-Air Group Created By: W Berry Last Saved By: wberry : Client (Project #)
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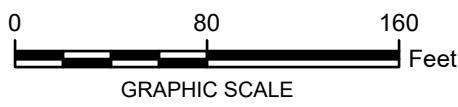


Legend

-  Temporary Well Location
-  Soil Sample Location - 2020
-  Soil Sample Location - 2021
-  Test Trench Location - 2023
-  Investigation Area

Note:

Image Source, ESRI Online - Google Satellite, April 2023



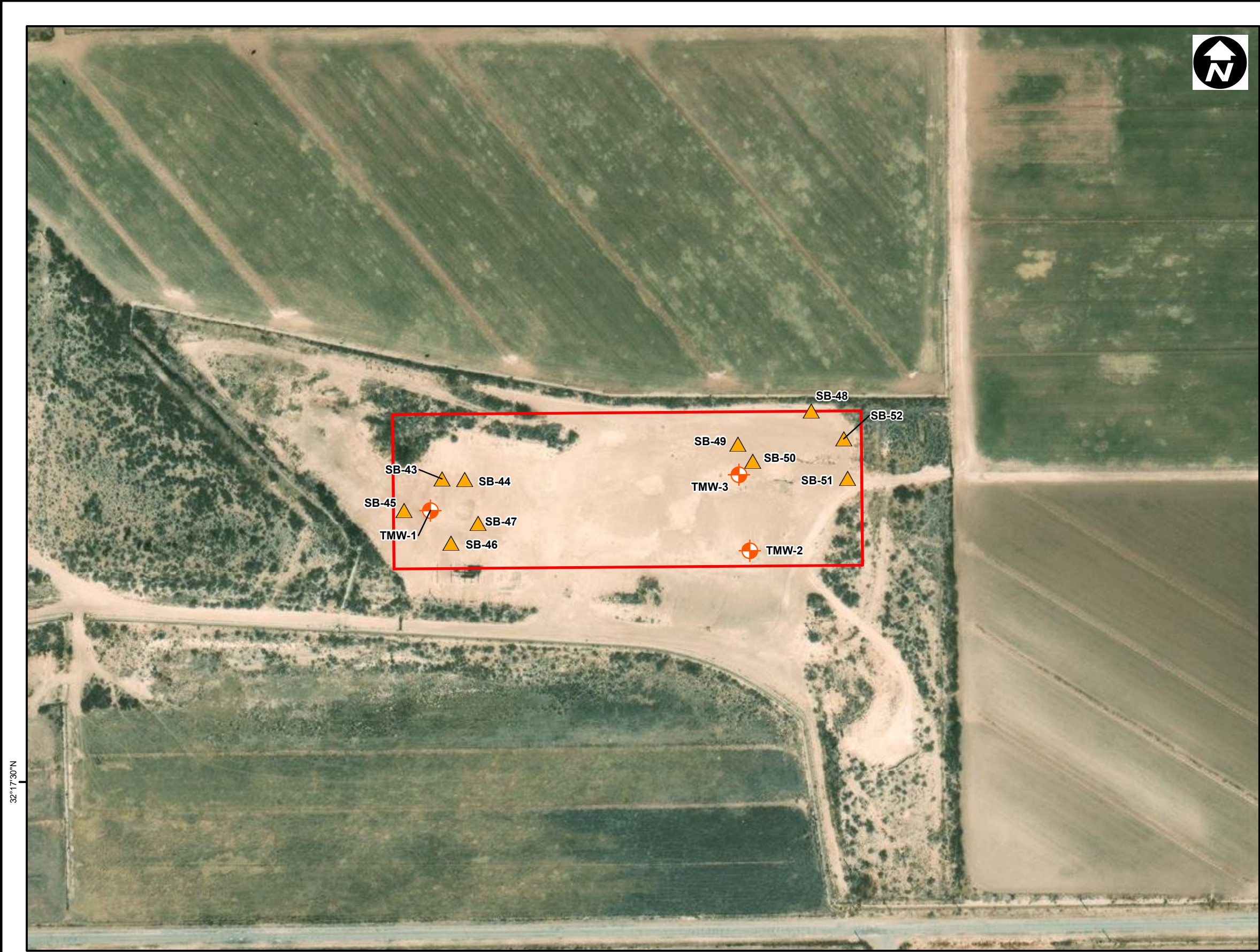
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
SOUTH CULEBRA BLUFF UNIT 3
246 GR HOWARD ROAD, LOVING, NEW MEXICO

**CUMULATIVE SOIL SAMPLE
LOCATION MAP**

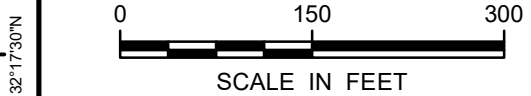


FIGURE
2

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- Legend**
- ▲ TEST TRENCH LOCATION
 - ⊕ TEMPORARY WELL LOCATION
 - ▭ INVESTIGATION AREA

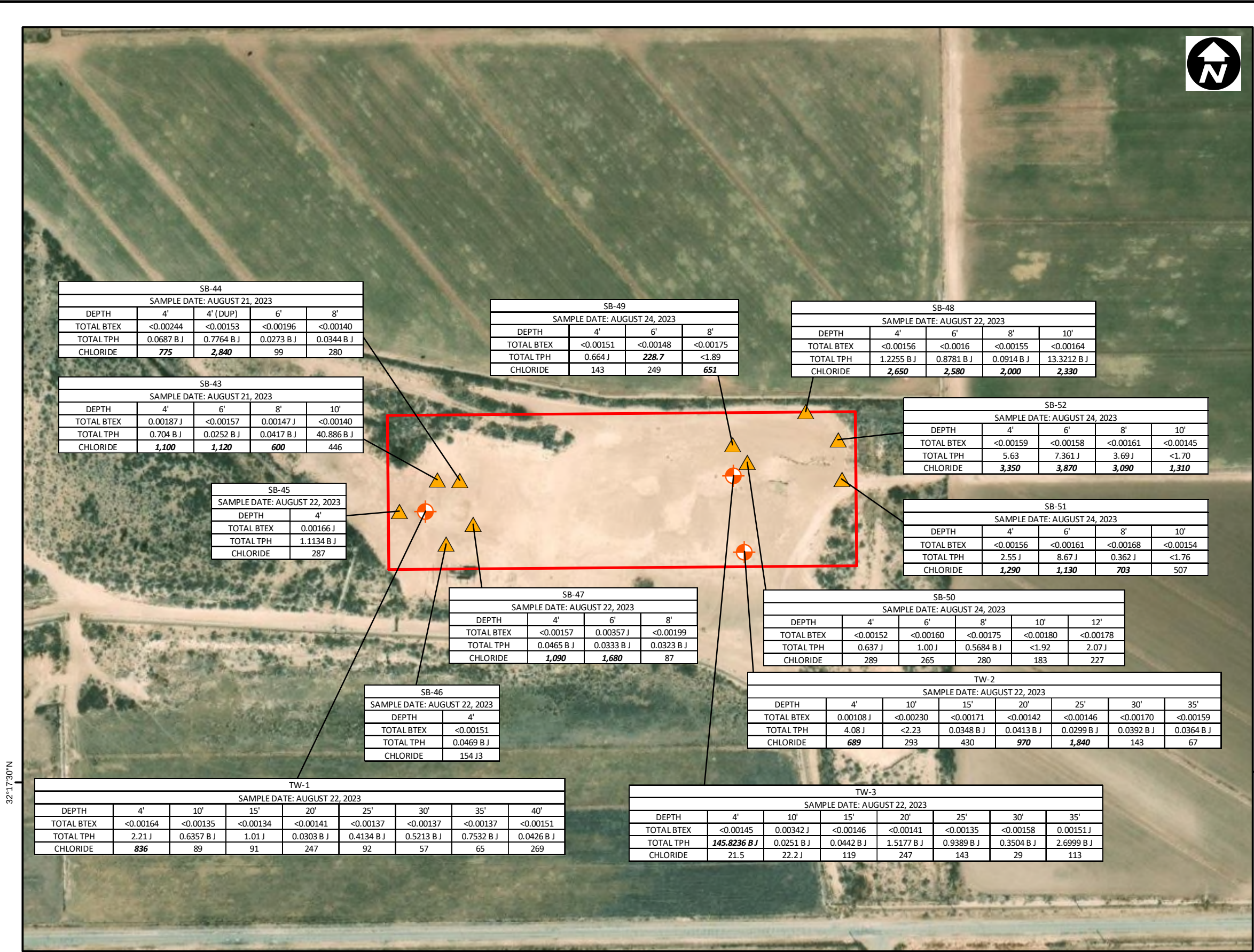


CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
SOUTH CULEBRA BLUFF UNIT 3
246 GR HOWARD ROAD LOVING, NEW MEXICO

SOIL SAMPLE LOCATIONS

FIGURE
3

User Name: av00976 DATE: 10/19/2023 6:20:40 PM
PATH: \\ENVChevron_South Culebra Bluff\\SCB_Unit3\\MXD\\Figure3_Soil Analytical Results Map.mxd



Legend

SOIL SAMPLE LOCATION

TEMPORARY WELL LOCATION

INVESTIGATION AREA

- Notes:
1. **Bold** and italicized analytes exceeds NMAC Standards.

2. < Indicates the analyte was not detected at or above the Method Detection Limit (MDL).

3. NMAC Indicates New Mexico Administration Code.

4. BTEX Indicates Benzene, Toluene, Ethylbenzene, and Total Xylenes.

5. J = The identification of the analyte is acceptable; the reported value is an estimate.

6. J3 = The associated batch QC was outside the established quality control range for precision.

7. B Indicates Compound was found in the blank and sample.

8. mg/kg = Milligram per Kilogram.

9. " " " = Indicates one foot.

10. bgs = Below ground surface.

11. DUP = Duplicate Sample.

12. Chloride analyzed by USEPA Method 300.0.

13. Gasoline Range Organics [C6-C10] analyzed by USEPA Method 8015D.

14. Diesel Range Organics [C10-C28] and Oil Range Organics [C28-36] analyzed by USEPA Method 8015M.

15. Total TPH is sum of result value of Gasoline Range Organics [C6-C10], Diesel Range Organics [C10-C28] and Oil Range Organics [C28-36]

16. BTEX analyzed by EPA Method 8260B.

17. Closure Criteria New Mexico Administrative Code 19.15.29.12.E(2).

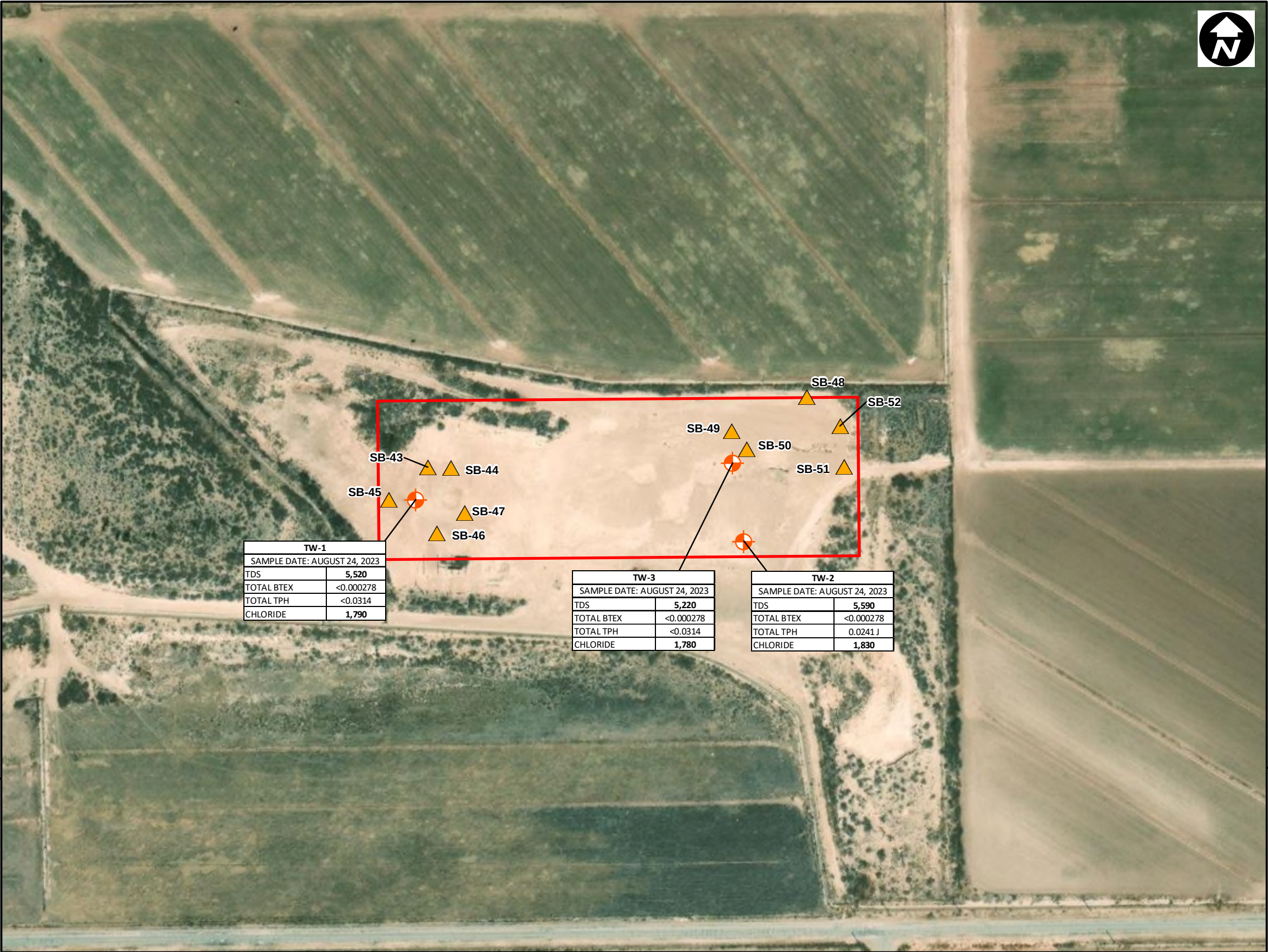
CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
SOUTH CULEBRA BLUFF UNIT 3
246 GR HOWARD ROAD LOVING, NEW MEXICO

SOIL ANALYTICAL RESULTS MAP

FIGURE
4

User Name: avi00976 DATE: 10/9/2023 11:18:03 AM
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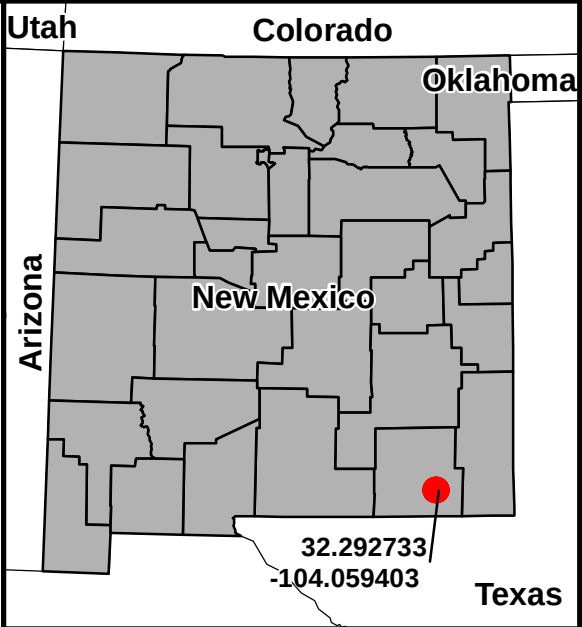
32°17'30"N



TW-1	
SAMPLE DATE: AUGUST 24, 2023	
TDS	5,520
TOTAL BTEX	<0.000278
TOTAL TPH	<0.0314
CHLORIDE	1,790

TW-3	
SAMPLE DATE: AUGUST 24, 2023	
TDS	5,220
TOTAL BTEX	<0.000278
TOTAL TPH	<0.0314
CHLORIDE	1,780

TW-2	
SAMPLE DATE: AUGUST 24, 2023	
TDS	5,590
TOTAL BTEX	<0.000278
TOTAL TPH	0.0241 J
CHLORIDE	1,830



Legend

- TEST TRENCH LOCATION
- TEMPORARY WELL LOCATION
- INVESTIGATION AREA

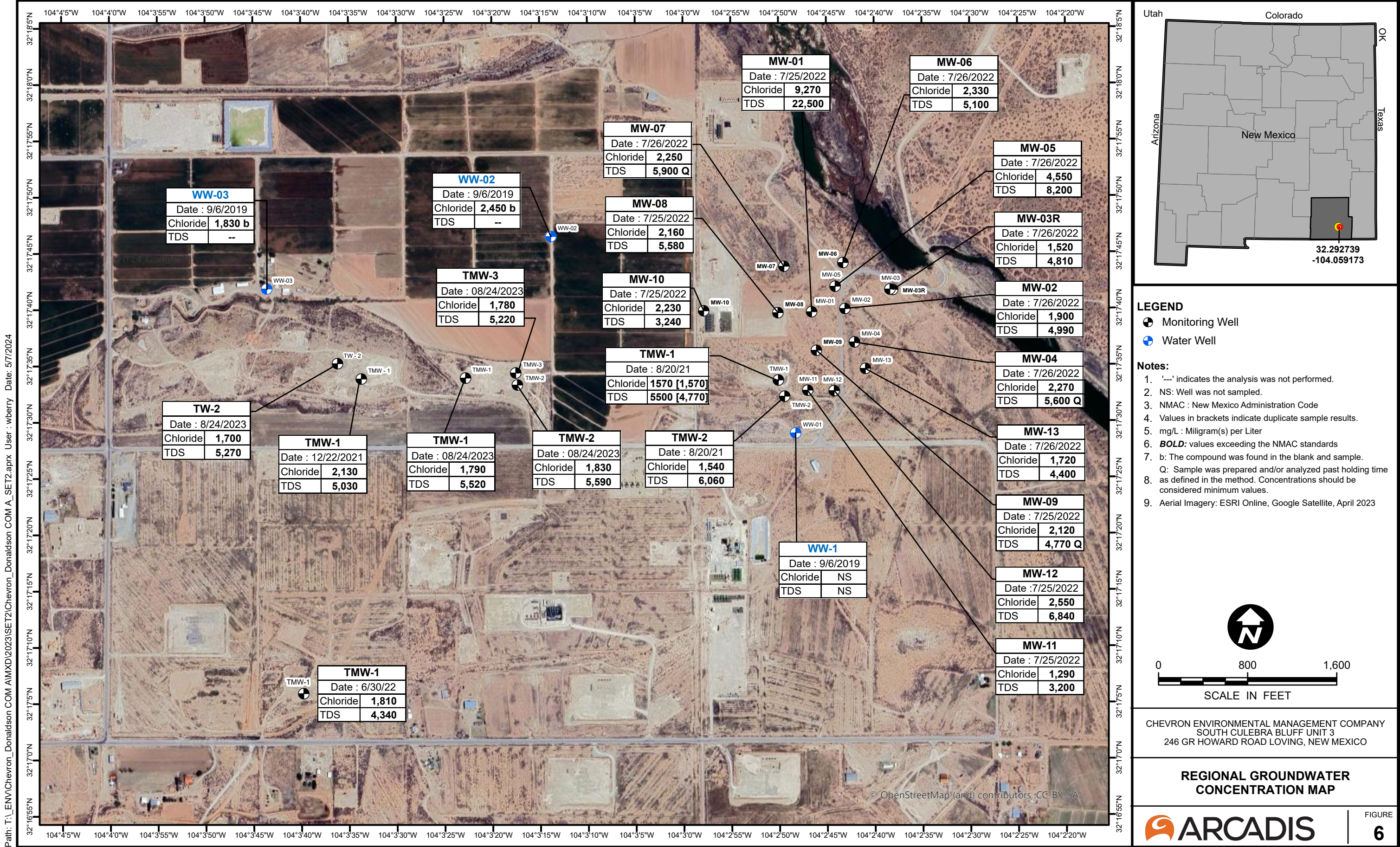
- Notes:
1. **Bold** values indicate concentrations above NMWQCC Other Standards for Domestic Water Supply.
 2. < Indicates the analyte was not detected at or above the Method Detection Limit (MDL).
 3. NMAC Indicates New Mexico Administration Code.
 4. BTEX Indicates Benzene, Toluene, Ethylbenzene, and Total Xylenes.
 5. J = The identification of the analyte is acceptable; the reported value is an estimate.
 6. mg/kg = Milligram per Kilogram.
 7. bgs = Below ground surface.
 8. HA = Hand Auger Sample Point Location.
 9. Chloride analyzed by USEPA Method 300.0.
 10. Gasoline Range Organics [C6-C10] analyzed by USEPA Method 8015M.
 11. Diesel Range Organics [C10-C28] and Oil Range Organics [C28-36] analyzed by USEPA Method 8015M.
 12. Total TPH is sum of result value of Gasoline Range Organics [C6-C10], Diesel Range Organics [C10-C28] and Oil Range Organics [C28-36]
 13. BTEX analyzed by EPA Method 8260B.
 14. Closure Criteria New Mexico Administrative Code 19.15.29.12.E(2).

CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
SOUTH CULEBRA BLUFF UNIT 3
246 GR HOWARD ROAD LOVING, NEW MEXICO

GROUNDWATER
ANALYTICAL RESULTS MAP



FIGURE
5



Appendix A

2RP-599 Initial C-141 Form and 2RP-3984 Letter of Violation

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

NM OIL CONSERVATION

ARTESIA DISTRICT

Form C-141
Revised August 8, 2011

FEB 29 2016

Submit a Copy to appropriate District Office in
accordance with 19.15.29 NMAC.

RECEIVED

NKMW/1103249928

Release Notification and Corrective Action

258350 OPERATOR

☐ Initial Report ☒ Final Report

Name of Company	Vanguard Operating LLC	Contact	Marty Bloodworth
Address	5817 San Felipe St 3000 Houston TX 77057	Telephone No.	432-362-2209
Facility Name	SCB #3	Facility Type	Buttery
Surface Owner	Mineral Owner	API No. 30-015-22700	

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
	23	235	28E					

Latitude 32.29299N Longitude -104.05589W

NATURE OF RELEASE

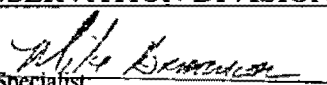
Type of Release	Produced Fluid	Volume of Release	~ 250 Bbls	Volume Recovered	~ 210 Bbls
Source of Release	Eroded Union	Date and Hour of Occurrence	01/25/11 6:00 am	Date and Hour of Discovery	01/25/11 6:30 am
Was Immediate Notice Given?	☒ Yes ☐ No ☐ Not Required If YES, To Whom? Mike Bratcher, NMOC D				
By Whom?	Sergio Contreras w/ SESE				
Was a Watercourse Reached?	☐ Yes ☒ No If YES, Volume Impacting the Watercourse:				

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.* A union on the tank eroded away, causing the pump to fail and shut down. As a result 250 bbls of produced fluid was released and captured inside the fire wall. A vacuum truck was able to recover approximately 210 bbls.

Describe Area Affected and Cleanup Action Taken.* SESE delineated the affected area as detailed in a copy of their report dated 02/19/11 (an original of the report has been provided to the Artesia NMOC D Dist. Office). The affected area was remediated as discussed in Section V. of the report. As noted in the report additional remediation will be necessary when the facility is inactive.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOC D 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 NMOC D marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOC D 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.

Signature: 		OIL CONSERVATION DIVISION	
Printed Name: C.M. "Marty" Bloodworth		Signed By:  Approved by Environmental Specialist	
Title: Sr. Operations Engineer	Approval Date: 3/1/16	Expiration Date:	
E-mail Address: mbloodworth@VNRLLC.com	Conditions of Approval: Deferred	Attached ☐	
Date: 02/25/2016	Phone: 432-362-2209	JO Close of Facility 2/28/2016	

* Attach Additional Sheets If Necessary

* Note: The operator at the time of the spill was Range Resources Corp. Vanguard acquired the lease from Range.

Released to Imaging: 1/26/2023 3:11:28 PM

Note: Remediation required @ close of facility
MB
NMOC D 3/1/2016



NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON

Governor

Joanna Prukop

Cabinet Secretary

Mark E. Fesmire, P.E.

Director

Oil Conservation Division

*Field Inspection Program
"Preserving the Integrity of Our Environment"*

17-Jan-06

RANGE OPERATING NEW MEXICO INC

777 MAIN STREET SUITE 800

FT WORTH TX 76102

LETTER OF VIOLATION - Inspection

Dear Operator:

The following inspection(s) indicate that the well, equipment, location or operational status of the well(s) failed to meet standards of the New Mexico Oil Conservation Division as described in the detail section below. To comply with standards imposed by Rules and Regulations of the Division, corrective action must be taken immediately and the situation brought into compliance. The detail section indicates preliminary findings and/or probable nature of the violation. This determination is based on an inspection of your well or facility by an inspector employed by the Oil Conservation Division on the date(s) indicated.

Please notify the proper district office of the Division, in writing, of the date corrective actions are scheduled to be made so that arrangements can be made to reinspect the well and/or facility.

INSPECTION DETAIL SECTION

SOUTH CULEBRA BLUFF UNIT No.003

G-23-23S-28E

30-015-22700-00-00

Inspection Date	Type Inspection	Inspector	Violation?	*Significant Non-Compliance?	Corrective Action Due By:	Inspection No.
01/11/2006	Routine/Periodic	Chris Beadle	Yes	No	2/10/2006	iCLB0601142847

Violations

Surface Leaks/Spills

Comments on Inspection:

Met with Greg Swindle, White Buffalo Environmental Services, Inc, representing the operator, to examine various wells in this area for remediation projects status. Driving by this well, observed that the well had standing fluids and fresh soil contamination on location. Cellar has standing fluids and saturated soils.

Remediation is required. Submit a remediation work plan to OCD District 2 Office prior to February 10, 2006.

OCD approved remediation must begin on this release no later than February 17, 2006. Until a remediation work plan is received, the NMOCD District 2 Office must be notified 48 hours prior to any remediation work or prior to taking samples where results of the samples may be submitted to the OCD.

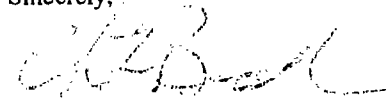
2RP-3984

Oil Conservation Division * 1301 W. Grand * Artesia, New Mexico 88210

Phone: 505-748-1283 * Fax: 505-748-9720 * <http://www.emnrd.state.nm.us>

In the event that a satisfactory response is not received to this letter of direction by the "Corrective Action Due By:" date shown above, further enforcement will occur. Such enforcement may include this office applying to the Division for an order summoning you to a hearing before a Division Examiner in Santa Fe to show cause why you should not be ordered to permanently plug and abandon this well. Such a hearing may result in imposition of CIVIL PENALTIES for your violation of OCD rules.

Sincerely,



Artesia OCD District Office

Note: Information in Detail Section comes directly from field inspector data entries - not all blanks will contain data.

*Significant Non-Compliance events are reported directly to the EPA, Region VI, Dallas, Texas.

Appendix B

Boring Logs

Drilling Company: E-Tech Driller's Name: Eddy Drilling Method: Excavation Sampling Method: Grab Rig Type: Excavator	Latitude: 32°17'34.33" N Longitude: 104° 3'22.56"W Casing Elevation: N/A Borehole Depth: 10' Surface Elevation: Not Surveyed Descriptions By: Chris Payton	Well/Boring ID: SB-43 Client: Chevron Environmental Management Company Location: Eddy County, New Mexico
--	---	---

DEPTH	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID	USCS Code	Geologic Column	Stratigraphic Description
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					ML	Fine Silt Dust; 90% silt, 10% gravel, unsorted, angular gravel, light tan, dry.
					GP	Hard Carbonate/Caliche Layer; dry, 100% rock, tan to white.
						Sand; 90% sand, 10% poorly sorted gravel, moist, light brown.
		4'				Sand; moist with poorly sorted clasts, subangular to subrounded.
-5	-5					
		6'			SP	Sand; moist with intermittent unsorted gravel (subangular) and dark brown clay.
		8'				Sand; moist, poorly sorted, subangular gravel, brown.
					GW	Carbonate Conglomerate; hard, 60% carbonate, 40% chert nodules. Chert is well rounded to subrounded.
-10	-10	10'				End of excavation @ 10' bgs

	Remarks: 1. Below Ground Surface
--	---

Received by: OC-D: 9/20/2024 11:55:39 AM Drilling Company: E-Tech Driller's Name: Eddy Drilling Method: Excavation Sampling Method: Grab Rig Type: Excavator	Latitude: 32°17'34.32"N Longitude: 104° 3'22.18"W Casing Elevation: N/A Borehole Depth: 8' Surface Elevation: Not Surveyed Descriptions By: Chris Payton	Well/Boring ID: SB-44 Client: Chevron Environmental Management Company Location: Eddy County, New Mexico
--	--	---

DEPTH	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID	USCS Code	Geologic Column	Stratigraphic Description

Geotechnical log for SB-43 showing soil layers GM and SP with descriptions and depths.

Depth (ft)	Soil Layer	Description
0.0 - 1.0	GM	Caliche Layer; loose, dry, light tan.
1.0 - 1.5	GM	Caliche Layer; hard, dry, dark to light tan.
1.5 - 4.0	SP	Sand; moist, with intermittend clay.
4.0 - 8.0	SP	Sand; moist, noticeably more dry than SB-43 at same depth. Clay layer not found. Dark tan.
8.0		End of excavation @ 8' bgs

	Remarks: 1. Below Ground Surface
--	---

Drilling Company: E-Tech Driller's Name: Eddy Drilling Method: Excavation Sampling Method: Grab Rig Type: Excavator	Latitude: 32°17'33.88"N Longitude: 104° 3'23.21"W Casing Elevation: N/A Borehole Depth: 4.5' Surface Elevation: Not Surveyed Descriptions By: Chris Payton	Well/Boring ID: SB-45 Client: Chevron Environmental Management Company Location: Eddy County, New Mexico
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DEPTH	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID	USCS Code	Geologic Column	Stratigraphic Description
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							Caliche; loose, dry, 20% gravel, 80% caliche.
-1				GW			Caliche; compacted, dry, 30% gravel, 70% caliche.
-2							Sand and Clay; 60% sand, 40% clay. Sand: moist, tan, with interminttent clay. Clay: moist, brown with visible crystals.
-3				SC			
-4		4'					Limestone Conglomerate; hard, with rounded chert intrusiones/clasts. Excavator cannot proceed.
				GW			End of excavation @ 4.5' bgs.

 Infrastructure · Water · Environment · Buildings	Remarks: 1. Below Ground Surface
--	---

Drilling Company: E-Tech Driller's Name: Eddy Drilling Method: Excavation Sampling Method: Grab Rig Type: Excavator	Latitude: 32°17'33.40"N Longitude: 104° 3'22.42"W Casing Elevation: N/A Borehole Depth: 4.5' Surface Elevation: Not Surveyed Descriptions By: Chris Payton	Well/Boring ID: SB-46 Client: Chevron Environmental Management Company Location: Eddy County, New Mexico
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DEPTH	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID	USCS Code	Geologic Column	Stratigraphic Description
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						GM	Caliche Layer; loose, dry, 80% caliche, 20% gravel.
							Caliche; compacted, dry, 90% caliche, 10% gravel.
-1						CL	Clay; moist, brown, 70% clay, 30% sand, tan.
-2							
-3						SP	Sand; moist,tan, 80% sand, 20% clay, intermittent.
-4		4'				GW	Carbonate; 100% hard rock. Refusal, cannot procede.
							End of excavation @ 4.5' bgs

	Remarks: 1. Below Ground Surface
--	---

Drilling Company: E-Tech
Driller's Name: Eddy
Drilling Method: Excavation
Sampling Method: Grab
Rig Type: Excavator

Latitude: 32°17'33.68"N
Longitude: 104° 3'21.96"W
Casing Elevation: N/A
Borehole Depth: 8'
Surface Elevation: Not Surveyed
Descriptions By: Chris Payton

Well/Boring ID: **SB-47**

Client: Chevron Environmental Management
Company

Location: Eddy County, New Mexico

DEPTH	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID	USCS Code	Geologic Column	Stratigraphic Description

Depth (ft)	Soil Type	Description
0 - 1	GM	Caliche; loose, 80% caliche, 20% gravel, dry, light tan.
1 - 4	SC	Caliche; compacted, 90% caliche, 10% gravel, dry, white to lightest tan.
4 - 6	SC	Sand and Clay; 70% sand, 30% Clay. Sand: moist, light tan. Clay: moist, brown, chloride crystals, intermittent.
6 - 8	SP	Sand and Clay; 80% sand, 20% clay. Sand: moist, tan. Clay: dark brown, intermittent.
8 - 10	SP	Sand; moist, tan, 100% sand.
10		End of excavation @ 8' bgs



Remarks: 1. Below Ground Surface

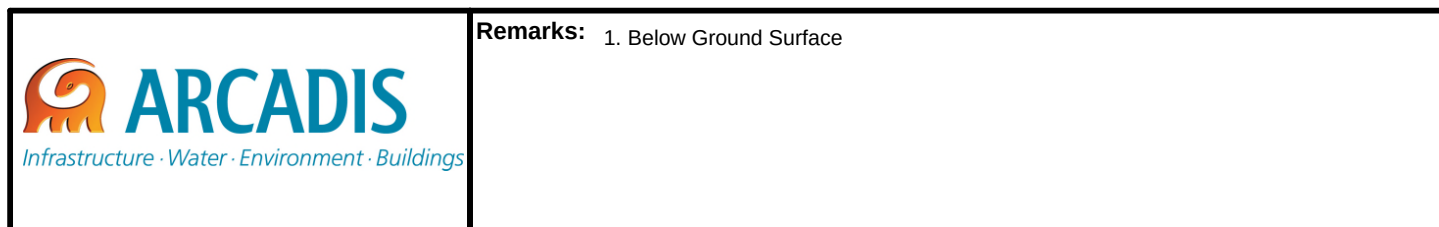
Drilling Company: E-Tech Driller's Name: Eddy Drilling Method: Excavation Sampling Method: Grab Rig Type: Excavator	Latitude: 32°17'35.27"N Longitude: 104° 3'16.27"W Casing Elevation: N/A Borehole Depth: 10' Surface Elevation: Not Surveyed Descriptions By: Chris Payton	Well/Boring ID: SB-48 Client: Chevron Environmental Management Company Location: Eddy County, New Mexico
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DEPTH	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID	USCS Code	Geologic Column	Stratigraphic Description
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	Remarks: 1. Below Ground Surface
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DEPTH	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID	USCS Code	Geologic Column	Stratigraphic Description



Drilling Company: E-Tech Driller's Name: Eddy Drilling Method: Excavation Sampling Method: Grab Rig Type: Excavator	Latitude: 32°17'34.54"N Longitude: 104° 3'17.28"W Casing Elevation: N/A Borehole Depth: 12' Surface Elevation: Not Surveyed Descriptions By: Chris Payton	Well/Boring ID: SB-50 Client: Chevron Environmental Management Company Location: Eddy County, New Mexico
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DEPTH	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID	USCS Code	Geologic Column	Stratigraphic Description
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 Infrastructure · Water · Environment · Buildings	Remarks: 1. Below Ground Surface (bgs)
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Drilling Company: E-Tech Driller's Name: Eddy Drilling Method: Excavation Sampling Method: Grab Rig Type: Excavator	Latitude: 32°17'34.29"N Longitude: 104° 3'15.66"W Casing Elevation: N/A Borehole Depth: 10' Surface Elevation: Not Surveyed Descriptions By: Chris Payton	Well/Boring ID: SB-51 Client: Chevron Environmental Management Company Location: Eddy County, New Mexico
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DEPTH	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID	USCS Code	Geologic Column	Stratigraphic Description
-------	-------------------	-----------------	-----------------	-----	-----------	-----------------	---------------------------

							Caliche; dry, loose, 80% caliche, 20% loose gravel.
							Caliche; dry, compacted, 70% caliche, 30% gravel.
				GW			
							Caliche Sand and Clay; moist, dark tan, 80% caliche sand, 20% clay.
		4'					Caliche Sand and Clay; moist, 70% caliche sand; 30% clay.
-5	-5						
		6'			SC		Caliche Sand and Clay; moist, 60% caliche sand, 40% clay with chloride crystals.
		8'					Caliche Sand and Clay; moist, dark brown, 70% caliche sand, 30% clay.
-10	-10	10'					End of excavation @ 10' bgs

	Remarks: 1. Below Ground Surface (bgs)
--	---

Drilling Company: E-Tech Driller's Name: Eddy Drilling Method: Excavation Sampling Method: Grab Rig Type: Excavator	Latitude: 32°17'34.86"N Longitude: 104° 3'15.72"W Casing Elevation: N/A Borehole Depth: 10' Surface Elevation: Not Surveyed Descriptions By: Chris Payton	Well/Boring ID: SB-52 Client: Chevron Environmental Management Company Location: Eddy County, New Mexico
--	--	---

DEPTH	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID	USCS Code	Geologic Column	Stratigraphic Description
-------	-------------------	-----------------	-----------------	-----	-----------	-----------------	---------------------------

					GW	Caliche; loose, dry, 80% caliche, 20% gravel.
						Caliche; compacted, dry, light tan, 70% caliche, 30% lithified gravel.
						Caliche Sand and Clay; moist, brown, 80% caliche sand, 20% clay.
			4'			Caliche Sand and Clay; moist, brown, 80% caliche sand, 20% clay.
-5					SC	Caliche Sand and Clay; moist, 70% caliche sand, 30% clay with chloride crystals.
			6'			Caliche Sand and Clay; moist, brown, 80% caliche sand, 20% clay, no visible chloride crystals.
			8'			End of excavation @ 10' bgs
-10			10'			

 Infrastructure · Water · Environment · Buildings	Remarks: 1. Below Ground Surface (bgs)
--	---

Drilling Company: HCI Driller's Name: Ken Cooper Drilling Method: Air Rotary Sampling Method: Grab Rig Type: Air Rotary	Latitude: 32°17'33.88"N Longitude: 104° 3'22.77"W Casing Elevation: N/A Borehole Depth: 48' Surface Elevation: Not Surveyed Descriptions By: Heather Dudley	Well/Boring ID: TW-1 Client: Chevron Environmental Management Company Location: Eddy County, New Mexico
--	--	--

DEPTH	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID	USCS Code	Geologic Column	Stratigraphic Description
-------	-------------------	-----------------	-----------------	-----	-----------	-----------------	---------------------------

0							No Recovery
5	-5	4'			SC		Sand with Clay and pieces of Caliche; 2.5 YR 5/4 Reddish Brown, 80% sand, 10% clay, 10% caliche. Sand and clay: moderately rounded, moderately sorted, soft, keeps shape, moist, subangular to angular. Caliche: angular. Weathered.
10	-10	10'					Sand with large pieces of Conglomerate; 80% sand, 20% conglomerate. Sand: 2.5 YR 5/4 reddish brown, subrounded to subangular, soft, moderately sorted, moist. Conglomerate: angular.
15	-15	15'					
20	-20	20'			SW		Sand with large pieces of Conglomerate; 2.5YR 4/3 reddish brown, subrounded to round, moist, moderately sorted, moderately rounded, cohesive, holds form.
25	-25	25'					Gravelly Sand; 5 YR 7/2 pinkish grey, moist to wet, 90% sand, 10% gravel, cohesive, holds shape, loose, subangular to angular, moderately sorted, moderately rounded. Note: Wet at 38 ft bgs.
30	-30	30'					
35	-35	35'					
40	-40	40'					No Recovery
45	-45						
End of boring @ 48' bgs							

	Remarks: 1. Below Ground Surface (bgs)
--	---

Drilling Company: HCI Driller's Name: Ken Cooper Drilling Method: Air Rotary Sampling Method: Grab Rig Type: Air Rotary	Latitude: 32°17'33.25"N Longitude: 104° 3'17.34"W Casing Elevation: N/A Borehole Depth: 40' Surface Elevation: Not Surveyed Descriptions By: Heather Dudley	Well/Boring ID: TW-2 Client: Chevron Environmental Management Company Location: Eddy County, New Mexico
--	--	--

DEPTH	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID	USCS Code	Geologic Column	Stratigraphic Description
-------	-------------------	-----------------	-----------------	-----	-----------	-----------------	---------------------------

0							No Recovery
-5		4'			SW		Sand with angular pieces of Caliche; 5YR 5/3 reddish brown, 80% sand, 20% caliche, subangular to angular, moist, soft, loose, medium grained, poorly sorted.
-10		10'					Sand with Clay; 5YR 5/3 reddish brown, 80% sand, 20% clay, cohesive, dilatancy, subrounded to rounded, soft, moist, loose, small to medium grained, moderately sorted.
-15		15'					
-20		20'			SC		Sand with Clay; 5YR 5/3 reddish brown, 85% sand, 15% clay, moist to wet, cohesive, dilatancy, subrounded to rounded, small to medium pebbles and gravel, moderately sorted, loose. Note: gauged water at 27 ft bgs.
-25		25'					
-30		30'					
-35		35'			GP		Gravelly Sand; 5YR 4/4 reddish brown, 70% gravel to pebbles, 30% sand, loose, moist to wet, dilatancy, very cohesive, moderately rounded sand, moderately sorted.
-40							End of borint @ 40' bgs

 Infrastructure · Water · Environment · Buildings	Remarks: 1. Below Ground Surface (bgs)
--	---

Drilling Company: HCI Driller's Name: Ken Cooper Drilling Method: Air Rotary Sampling Method: Grab Rig Type: Air Rotary	Latitude: 32°17'34.35"N Longitude: 104° 3'17.51"W Casing Elevation: N/A Borehole Depth: 40' Surface Elevation: Not Surveyed Descriptions By: Heather Dudley	Well/Boring ID: TW-3 Client: Chevron Environmental Management Company Location: Eddy County, New Mexico
--	--	--

DEPTH	Sample Run Number	Sample/Int/Type	Recovery (feet)	PID	USCS Code	Geologic Column	Stratigraphic Description
-------	-------------------	-----------------	-----------------	-----	-----------	-----------------	---------------------------

						No Recovery
-5	-5	4'		SW		Sand with Caliche; 5YR 6/3 light brown, 80% sand, 20% caliche pieces, medium grained, subangular to angular, poorly sorted, soft, loose, dry.
-10	-10	10'		SC		Sand with Clay; 5YR 4/3 reddish brown, 80% sand, 20% clay, fine to medium grained, sorted, dilatancy, moist, holds shape, small pebbles present.
-15	-15	15'				
-20	-20	20'				
-25	-25	25'		GC		Sand with Clay and Gravel; 5 YR 4/3 reddish brown, 80% Sand and Clay, 20% gravel, loose moist, fine to medium grained, soft, holds shape, moderately sorted. Note: gauged well at 27" bgs.
-30	-30	30'				
-35	-35	35'		GP		Sandy Gravel; 5YR 4/3 reddish brown, wet at 39 to 40 ft bgs, loose, moderately sorted, well rounded to subrounded.
-40	-40					End of boring @ 40' bgs

	Remarks: 1. Below Ground Surface (bgs)
--	---

Appendix C

Photographic Log

PROJECT PHOTOGRAPHS

Chevron Environmental Management Company
UEM South Culebra Bluff Unit 3



Photo: 1

Location:
South Culebra Bluff Unit
3

Description:
SB-43 (4 feet bgs)

Date: 08/21/2023

Taken By:
Christopher Payton



Photo: 2

Location:
South Culebra Bluff Unit
3

Description:
SB-43 (6 feet bgs)

Date: 08/21/2023

Taken By:
Christopher Payton

PROJECT PHOTOGRAPHS

Chevron Environmental Management Company
UEM South Culebra Bluff Unit 3

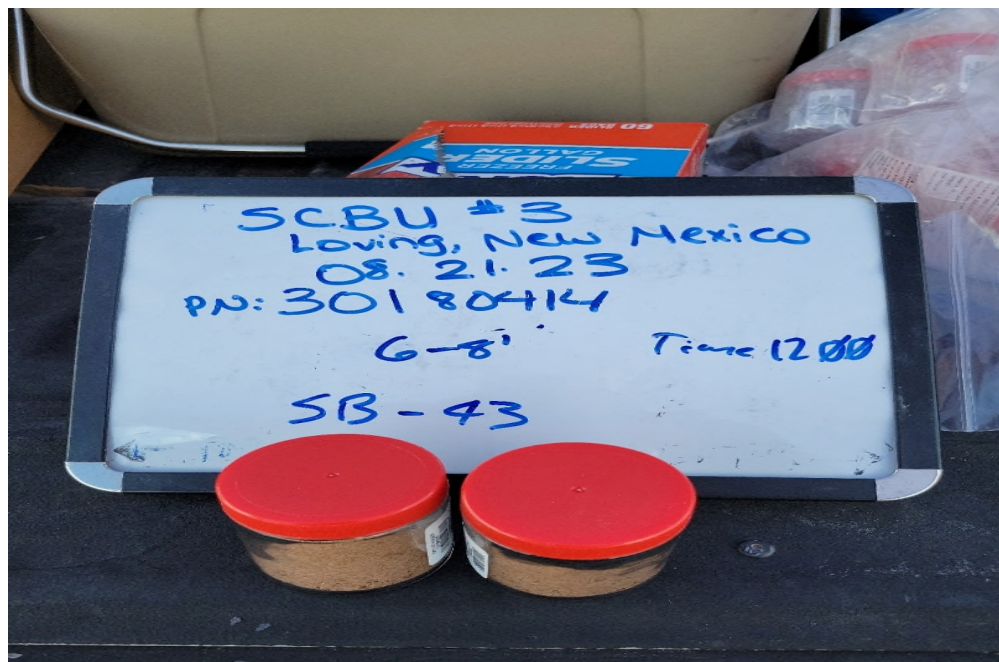


Photo: 3

Location:

South Culebra Bluff Unit
3

Description:

SB-43 (8 feet bgs)

Date: 08/21/2023

Taken By:

Christopher Payton



Photo: 4

Location:

South Culebra Bluff Unit
3

Description:

SB-44 (4 feet bgs)

Date: 08/21/2023

Taken By:

Christopher Payton

PROJECT PHOTOGRAPHS

Chevron Environmental Management Company
UEM South Culebra Bluff Unit 3



Photo: 5

Location:
South Culebra Bluff Unit
3

Description:
SB-47 (4 feet bgs)

Date: 08/22/2023

Taken By:
Christopher Payton



Photo: 6

Location:
South Culebra Bluff Unit
3

Description:
SB-47 (6 feet bgs)

Date: 08/22/2023

Taken By:
Christopher Payton

PROJECT PHOTOGRAPHS

Chevron Environmental Management Company
UEM South Culebra Bluff Unit 3



Photo: 7

Location:
South Culebra Bluff Unit
3

Description:
SB-48 (4 feet bgs)

Date: 08/22/2023

Taken By:
Christopher Payton



Photo: 8

Location:
South Culebra Bluff Unit
3

Description:
SB-48 (6 feet bgs)

Date: 08/22/2023

Taken By:
Christopher Payton

PROJECT PHOTOGRAPHS

Chevron Environmental Management Company
UEM South Culebra Bluff Unit 3



Photo: 9

Location:
South Culebra Bluff Unit
3

Description:
SB-48 (8 feet bgs)

Date: 08/22/2023

Taken By:
Christopher Payton



Photo: 10

Location:
South Culebra Bluff Unit
3

Description:
SB-48 (10 feet bgs)

Date: 08/22/2023

Taken By:
Christopher Payton

PROJECT PHOTOGRAPHS

Chevron Environmental Management Company
UEM South Culebra Bluff Unit 3



Photo: 11

Location:

South Culebra Bluff Unit
3

Description:

SB-49 (6 feet bgs)

Date: 08/24/2023

Taken By:

Christopher Payton



Photo: 12

Location:

South Culebra Bluff Unit
3

Description:

SB-49 (8 feet bgs)

Date: 08/24/2023

Taken By:

Christopher Payton

PROJECT PHOTOGRAPHS

Chevron Environmental Management Company
UEM South Culebra Bluff Unit 3



Photo: 13

Location:
South Culebra Bluff Unit
3

Description:
SB-51 (4 feet bgs)

Date: 08/24/2023

Taken By:
Christopher Payton



Photo: 14

Location:
South Culebra Bluff Unit
3

Description:
SB-51 (6 feet bgs)

Date: 08/24/2023

Taken By:
Christopher Payton

PROJECT PHOTOGRAPHS

Chevron Environmental Management Company
UEM South Culebra Bluff Unit 3



Photo: 15

Location:
South Culebra Bluff Unit
3

Description:
SB-51 (8 feet bgs)

Date: 08/24/2023

Taken By:
Christopher Payton

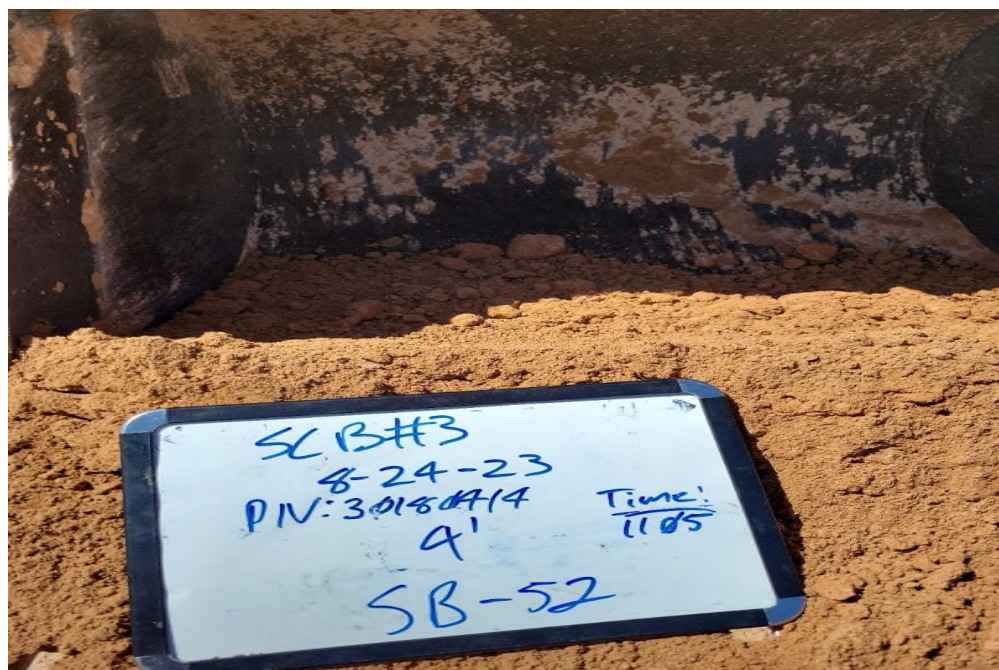


Photo: 16

Location:
South Culebra Bluff Unit
3

Description:
SB-52 (4 feet bgs)

Date: 08/24/2023

Taken By:
Christopher Payton

PROJECT PHOTOGRAPHS

Chevron Environmental Management Company
UEM South Culebra Bluff Unit 3



Photo: 17

Location:
South Culebra Bluff Unit
3

Description:
SB-52 (6 feet bgs)

Date: 08/24/2023

Taken By:
Christopher Payton



Photo: 18

Location:
South Culebra Bluff Unit
3

Description:
SB-52 (8 feet bgs)

Date: 08/24/2023

Taken By:
Christopher Payton

PROJECT PHOTOGRAPHS

Chevron Environmental Management Company
UEM South Culebra Bluff Unit 3



Photo: 19

Location:
South Culebra Bluff Unit
3

Description:
SB-52 (10 feet bgs)

Date: 08/24/2023

Taken By:
Christopher Payton



Photo: 20

Location:
South Culebra Bluff Unit
3

Description:
TMW-1 (4 feet bgs)

Date: 08/22/2023

Taken By:
Heather Dudley

PROJECT PHOTOGRAPHS

Chevron Environmental Management Company
UEM South Culebra Bluff Unit 3



Photo: 21

Location:
South Culebra Bluff Unit
3

Description:
TMW-2 (4 feet bgs)

Date: 08/22/2023

Taken By:
Heather Dudley



Photo: 22

Location:
South Culebra Bluff Unit
3

Description:
TMW-2 (20 feet bgs)

Date: 08/22/2023

Taken By:
Heather Dudley

PROJECT PHOTOGRAPHS

Chevron Environmental Management Company
UEM South Culebra Bluff Unit 3



Photo: 23

Location:
South Culebra Bluff Unit
3

Description:
TMW-2 (25 feet bgs)

Date: 08/22/2023

Taken By:
Heather Dudley



Photo: 24

Location:
South Culebra Bluff Unit
3

Description:
TMW-3 (4 feet bgs)

Date: 08/22/2023

Taken By:
Heather Dudley

Appendix D

Laboratory Reports



ANALYTICAL REPORT

August 31, 2023

Arcadis - Chevron - NM

Sample Delivery Group: L1649011
Samples Received: 08/23/2023
Project Number: 30180414
Description: SCB Unit 3
Site: SCB UNIT 3
Report To: Sarah Johnson
401 East Main Street
Suite 400
El Paso, TX 79901

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Entire Report Reviewed By:

Chris McCord
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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SB-45-S-4-230822 L1649011-01 Solid

Collected by
Chris Payton

Collected date/time
08/22/23 07:55

Received date/time
08/23/23 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2120020	1	08/24/23 09:11	08/24/23 09:20	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2121202	1	08/25/23 15:50	08/25/23 18:37	MDM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2121732	1	08/23/23 22:30	08/27/23 09:42	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2119986	1	08/23/23 22:30	08/24/23 11:15	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2121244	1	08/26/23 07:51	08/26/23 16:14	KAP	Mt. Juliet, TN

1Cp

2Tc

3Ss

4Cn

SB-46-S-4-230822 L1649011-02 Solid

Collected by
Chris Payton

Collected date/time
08/22/23 08:40

Received date/time
08/23/23 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2120020	1	08/24/23 09:11	08/24/23 09:20	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2121202	1	08/25/23 15:50	08/25/23 18:54	MDM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2121732	1	08/23/23 22:30	08/27/23 10:06	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2119986	1	08/23/23 22:30	08/24/23 11:34	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2121256	1	08/26/23 14:21	08/26/23 18:42	KAP	Mt. Juliet, TN

5Sr

6Qc

7Gl

8Al

SB-47-S-4-230822 L1649011-03 Solid

Collected by
Chris Payton

Collected date/time
08/22/23 09:35

Received date/time
08/23/23 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2120020	1	08/24/23 09:11	08/24/23 09:20	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2121202	5	08/25/23 15:50	08/25/23 20:36	MDM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2121732	1	08/23/23 22:30	08/27/23 10:29	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2119986	1	08/23/23 22:30	08/24/23 11:53	JAH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2121256	1	08/26/23 14:21	08/26/23 22:43	KAP	Mt. Juliet, TN

9Sc

SB-47-S-6-230822 L1649011-04 Solid

Collected by
Chris Payton

Collected date/time
08/22/23 09:50

Received date/time
08/23/23 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2120020	1	08/24/23 09:11	08/24/23 09:20	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2121202	5	08/25/23 15:50	08/25/23 20:52	MDM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2122047	1	08/23/23 22:30	08/28/23 01:37	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2120620	1	08/23/23 22:30	08/25/23 06:02	ADM	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2121251	1	08/23/23 22:30	08/27/23 01:53	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2121256	1	08/26/23 14:21	08/26/23 21:50	KAP	Mt. Juliet, TN

Collected by
Chris Payton

Collected date/time
08/22/23 10:02

Received date/time
08/23/23 08:30

SB-47-S-8-230822 L1649011-05 Solid

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2120020	1	08/24/23 09:11	08/24/23 09:20	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2121202	1	08/25/23 15:50	08/25/23 21:09	MDM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2121732	1	08/23/23 22:30	08/27/23 10:52	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2120754	1	08/23/23 22:30	08/24/23 23:15	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2121256	1	08/26/23 14:21	08/26/23 18:56	KAP	Mt. Juliet, TN

SB-48-S-4-230822 L1649011-06 Solid

Collected by
Chris Payton

Collected date/time
08/22/23 12:00

Received date/time
08/23/23 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2120021	1	08/24/23 09:03	08/24/23 09:10	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2121202	5	08/25/23 15:50	08/25/23 21:26	MDM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2121732	1	08/23/23 22:30	08/27/23 11:15	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2120754	1	08/23/23 22:30	08/24/23 23:34	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2121256	1	08/26/23 14:21	08/26/23 19:09	KAP	Mt. Juliet, TN

1

Cp

2

Tc

3

Ss

4

Cn

SB-48-S-6-230822 L1649011-07 Solid

Collected by
Chris Payton

Collected date/time
08/22/23 12:30

Received date/time
08/23/23 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2120021	1	08/24/23 09:03	08/24/23 09:10	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2121202	5	08/25/23 15:50	08/25/23 21:43	MDM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2121732	1	08/23/23 22:30	08/27/23 11:38	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2120754	1	08/23/23 22:30	08/24/23 23:53	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2121256	1	08/26/23 14:21	08/26/23 19:22	KAP	Mt. Juliet, TN

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

SB-48-S-8-230822 L1649011-08 Solid

Collected by
Chris Payton

Collected date/time
08/22/23 12:45

Received date/time
08/23/23 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2120021	1	08/24/23 09:03	08/24/23 09:10	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2121202	5	08/25/23 15:50	08/25/23 22:00	MDM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2121732	1	08/23/23 22:30	08/27/23 12:01	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2120754	1	08/23/23 22:30	08/25/23 00:12	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2121256	1	08/26/23 14:21	08/26/23 19:36	KAP	Mt. Juliet, TN

SB-48-S-10-230822 L1649011-09 Solid

Collected by
Chris Payton

Collected date/time
08/22/23 13:05

Received date/time
08/23/23 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2120021	1	08/24/23 09:03	08/24/23 09:10	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2121202	5	08/25/23 15:50	08/25/23 22:17	MDM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2121732	1	08/23/23 22:30	08/27/23 12:24	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2120754	1	08/23/23 22:30	08/25/23 00:32	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2121256	1	08/26/23 14:21	08/26/23 19:49	KAP	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Chris McCord
Project Manager

- ¹ Cp
- ² Tc
- ³ Ss
- ⁴ Cn
- ⁵ Sr
- ⁶ Qc
- ⁷ Gl
- ⁸ Al
- ⁹ Sc

Collected date/time: 08/22/23 07:55

L1649011

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	89.6		1	08/24/2023 09:20	WG2120020

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	287		10.3	22.3	1	08/25/2023 18:37	WG2121202

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0334	B J	0.0242	0.112	1	08/27/2023 09:42	WG2121732
(S) a,a,a-Trifluorotoluene(FID)	95.0			77.0-120		08/27/2023 09:42	WG2121732

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000575	0.00123	1	08/24/2023 11:15	WG2119986
Toluene	0.00166	J	0.00160	0.00616	1	08/24/2023 11:15	WG2119986
Ethylbenzene	U		0.000907	0.00308	1	08/24/2023 11:15	WG2119986
Total Xylenes	U		0.00108	0.00800	1	08/24/2023 11:15	WG2119986
(S) Toluene-d8	105			75.0-131		08/24/2023 11:15	WG2119986
(S) 4-Bromofluorobenzene	108			67.0-138		08/24/2023 11:15	WG2119986
(S) 1,2-Dichloroethane-d4	91.4			70.0-130		08/24/2023 11:15	WG2119986

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.80	4.46	1	08/26/2023 16:14	WG2121244
C28-C36 Motor Oil Range	1.08	J	0.306	4.46	1	08/26/2023 16:14	WG2121244
(S) o-Terphenyl	55.1			18.0-148		08/26/2023 16:14	WG2121244

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	92.7		1	08/24/2023 09:20	WG2120020

¹ Cp

² Tc

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	154	J3	9.92	21.6	1	08/25/2023 18:54	WG2121202

³ Ss

⁴ Cn

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0469	B J	0.0234	0.108	1	08/27/2023 10:06	WG2121732
(S) a,a,a-Trifluorotoluene(FID)	95.4			77.0-120		08/27/2023 10:06	WG2121732

⁵ Sr

⁶ Qc

⁷ Gl

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000541	0.00116	1	08/24/2023 11:34	WG2119986
Toluene	U		0.00151	0.00579	1	08/24/2023 11:34	WG2119986
Ethylbenzene	U		0.000853	0.00290	1	08/24/2023 11:34	WG2119986
Total Xylenes	U		0.00102	0.00753	1	08/24/2023 11:34	WG2119986
(S) Toluene-d8	105			75.0-131		08/24/2023 11:34	WG2119986
(S) 4-Bromofluorobenzene	107			67.0-138		08/24/2023 11:34	WG2119986
(S) 1,2-Dichloroethane-d4	91.2			70.0-130		08/24/2023 11:34	WG2119986

⁸ Al

⁹ Sc

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.74	4.31	1	08/26/2023 18:42	WG2121256
C28-C36 Motor Oil Range	U		0.296	4.31	1	08/26/2023 18:42	WG2121256
(S) o-Terphenyl	48.2			18.0-148		08/26/2023 18:42	WG2121256

Collected date/time: 08/22/23 09:35

L1649011

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	90.5		1	08/24/2023 09:20	WG2120020

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	1090		50.8	111	5	08/25/2023 20:36	WG2121202

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0465	B J	0.0240	0.111	1	08/27/2023 10:29	WG2121732
(S) a,a,a-Trifluorotoluene(FID)	96.9			77.0-120		08/27/2023 10:29	WG2121732

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000565	0.00121	1	08/24/2023 11:53	WG2119986
Toluene	U		0.00157	0.00605	1	08/24/2023 11:53	WG2119986
Ethylbenzene	U		0.000892	0.00303	1	08/24/2023 11:53	WG2119986
Total Xylenes	U		0.00107	0.00787	1	08/24/2023 11:53	WG2119986
(S) Toluene-d8	106			75.0-131		08/24/2023 11:53	WG2119986
(S) 4-Bromofluorobenzene	108			67.0-138		08/24/2023 11:53	WG2119986
(S) 1,2-Dichloroethane-d4	89.8			70.0-130		08/24/2023 11:53	WG2119986

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.78	4.42	1	08/26/2023 22:43	WG2121256
C28-C36 Motor Oil Range	U		0.303	4.42	1	08/26/2023 22:43	WG2121256
(S) o-Terphenyl	50.5			18.0-148		08/26/2023 22:43	WG2121256

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	90.2		1	08/24/2023 09:20	WG2120020

1 Cp

2 Tc

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	1680		51.0	111	5	08/25/2023 20:52	WG2121202

3 Ss

4 Cn

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0333	B J	0.0241	0.111	1	08/28/2023 01:37	WG2122047
(S) a,a,a-Trifluorotoluene(FID)	96.7			77.0-120		08/28/2023 01:37	WG2122047

5 Sr

6 Qc

7 Gl

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000569	0.00122	1	08/25/2023 06:02	WG2120620
Toluene	U		0.00158	0.00609	1	08/25/2023 06:02	WG2120620
Ethylbenzene	U		0.000897	0.00304	1	08/25/2023 06:02	WG2120620
Total Xylenes	0.00357	J	0.00107	0.00792	1	08/27/2023 01:53	WG2121251
(S) Toluene-d8	105			75.0-131		08/25/2023 06:02	WG2120620
(S) Toluene-d8	102			75.0-131		08/27/2023 01:53	WG2121251
(S) 4-Bromofluorobenzene	104			67.0-138		08/25/2023 06:02	WG2120620
(S) 4-Bromofluorobenzene	102			67.0-138		08/27/2023 01:53	WG2121251
(S) 1,2-Dichloroethane-d4	92.0			70.0-130		08/25/2023 06:02	WG2120620
(S) 1,2-Dichloroethane-d4	93.6			70.0-130		08/27/2023 01:53	WG2121251

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U	J3 J6	1.79	4.44	1	08/26/2023 21:50	WG2121256
C28-C36 Motor Oil Range	U		0.304	4.44	1	08/26/2023 21:50	WG2121256
(S) o-Terphenyl	46.1			18.0-148		08/26/2023 21:50	WG2121256

SB-47-3-8-230822

Collected date/time: 08/22/23 10:02

L1649011

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	79.0		1	08/24/2023 09:20	WG2120020

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	86.6		11.6	25.3	1	08/25/2023 21:09	WG2121202

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0323	B J	0.0275	0.127	1	08/27/2023 10:52	WG2121732
(S) a,a,a-Trifluorotoluene(FID)	96.5			77.0-120		08/27/2023 10:52	WG2121732

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000715	0.00153	1	08/24/2023 23:15	WG2120754
Toluene	U		0.00199	0.00765	1	08/24/2023 23:15	WG2120754
Ethylbenzene	U		0.00113	0.00383	1	08/24/2023 23:15	WG2120754
Total Xylenes	U		0.00135	0.00995	1	08/24/2023 23:15	WG2120754
(S) Toluene-d8	120			75.0-131		08/24/2023 23:15	WG2120754
(S) 4-Bromofluorobenzene	105			67.0-138		08/24/2023 23:15	WG2120754
(S) 1,2-Dichloroethane-d4	103			70.0-130		08/24/2023 23:15	WG2120754

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		2.04	5.06	1	08/26/2023 18:56	WG2121256
C28-C36 Motor Oil Range	U		0.347	5.06	1	08/26/2023 18:56	WG2121256
(S) o-Terphenyl	33.9			18.0-148		08/26/2023 18:56	WG2121256

Collected date/time: 08/22/23 12:00

L1649011

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	91.0		1	08/24/2023 09:10	WG2120021

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	2650		50.6	110	5	08/25/2023 21:26	WG2121202

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0255	B J	0.0239	0.110	1	08/27/2023 11:15	WG2121732
(S) a,a,a-Trifluorotoluene(FID)	94.5			77.0-120		08/27/2023 11:15	WG2121732

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000560	0.00120	1	08/24/2023 23:34	WG2120754
Toluene	U		0.00156	0.00600	1	08/24/2023 23:34	WG2120754
Ethylbenzene	U		0.000884	0.00300	1	08/24/2023 23:34	WG2120754
Total Xylenes	U		0.00106	0.00780	1	08/24/2023 23:34	WG2120754
(S) Toluene-d8	98.9			75.0-131		08/24/2023 23:34	WG2120754
(S) 4-Bromofluorobenzene	91.3			67.0-138		08/24/2023 23:34	WG2120754
(S) 1,2-Dichloroethane-d4	95.7			70.0-130		08/24/2023 23:34	WG2120754

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.77	4.40	1	08/26/2023 19:09	WG2121256
C28-C36 Motor Oil Range	1.20	J	0.301	4.40	1	08/26/2023 19:09	WG2121256
(S) o-Terphenyl	42.6			18.0-148		08/26/2023 19:09	WG2121256

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	89.7		1	08/24/2023 09:10	WG2120021

¹ Cp

² Tc

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	2580		51.3	111	5	08/25/2023 21:43	WG2121202

³ Ss

⁴ Cn

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0291	B J	0.0242	0.111	1	08/27/2023 11:38	WG2121732
(S) a,a,a-Trifluorotoluene(FID)	95.9			77.0-120		08/27/2023 11:38	WG2121732

⁵ Sr

⁶ Qc

⁷ Gl

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000574	0.00123	1	08/24/2023 23:53	WG2120754
Toluene	U		0.00160	0.00614	1	08/24/2023 23:53	WG2120754
Ethylbenzene	U		0.000906	0.00307	1	08/24/2023 23:53	WG2120754
Total Xylenes	U		0.00108	0.00799	1	08/24/2023 23:53	WG2120754
(S) Toluene-d8	102			75.0-131		08/24/2023 23:53	WG2120754
(S) 4-Bromofluorobenzene	102			67.0-138		08/24/2023 23:53	WG2120754
(S) 1,2-Dichloroethane-d4	105			70.0-130		08/24/2023 23:53	WG2120754

⁸ Al

⁹ Sc

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.79	4.46	1	08/26/2023 19:22	WG2121256
C28-C36 Motor Oil Range	0.849	J	0.305	4.46	1	08/26/2023 19:22	WG2121256
(S) o-Terphenyl	42.6			18.0-148		08/26/2023 19:22	WG2121256

Collected date/time: 08/22/23 12:45

L1649011

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	91.2		1	08/24/2023 09:10	WG2120021

1 Cp

2 Tc

3 Ss

4 Cn

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	2000		50.4	110	5	08/25/2023 22:00	WG2121202

5 Sr

6 Qc

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0914	B J	0.0238	0.110	1	08/27/2023 12:01	WG2121732
(S) a,a,a-Trifluorotoluene(FID)	95.9			77.0-120		08/27/2023 12:01	WG2121732

7 Gl

8 Al

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000557	0.00119	1	08/25/2023 00:12	WG2120754
Toluene	U		0.00155	0.00597	1	08/25/2023 00:12	WG2120754
Ethylbenzene	U		0.000880	0.00298	1	08/25/2023 00:12	WG2120754
Total Xylenes	U		0.00105	0.00776	1	08/25/2023 00:12	WG2120754
(S) Toluene-d8	105			75.0-131		08/25/2023 00:12	WG2120754
(S) 4-Bromofluorobenzene	86.5			67.0-138		08/25/2023 00:12	WG2120754
(S) 1,2-Dichloroethane-d4	104			70.0-130		08/25/2023 00:12	WG2120754

9 Sc

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.77	4.39	1	08/26/2023 19:36	WG2121256
C28-C36 Motor Oil Range	U		0.300	4.39	1	08/26/2023 19:36	WG2121256
(S) o-Terphenyl	48.0			18.0-148		08/26/2023 19:36	WG2121256

Collected date/time: 08/22/23 13:05

L1649011

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	88.4		1	08/24/2023 09:10	WG2120021

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	2330		52.0	113	5	08/25/2023 22:17	WG2121202

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0412	B J	0.0245	0.113	1	08/27/2023 12:24	WG2121732
(S) a,a,a-Trifluorotoluene(FID)	96.6			77.0-120		08/27/2023 12:24	WG2121732

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Benzene	U		0.000590	0.00126	1	08/25/2023 00:32	WG2120754
Toluene	U		0.00164	0.00631	1	08/25/2023 00:32	WG2120754
Ethylbenzene	U		0.000931	0.00316	1	08/25/2023 00:32	WG2120754
Total Xylenes	U		0.00111	0.00821	1	08/25/2023 00:32	WG2120754
(S) Toluene-d8	95.9			75.0-131		08/25/2023 00:32	WG2120754
(S) 4-Bromofluorobenzene	89.1			67.0-138		08/25/2023 00:32	WG2120754
(S) 1,2-Dichloroethane-d4	104			70.0-130		08/25/2023 00:32	WG2120754

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	3.87	J	1.82	4.52	1	08/26/2023 19:49	WG2121256
C28-C36 Motor Oil Range	9.41		0.310	4.52	1	08/26/2023 19:49	WG2121256
(S) o-Terphenyl	48.2			18.0-148		08/26/2023 19:49	WG2121256

Method Blank (MB)

(MB) R3965350-1 08/24/23 09:20

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	%		%	%
Total Solids	0.00100			

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1649005-11 Original Sample (OS) • Duplicate (DUP)

(OS) L1649005-11 08/24/23 09:20 • (DUP) R3965350-3 08/24/23 09:20

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	95.6	93.1	1	2.64		10

Laboratory Control Sample (LCS)

(LCS) R3965350-2 08/24/23 09:20

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	%	%	%	%	
Total Solids	50.0	50.0	99.9	85.0-115	

Total Solids by Method 2540 G-2011 [L1649011-06,07,08,09](#)

Method Blank (MB)

(MB) R3965342-1 08/24/23 09:10

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	%		%	%
Total Solids	0.000			

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

L1649011-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1649011-07 08/24/23 09:10 • (DUP) R3965342-3 08/24/23 09:10

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	89.7	89.7	1	0.0954		10

Laboratory Control Sample (LCS)

(LCS) R3965342-2 08/24/23 09:10

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	%	%	%	%	
Total Solids	50.0	50.0	100	85.0-115	

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 300.0

[L1649011-01,02,03,04,05,06,07,08,09](#)

Method Blank (MB)

(MB) R3965797-1 08/25/23 16:58

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chloride	U		9.20	20.0

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1649011-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1649011-02 08/25/23 18:54 • (DUP) R3965797-3 08/25/23 19:11

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	154	196	1	24.0	J3	20

L1649020-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1649020-08 08/26/23 01:06 • (DUP) R3965797-6 08/26/23 01:23

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	21.5	21.6	1	0.828		20

Laboratory Control Sample (LCS)

(LCS) R3965797-2 08/25/23 17:14

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	199	99.7	90.0-110	

L1649011-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1649011-02 08/25/23 18:54 • (MS) R3965797-4 08/25/23 19:28 • (MSD) R3965797-5 08/25/23 19:45

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	539	154	686	732	98.6	107	1	80.0-120			6.52	20

Volatile Organic Compounds (GC) by Method 8015D/GRO

[L1649011-01,02,03,05,06,07,08,09](#)

Method Blank (MB)

(MB) R3966958-2 08/27/23 08:49

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0263	⬇	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	96.9			77.0-120

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3966958-1 08/27/23 01:04

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.64	103	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			112	77.0-120	

Volatile Organic Compounds (GC) by Method 8015D/GRO

[L1649011-04](#)

Method Blank (MB)

(MB) R3966100-2 08/27/23 20:35

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0281	⬇	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	97.9			77.0-120

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3966100-1 08/27/23 18:46

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	4.17	75.8	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			102	77.0-120	

Volatile Organic Compounds (GC/MS) by Method 8260B

L1649011-01,02,03

Method Blank (MB)

(MB) R3965965-3 08/24/23 05:58

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Toluene	U		0.00130	0.00500
Ethylbenzene	U		0.000737	0.00250
Total Xylenes	U		0.000880	0.00650
(S) Toluene-d8	106			75.0-131
(S) 4-Bromofluorobenzene	106			67.0-138
(S) 1,2-Dichloroethane-d4	89.1			70.0-130

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3965965-1 08/24/23 04:22 • (LCSD) R3965965-2 08/24/23 04:41

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.135	0.142	108	114	70.0-123			5.05	20
Toluene	0.125	0.138	0.141	110	113	75.0-121			2.15	20
Ethylbenzene	0.125	0.136	0.143	109	114	74.0-126			5.02	20
Total Xylenes	0.375	0.409	0.420	109	112	72.0-127			2.65	20
(S) Toluene-d8				105	105	75.0-131				
(S) 4-Bromofluorobenzene				108	110	67.0-138				
(S) 1,2-Dichloroethane-d4				92.3	94.4	70.0-130				

7
Gl

8
Al

9
Sc

Volatile Organic Compounds (GC/MS) by Method 8260B

L1649011-04

Method Blank (MB)

(MB) R3965552-3 08/25/23 02:34

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Toluene	U		0.00130	0.00500
Ethylbenzene	U		0.000737	0.00250
(S) Toluene-d8	104			75.0-131
(S) 4-Bromofluorobenzene	100			67.0-138
(S) 1,2-Dichloroethane-d4	97.8			70.0-130

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3965552-1 08/25/23 01:00 • (LCSD) R3965552-2 08/25/23 01:18

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.124	0.112	99.2	89.6	70.0-123			10.2	20
Toluene	0.125	0.120	0.108	96.0	86.4	75.0-121			10.5	20
Ethylbenzene	0.125	0.125	0.115	100	92.0	74.0-126			8.33	20
(S) Toluene-d8				101	101	75.0-131				
(S) 4-Bromofluorobenzene				97.8	103	67.0-138				
(S) 1,2-Dichloroethane-d4				97.2	99.0	70.0-130				

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3965321-3 08/24/23 21:27

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Toluene	U		0.00130	0.00500
Ethylbenzene	U		0.000737	0.00250
Total Xylenes	U		0.000880	0.00650
(S) Toluene-d8	119			75.0-131
(S) 4-Bromofluorobenzene	102			67.0-138
(S) 1,2-Dichloroethane-d4	102			70.0-130

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3965321-1 08/24/23 19:51 • (LCSD) R3965321-2 08/24/23 20:10

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.110	0.126	88.0	101	70.0-123			13.6	20
Toluene	0.125	0.113	0.122	90.4	97.6	75.0-121			7.66	20
Ethylbenzene	0.125	0.122	0.132	97.6	106	74.0-126			7.87	20
Total Xylenes	0.375	0.362	0.358	96.5	95.5	72.0-127			1.11	20
(S) Toluene-d8				108	107	75.0-131				
(S) 4-Bromofluorobenzene				105	94.9	67.0-138				
(S) 1,2-Dichloroethane-d4				107	110	70.0-130				

⁷Gl

⁸Al

⁹Sc

Volatile Organic Compounds (GC/MS) by Method 8260B

L1649011-04

Method Blank (MB)

(MB) R3966111-3 08/26/23 22:13

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Total Xylenes	U		0.000880	0.00650
(S) Toluene-d8	102			75.0-131
(S) 4-Bromofluorobenzene	100			67.0-138
(S) 1,2-Dichloroethane-d4	96.9			70.0-130

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3966111-1 08/26/23 20:32 • (LCSD) R3966111-2 08/26/23 20:51

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Total Xylenes	0.375	0.316	0.321	84.3	85.6	72.0-127			1.57	20
(S) Toluene-d8				98.2	99.7	75.0-131				
(S) 4-Bromofluorobenzene				101	99.6	67.0-138				
(S) 1,2-Dichloroethane-d4				102	102	70.0-130				

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Semi-Volatile Organic Compounds (GC) by Method 8015M [L1649011-01](#)

Method Blank (MB)

(MB) R3965855-1 08/26/23 14:42

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C36 Motor Oil Range	U		0.274	4.00
(S) o-Terphenyl	67.1			18.0-148

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3965855-2 08/26/23 14:55

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	39.7	79.4	50.0-150	
(S) o-Terphenyl			76.0	18.0-148	

L1648791-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1648791-01 08/26/23 16:54 • (MS) R3965855-3 08/26/23 17:07 • (MSD) R3965855-4 08/26/23 17:20

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	53.0	U	54.7	38.6	103	72.8	1	50.0-150		J3	34.5	20
(S) o-Terphenyl					90.2	63.4		18.0-148				

Method Blank (MB)

(MB) R3965810-1 08/26/23 18:15

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C36 Motor Oil Range	U		0.274	4.00
(S) o-Terphenyl	57.4			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3965810-2 08/26/23 18:29

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	32.3	64.6	50.0-150	
(S) o-Terphenyl			64.3	18.0-148	

L1649011-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1649011-04 08/26/23 21:50 • (MS) R3965810-3 08/26/23 22:03 • (MSD) R3965810-4 08/26/23 22:16

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	55.4	U	31.9	21.8	57.6	39.4	1	50.0-150		J3 J6	37.5	20
(S) o-Terphenyl					53.0	33.6		18.0-148				

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MDL (dry)	Method Detection Limit.
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey--NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio--VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1 6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1 4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA -- ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA -- ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA--Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Arcadis - Chevron - NM

401 East Main Street
Suite 400
El Paso, TX 79901

Report to:
Sarah Johnson

Project Description:
SCB Unit 3

City/State
Collected:

Please Circle:
PT MT CT ET

Phone: 915-747-3902

Client Project #
30180414

Lab Project #
CHEVARCNM-SCBUNIT3

Collected by (print):

Chris Payton

Site/Facility ID #
SCB UNIT 3

P.O. #

Collected by (signature):

Chris Payton

Rush? (Lab MUST Be Notified)

☐ Same Day ☐ Five Day
☐ Next Day ☐ 5 Day (Rad Only)
☐ Two Day ☐ 10 Day (Rad Only)
☐ Three Day

Date Results Needed

Standard

Immediately

Packed on Ice N ☐ Y ☒

Pres
Chk

Analysis / Container / Preservative

CHLORIDE-300, DRONM 4oz Clr-NoPres

GRO, V8260BTEX, TS 4oz Clr-NoPres

Total TPH (GRO, DRO, DRO)



MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody
constitutes acknowledgment and acceptance of the
Pace Terms and Conditions found at:
<https://info.pacelabs.com/hubfs/pas-standard-terms.pdf>

SDG #

F182

Acctnum: CHEVARCNM

Template: T235721

Prelogin: P1017032

PM: 526 - Chris McCord

PB: 8/8/11/23

Shipped Via: FedEX Ground

Remarks

Sample # (lab only)

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	CHLORIDE-300, DRONM 4oz Clr-NoPres	GRO, V8260BTEX, TS 4oz Clr-NoPres	Total TPH (GRO, DRO, DRO)										
SB-45-S-4-230822	G	SS	4	08-22-23	0755	2	X	X	X										-01
SB-46-S-4-230822	G	SS	4	08-22-23	0840	2	X	X	X										-02
SB-47-S-4-230822	G	SS	4	08-22-23	0935	2	X	X	X										-03
SB-47-S-6-230822	G	SS	6	08-22-23	0950	2	X	X	X										-04
SB-47-S-8-230822	G	SS	8	08-22-23	1002	2	X	X	X										-05
SB-48-S-4-230822	G	SS	4	08-22-23	1200	2	X	X	X										-06
SB-48-S-6-230822	G	SS	6	08-22-23	1230	2	X	X	X										-07
SB-48-S-8-230822	G	SS	8	08-22-23	1245	2	X	X	X										-08
SB-48-S-10-230822	G	SS	10	08-22-23	1305	2	X	X	X										-09
		SS				2	X	X											

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:

___ UPS ___ FedEx ___ Courier

Tracking #

6841 8349 9987

Sample Receipt Checklist

COC Seal Present/Intact: ☒ NP ☐ Y ☐ N
 COC Signed/Accurate: ☒ Y ☐ N
 Bottles arrive intact: ☒ Y ☐ N
 Correct bottles used: ☒ Y ☐ N
 Sufficient volume sent: ☒ Y ☐ N
 If Applicable
 VOA Zero Headspace: ☐ Y ☐ N
 Preservation Correct/Checked: ☒ Y ☐ N
 RAD Screen <0.5 mR/hr: ☒ Y ☐ N

Relinquished by: (Signature)

Chris Payton

Date:

08-22-23

Time:

1500

Received by: (Signature)

Trip Blank Received: Yes ☐ No ☒

HCL/MeOH

TBR

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Temp: 68.8°C

Bottles Received: 18

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)

Date:

8-23-23

Time:

830

Hold:

Condition:

NCF / OK



ANALYTICAL REPORT

August 31, 2023

Arcadis - Chevron - NM

Sample Delivery Group: L1649020
Samples Received: 08/23/2023
Project Number: 30180414
Description: SCB Unit 3
Site: SCB UNIT 3
Report To: Sarah Johnson
401 East Main Street
Suite 400
El Paso, TX 79901

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Entire Report Reviewed By:

Chris McCord
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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TW-3-S-25-230822 L1649020-12	20	
TW-3-S-30-230822 L1649020-13	21	
TW-3-S-35-230822 L1649020-14	22	
TW-1-S-4-230822 L1649020-15	23	
TW-1-S-10-230822 L1649020-16	24	
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TW-2-S-4-230822 L1649020-01 Solid

Collected by Heather Dudley
Collected date/time 08/22/23 07:50
Received date/time 08/23/23 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2120021	1	08/24/23 09:03	08/24/23 09:10	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2121202	5	08/25/23 15:50	08/25/23 22:34	MDM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2121936	1	08/24/23 09:31	08/27/23 16:08	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2120754	1	08/24/23 09:31	08/25/23 01:10	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2121256	1	08/26/23 14:21	08/26/23 20:02	KAP	Mt. Juliet, TN

1Cp

2Tc

3Ss

4Cn

TW-2-S-10-230822 L1649020-02 Solid

Collected by Heather Dudley
Collected date/time 08/22/23 07:57
Received date/time 08/23/23 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2120021	1	08/24/23 09:03	08/24/23 09:10	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2121202	1.02	08/25/23 15:50	08/25/23 22:51	MDM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2121936	1	08/24/23 09:31	08/27/23 16:33	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2120754	1	08/24/23 09:31	08/25/23 01:30	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2121256	1	08/26/23 14:21	08/26/23 20:16	KAP	Mt. Juliet, TN

5Sr

6Qc

7Gl

8Al

TW-2-S-15-230822 L1649020-03 Solid

Collected by Heather Dudley
Collected date/time 08/22/23 08:14
Received date/time 08/23/23 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2120021	1	08/24/23 09:03	08/24/23 09:10	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2121202	1.01	08/25/23 15:50	08/25/23 23:08	MDM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2121936	1	08/24/23 09:31	08/27/23 16:57	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2120754	1	08/24/23 09:31	08/25/23 01:49	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2121256	1	08/26/23 14:21	08/26/23 20:29	KAP	Mt. Juliet, TN

9Sc

TW-2-S-20-230822 L1649020-04 Solid

Collected by Heather Dudley
Collected date/time 08/22/23 08:16
Received date/time 08/23/23 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2120021	1	08/24/23 09:03	08/24/23 09:10	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2121202	1	08/25/23 15:50	08/25/23 23:58	MDM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2121936	1	08/24/23 09:31	08/27/23 17:21	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2120754	1	08/24/23 09:31	08/25/23 02:08	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2121256	1	08/26/23 14:21	08/26/23 20:43	KAP	Mt. Juliet, TN

Collected by Heather Dudley
Collected date/time 08/22/23 08:26
Received date/time 08/23/23 08:30

TW-2-S-25-230822 L1649020-05 Solid

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2120021	1	08/24/23 09:03	08/24/23 09:10	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2121202	1	08/25/23 15:50	08/26/23 00:15	MDM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2121936	1	08/24/23 09:31	08/27/23 17:46	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2120754	1	08/24/23 09:31	08/25/23 02:27	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2121256	1	08/26/23 14:21	08/26/23 20:56	KAP	Mt. Juliet, TN

TW-2-S-30-230822 L1649020-06 Solid

Collected by Heather Dudley
Collected date/time 08/22/23 08:30
Received date/time 08/23/23 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2120021	1	08/24/23 09:03	08/24/23 09:10	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2121202	1	08/25/23 15:50	08/26/23 00:32	MDM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2121936	1	08/24/23 09:31	08/27/23 18:10	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2120754	1	08/24/23 09:31	08/25/23 02:47	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2121256	1	08/26/23 14:21	08/26/23 21:10	KAP	Mt. Juliet, TN

1Cp

2Tc

3Ss

4Cn

TW-2-S-35-230822 L1649020-07 Solid

Collected by Heather Dudley
Collected date/time 08/22/23 09:00
Received date/time 08/23/23 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2120022	1	08/24/23 08:55	08/24/23 09:01	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2121202	1	08/25/23 15:50	08/26/23 00:49	MDM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2121936	1	08/24/23 09:31	08/27/23 18:35	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2120754	1	08/24/23 09:31	08/25/23 03:06	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2121256	1	08/26/23 14:21	08/26/23 21:23	KAP	Mt. Juliet, TN

5Sr

6Qc

7Gl

8Al

TW-3-S-4-230822 L1649020-08 Solid

Collected by Heather Dudley
Collected date/time 08/22/23 09:11
Received date/time 08/23/23 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2120022	1	08/24/23 08:55	08/24/23 09:01	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2121202	1	08/25/23 15:50	08/26/23 01:06	MDM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2121936	1	08/24/23 09:31	08/27/23 18:59	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2120754	1	08/24/23 09:31	08/25/23 03:25	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2121256	1	08/26/23 14:21	08/26/23 22:56	KAP	Mt. Juliet, TN

9Sc

TW-3-S-10-230822 L1649020-09 Solid

Collected by Heather Dudley
Collected date/time 08/22/23 09:15
Received date/time 08/23/23 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2120022	1	08/24/23 08:55	08/24/23 09:01	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2121202	1	08/25/23 15:50	08/26/23 01:40	MDM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2121936	1	08/24/23 09:31	08/27/23 19:23	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2120754	1	08/24/23 09:31	08/25/23 03:45	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2121256	1	08/26/23 14:21	08/26/23 22:30	KAP	Mt. Juliet, TN

TW-3-S-15-230822 L1649020-10 Solid

Collected by Heather Dudley
Collected date/time 08/22/23 09:20
Received date/time 08/23/23 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2120022	1	08/24/23 08:55	08/24/23 09:01	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2121202	1	08/25/23 15:50	08/26/23 01:57	MDM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2121936	1	08/24/23 09:31	08/27/23 19:48	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2120754	1	08/24/23 09:31	08/25/23 04:04	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2121256	1	08/26/23 14:21	08/26/23 21:36	KAP	Mt. Juliet, TN

TW-3-S-20-230822 L1649020-11 Solid

Collected by Heather Dudley
Collected date/time 08/22/23 09:22
Received date/time 08/23/23 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2120022	1	08/24/23 08:55	08/24/23 09:01	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2122591	1	08/28/23 19:29	08/29/23 02:00	GEB	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2121936	1	08/24/23 09:31	08/27/23 20:12	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2120772	1	08/24/23 09:31	08/25/23 01:43	JBE	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2122089	1	08/28/23 08:58	08/28/23 20:46	KAP	Mt. Juliet, TN

1Cp

2Tc

3Ss

4Cn

TW-3-S-25-230822 L1649020-12 Solid

Collected by Heather Dudley
Collected date/time 08/22/23 09:30
Received date/time 08/23/23 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2120022	1	08/24/23 08:55	08/24/23 09:01	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2122591	1	08/28/23 19:29	08/29/23 02:15	GEB	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2121936	1	08/24/23 09:31	08/27/23 20:36	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2120772	1	08/24/23 09:31	08/25/23 02:02	JBE	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2122089	1	08/28/23 08:58	08/28/23 20:59	KAP	Mt. Juliet, TN

5Sr

6Qc

7Gl

8Al

TW-3-S-30-230822 L1649020-13 Solid

Collected by Heather Dudley
Collected date/time 08/22/23 09:40
Received date/time 08/23/23 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2120022	1	08/24/23 08:55	08/24/23 09:01	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2122591	1.01	08/28/23 19:29	08/29/23 02:30	GEB	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2121936	1	08/24/23 09:31	08/27/23 21:01	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2120772	1	08/24/23 09:31	08/25/23 02:22	JBE	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2122089	1	08/28/23 08:58	08/28/23 21:12	KAP	Mt. Juliet, TN

9Sc

TW-3-S-35-230822 L1649020-14 Solid

Collected by Heather Dudley
Collected date/time 08/22/23 09:50
Received date/time 08/23/23 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2120022	1	08/24/23 08:55	08/24/23 09:01	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2122591	1	08/28/23 19:29	08/29/23 02:45	GEB	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2121936	1	08/24/23 09:31	08/27/23 21:26	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2120772	1	08/24/23 09:31	08/25/23 02:40	JBE	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2122089	1	08/28/23 08:58	08/28/23 19:57	KAP	Mt. Juliet, TN

TW-1-S-4-230822 L1649020-15 Solid

Collected by Heather Dudley
Collected date/time 08/22/23 12:06
Received date/time 08/23/23 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2120022	1	08/24/23 08:55	08/24/23 09:01	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2122591	1	08/28/23 19:29	08/29/23 03:00	GEB	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2121936	1	08/24/23 09:31	08/27/23 21:50	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2120772	1	08/24/23 09:31	08/25/23 02:59	JBE	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2122089	1	08/28/23 08:58	08/28/23 21:25	KAP	Mt. Juliet, TN

TW-1-S-10-230822 L1649020-16 Solid

Collected by Heather Dudley
Collected date/time 08/22/23 12:17
Received date/time 08/23/23 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2120022	1	08/24/23 08:55	08/24/23 09:01	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2122591	1	08/28/23 19:29	08/29/23 03:15	GEB	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2121936	1	08/24/23 15:35	08/27/23 22:15	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2120772	1	08/24/23 15:35	08/25/23 03:18	JBE	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2122089	1	08/28/23 08:58	08/28/23 21:38	KAP	Mt. Juliet, TN

1Cp

2Tc

3Ss

4Cn

TW-1-S-15-230822 L1649020-17 Solid

Collected by Heather Dudley
Collected date/time 08/22/23 12:24
Received date/time 08/23/23 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2120023	1	08/24/23 08:47	08/24/23 08:53	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2122591	1	08/28/23 19:29	08/29/23 03:30	GEB	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2121936	1	08/24/23 15:35	08/27/23 22:40	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2120772	1	08/24/23 15:35	08/25/23 03:37	JBE	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2122089	1	08/28/23 08:58	08/28/23 21:51	KAP	Mt. Juliet, TN

5Sr

6Qc

7Gl

8Al

TW-1-S-20-230822 L1649020-18 Solid

Collected by Heather Dudley
Collected date/time 08/22/23 12:30
Received date/time 08/23/23 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2120023	1	08/24/23 08:47	08/24/23 08:53	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2122594	1	08/29/23 00:12	08/29/23 02:08	GEB	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2121936	1	08/24/23 15:35	08/27/23 23:04	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2120772	1	08/24/23 15:35	08/25/23 03:56	JBE	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2122089	1	08/28/23 08:58	08/28/23 22:04	KAP	Mt. Juliet, TN

9Sc

TW-1-S-25-230822 L1649020-19 Solid

Collected by Heather Dudley
Collected date/time 08/22/23 12:36
Received date/time 08/23/23 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2120023	1	08/24/23 08:47	08/24/23 08:53	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2122594	1.03	08/29/23 00:12	08/29/23 02:27	GEB	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2121936	1	08/24/23 15:35	08/27/23 23:29	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2120772	1	08/24/23 15:35	08/25/23 04:15	JBE	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2122089	1	08/28/23 08:58	08/28/23 22:17	KAP	Mt. Juliet, TN

TW-1-S-30-230822 L1649020-20 Solid

Collected by Heather Dudley
Collected date/time 08/22/23 12:45
Received date/time 08/23/23 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2120023	1	08/24/23 08:47	08/24/23 08:53	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2122594	1	08/29/23 00:12	08/29/23 02:36	GEB	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2121936	1	08/24/23 15:35	08/27/23 23:54	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2120772	1	08/24/23 15:35	08/25/23 04:34	JBE	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2122089	1	08/28/23 08:58	08/28/23 22:30	KAP	Mt. Juliet, TN

TW-1-S-35-230822 L1649020-21 Solid

Collected by Heather Dudley
Collected date/time 08/22/23 12:49
Received date/time 08/23/23 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2120023	1	08/24/23 08:47	08/24/23 08:53	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2122594	1	08/29/23 00:12	08/29/23 02:46	GEB	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2122047	1	08/24/23 15:35	08/28/23 02:00	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2120772	1	08/24/23 15:35	08/25/23 04:53	JBE	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2122089	1	08/28/23 08:58	08/28/23 22:43	KAP	Mt. Juliet, TN

1Cp

2Tc

3Ss

4Cn

TW-1-S-40-230822 L1649020-22 Solid

Collected by Heather Dudley
Collected date/time 08/22/23 13:00
Received date/time 08/23/23 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2120023	1	08/24/23 08:47	08/24/23 08:53	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2122594	1.05	08/29/23 00:12	08/29/23 02:55	GEB	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2122047	1	08/24/23 15:35	08/28/23 02:23	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2120772	1	08/24/23 15:35	08/25/23 05:12	JBE	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2122089	1	08/28/23 08:58	08/28/23 22:56	KAP	Mt. Juliet, TN

5Sr

6Qc

7Gl

8Al

9Sc

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Chris McCord
Project Manager

- ¹ Cp
- ² Tc
- ³ Ss
- ⁴ Cn
- ⁵ Sr
- ⁶ Qc
- ⁷ Gl
- ⁸ Al
- ⁹ Sc

PW-2-34-230822

Collected date/time: 08/22/23 07:50

L1649020

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	90.7		1	08/24/2023 09:10	WG2120021

¹ Cp² Tc

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	689		50.7	110	5	08/25/2023 22:34	WG2121202

³ Ss⁴ Cn

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0239	0.110	1	08/27/2023 16:08	WG2121936
(S) a,a,a-Trifluorotoluene(FID)	96.6			77.0-120		08/27/2023 16:08	WG2121936

⁵ Sr⁶ Qc⁷ Gl

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000563	0.00121	1	08/25/2023 01:10	WG2120754
Toluene	U		0.00157	0.00603	1	08/25/2023 01:10	WG2120754
Ethylbenzene	U		0.000888	0.00301	1	08/25/2023 01:10	WG2120754
Total Xylenes	0.00108	J	0.00106	0.00783	1	08/25/2023 01:10	WG2120754
(S) Toluene-d8	108			75.0-131		08/25/2023 01:10	WG2120754
(S) 4-Bromofluorobenzene	111			67.0-138		08/25/2023 01:10	WG2120754
(S) 1,2-Dichloroethane-d4	106			70.0-130		08/25/2023 01:10	WG2120754

⁸ Al⁹ Sc

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	2.07	J	1.78	4.41	1	08/26/2023 20:02	WG2121256
C28-C36 Motor Oil Range	2.01	J	0.302	4.41	1	08/26/2023 20:02	WG2121256
(S) o-Terphenyl	53.9			18.0-148		08/26/2023 20:02	WG2121256

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	72.1		1	08/24/2023 09:10	WG2120021

¹ Cp

² Tc

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	293		13.0	28.3	1.02	08/25/2023 22:51	WG2121202

³ Ss

⁴ Cn

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0301	0.139	1	08/27/2023 16:33	WG2121936
(S) a,a,a-Trifluorotoluene(FID)	96.9			77.0-120		08/27/2023 16:33	WG2121936

⁵ Sr

⁶ Qc

⁷ Gl

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000827	0.00177	1	08/25/2023 01:30	WG2120754
Toluene	U		0.00230	0.00886	1	08/25/2023 01:30	WG2120754
Ethylbenzene	U		0.00131	0.00443	1	08/25/2023 01:30	WG2120754
Total Xylenes	U		0.00156	0.0115	1	08/25/2023 01:30	WG2120754
(S) Toluene-d8	112			75.0-131		08/25/2023 01:30	WG2120754
(S) 4-Bromofluorobenzene	104			67.0-138		08/25/2023 01:30	WG2120754
(S) 1,2-Dichloroethane-d4	104			70.0-130		08/25/2023 01:30	WG2120754

⁸ Al

⁹ Sc

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		2.23	5.54	1	08/26/2023 20:16	WG2121256
C28-C36 Motor Oil Range	U		0.380	5.54	1	08/26/2023 20:16	WG2121256
(S) o-Terphenyl	42.8			18.0-148		08/26/2023 20:16	WG2121256

Collected date/time: 08/22/23 08:14

L1649020

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	86.3		1	08/24/2023 09:10	WG2120021

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	430		10.8	23.4	1.01	08/25/2023 23:08	WG2121202

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0348	B J	0.0251	0.116	1	08/27/2023 16:57	WG2121936
(S) a,a,a-Trifluorotoluene(FID)	97.3			77.0-120		08/27/2023 16:57	WG2121936

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000615	0.00132	1	08/25/2023 01:49	WG2120754
Toluene	U		0.00171	0.00659	1	08/25/2023 01:49	WG2120754
Ethylbenzene	U		0.000971	0.00329	1	08/25/2023 01:49	WG2120754
Total Xylenes	U		0.00116	0.00856	1	08/25/2023 01:49	WG2120754
(S) Toluene-d8	101			75.0-131		08/25/2023 01:49	WG2120754
(S) 4-Bromofluorobenzene	88.8			67.0-138		08/25/2023 01:49	WG2120754
(S) 1,2-Dichloroethane-d4	100			70.0-130		08/25/2023 01:49	WG2120754

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.87	4.63	1	08/26/2023 20:29	WG2121256
C28-C36 Motor Oil Range	U		0.317	4.63	1	08/26/2023 20:29	WG2121256
(S) o-Terphenyl	55.1			18.0-148		08/26/2023 20:29	WG2121256

Collected date/time: 08/22/23 08:16

L1649020

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	95.4		1	08/24/2023 09:10	WG2120021

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	970		9.64	21.0	1	08/25/2023 23:58	WG2121202

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0413	B J	0.0227	0.105	1	08/27/2023 17:21	WG2121936
(S) a,a,a-Trifluorotoluene(FID)	97.2			77.0-120		08/27/2023 17:21	WG2121936

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000512	0.00110	1	08/25/2023 02:08	WG2120754
Toluene	U		0.00142	0.00548	1	08/25/2023 02:08	WG2120754
Ethylbenzene	U		0.000808	0.00274	1	08/25/2023 02:08	WG2120754
Total Xylenes	U		0.000964	0.00712	1	08/25/2023 02:08	WG2120754
(S) Toluene-d8	106			75.0-131		08/25/2023 02:08	WG2120754
(S) 4-Bromofluorobenzene	105			67.0-138		08/25/2023 02:08	WG2120754
(S) 1,2-Dichloroethane-d4	107			70.0-130		08/25/2023 02:08	WG2120754

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.69	4.19	1	08/26/2023 20:43	WG2121256
C28-C36 Motor Oil Range	U		0.287	4.19	1	08/26/2023 20:43	WG2121256
(S) o-Terphenyl	50.3			18.0-148		08/26/2023 20:43	WG2121256

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	94.3		1	08/24/2023 09:10	WG2120021

¹ Cp

² Tc

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	1840		9.76	21.2	1	08/26/2023 00:15	WG2121202

³ Ss

⁴ Cn

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0299	B J	0.0230	0.106	1	08/27/2023 17:46	WG2121936
(S) a,a,a-Trifluorotoluene(FID)	97.2			77.0-120		08/27/2023 17:46	WG2121936

⁵ Sr

⁶ Qc

⁷ Gl

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000524	0.00112	1	08/25/2023 02:27	WG2120754
Toluene	U		0.00146	0.00561	1	08/25/2023 02:27	WG2120754
Ethylbenzene	U		0.000826	0.00280	1	08/25/2023 02:27	WG2120754
Total Xylenes	U		0.000987	0.00729	1	08/25/2023 02:27	WG2120754
(S) Toluene-d8	118			75.0-131		08/25/2023 02:27	WG2120754
(S) 4-Bromofluorobenzene	102			67.0-138		08/25/2023 02:27	WG2120754
(S) 1,2-Dichloroethane-d4	101			70.0-130		08/25/2023 02:27	WG2120754

⁸ Al

⁹ Sc

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.71	4.24	1	08/26/2023 20:56	WG2121256
C28-C36 Motor Oil Range	U		0.291	4.24	1	08/26/2023 20:56	WG2121256
(S) o-Terphenyl	74.3			18.0-148		08/26/2023 20:56	WG2121256

Collected date/time: 08/22/23 08:30

L1649020

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	86.8		1	08/24/2023 09:10	WG2120021

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	143		10.6	23.0	1	08/26/2023 00:32	WG2121202

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0392	B J	0.0250	0.115	1	08/27/2023 18:10	WG2121936
(S) a,a,a-Trifluorotoluene(FID)	98.2			77.0-120		08/27/2023 18:10	WG2121936

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000609	0.00130	1	08/25/2023 02:47	WG2120754
Toluene	U		0.00170	0.00652	1	08/25/2023 02:47	WG2120754
Ethylbenzene	U		0.000961	0.00326	1	08/25/2023 02:47	WG2120754
Total Xylenes	U		0.00115	0.00848	1	08/25/2023 02:47	WG2120754
(S) Toluene-d8	106			75.0-131		08/25/2023 02:47	WG2120754
(S) 4-Bromofluorobenzene	101			67.0-138		08/25/2023 02:47	WG2120754
(S) 1,2-Dichloroethane-d4	95.7			70.0-130		08/25/2023 02:47	WG2120754

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.86	4.61	1	08/26/2023 21:10	WG2121256
C28-C36 Motor Oil Range	U		0.316	4.61	1	08/26/2023 21:10	WG2121256
(S) o-Terphenyl	45.2			18.0-148		08/26/2023 21:10	WG2121256

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	90.1		1	08/24/2023 09:01	WG2120022

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	67.2		10.2	22.2	1	08/26/2023 00:49	WG2121202

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0364	B J	0.0241	0.111	1	08/27/2023 18:35	WG2121936
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	97.9			77.0-120		08/27/2023 18:35	WG2121936

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000570	0.00122	1	08/25/2023 03:06	WG2120754
Toluene	U		0.00159	0.00610	1	08/25/2023 03:06	WG2120754
Ethylbenzene	U		0.000899	0.00305	1	08/25/2023 03:06	WG2120754
Total Xylenes	U		0.00107	0.00793	1	08/25/2023 03:06	WG2120754
(S) <i>Toluene-d8</i>	113			75.0-131		08/25/2023 03:06	WG2120754
(S) <i>4-Bromofluorobenzene</i>	102			67.0-138		08/25/2023 03:06	WG2120754
(S) <i>1,2-Dichloroethane-d4</i>	103			70.0-130		08/25/2023 03:06	WG2120754

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.79	4.44	1	08/26/2023 21:23	WG2121256
C28-C36 Motor Oil Range	U		0.304	4.44	1	08/26/2023 21:23	WG2121256
(S) <i>o</i> -Terphenyl	46.2			18.0-148		08/26/2023 21:23	WG2121256

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Collected date/time: 08/22/23 09:11

L1649020

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	94.6		1	08/24/2023 09:01	WG2120022

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	21.5		9.73	21.2	1	08/26/2023 01:06	WG2121202

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0236	B J	0.0229	0.106	1	08/27/2023 18:59	WG2121936
(S) a,a,a-Trifluorotoluene(FID)	97.0			77.0-120		08/27/2023 18:59	WG2121936

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000521	0.00112	1	08/25/2023 03:25	WG2120754
Toluene	U		0.00145	0.00558	1	08/25/2023 03:25	WG2120754
Ethylbenzene	U		0.000822	0.00279	1	08/25/2023 03:25	WG2120754
Total Xylenes	U		0.000981	0.00725	1	08/25/2023 03:25	WG2120754
(S) Toluene-d8	108			75.0-131		08/25/2023 03:25	WG2120754
(S) 4-Bromofluorobenzene	102			67.0-138		08/25/2023 03:25	WG2120754
(S) 1,2-Dichloroethane-d4	104			70.0-130		08/25/2023 03:25	WG2120754

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	46.2		1.70	4.23	1	08/26/2023 22:56	WG2121256
C28-C36 Motor Oil Range	99.6		0.290	4.23	1	08/26/2023 22:56	WG2121256
(S) o-Terphenyl	35.0			18.0-148		08/26/2023 22:56	WG2121256

Collected date/time: 08/22/23 09:15

L1649020

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	89.1		1	08/24/2023 09:01	WG2120022

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	22.2	J	10.3	22.4	1	08/26/2023 01:40	WG2121202

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0251	B J	0.0243	0.112	1	08/27/2023 19:23	WG2121936
(S) a,a,a-Trifluorotoluene(FID)	96.5			77.0-120		08/27/2023 19:23	WG2121936

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000581	0.00124	1	08/25/2023 03:45	WG2120754
Toluene	0.00211	J	0.00162	0.00622	1	08/25/2023 03:45	WG2120754
Ethylbenzene	U		0.000917	0.00311	1	08/25/2023 03:45	WG2120754
Total Xylenes	0.00131	J	0.00109	0.00809	1	08/25/2023 03:45	WG2120754
(S) Toluene-d8	109			75.0-131		08/25/2023 03:45	WG2120754
(S) 4-Bromofluorobenzene	93.1			67.0-138		08/25/2023 03:45	WG2120754
(S) 1,2-Dichloroethane-d4	101			70.0-130		08/25/2023 03:45	WG2120754

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.81	4.49	1	08/26/2023 22:30	WG2121256
C28-C36 Motor Oil Range	U		0.307	4.49	1	08/26/2023 22:30	WG2121256
(S) o-Terphenyl	49.7			18.0-148		08/26/2023 22:30	WG2121256

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	94.1		1	08/24/2023 09:01	WG2120022

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	119		9.78	21.3	1	08/26/2023 01:57	WG2121202

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0442	B J	0.0231	0.106	1	08/27/2023 19:48	WG2121936
(S) a,a,a-Trifluorotoluene(FID)	98.1			77.0-120		08/27/2023 19:48	WG2121936

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000525	0.00113	1	08/25/2023 04:04	WG2120754
Toluene	U		0.00146	0.00563	1	08/25/2023 04:04	WG2120754
Ethylbenzene	U		0.000829	0.00281	1	08/25/2023 04:04	WG2120754
Total Xylenes	U		0.000990	0.00731	1	08/25/2023 04:04	WG2120754
(S) Toluene-d8	99.3			75.0-131		08/25/2023 04:04	WG2120754
(S) 4-Bromofluorobenzene	96.9			67.0-138		08/25/2023 04:04	WG2120754
(S) 1,2-Dichloroethane-d4	94.7			70.0-130		08/25/2023 04:04	WG2120754

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.71	4.25	1	08/26/2023 21:36	WG2121256
C28-C36 Motor Oil Range	U		0.291	4.25	1	08/26/2023 21:36	WG2121256
(S) o-Terphenyl	52.6			18.0-148		08/26/2023 21:36	WG2121256

Collected date/time: 08/22/23 09:22

L1649020

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	96.0		1	08/24/2023 09:01	WG2120022

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	247		9.59	20.8	1	08/29/2023 02:00	WG2122591

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0477	B J	0.0226	0.104	1	08/27/2023 20:12	WG2121936
(S) a,a,a-Trifluorotoluene(FID)	97.4			77.0-120		08/27/2023 20:12	WG2121936

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000506	0.00108	1	08/25/2023 01:43	WG2120772
Toluene	U		0.00141	0.00542	1	08/25/2023 01:43	WG2120772
Ethylbenzene	U		0.000799	0.00271	1	08/25/2023 01:43	WG2120772
Total Xylenes	U		0.000954	0.00705	1	08/25/2023 01:43	WG2120772
(S) Toluene-d8	105			75.0-131		08/25/2023 01:43	WG2120772
(S) 4-Bromofluorobenzene	107			67.0-138		08/25/2023 01:43	WG2120772
(S) 1,2-Dichloroethane-d4	91.1			70.0-130		08/25/2023 01:43	WG2120772

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.68	4.17	1	08/28/2023 20:46	WG2122089
C28-C36 Motor Oil Range	1.47	J	0.285	4.17	1	08/28/2023 20:46	WG2122089
(S) o-Terphenyl	77.3			18.0-148		08/28/2023 20:46	WG2122089

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Collected date/time: 08/22/23 09:30

L1649020

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	98.0		1	08/24/2023 09:01	WG2120022

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	143		9.39	20.4	1	08/29/2023 02:15	WG2122591

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0259	B J	0.0221	0.102	1	08/27/2023 20:36	WG2121936
(S) a,a,a-Trifluorotoluene(FID)	97.5			77.0-120		08/27/2023 20:36	WG2121936

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000486	0.00104	1	08/25/2023 02:02	WG2120772
Toluene	U		0.00135	0.00521	1	08/25/2023 02:02	WG2120772
Ethylbenzene	U		0.000768	0.00260	1	08/25/2023 02:02	WG2120772
Total Xylenes	U		0.000917	0.00677	1	08/25/2023 02:02	WG2120772
(S) Toluene-d8	108			75.0-131		08/25/2023 02:02	WG2120772
(S) 4-Bromofluorobenzene	107			67.0-138		08/25/2023 02:02	WG2120772
(S) 1,2-Dichloroethane-d4	90.6			70.0-130		08/25/2023 02:02	WG2120772

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.64	4.08	1	08/28/2023 20:59	WG2122089
C28-C36 Motor Oil Range	0.913	J	0.280	4.08	1	08/28/2023 20:59	WG2122089
(S) o-Terphenyl	66.9			18.0-148		08/28/2023 20:59	WG2122089

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	90.4		1	08/24/2023 09:01	WG2120022

¹ Cp

² Tc

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	29.3		10.3	22.3	1.01	08/29/2023 02:30	WG2122591

³ Ss

⁴ Cn

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0464	B J	0.0240	0.111	1	08/27/2023 21:01	WG2121936
(S) a,a,a-Trifluorotoluene(FID)	96.0			77.0-120		08/27/2023 21:01	WG2121936

⁵ Sr

⁶ Qc

⁷ Gl

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000566	0.00121	1	08/25/2023 02:22	WG2120772
Toluene	U		0.00158	0.00606	1	08/25/2023 02:22	WG2120772
Ethylbenzene	U		0.000894	0.00303	1	08/25/2023 02:22	WG2120772
Total Xylenes	U		0.00107	0.00788	1	08/25/2023 02:22	WG2120772
(S) Toluene-d8	106			75.0-131		08/25/2023 02:22	WG2120772
(S) 4-Bromofluorobenzene	104			67.0-138		08/25/2023 02:22	WG2120772
(S) 1,2-Dichloroethane-d4	87.5			70.0-130		08/25/2023 02:22	WG2120772

⁸ Al

⁹ Sc

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.78	4.43	1	08/28/2023 21:12	WG2122089
C28-C36 Motor Oil Range	0.304	J	0.303	4.43	1	08/28/2023 21:12	WG2122089
(S) o-Terphenyl	55.2			18.0-148		08/28/2023 21:12	WG2122089

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	94.4		1	08/24/2023 09:01	WG2120022

1 Cp

2 Tc

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	113		9.75	21.2	1	08/29/2023 02:45	WG2122591

3 Ss

4 Cn

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0299	B J	0.0230	0.106	1	08/27/2023 21:26	WG2121936
(S) a,a,a-Trifluorotoluene(FID)	97.5			77.0-120		08/27/2023 21:26	WG2121936

5 Sr

6 Qc

7 Gl

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000523	0.00112	1	08/25/2023 02:40	WG2120772
Toluene	0.00151	J	0.00145	0.00559	1	08/25/2023 02:40	WG2120772
Ethylbenzene	U		0.000825	0.00280	1	08/25/2023 02:40	WG2120772
Total Xylenes	U		0.000985	0.00727	1	08/25/2023 02:40	WG2120772
(S) Toluene-d8	106			75.0-131		08/25/2023 02:40	WG2120772
(S) 4-Bromofluorobenzene	106			67.0-138		08/25/2023 02:40	WG2120772
(S) 1,2-Dichloroethane-d4	90.9			70.0-130		08/25/2023 02:40	WG2120772

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.71	4.24	1	08/28/2023 19:57	WG2122089
C28-C36 Motor Oil Range	2.67	J	0.290	4.24	1	08/28/2023 19:57	WG2122089
(S) o-Terphenyl	68.3			18.0-148		08/28/2023 19:57	WG2122089

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	88.4		1	08/24/2023 09:01	WG2120022

¹ Cp

² Tc

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	836		10.4	22.6	1	08/29/2023 03:00	WG2122591

³ Ss

⁴ Cn

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0245	0.113	1	08/27/2023 21:50	WG2121936
(S) a,a,a-Trifluorotoluene(FID)	97.2			77.0-120		08/27/2023 21:50	WG2121936

⁵ Sr

⁶ Qc

⁷ Gl

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000589	0.00126	1	08/25/2023 02:59	WG2120772
Toluene	U		0.00164	0.00631	1	08/25/2023 02:59	WG2120772
Ethylbenzene	U		0.000930	0.00316	1	08/25/2023 02:59	WG2120772
Total Xylenes	U		0.00111	0.00820	1	08/25/2023 02:59	WG2120772
(S) Toluene-d8	107			75.0-131		08/25/2023 02:59	WG2120772
(S) 4-Bromofluorobenzene	104			67.0-138		08/25/2023 02:59	WG2120772
(S) 1,2-Dichloroethane-d4	83.1			70.0-130		08/25/2023 02:59	WG2120772

⁸ Al

⁹ Sc

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.82	4.52	1	08/28/2023 21:25	WG2122089
C28-C36 Motor Oil Range	2.21	J	0.310	4.52	1	08/28/2023 21:25	WG2122089
(S) o-Terphenyl	60.2			18.0-148		08/28/2023 21:25	WG2122089

Collected date/time: 08/22/23 12:17

L1649020

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	98.0		1	08/24/2023 09:01	WG2120022

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	88.6		9.39	20.4	1	08/29/2023 03:15	WG2122591

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0287	B J	0.0221	0.102	1	08/27/2023 22:15	WG2121936
(S) a,a,a-Trifluorotoluene(FID)	96.9			77.0-120		08/27/2023 22:15	WG2121936

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000486	0.00104	1	08/25/2023 03:18	WG2120772
Toluene	U		0.00135	0.00520	1	08/25/2023 03:18	WG2120772
Ethylbenzene	U		0.000767	0.00260	1	08/25/2023 03:18	WG2120772
Total Xylenes	U		0.000916	0.00676	1	08/25/2023 03:18	WG2120772
(S) Toluene-d8	107			75.0-131		08/25/2023 03:18	WG2120772
(S) 4-Bromofluorobenzene	107			67.0-138		08/25/2023 03:18	WG2120772
(S) 1,2-Dichloroethane-d4	83.9			70.0-130		08/25/2023 03:18	WG2120772

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.64	4.08	1	08/28/2023 21:38	WG2122089
C28-C36 Motor Oil Range	0.607	J	0.280	4.08	1	08/28/2023 21:38	WG2122089
(S) o-Terphenyl	76.5			18.0-148		08/28/2023 21:38	WG2122089

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Collected date/time: 08/22/23 12:24

L1649020

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	98.4		1	08/24/2023 08:53	WG2120023

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	91.2		9.35	20.3	1	08/29/2023 03:30	WG2122591

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0221	0.102	1	08/27/2023 22:40	WG2121936
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	97.1			77.0-120		08/27/2023 22:40	WG2121936

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000482	0.00103	1	08/25/2023 03:37	WG2120772
Toluene	U		0.00134	0.00516	1	08/25/2023 03:37	WG2120772
Ethylbenzene	U		0.000761	0.00258	1	08/25/2023 03:37	WG2120772
Total Xylenes	U		0.000909	0.00671	1	08/25/2023 03:37	WG2120772
(S) <i>Toluene-d8</i>	108			75.0-131		08/25/2023 03:37	WG2120772
(S) <i>4-Bromofluorobenzene</i>	108			67.0-138		08/25/2023 03:37	WG2120772
(S) <i>1,2-Dichloroethane-d4</i>	84.3			70.0-130		08/25/2023 03:37	WG2120772

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.64	4.07	1	08/28/2023 21:51	WG2122089
C28-C36 Motor Oil Range	1.01	J	0.278	4.07	1	08/28/2023 21:51	WG2122089
(S) <i>o</i> -Terphenyl	70.6			18.0-148		08/28/2023 21:51	WG2122089

1	Cp
2	Tc
3	Ss
4	Cn
5	Sr
6	Qc
7	Gl
8	Al
9	Sc

Collected date/time: 08/22/23 12:30

L1649020

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	95.8		1	08/24/2023 08:53	WG2120023

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	247		9.60	20.9	1	08/29/2023 02:08	WG2122594

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0303	B J	0.0226	0.104	1	08/27/2023 23:04	WG2121936
(S) a,a,a-Trifluorotoluene(FID)	97.9			77.0-120		08/27/2023 23:04	WG2121936

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000508	0.00109	1	08/25/2023 03:56	WG2120772
Toluene	U		0.00141	0.00544	1	08/25/2023 03:56	WG2120772
Ethylbenzene	U		0.000801	0.00272	1	08/25/2023 03:56	WG2120772
Total Xylenes	U		0.000957	0.00707	1	08/25/2023 03:56	WG2120772
(S) Toluene-d8	106			75.0-131		08/25/2023 03:56	WG2120772
(S) 4-Bromofluorobenzene	108			67.0-138		08/25/2023 03:56	WG2120772
(S) 1,2-Dichloroethane-d4	91.9			70.0-130		08/25/2023 03:56	WG2120772

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.68	4.17	1	08/28/2023 22:04	WG2122089
C28-C36 Motor Oil Range	U		0.286	4.17	1	08/28/2023 22:04	WG2122089
(S) o-Terphenyl	64.7			18.0-148		08/28/2023 22:04	WG2122089

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	97.5		1	08/24/2023 08:53	WG2120023

¹ Cp

² Tc

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	92.0		9.72	21.1	1.03	08/29/2023 02:27	WG2122594

³ Ss

⁴ Cn

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0454	B J	0.0222	0.103	1	08/27/2023 23:29	WG2121936
(S) a,a,a-Trifluorotoluene(FID)	98.2			77.0-120		08/27/2023 23:29	WG2121936

⁵ Sr

⁶ Qc

⁷ Gl

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000491	0.00105	1	08/25/2023 04:15	WG2120772
Toluene	U		0.00137	0.00525	1	08/25/2023 04:15	WG2120772
Ethylbenzene	U		0.000774	0.00263	1	08/25/2023 04:15	WG2120772
Total Xylenes	U		0.000925	0.00683	1	08/25/2023 04:15	WG2120772
(S) Toluene-d8	107			75.0-131		08/25/2023 04:15	WG2120772
(S) 4-Bromofluorobenzene	109			67.0-138		08/25/2023 04:15	WG2120772
(S) 1,2-Dichloroethane-d4	92.8			70.0-130		08/25/2023 04:15	WG2120772

⁸ Al

⁹ Sc

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.65	4.10	1	08/28/2023 22:17	WG2122089
C28-C36 Motor Oil Range	0.368	J	0.281	4.10	1	08/28/2023 22:17	WG2122089
(S) o-Terphenyl	56.4			18.0-148		08/28/2023 22:17	WG2122089

Collected date/time: 08/22/23 12:45

L1649020

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	97.3		1	08/24/2023 08:53	WG2120023

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	57.1		9.45	20.6	1	08/29/2023 02:36	WG2122594

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0313	B J	0.0223	0.103	1	08/27/2023 23:54	WG2121936
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	97.2			77.0-120		08/27/2023 23:54	WG2121936

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000493	0.00106	1	08/25/2023 04:34	WG2120772
Toluene	U		0.00137	0.00528	1	08/25/2023 04:34	WG2120772
Ethylbenzene	U		0.000778	0.00264	1	08/25/2023 04:34	WG2120772
Total Xylenes	U		0.000929	0.00686	1	08/25/2023 04:34	WG2120772
(S) <i>Toluene-d8</i>	106			75.0-131		08/25/2023 04:34	WG2120772
(S) <i>4-Bromofluorobenzene</i>	108			67.0-138		08/25/2023 04:34	WG2120772
(S) <i>1,2-Dichloroethane-d4</i>	90.4			70.0-130		08/25/2023 04:34	WG2120772

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.65	4.11	1	08/28/2023 22:30	WG2122089
C28-C36 Motor Oil Range	0.490	J	0.282	4.11	1	08/28/2023 22:30	WG2122089
(S) <i>o</i> -Terphenyl	74.5			18.0-148		08/28/2023 22:30	WG2122089

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	97.2		1	08/24/2023 08:53	WG2120023

¹ Cp

² Tc

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	65.3		9.46	20.6	1	08/29/2023 02:46	WG2122594

³ Ss

⁴ Cn

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0572	B J	0.0223	0.103	1	08/28/2023 02:00	WG2122047
(S) a,a,a-Trifluorotoluene(FID)	96.7			77.0-120		08/28/2023 02:00	WG2122047

⁵ Sr

⁶ Qc

⁷ Gl

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000494	0.00106	1	08/25/2023 04:53	WG2120772
Toluene	U		0.00137	0.00528	1	08/25/2023 04:53	WG2120772
Ethylbenzene	U		0.000779	0.00264	1	08/25/2023 04:53	WG2120772
Total Xylenes	U		0.000930	0.00687	1	08/25/2023 04:53	WG2120772
(S) Toluene-d8	107			75.0-131		08/25/2023 04:53	WG2120772
(S) 4-Bromofluorobenzene	107			67.0-138		08/25/2023 04:53	WG2120772
(S) 1,2-Dichloroethane-d4	89.6			70.0-130		08/25/2023 04:53	WG2120772

⁸ Al

⁹ Sc

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.66	4.11	1	08/28/2023 22:43	WG2122089
C28-C36 Motor Oil Range	0.696	J	0.282	4.11	1	08/28/2023 22:43	WG2122089
(S) o-Terphenyl	74.2			18.0-148		08/28/2023 22:43	WG2122089

Collected date/time: 08/22/23 13:00

L1649020

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.5		1	08/24/2023 08:53	WG2120023

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	269		10.4	22.7	1.05	08/29/2023 02:55	WG2122594

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	0.0426	B J	0.0235	0.108	1	08/28/2023 02:23	WG2122047
(S) a,a,a-Trifluorotoluene(FID)	95.9			77.0-120		08/28/2023 02:23	WG2122047

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000543	0.00116	1	08/25/2023 05:12	WG2120772
Toluene	U		0.00151	0.00581	1	08/25/2023 05:12	WG2120772
Ethylbenzene	U		0.000857	0.00291	1	08/25/2023 05:12	WG2120772
Total Xylenes	U		0.00102	0.00756	1	08/25/2023 05:12	WG2120772
(S) Toluene-d8	107			75.0-131		08/25/2023 05:12	WG2120772
(S) 4-Bromofluorobenzene	106			67.0-138		08/25/2023 05:12	WG2120772
(S) 1,2-Dichloroethane-d4	86.1			70.0-130		08/25/2023 05:12	WG2120772

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.74	4.32	1	08/28/2023 22:56	WG2122089
C28-C36 Motor Oil Range	U		0.296	4.32	1	08/28/2023 22:56	WG2122089
(S) o-Terphenyl	54.4			18.0-148		08/28/2023 22:56	WG2122089

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Total Solids by Method 2540 G-2011 [L1649020-01,02,03,04,05,06](#)

Method Blank (MB)

(MB) R3965342-1 08/24/23 09:10

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	%		%	%
Total Solids	0.000			

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

L1649011-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1649011-07 08/24/23 09:10 • (DUP) R3965342-3 08/24/23 09:10

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	%	%		%		%
Total Solids	89.7	89.7	1	0.0954		10

Laboratory Control Sample (LCS)

(LCS) R3965342-2 08/24/23 09:10

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	%	%	%	%	
Total Solids	50.0	50.0	100	85.0-115	

⁷Gl

⁸Al

⁹Sc

Total Solids by Method 2540 G-2011 [L1649020-07,08,09,10,11,12,13,14,15,16](#)

Method Blank (MB)

(MB) R3965334-1 08/24/23 09:01

	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
Analyte	%		%	%
Total Solids	0.00200			

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

L1649020-16 Original Sample (OS) • Duplicate (DUP)

(OS) L1649020-16 08/24/23 09:01 • (DUP) R3965334-3 08/24/23 09:01

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	98.0	97.9	1	0.107		10

⁷Gl

⁸Al

Laboratory Control Sample (LCS)

(LCS) R3965334-2 08/24/23 09:01

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
Analyte	%	%	%	%	
Total Solids	50.0	50.0	100	85.0-115	

⁹Sc

Total Solids by Method 2540 G-2011 [L1649020-17,18,19,20,21,22](#)

Method Blank (MB)

(MB) R3965327-1 08/24/23 08:53

	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
Analyte	%		%	%
Total Solids	0.00100			

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

L1649033-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1649033-01 08/24/23 08:53 • (DUP) R3965327-3 08/24/23 08:53

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	89.9	93.7	1	4.10		10

Laboratory Control Sample (LCS)

(LCS) R3965327-2 08/24/23 08:53

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
Analyte	%	%	%	%	
Total Solids	50.0	50.0	100	85.0-115	

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 300.0

L1649020-01,02,03,04,05,06,07,08,09,10

Method Blank (MB)

(MB) R3965797-1 08/25/23 16:58

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Chloride	U		9.20	20.0

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1649011-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1649011-02 08/25/23 18:54 • (DUP) R3965797-3 08/25/23 19:11

	Original Result (dry)	DUP Result (dry)	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Chloride	154	196	1	24.0	J3	20

L1649020-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1649020-08 08/26/23 01:06 • (DUP) R3965797-6 08/26/23 01:23

	Original Result (dry)	DUP Result (dry)	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Chloride	21.5	21.6	1	0.828		20

Laboratory Control Sample (LCS)

(LCS) R3965797-2 08/25/23 17:14

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Chloride	200	199	99.7	90.0-110	

L1649011-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1649011-02 08/25/23 18:54 • (MS) R3965797-4 08/25/23 19:28 • (MSD) R3965797-5 08/25/23 19:45

	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Chloride	539	154	686	732	98.6	107	1	80.0-120			6.52	20

Wet Chemistry by Method 300.0

[L1649020-11,12,13,14,15,16,17](#)

Method Blank (MB)

(MB) R3966592-1 08/28/23 21:36

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chloride	U		9.20	20.0

L1649049-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1649049-05 08/29/23 00:31 • (DUP) R3966592-3 08/29/23 00:46

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	U	U	1	0.000		20

L1649046-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1649046-01 08/29/23 03:45 • (DUP) R3966592-6 08/29/23 04:00

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	1100	1110	1	0.593		20

Laboratory Control Sample (LCS)

(LCS) R3966592-2 08/28/23 21:50

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	204	102	90.0-110	

L1649049-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1649049-05 08/29/23 00:31 • (MS) R3966592-4 08/29/23 01:01 • (MSD) R3966592-5 08/29/23 01:45

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	507	U	520	516	103	102	1	80.0-120			0.713	20

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 300.0

[L1649020-18,19,20,21,22](#)

Method Blank (MB)

(MB) R3966618-1 08/29/23 01:19

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Chloride	U		9.20	20.0

L1649020-18 Original Sample (OS) • Duplicate (DUP)

(OS) L1649020-18 08/29/23 02:08 • (DUP) R3966618-3 08/29/23 02:17

	Original Result (dry)	DUP Result (dry)	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Chloride	247	262	1	5.86		20

L1649033-13 Original Sample (OS) • Duplicate (DUP)

(OS) L1649033-13 08/29/23 05:37 • (DUP) R3966618-4 08/29/23 05:47

	Original Result (dry)	DUP Result (dry)	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Chloride	352	379	1.04	7.28		20

Laboratory Control Sample (LCS)

(LCS) R3966618-2 08/29/23 01:28

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Chloride	200	213	106	90.0-110	

L1649033-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1649033-13 08/29/23 05:37 • (MS) R3966618-5 08/29/23 05:56 • (MSD) R3966618-6 08/29/23 06:06

	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Chloride	558	352	1010	969	119	111	1.04	80.0-120			4.51	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Volatile Organic Compounds (GC) by Method 8015D/GRO

L1649020-01,02,03,04,05,06,07,08,09,10,11,12,13,14,15,16,17,18,19,20

Method Blank (MB)

(MB) R3966963-2 08/27/23 14:34

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0300	⬇	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	101			77.0-120

Laboratory Control Sample (LCS)

(LCS) R3966963-1 08/27/23 12:58

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	6.26	114	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			104	77.0-120	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Volatile Organic Compounds (GC) by Method 8015D/GRO

[L1649020-21,22](#)

Method Blank (MB)

(MB) R3966100-2 08/27/23 20:35

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0281	⬇	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	97.9			77.0-120

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3966100-1 08/27/23 18:46

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	4.17	75.8	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			102	77.0-120	

Volatile Organic Compounds (GC/MS) by Method 8260B

[L1649020-01.02.03.04.05.06.07.08.09.10](#)

Method Blank (MB)

(MB) R3965321-3 08/24/23 21:27

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Toluene	U		0.00130	0.00500
Ethylbenzene	U		0.000737	0.00250
Total Xylenes	U		0.000880	0.00650
(S) Toluene-d8	119			75.0-131
(S) 4-Bromofluorobenzene	102			67.0-138
(S) 1,2-Dichloroethane-d4	102			70.0-130

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3965321-1 08/24/23 19:51 • (LCSD) R3965321-2 08/24/23 20:10

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.110	0.126	88.0	101	70.0-123			13.6	20
Toluene	0.125	0.113	0.122	90.4	97.6	75.0-121			7.66	20
Ethylbenzene	0.125	0.122	0.132	97.6	106	74.0-126			7.87	20
Total Xylenes	0.375	0.362	0.358	96.5	95.5	72.0-127			1.11	20
(S) Toluene-d8				108	107	75.0-131				
(S) 4-Bromofluorobenzene				105	94.9	67.0-138				
(S) 1,2-Dichloroethane-d4				107	110	70.0-130				

⁷ Gl

⁸ Al

⁹ Sc

Volatile Organic Compounds (GC/MS) by Method 8260B

L1649020-11,12,13,14,15,16,17,18,19,20,21,22

Method Blank (MB)

(MB) R3966943-3 08/25/23 01:24

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Toluene	U		0.00130	0.00500
Ethylbenzene	U		0.000737	0.00250
Total Xylenes	U		0.000880	0.00650
(S) Toluene-d8	107			75.0-131
(S) 4-Bromofluorobenzene	103			67.0-138
(S) 1,2-Dichloroethane-d4	85.6			70.0-130

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3966943-1 08/24/23 23:45 • (LCSD) R3966943-2 08/25/23 00:07

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.144	0.122	115	97.6	70.0-123			16.5	20
Toluene	0.125	0.142	0.122	114	97.6	75.0-121			15.2	20
Ethylbenzene	0.125	0.138	0.122	110	97.6	74.0-126			12.3	20
Total Xylenes	0.375	0.422	0.355	113	94.7	72.0-127			17.2	20
(S) Toluene-d8				105	106	75.0-131				
(S) 4-Bromofluorobenzene				110	108	67.0-138				
(S) 1,2-Dichloroethane-d4				95.1	93.1	70.0-130				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Semi-Volatile Organic Compounds (GC) by Method 8015M

L1649020-01,02,03,04,05,06,07,08,09,10

Method Blank (MB)

(MB) R3965810-1 08/26/23 18:15

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C36 Motor Oil Range	U		0.274	4.00
(S) o-Terphenyl	57.4			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3965810-2 08/26/23 18:29

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	32.3	64.6	50.0-150	
(S) o-Terphenyl			64.3	18.0-148	

L1649011-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1649011-04 08/26/23 21:50 • (MS) R3965810-3 08/26/23 22:03 • (MSD) R3965810-4 08/26/23 22:16

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	55.4	U	31.9	21.8	57.6	39.4	1	50.0-150		J3 J6	37.5	20
(S) o-Terphenyl					53.0	33.6		18.0-148				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Semi-Volatile Organic Compounds (GC) by Method 8015M

[L1649020-11,12,13,14,15,16,17,18,19,20,21,22](#)

Method Blank (MB)

(MB) R3966462-1 08/28/23 19:31

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C36 Motor Oil Range	U		0.274	4.00
(S) o-Terphenyl	75.7			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3966462-2 08/28/23 19:44

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	37.2	74.4	50.0-150	
(S) o-Terphenyl			80.3	18.0-148	

L1649020-14 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1649020-14 08/28/23 19:57 • (MS) R3966462-3 08/28/23 20:10 • (MSD) R3966462-4 08/28/23 20:23

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	51.8	U	36.8	34.5	71.0	66.5	1	50.0-150			6.24	20
(S) o-Terphenyl					72.7	69.6		18.0-148				

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MDL (dry)	Method Detection Limit.
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey--NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio--VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1 6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1 4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA -- ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA -- ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA--Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Arcadis - Chevron - NM

401 East Main Street
Suite 400
El Paso, TX 79901

Report to:
Sarah Johnson

Project Description:
SCB Unit 3

City/State
Collected:

Please Circle:
PT MT CT ET

Phone: **915-747-3902**

Client Project #
30180414

Lab Project #
CHEVARCNM-SCBUNIT3

Collected by (print):

Site/Facility ID #
SCB UNIT 3

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)

Quote #

Immediately
Packed on Ice N Y X

Same Day Five Day
Next Day 5 Day (Rad Only)
Two Day 10 Day (Rad Only)
Three Day

Date Results Needed

STANDARD

No.
of
Cntrs

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs
TW-2-S-4-230822	G	SS	4	08-22-23	0750	2
TW-2-S-10-230822	G	SS	10	08-22-23	0757	2
TW-2-S-15-230822	G	SS	15	08-22-23	0814	2
TW-2-S-20-230822	G	SS	20	08-22-23	0816	2
TW-2-S-25-230822	G	SS	25	08-22-23	0826	2
TW-2-S-30-230822	G	SS	30	08-22-23	0830	2
TW-2-S-35-230822	G	SS	35	08-22-23	0900	2
TW-3-S-4-230822	G	SS	4	08-22-23	0911	2
TW-3-S-10-230822	G	SS	10	08-22-23	0915	2
TW-3-S-15-230822	G	SS	15	08-22-23	0920	2

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks:

Samples returned via:
 UPS FedEx Courier

Tracking # **6841 8349 9976**

pH Temp

Flow Other

Sample Receipt Checklist

COC Seal Present/Intact: NP N
COC Signed/Accurate: N
Bottles arrive intact: N
Correct bottles used: N
Sufficient volume sent: Y N
If Applicable
VOA Zero Headspace: Y N
Preservation Correct/Checked: Y N
RAD Screen <0.5 mR/hr: 0 N

Relinquished by (Signature)

Date:

Time:

Received by: (Signature)

Trip Blank Received: Yes / No
HCL / MeOH
TBR

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Temp: 68.08 °C Bottles Received: 4 to 4

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)

Date: 8/23/23 Time: 8:36

Hold:

Condition:
NCF / OK

Billing Information:

Accounts Payable
401 East Main Street
Suite 400
El Paso, TX 79901

Pres
Chk

Email To:

sarah.johnson@arcadis.com;laura.gloria@arcadi

Analysis / Container / Preservative

CHLORIDE-300,DRONM 4ozClr-NoPres

GRO,V8260BTEX,TS 4ozClr-NoPres

Total TPH(GRO,DRO,ORO)



MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody
constitutes acknowledgment and acceptance of the
Pace Terms and Conditions found at:
<https://info.pacelabs.com/hubfs/pas-standard-terms.pdf>

SDG #

J005

Acctnum: **CHEVARCNM**

Template: **T235721**

Prelogin: **P1017032**

PM: **526 - Chris McCord**

PB:

Shipped Via: **FedEX Ground**

Remarks

Sample # (lab only)

Arcadis - Chevron - NM

401 East Main Street
Suite 400
El Paso, TX 79901

Billing Information:

Accounts Payable
401 East Main Street
Suite 400
El Paso, TX 79901

Pres
Chk

Report to:
Sarah Johnson

Email To:
sarah.johnson@arcadis.com;laura.gloria@arcadis.com

Project Description:
SCB Unit 3

City/State
Collected:

Please Circle:
PT MT CT ET

Phone: 915-747-3902

Client Project #
30180414

Lab Project #
CHEVARCNM-SCBUNIT3

Collected by (print):

Site/Facility ID #
SCB UNIT 3

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)

___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed

STANDARD

Immediately
Packed on Ice N ___ Y X

No.
of
Cnts

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cnts
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TW-3-S-20-230822	G	SS	20	08.22.23	0922	2
TW-3-S-25-230822	G	SS	25	08.22.23	0930	2
TW-3-S-30-230822	G	SS	30	08.22.23	0940	2
TW-3-S-35-230822	G	SS	35	08.22.23	0950	2
TW-1-S-4-230822	G	SS	4	08.22.23	1206	2
TW-1-S-10-230822	G	SS	10	08.22.23	1217	2
TW-1-S-15-230822	G	SS	15	08.22.23	1224	2
TW-1-S-20-230822	G	SS	20	08.22.23	1230	2
TW-1-S-25-230822	G	SS	25	08.22.23	1236	2
TW-1-S-30-230822	G	SS	30	08.22.23	1245	2

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
___ UPS ___ FedEx ___ Courier

Tracking # 6841 8349 9976

Relinquished by: (Signature)

Date: 08.22.23

Time: 1500

Received by: (Signature)

Trip Blank Received: Yes / No
HCL / MeOH
TBR

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Temp: °C Bottles Received: GBAB 4700.4

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)

Date: 8/23/23 Time: 8:30

Hold:

Condition:
NCF / OK

Analysis / Container / Preservative

CHLORIDE-300, DRONM 4ozClr-NoPres

GRO, V8260BTEX, TS 4ozClr-NoPres

Total TPH (GRO, DRONM)



MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody
constitutes acknowledgment and acceptance of the
Pace Terms and Conditions found at:
<https://info.pacelabs.com/hubs/pas-standard-terms.pdf>

SDG #

Table #

Acctnum: CHEVARCNM

Template: T235721

Prelogin: P1017032

PM: 526 - Chris McCord

PB: 8/11/23

Shipped Via: FedEX Ground

Remarks Sample # (lab only)

Sample Receipt Checklist

COC Seal Present/Intact: ___ NP ___ N
COC Signed/Accurate: ___ Y ___ N
Bottles arrive intact: ___ Y ___ N
Correct bottles used: ___ Y ___ N
Sufficient volume sent: ___ Y ___ N
If Applicable
VOA Zero Headspace: ___ Y ___ N
Preservation Correct/Checked: ___ Y ___ N
RAD Screen <0.5 mR/hr: ___ Y ___ N

Arcadis - Chevron - NM 401 East Main Street Suite 400 El Paso, TX 79901	Accounts Payable 401 East Main Street Suite 400 El Paso, TX 79901	Pres Chk
Report to: Sarah Johnson	Email To: sarah.johnson@arcadis.com;laura.gloria@arcadis.com	

Project Description: SCB Unit 3		City/State Collected:	Please Circle: PT MT CT ET
------------------------------------	--	--------------------------	-------------------------------

Phone: 915-747-3902	Client Project # 30180414	Lab Project # CHEVARCNM-SCBUNIT3
----------------------------	-------------------------------------	--

Collected by (print): Weather Dunder	Site/Facility ID # SCB UNIT 3	P.O. #
---	----------------------------------	--------

Collected by (signature): <i>[Signature]</i>	Rush? (Lab MUST Be Notified) ☐ Same Day ☐ Five Day ☐ Next Day ☐ 5 Day (Rad Only) ☐ Two Day ☐ 10 Day (Rad Only) ☐ Three Day	Quote #
Immediately Packed on Ice N ☐ Y ☒	☐ Same Day ☐ Five Day ☐ Next Day ☐ 5 Day (Rad Only) ☐ Two Day ☐ 10 Day (Rad Only) ☐ Three Day	Date Results Needed STANDARD
		No. of

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	Cntrs
-----------	-----------	----------	-------	------	------	-------

[illegible]

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks:

Samples returned via:
 UPS FedEx Courier _____

Tracking #	6841	8344	9976
------------	------	------	------

Relinquished by: (Signature)	Date:	Time:
<i>Leather Dubs</i>	08.22.23	1500

Relinquished by : (Signature)	Date:	Time:
-------------------------------	-------	-------

Relinquished by : (Signature)	Date:	Time:
-------------------------------	-------	-------

Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeOH TBR
--------------------------	--

Received by: (Signature)	Temp: $^{\circ}\text{C}$ Bottles Received
	GBAR 440

Received for lab by: (Signature)	Date:	Time:
<i>[Signature]</i>	8/7/97	8:30

Sample Receipt Checklist

COC Seal Present/Intact:	NP	☒	N
COC Signed/Accurate:		☒	N
Bottles arrive intact:		☒	N
Correct bottles used:		☒	N
Sufficient volume sent:		☒	N
<u>If Applicable</u>			
VOA Zero Headspace:		☒	N
Preservation Correct/Checked:		☒	N
RAD Screen <0.5 mR/hr:		☒	N

If preservation required by Login: Date/Time

Hold:	Condition: NCF / OK
-------	------------------------



ANALYTICAL REPORT

September 05, 2023

Arcadis - Chevron - NM

Sample Delivery Group: L1649046
Samples Received: 08/23/2023
Project Number: 30180414
Description: SCB Unit 3
Site: SCB UNIT 3
Report To: Sarah Johnson
401 East Main Street
Suite 400
El Paso, TX 79901

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Entire Report Reviewed By:

A handwritten signature in blue ink that reads "Erica McNeese".

Erica McNeese
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

Cp: Cover Page	1	1 Cp
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Cn: Case Narrative	5	
Sr: Sample Results	6	3 Ss
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SB-43-S-8-230821 L1649046-02	7	4 Cn
SB-43-S-10-230821 L1649046-03	8	5 Sr
SB-43-S-6-230821 L1649046-04	9	
FD-1-S-230821 L1649046-05	10	6 Qc
SB-44-S-4-230821 L1649046-06	11	
SB-44-S-6-230821 L1649046-07	12	7 Gl
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Gl: Glossary of Terms	24	
Al: Accreditations & Locations	25	
Sc: Sample Chain of Custody	26	

SB-43-S-4-230821 L1649046-01 Solid

Collected by
Chris Payton

Collected date/time
08/21/23 11:00

Received date/time
08/23/23 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2120804	1	08/25/23 10:15	08/25/23 10:34	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2122591	1	08/28/23 19:29	08/29/23 03:45	GEB	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2122201	1	08/24/23 17:14	08/28/23 15:37	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2120772	1	08/24/23 17:14	08/25/23 07:06	JBE	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2122090	1	08/28/23 15:56	08/29/23 18:12	KAP	Mt. Juliet, TN

1Cp

2Tc

3Ss

4Cn

SB-43-S-8-230821 L1649046-02 Solid

Collected by
Chris Payton

Collected date/time
08/21/23 12:00

Received date/time
08/23/23 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2120804	1	08/25/23 10:15	08/25/23 10:34	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2122591	1	08/28/23 19:29	08/29/23 04:44	GEB	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2122201	1	08/24/23 17:14	08/28/23 16:01	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2120772	1	08/24/23 17:14	08/25/23 07:24	JBE	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2123682	1	08/30/23 16:24	08/30/23 23:56	KAP	Mt. Juliet, TN

5Sr

6Qc

7Gl

8Al

SB-43-S-10-230821 L1649046-03 Solid

Collected by
Chris Payton

Collected date/time
08/21/23 12:15

Received date/time
08/23/23 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2120805	1	08/25/23 09:32	08/25/23 09:54	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2122591	1	08/28/23 19:29	08/29/23 04:59	GEB	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2122201	1	08/24/23 17:14	08/28/23 16:24	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2120772	1	08/24/23 17:14	08/25/23 07:43	JBE	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2122091	1	08/28/23 15:55	08/29/23 20:54	KAP	Mt. Juliet, TN

9Sc

SB-43-S-6-230821 L1649046-04 Solid

Collected by
Chris Payton

Collected date/time
08/21/23 11:30

Received date/time
08/23/23 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2120805	1	08/25/23 09:32	08/25/23 09:54	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2122591	1.02	08/28/23 19:29	08/29/23 05:14	GEB	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2122201	1	08/24/23 17:14	08/28/23 16:47	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2121330	1	08/24/23 17:14	08/25/23 18:19	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2122091	1	08/28/23 15:55	08/29/23 21:08	KAP	Mt. Juliet, TN

FD-1-S-230821 L1649046-05 Solid

Collected by
Chris Payton

Collected date/time
08/21/23 00:00

Received date/time
08/23/23 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2120805	1	08/25/23 09:32	08/25/23 09:54	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2122591	10	08/28/23 19:29	08/29/23 05:29	GEB	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2122201	1	08/24/23 17:14	08/28/23 17:10	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2121330	1	08/24/23 17:14	08/25/23 18:39	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2122091	1	08/28/23 15:55	08/29/23 21:22	KAP	Mt. Juliet, TN

SB-44-S-4-230821 L1649046-06 Solid

Collected by
Chris Payton

Collected date/time
08/21/23 13:10

Received date/time
08/23/23 08:30

1

Cp

2

Tc

3

Ss

4

Cn

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2120805	1	08/25/23 09:32	08/25/23 09:54	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2122591	1	08/28/23 19:29	08/29/23 05:44	GEB	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2122201	1	08/24/23 17:14	08/28/23 17:33	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2121330	1	08/24/23 17:14	08/25/23 18:58	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2122091	1	08/28/23 15:55	08/29/23 21:36	KAP	Mt. Juliet, TN

SB-44-S-6-230821 L1649046-07 Solid

Collected by
Chris Payton

Collected date/time
08/21/23 13:25

Received date/time
08/23/23 08:30

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2120805	1	08/25/23 09:32	08/25/23 09:54	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2122591	1	08/28/23 19:29	08/29/23 05:59	GEB	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2122201	1	08/24/23 17:14	08/28/23 17:56	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2121360	1	08/24/23 17:14	08/26/23 09:30	JHH	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2122091	1	08/28/23 15:55	08/29/23 21:50	KAP	Mt. Juliet, TN

SB-44-S-8-230821 L1649046-08 Solid

Collected by
Chris Payton

Collected date/time
08/21/23 13:47

Received date/time
08/23/23 08:30

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2120805	1	08/25/23 09:32	08/25/23 09:54	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2122591	1	08/28/23 19:29	08/29/23 06:14	GEB	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2122201	1	08/24/23 17:14	08/28/23 18:19	JHH	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2121330	1	08/24/23 17:14	08/25/23 19:18	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2122091	1	08/28/23 15:55	08/29/23 22:04	KAP	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Erica McNeese
Project Manager

- ¹Cp
- ²Tc
- ³Ss
- ⁴Cn
- ⁵Sr
- ⁶Qc
- ⁷Gl
- ⁸Al
- ⁹Sc

Collected date/time: 08/21/23 11:00

L1649046

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	92.3		1	08/25/2023 10:34	WG2120804

1 Cp

2 Tc

3 Ss

4 Cn

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	1100		9.97	21.7	1	08/29/2023 03:45	WG2122591

5 Sr

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0420	B J	0.0235	0.108	1	08/28/2023 15:37	WG2122201
(S) a,a,a-Trifluorotoluene(FID)	96.1			77.0-120		08/28/2023 15:37	WG2122201

6 Qc

7 Gl

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000546	0.00117	1	08/25/2023 07:06	WG2120772
Toluene	0.00187	J	0.00152	0.00584	1	08/25/2023 07:06	WG2120772
Ethylbenzene	U		0.000861	0.00292	1	08/25/2023 07:06	WG2120772
Total Xylenes	U		0.00103	0.00759	1	08/25/2023 07:06	WG2120772
(S) Toluene-d8	106			75.0-131		08/25/2023 07:06	WG2120772
(S) 4-Bromofluorobenzene	106			67.0-138		08/25/2023 07:06	WG2120772
(S) 1,2-Dichloroethane-d4	87.7			70.0-130		08/25/2023 07:06	WG2120772

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.75	4.34	1	08/29/2023 18:12	WG2122090
C28-C36 Motor Oil Range	0.662	J	0.297	4.34	1	08/29/2023 18:12	WG2122090
(S) o-Terphenyl	30.8			18.0-148		08/29/2023 18:12	WG2122090

Collected date/time: 08/21/23 12:00

L1649046

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	94.2		1	08/25/2023 10:34	WG2120804

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	600		9.77	21.2	1	08/29/2023 04:44	WG2122591

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0417	B J	0.0230	0.106	1	08/28/2023 16:01	WG2122201
(S) a,a,a-Trifluorotoluene(FID)	97.7			77.0-120		08/28/2023 16:01	WG2122201

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000525	0.00112	1	08/25/2023 07:24	WG2120772
Toluene	0.00147	J	0.00146	0.00562	1	08/25/2023 07:24	WG2120772
Ethylbenzene	U		0.000829	0.00281	1	08/25/2023 07:24	WG2120772
Total Xylenes	U		0.000990	0.00731	1	08/25/2023 07:24	WG2120772
(S) Toluene-d8	106			75.0-131		08/25/2023 07:24	WG2120772
(S) 4-Bromofluorobenzene	107			67.0-138		08/25/2023 07:24	WG2120772
(S) 1,2-Dichloroethane-d4	90.8			70.0-130		08/25/2023 07:24	WG2120772

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.71	4.25	1	08/30/2023 23:56	WG2123682
C28-C36 Motor Oil Range	U		0.291	4.25	1	08/30/2023 23:56	WG2123682
(S) o-Terphenyl	54.3			18.0-148		08/30/2023 23:56	WG2123682

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	96.3		1	08/25/2023 09:54	WG2120805

¹ Cp

² Tc

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	446		9.55	20.8	1	08/29/2023 04:59	WG2122591

³ Ss

⁴ Cn

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0460	B J	0.0225	0.104	1	08/28/2023 16:24	WG2122201
(S) a,a,a-Trifluorotoluene(FID)	96.7			77.0-120		08/28/2023 16:24	WG2122201

⁵ Sr

⁶ Qc

⁷ Gl

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000503	0.00108	1	08/25/2023 07:43	WG2120772
Toluene	U		0.00140	0.00538	1	08/25/2023 07:43	WG2120772
Ethylbenzene	U		0.000794	0.00269	1	08/25/2023 07:43	WG2120772
Total Xylenes	U		0.000948	0.00700	1	08/25/2023 07:43	WG2120772
(S) Toluene-d8	107			75.0-131		08/25/2023 07:43	WG2120772
(S) 4-Bromofluorobenzene	109			67.0-138		08/25/2023 07:43	WG2120772
(S) 1,2-Dichloroethane-d4	90.9			70.0-130		08/25/2023 07:43	WG2120772

⁸ Al

⁹ Sc

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	9.54		1.67	4.15	1	08/29/2023 20:54	WG2122091
C28-C36 Motor Oil Range	31.3		0.285	4.15	1	08/29/2023 20:54	WG2122091
(S) o-Terphenyl	65.8			18.0-148		08/29/2023 20:54	WG2122091

Collected date/time: 08/21/23 11:30

L1649046

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	90.8		1	08/25/2023 09:54	WG2120805

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	1120		10.3	22.5	1.02	08/29/2023 05:14	WG2122591

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0252	B J	0.0239	0.110	1	08/28/2023 16:47	WG2122201
(S) a,a,a-Trifluorotoluene(FID)	96.7			77.0-120		08/28/2023 16:47	WG2122201

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000562	0.00120	1	08/25/2023 18:19	WG2121330
Toluene	U		0.00157	0.00602	1	08/25/2023 18:19	WG2121330
Ethylbenzene	U		0.000887	0.00301	1	08/25/2023 18:19	WG2121330
Total Xylenes	U		0.00106	0.00783	1	08/25/2023 18:19	WG2121330
(S) Toluene-d8	107			75.0-131		08/25/2023 18:19	WG2121330
(S) 4-Bromofluorobenzene	99.6			67.0-138		08/25/2023 18:19	WG2121330
(S) 1,2-Dichloroethane-d4	110			70.0-130		08/25/2023 18:19	WG2121330

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.77	4.41	1	08/29/2023 21:08	WG2122091
C28-C36 Motor Oil Range	U		0.302	4.41	1	08/29/2023 21:08	WG2122091
(S) o-Terphenyl	39.4			18.0-148		08/29/2023 21:08	WG2122091

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Collected date/time: 08/21/23 00:00

L1649046

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	91.9		1	08/25/2023 09:54	WG2120805

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	2840		100	218	10	08/29/2023 05:29	WG2122591

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0364	B J	0.0236	0.109	1	08/28/2023 17:10	WG2122201
(S) a,a,a-Trifluorotoluene(FID)	97.5			77.0-120		08/28/2023 17:10	WG2122201

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Benzene	U		0.000549	0.00118	1	08/25/2023 18:39	WG2121330
Toluene	U		0.00153	0.00588	1	08/25/2023 18:39	WG2121330
Ethylbenzene	U		0.000866	0.00294	1	08/25/2023 18:39	WG2121330
Total Xylenes	U		0.00103	0.00764	1	08/25/2023 18:39	WG2121330
(S) Toluene-d8	107			75.0-131		08/25/2023 18:39	WG2121330
(S) 4-Bromofluorobenzene	99.5			67.0-138		08/25/2023 18:39	WG2121330
(S) 1,2-Dichloroethane-d4	111			70.0-130		08/25/2023 18:39	WG2121330

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.75	4.35	1	08/29/2023 21:22	WG2122091
C28-C36 Motor Oil Range	0.740	J	0.298	4.35	1	08/29/2023 21:22	WG2122091
(S) o-Terphenyl	40.5			18.0-148		08/29/2023 21:22	WG2122091

Collected date/time: 08/21/23 13:10

L1649046

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	69.5		1	08/25/2023 09:54	WG2120805

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	775		13.2	28.8	1	08/29/2023 05:44	WG2122591

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0687	B J	0.0312	0.144	1	08/28/2023 17:33	WG2122201
(S) a,a,a-Trifluorotoluene(FID)	96.5			77.0-120		08/28/2023 17:33	WG2122201

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000877	0.00188	1	08/25/2023 18:58	WG2121330
Toluene	U		0.00244	0.00939	1	08/25/2023 18:58	WG2121330
Ethylbenzene	U		0.00138	0.00470	1	08/25/2023 18:58	WG2121330
Total Xylenes	U		0.00165	0.0122	1	08/25/2023 18:58	WG2121330
(S) Toluene-d8	107			75.0-131		08/25/2023 18:58	WG2121330
(S) 4-Bromofluorobenzene	100			67.0-138		08/25/2023 18:58	WG2121330
(S) 1,2-Dichloroethane-d4	114			70.0-130		08/25/2023 18:58	WG2121330

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		2.32	5.75	1	08/29/2023 21:36	WG2122091
C28-C36 Motor Oil Range	U		0.394	5.75	1	08/29/2023 21:36	WG2122091
(S) o-Terphenyl	69.3			18.0-148		08/29/2023 21:36	WG2122091

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	79.8		1	08/25/2023 09:54	WG2120805

¹ Cp

² Tc

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	98.6		11.5	25.0	1	08/29/2023 05:59	WG2122591

³ Ss

⁴ Cn

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0273	B J	0.0272	0.125	1	08/28/2023 17:56	WG2122201
(S) a,a,a-Trifluorotoluene(FID)	97.9			77.0-120		08/28/2023 17:56	WG2122201

⁵ Sr

⁶ Qc

⁷ Gl

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000704	0.00151	1	08/26/2023 09:30	WG2121360
Toluene	U		0.00196	0.00753	1	08/26/2023 09:30	WG2121360
Ethylbenzene	U		0.00111	0.00377	1	08/26/2023 09:30	WG2121360
Total Xylenes	U		0.00133	0.00979	1	08/26/2023 09:30	WG2121360
(S) Toluene-d8	100			75.0-131		08/26/2023 09:30	WG2121360
(S) 4-Bromofluorobenzene	93.8			67.0-138		08/26/2023 09:30	WG2121360
(S) 1,2-Dichloroethane-d4	103			70.0-130		08/26/2023 09:30	WG2121360

⁸ Al

⁹ Sc

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		2.02	5.01	1	08/29/2023 21:50	WG2122091
C28-C36 Motor Oil Range	U		0.343	5.01	1	08/29/2023 21:50	WG2122091
(S) o-Terphenyl	63.2			18.0-148		08/29/2023 21:50	WG2122091

Collected date/time: 08/21/23 13:47

L1649046

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	96.3		1	08/25/2023 09:54	WG2120805

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	280		9.56	20.8	1	08/29/2023 06:14	WG2122591

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0344	B J	0.0225	0.104	1	08/28/2023 18:19	WG2122201
(S) a,a,a-Trifluorotoluene(FID)	98.5			77.0-120		08/28/2023 18:19	WG2122201

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Benzene	U		0.000503	0.00108	1	08/25/2023 19:18	WG2121330
Toluene	U		0.00140	0.00539	1	08/25/2023 19:18	WG2121330
Ethylbenzene	U		0.000794	0.00269	1	08/25/2023 19:18	WG2121330
Total Xylenes	U		0.000949	0.00701	1	08/25/2023 19:18	WG2121330
(S) Toluene-d8	105			75.0-131		08/25/2023 19:18	WG2121330
(S) 4-Bromofluorobenzene	100			67.0-138		08/25/2023 19:18	WG2121330
(S) 1,2-Dichloroethane-d4	113			70.0-130		08/25/2023 19:18	WG2121330

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.67	4.16	1	08/29/2023 22:04	WG2122091
C28-C36 Motor Oil Range	U		0.285	4.16	1	08/29/2023 22:04	WG2122091
(S) o-Terphenyl	45.2			18.0-148		08/29/2023 22:04	WG2122091

Total Solids by Method 2540 G-2011 [L1649046-01,02](#)

Method Blank (MB)

(MB) R3965706-1 08/25/23 10:34

Analyte	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
	%		%	%
Total Solids	0.00200			

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

L1649238-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1649238-07 08/25/23 10:34 • (DUP) R3965706-3 08/25/23 10:34

Analyte	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
	%	%		%		%
Total Solids	86.6	87.1	1	0.627		10

Laboratory Control Sample (LCS)

(LCS) R3965706-2 08/25/23 10:34

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
	%	%	%	%	
Total Solids	50.0	50.0	100	85.0-115	

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3965704-1 08/25/23 09:54

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	%		%	%
Total Solids	0.00200			

L1649134-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1649134-01 08/25/23 09:54 • (DUP) R3965704-3 08/25/23 09:54

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	85.1	85.3	1	0.166		10

Laboratory Control Sample (LCS)

(LCS) R3965704-2 08/25/23 09:54

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	%	%	%	%	
Total Solids	50.0	50.0	100	85.0-115	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Wet Chemistry by Method 300.0

L1649046-01,02,03,04,05,06,07,08

Method Blank (MB)

(MB) R3966592-1 08/28/23 21:36

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Chloride	U		9.20	20.0

L1649049-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1649049-05 08/29/23 00:31 • (DUP) R3966592-3 08/29/23 00:46

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	U	U	1	0.000		20

L1649046-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1649046-01 08/29/23 03:45 • (DUP) R3966592-6 08/29/23 04:00

Analyte	Original Result (dry) mg/kg	DUP Result (dry) mg/kg	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	1100	1110	1	0.593		20

Laboratory Control Sample (LCS)

(LCS) R3966592-2 08/28/23 21:50

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	200	204	102	90.0-110	

L1649049-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1649049-05 08/29/23 00:31 • (MS) R3966592-4 08/29/23 01:01 • (MSD) R3966592-5 08/29/23 01:45

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	507	U	520	516	103	102	1	80.0-120			0.713	20

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3966961-3 08/28/23 11:04

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0270	⬇	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	97.9			77.0-120

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3966961-1 08/28/23 09:43 • (LCSD) R3966961-2 08/28/23 10:06

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	5.50	5.82	5.76	106	105	72.0-127			1.04	20
(S) a,a,a-Trifluorotoluene(FID)				108	109	77.0-120				

Volatile Organic Compounds (GC/MS) by Method 8260B

L1649046-01,02,03

Method Blank (MB)

(MB) R3966943-3 08/25/23 01:24

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Toluene	U		0.00130	0.00500
Ethylbenzene	U		0.000737	0.00250
Total Xylenes	U		0.000880	0.00650
(S) Toluene-d8	107			75.0-131
(S) 4-Bromofluorobenzene	103			67.0-138
(S) 1,2-Dichloroethane-d4	85.6			70.0-130

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3966943-1 08/24/23 23:45 • (LCSD) R3966943-2 08/25/23 00:07

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.144	0.122	115	97.6	70.0-123			16.5	20
Toluene	0.125	0.142	0.122	114	97.6	75.0-121			15.2	20
Ethylbenzene	0.125	0.138	0.122	110	97.6	74.0-126			12.3	20
Total Xylenes	0.375	0.422	0.355	113	94.7	72.0-127			17.2	20
(S) Toluene-d8				105	106	75.0-131				
(S) 4-Bromofluorobenzene				110	108	67.0-138				
(S) 1,2-Dichloroethane-d4				95.1	93.1	70.0-130				

Method Blank (MB)

(MB) R3966260-3 08/25/23 17:27

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Toluene	U		0.00130	0.00500
Ethylbenzene	U		0.000737	0.00250
Total Xylenes	U		0.000880	0.00650
(S) Toluene-d8	106			75.0-131
(S) 4-Bromofluorobenzene	101			67.0-138
(S) 1,2-Dichloroethane-d4	111			70.0-130

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3966260-1 08/25/23 15:37 • (LCSD) R3966260-2 08/25/23 16:08

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.139	0.129	111	103	70.0-123			7.46	20
Toluene	0.125	0.133	0.123	106	98.4	75.0-121			7.81	20
Ethylbenzene	0.125	0.138	0.127	110	102	74.0-126			8.30	20
Total Xylenes	0.375	0.402	0.375	107	100	72.0-127			6.95	20
(S) Toluene-d8				105	105	75.0-131				
(S) 4-Bromofluorobenzene				101	103	67.0-138				
(S) 1,2-Dichloroethane-d4				109	112	70.0-130				

⁷Gl

⁸Al

⁹Sc

Volatile Organic Compounds (GC/MS) by Method 8260B

L1649046-07

Method Blank (MB)

(MB) R3966710-3 08/26/23 06:51

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Toluene	U		0.00130	0.00500
Ethylbenzene	U		0.000737	0.00250
Total Xylenes	U		0.000880	0.00650
(S) Toluene-d8	99.0			75.0-131
(S) 4-Bromofluorobenzene	91.4			67.0-138
(S) 1,2-Dichloroethane-d4	106			70.0-130

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3966710-1 08/26/23 05:13 • (LCSD) R3966710-2 08/26/23 05:33

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.126	0.119	101	95.2	70.0-123			5.71	20
Toluene	0.125	0.106	0.106	84.8	84.8	75.0-121			0.000	20
Ethylbenzene	0.125	0.107	0.0994	85.6	79.5	74.0-126			7.36	20
Total Xylenes	0.375	0.321	0.299	85.6	79.7	72.0-127			7.10	20
(S) Toluene-d8				95.4	96.0	75.0-131				
(S) 4-Bromofluorobenzene				97.9	95.1	67.0-138				
(S) 1,2-Dichloroethane-d4				125	123	70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method 8015M

L1649046-01

Method Blank (MB)

(MB) R3967060-1 08/29/23 14:51

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C36 Motor Oil Range	U		0.274	4.00
(S) o-Terphenyl	47.1			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3967060-2 08/29/23 15:05

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	29.3	58.6	50.0-150	
(S) o-Terphenyl			50.5	18.0-148	

L1649034-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1649034-05 08/29/23 16:38 • (MS) R3967060-3 08/29/23 16:52 • (MSD) R3967060-4 08/29/23 17:05

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	50.0	157	194	202	74.0	90.0	1	50.0-150			4.04	20
(S) o-Terphenyl					44.0	50.6		18.0-148				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method 8015M [L1649046-03,04,05,06,07,08](#)

Method Blank (MB)

(MB) R3967052-1 08/29/23 19:43

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C36 Motor Oil Range	U		0.274	4.00
(S) o-Terphenyl	67.0			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3967052-2 08/29/23 19:57

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	38.5	77.0	50.0-150	
(S) o-Terphenyl			87.7	18.0-148	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Semi-Volatile Organic Compounds (GC) by Method 8015M

[L1649046-02](#)

Method Blank (MB)

(MB) R3967922-1 08/30/23 23:29

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C36 Motor Oil Range	U		0.274	4.00
(S) o-Terphenyl	68.0			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3967922-2 08/30/23 23:42

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	32.7	65.4	50.0-150	
(S) o-Terphenyl			60.7	18.0-148	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MDL (dry)	Method Detection Limit.
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey--NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio--VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1 6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1 4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA -- ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA -- ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA--Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Released to Imaging: 2/26/2025 3:11:58 PM



ANALYTICAL REPORT

September 05, 2023

Arcadis - Chevron - NM

Sample Delivery Group: L1649942
Samples Received: 08/25/2023
Project Number: 30180414
Description: SCB Unit 3
Site: SCB UNIT 3
Report To: Sarah Johnson
401 East Main Street
Suite 400
El Paso, TX 79901

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Entire Report Reviewed By:

A handwritten signature in blue ink that reads "Erica McNeese".

Erica McNeese
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

Cp: Cover Page	1	1 Cp
Tc: Table of Contents	2	
Ss: Sample Summary	3	2 Tc
Cn: Case Narrative	4	
Sr: Sample Results	5	3 Ss
TW-2-GW-230824 L1649942-01	5	
TW-1-GW-230824 L1649942-02	6	4 Cn
TW-3-GW-230824 L1649942-03	7	5 Sr
Qc: Quality Control Summary	8	
Gravimetric Analysis by Method 2540 C-2011	8	6 Qc
Wet Chemistry by Method 300.0	9	
Volatile Organic Compounds (GC) by Method 8015D/GRO	12	7 Gl
Volatile Organic Compounds (GC/MS) by Method 8260B	13	
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TW-2-GW-230824 L1649942-01 GW

Collected by HEATHER DUDLEY
Collected date/time 08/24/23 09:20
Received date/time 08/25/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2123189	1	08/29/23 22:45	08/30/23 00:29	JAC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2122589	100	08/29/23 06:42	08/29/23 06:42	GEB	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2125627	1	09/02/23 04:39	09/02/23 04:39	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2122035	1	08/28/23 11:06	08/28/23 11:06	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2122752	1	08/29/23 16:16	08/31/23 22:18	TJD	Mt. Juliet, TN

1Cp

2Tc

3Ss

4Cn

TW-1-GW-230824 L1649942-02 GW

Collected by HEATHER DUDLEY
Collected date/time 08/24/23 09:52
Received date/time 08/25/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2123189	1	08/29/23 22:45	08/30/23 00:29	JAC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2122589	100	08/29/23 06:59	08/29/23 06:59	GEB	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2125627	1	09/02/23 05:02	09/02/23 05:02	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2122035	1	08/28/23 11:26	08/28/23 11:26	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2122752	1	08/29/23 16:16	08/31/23 22:38	TJD	Mt. Juliet, TN

5Sr

6Qc

7Gl

8Al

9Sc

TW-3-GW-230824 L1649942-03 GW

Collected by HEATHER DUDLEY
Collected date/time 08/24/23 10:22
Received date/time 08/25/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Gravimetric Analysis by Method 2540 C-2011	WG2123189	1	08/29/23 22:45	08/30/23 00:29	JAC	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2122861	20	08/29/23 18:15	08/29/23 18:15	GEB	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2125627	1	09/02/23 05:25	09/02/23 05:25	ACG	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2122035	1	08/28/23 11:46	08/28/23 11:46	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2122752	1	08/29/23 16:16	08/31/23 22:58	TJD	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Erica McNeese
Project Manager

- ¹ Cp
- ² Tc
- ³ Ss
- ⁴ Cn
- ⁵ Sr
- ⁶ Qc
- ⁷ Gl
- ⁸ Al
- ⁹ Sc

Collected date/time: 08/24/23 09:20

L1649942

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	5590		100	1	08/30/2023 00:29	WG2123189

Wet Chemistry by Method 300.0

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	1830		37.9	100	100	08/29/2023 06:42	WG2122589

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0314	0.100	1	09/02/2023 04:39	WG2125627
(S) a,a,a-Trifluorotoluene(FID)	92.0			78.0-120		09/02/2023 04:39	WG2125627

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.0000941	0.00100	1	08/28/2023 11:06	WG2122035
Toluene	U		0.000278	0.00100	1	08/28/2023 11:06	WG2122035
Ethylbenzene	U		0.000137	0.00100	1	08/28/2023 11:06	WG2122035
Total Xylenes	U		0.000174	0.00300	1	08/28/2023 11:06	WG2122035
(S) Toluene-d8	96.3			80.0-120		08/28/2023 11:06	WG2122035
(S) 4-Bromofluorobenzene	96.6			77.0-126		08/28/2023 11:06	WG2122035
(S) 1,2-Dichloroethane-d4	118			70.0-130		08/28/2023 11:06	WG2122035

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		0.0222	0.100	1	08/31/2023 22:18	WG2122752
C28-C36 Motor Oil Range	0.0241	J	0.0118	0.100	1	08/31/2023 22:18	WG2122752
(S) o-Terphenyl	141			52.0-156		08/31/2023 22:18	WG2122752

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

TPW-1-GW-250824

Collected date/time: 08/24/23 09:52

L1649942

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	5520		100	1	08/30/2023 00:29	WG2123189

Wet Chemistry by Method 300.0

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	1790		37.9	100	100	08/29/2023 06:59	WG2122589

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0314	0.100	1	09/02/2023 05:02	WG2125627
(S) a,a,a-Trifluorotoluene(FID)	93.0			78.0-120		09/02/2023 05:02	WG2125627

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.0000941	0.00100	1	08/28/2023 11:26	WG2122035
Toluene	U		0.000278	0.00100	1	08/28/2023 11:26	WG2122035
Ethylbenzene	U		0.000137	0.00100	1	08/28/2023 11:26	WG2122035
Total Xylenes	U		0.000174	0.00300	1	08/28/2023 11:26	WG2122035
(S) Toluene-d8	96.1			80.0-120		08/28/2023 11:26	WG2122035
(S) 4-Bromofluorobenzene	96.1			77.0-126		08/28/2023 11:26	WG2122035
(S) 1,2-Dichloroethane-d4	114			70.0-130		08/28/2023 11:26	WG2122035

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		0.0222	0.100	1	08/31/2023 22:38	WG2122752
C28-C36 Motor Oil Range	U		0.0118	0.100	1	08/31/2023 22:38	WG2122752
(S) o-Terphenyl	94.2			52.0-156		08/31/2023 22:38	WG2122752

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Collected date/time: 08/24/23 10:22

L1649942

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	5220		100	1	08/30/2023 00:29	WG2123189

Wet Chemistry by Method 300.0

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	1780		7.58	20.0	20	08/29/2023 18:15	WG2122861

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0314	0.100	1	09/02/2023 05:25	WG2125627
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	92.6			78.0-120		09/02/2023 05:25	WG2125627

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
Benzene	U		0.0000941	0.00100	1	08/28/2023 11:46	WG2122035
Toluene	U		0.000278	0.00100	1	08/28/2023 11:46	WG2122035
Ethylbenzene	U		0.000137	0.00100	1	08/28/2023 11:46	WG2122035
Total Xylenes	U		0.000174	0.00300	1	08/28/2023 11:46	WG2122035
(S) <i>Toluene-d8</i>	95.1			80.0-120		08/28/2023 11:46	WG2122035
(S) <i>4-Bromofluorobenzene</i>	95.4			77.0-126		08/28/2023 11:46	WG2122035
(S) <i>1,2-Dichloroethane-d4</i>	116			70.0-130		08/28/2023 11:46	WG2122035

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result mg/l	Qualifier	MDL mg/l	RDL mg/l	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		0.0222	0.100	1	08/31/2023 22:58	WG2122752
C28-C36 Motor Oil Range	U		0.0118	0.100	1	08/31/2023 22:58	WG2122752
(S) <i>o</i> -Terphenyl	81.1			52.0-156		08/31/2023 22:58	WG2122752

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3968401-1 08/30/23 00:29

	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Dissolved Solids	U		10.0	10.0

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1649777-20 Original Sample (OS) • Duplicate (DUP)

(OS) L1649777-20 08/30/23 00:29 • (DUP) R3968401-3 08/30/23 00:29

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Dissolved Solids	7400	8070	1	8.66	<u>J3</u>	5

L1650013-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1650013-01 08/30/23 00:29 • (DUP) R3968401-4 08/30/23 00:29

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Dissolved Solids	858	880	1	2.53		5

Laboratory Control Sample (LCS)

(LCS) R3968401-2 08/30/23 00:29

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
Analyte	mg/l	mg/l	%	%	
Dissolved Solids	8800	8040	91.4	77.3-123	

Method Blank (MB)

(MB) R3966608-1 08/28/23 20:16

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Chloride	U		0.379	1.00

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1649290-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1649290-03 08/29/23 01:21 • (DUP) R3966608-3 08/29/23 01:37

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Chloride	78.9	78.9	1	0.0184		15

L1649893-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1649893-05 08/29/23 05:34 • (DUP) R3966608-5 08/29/23 05:51

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Chloride	79.7	79.7	1	0.00891		15

Laboratory Control Sample (LCS)

(LCS) R3966608-2 08/28/23 20:33

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Chloride	40.0	40.5	101	90.0-110	

L1649290-03 Original Sample (OS) • Matrix Spike (MS)

(OS) L1649290-03 08/29/23 01:21 • (MS) R3966608-4 08/29/23 01:54

	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Analyte	mg/l	mg/l	mg/l	%		%	
Chloride	50.0	78.9	118	78.7	1	80.0-120	<u>J6</u>

Sample Narrative:

MS: BROMIDE, CHLORIDE, NITRATE, SULFATE: Spike failure due to matrix

Wet Chemistry by Method 300.0 [L1649942-01,02](#)

L1649893-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1649893-05 08/29/23 05:34 • (MS) R3966608-6 08/29/23 06:08 • (MSD) R3966608-7 08/29/23 06:25

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Chloride	50.0	79.7	120	127	79.9	94.9	1	80.0-120	<u>J6</u>		6.11	15

Sample Narrative:
MS: CHLORIDE & NITRATE: Spike failed due to matrix
MSD: CHLORIDE & NITRATE: Spike failed due to matrix

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Wet Chemistry by Method 300.0

L1649942-03

Method Blank (MB)

(MB) R3967518-1 08/29/23 08:39

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Chloride	U		0.379	1.00

L1649470-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1649470-01 08/29/23 12:11 • (DUP) R3967518-3 08/29/23 12:24

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Chloride	33.8	34.0	1	0.470		15

L1649946-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1649946-01 08/29/23 20:58 • (DUP) R3967518-6 08/29/23 21:11

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Chloride	34.8	35.0	1	0.549		15

Laboratory Control Sample (LCS)

(LCS) R3967518-2 08/29/23 08:52

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Chloride	40.0	38.5	96.1	90.0-110	

L1649470-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1649470-01 08/29/23 12:11 • (MS) R3967518-4 08/29/23 12:37 • (MSD) R3967518-5 08/29/23 12:49

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Chloride	50.0	33.8	82.0	81.7	96.3	95.8	1	80.0-120			0.301	15

L1649946-01 Original Sample (OS) • Matrix Spike (MS)

(OS) L1649946-01 08/29/23 20:58 • (MS) R3967518-7 08/29/23 21:25

	Spike Amount	Original Result	MS Result	MS Rec.	Dilution	Rec. Limits	MS Qualifier
Analyte	mg/l	mg/l	mg/l	%		%	
Chloride	50.0	34.8	82.2	94.7	1	80.0-120	

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Volatile Organic Compounds (GC) by Method 8015D/GRO

L1649942-01,02,03

Method Blank (MB)

(MB) R3969383-2 09/02/23 03:53

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
TPH (GC/FID) Low Fraction	U		0.0314	0.100
(S) a,a,a-Trifluorotoluene(FID)	93.3			78.0-120

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Laboratory Control Sample (LCS)

(LCS) R3969383-1 09/02/23 03:07

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.20	94.5	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			104	78.0-120	

L1650002-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1650002-01 09/02/23 11:35 • (MS) R3969383-3 09/02/23 11:58 • (MSD) R3969383-4 09/02/23 12:21

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
TPH (GC/FID) Low Fraction	550	64.2	509	531	80.9	84.9	100	10.0-160			4.23	22
(S) a,a,a-Trifluorotoluene(FID)					98.9	98.6		78.0-120				

Volatile Organic Compounds (GC/MS) by Method 8260B

L1649942-01,02,03

Method Blank (MB)

(MB) R3969085-3 08/28/23 06:57

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Benzene	U		0.0000941	0.00100
Toluene	U		0.000278	0.00100
Ethylbenzene	U		0.000137	0.00100
Total Xylenes	U		0.000174	0.00300
(S) Toluene-d8	95.4			80.0-120
(S) 4-Bromofluorobenzene	93.9			77.0-126
(S) 1,2-Dichloroethane-d4	109			70.0-130

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3969085-1 08/28/23 05:58 • (LCSD) R3969085-2 08/28/23 06:17

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.00500	0.00575	0.00544	115	109	70.0-123			5.54	20
Toluene	0.00500	0.00502	0.00501	100	100	79.0-120			0.199	20
Ethylbenzene	0.00500	0.00480	0.00516	96.0	103	79.0-123			7.23	20
Total Xylenes	0.0150	0.0148	0.0147	98.7	98.0	79.0-123			0.678	20
(S) Toluene-d8				95.9	93.8	80.0-120				
(S) 4-Bromofluorobenzene				97.4	95.3	77.0-126				
(S) 1,2-Dichloroethane-d4				113	110	70.0-130				

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method 8015M [L1649942-01,02,03](#)

Method Blank (MB)

(MB) R3967402-1 08/30/23 05:18

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
C10-C28 Diesel Range	U		0.0222	0.100
C28-C36 Motor Oil Range	U		0.0118	0.100
(S) o-Terphenyl	126			52.0-156

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3967402-2 08/30/23 05:38 • (LCSD) R3967402-3 08/30/23 05:58

Analyte	Spike Amount mg/l	LCS Result mg/l	LCSD Result mg/l	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	1.50	1.77	1.60	118	107	50.0-150			10.1	20
(S) o-Terphenyl				110	103	52.0-156				

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey--NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio--VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1 6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1 4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA -- ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA -- ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA--Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc



ANALYTICAL REPORT

September 07, 2023

Arcadis - Chevron - NM

Sample Delivery Group: L1649983
Samples Received: 08/25/2023
Project Number: 30180414
Description: SCB Unit 3
Site: SCB UNIT 3
Report To: Sarah Johnson
401 East Main Street
Suite 400
El Paso, TX 79901

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Entire Report Reviewed By:

A handwritten signature in blue ink that reads "Erica McNeese".

Erica McNeese
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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SB-51-S-8-230824 L1649983-11	18
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¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

SB-49-S-4-230824 L1649983-01 Solid

Collected by
Chris Payton

Collected date/time
08/24/23 07:45

Received date/time
08/25/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2122143	1	08/28/23 13:50	08/28/23 13:57	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2125527	1	09/01/23 17:54	09/02/23 02:13	MDM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2123363	1	08/29/23 13:59	09/01/23 22:27	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2123846	1	08/29/23 13:59	08/30/23 15:54	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2123506	1	08/30/23 08:57	08/31/23 02:34	KAP	Mt. Juliet, TN

1

Cp

2

Tc

3

Ss

4

Cn

SB-49-S-6-230824 L1649983-02 Solid

Collected by
Chris Payton

Collected date/time
08/24/23 08:00

Received date/time
08/25/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2122143	1	08/28/23 13:50	08/28/23 13:57	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2125524	1	09/01/23 17:30	09/01/23 20:06	MDM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2123363	1	08/29/23 13:59	09/01/23 22:51	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2123846	1	08/29/23 13:59	08/30/23 16:13	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2123506	1	08/30/23 08:57	08/31/23 13:28	JAS	Mt. Juliet, TN

5

Sr

6

Qc

7

Gl

8

Al

SB-49-S-8-230824 L1649983-03 Solid

Collected by
Chris Payton

Collected date/time
08/24/23 08:10

Received date/time
08/25/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2122143	1	08/28/23 13:50	08/28/23 13:57	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2125524	1.03	09/01/23 17:30	09/01/23 20:15	MDM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2123363	1	08/29/23 13:59	09/01/23 23:16	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2123846	1	08/29/23 13:59	08/30/23 16:33	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2123506	1	08/30/23 08:57	08/31/23 01:49	KAP	Mt. Juliet, TN

9

Sc

SB-50-S-4-230824 L1649983-04 Solid

Collected by
Chris Payton

Collected date/time
08/24/23 08:35

Received date/time
08/25/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2122143	1	08/28/23 13:50	08/28/23 13:57	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2125524	1	09/01/23 17:30	09/01/23 20:25	MDM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2123363	1	08/29/23 13:59	09/01/23 23:40	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2123846	1	08/29/23 13:59	08/30/23 16:53	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2123506	1	08/30/23 08:57	08/31/23 00:18	KAP	Mt. Juliet, TN

SB-50-S-6-230824 L1649983-05 Solid

Collected by
Chris Payton

Collected date/time
08/24/23 08:45

Received date/time
08/25/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2122143	1	08/28/23 13:50	08/28/23 13:57	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2125524	1	09/01/23 17:30	09/01/23 20:34	MDM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2123363	1	08/29/23 13:59	09/02/23 00:04	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2123846	1	08/29/23 13:59	08/30/23 17:13	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2123506	1	08/30/23 08:57	08/31/23 00:31	KAP	Mt. Juliet, TN

SB-50-S-8-230824 L1649983-06 Solid

Collected by
Chris Payton

Collected date/time
08/24/23 08:57

Received date/time
08/25/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2122143	1	08/28/23 13:50	08/28/23 13:57	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2125524	1	09/01/23 17:30	09/01/23 20:44	MDM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2123363	1	08/29/23 13:59	09/02/23 00:28	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2123846	1	08/29/23 13:59	08/30/23 17:32	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2124324	1	08/31/23 07:47	08/31/23 15:30	TJD	Mt. Juliet, TN

1Cp

2Tc

3Ss

4Cn

SB-50-S-10-230824 L1649983-07 Solid

Collected by
Chris Payton

Collected date/time
08/24/23 09:10

Received date/time
08/25/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2122150	1	08/29/23 12:14	08/29/23 12:31	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2125524	1.02	09/01/23 17:30	09/01/23 20:53	MDM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2123363	1	08/29/23 13:59	09/02/23 00:53	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2123846	1	08/29/23 13:59	08/30/23 17:52	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2124324	1	08/31/23 07:47	08/31/23 15:43	TJD	Mt. Juliet, TN

5Sr

6Qc

7Gl

8Al

SB-50-S-12-230824 L1649983-08 Solid

Collected by
Chris Payton

Collected date/time
08/24/23 09:30

Received date/time
08/25/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2122150	1	08/29/23 12:14	08/29/23 12:31	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2125524	1	09/01/23 17:30	09/01/23 21:03	MDM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2123363	1	08/29/23 13:59	09/02/23 01:17	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2123846	1	08/29/23 13:59	08/30/23 18:11	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2124324	1	08/31/23 07:47	08/31/23 15:56	TJD	Mt. Juliet, TN

9Sc

SB-51-S-4-230824 L1649983-09 Solid

Collected by
Chris Payton

Collected date/time
08/24/23 10:05

Received date/time
08/25/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2122150	1	08/29/23 12:14	08/29/23 12:31	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2125524	1	09/01/23 17:30	09/01/23 21:12	MDM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2123363	1	08/29/23 13:59	09/02/23 01:41	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2123846	1	08/29/23 13:59	08/30/23 18:31	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2124324	1	08/31/23 07:47	08/31/23 16:09	TJD	Mt. Juliet, TN

SB-51-S-6-230824 L1649983-10 Solid

Collected by
Chris Payton

Collected date/time
08/24/23 10:15

Received date/time
08/25/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2122150	1	08/29/23 12:14	08/29/23 12:31	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2125527	1	09/01/23 17:54	09/02/23 02:51	MDM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2126788	1	08/29/23 13:59	09/06/23 00:55	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2123846	1	08/29/23 13:59	08/30/23 18:51	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2124324	1	08/31/23 07:47	08/31/23 16:22	TJD	Mt. Juliet, TN

SB-51-S-8-230824 L1649983-11 Solid

Collected by
Chris Payton

Collected date/time
08/24/23 10:30

Received date/time
08/25/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2122150	1	08/29/23 12:14	08/29/23 12:31	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2125527	1	09/01/23 17:54	09/02/23 03:00	MDM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2123363	1	08/29/23 13:59	09/02/23 02:30	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2123846	1	08/29/23 13:59	08/30/23 19:10	ACG	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2124324	1	08/31/23 07:47	08/31/23 16:36	TJD	Mt. Juliet, TN

1

Cp

2

Tc

3

Ss

4

Cn

SB-51-S-10-230824 L1649983-12 Solid

Collected by
Chris Payton

Collected date/time
08/24/23 10:40

Received date/time
08/25/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2122150	1	08/29/23 12:14	08/29/23 12:31	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2125527	1.01	09/01/23 17:54	09/02/23 03:10	MDM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2123363	1	08/29/23 13:59	09/02/23 02:54	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2124141	1	08/29/23 13:59	08/31/23 06:11	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2123682	1	08/30/23 16:21	08/31/23 00:09	KAP	Mt. Juliet, TN

5

Sr

6

Qc

7

Gl

8

Al

9

Sc

SB-52-S-4-230824 L1649983-13 Solid

Collected by
Chris Payton

Collected date/time
08/24/23 11:05

Received date/time
08/25/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2122150	1	08/29/23 12:14	08/29/23 12:31	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2125527	5	09/01/23 17:54	09/02/23 03:19	MDM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2123363	1	08/29/23 13:59	09/02/23 03:19	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2124141	1	08/29/23 13:59	08/31/23 06:31	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2123682	1	08/30/23 16:21	08/31/23 00:22	KAP	Mt. Juliet, TN

SB-52-S-6-230824 L1649983-14 Solid

Collected by
Chris Payton

Collected date/time
08/24/23 11:15

Received date/time
08/25/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2122150	1	08/29/23 12:14	08/29/23 12:31	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2125527	5	09/01/23 17:54	09/02/23 03:48	MDM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2126788	1	08/29/23 13:59	09/06/23 01:19	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2124141	1	08/29/23 13:59	08/31/23 06:51	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2123682	1	08/30/23 16:21	08/31/23 00:36	KAP	Mt. Juliet, TN

SB-52-S-8-230824 L1649983-15 Solid

Collected by
Chris Payton

Collected date/time
08/24/23 11:30

Received date/time
08/25/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2122150	1	08/29/23 12:14	08/29/23 12:31	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2125527	5	09/01/23 17:54	09/02/23 03:57	MDM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2123363	1	08/29/23 13:59	09/02/23 04:07	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2124141	1	08/29/23 13:59	08/31/23 07:10	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2123682	1	08/30/23 16:21	08/31/23 00:49	KAP	Mt. Juliet, TN

SB-52-S-10-230824 L1649983-16 Solid

Collected by
Chris Payton

Collected date/time
08/24/23 11:40

Received date/time
08/25/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Total Solids by Method 2540 G-2011	WG2122150	1	08/29/23 12:14	08/29/23 12:31	KDW	Mt. Juliet, TN
Wet Chemistry by Method 300.0	WG2125527	1	09/01/23 17:54	09/02/23 04:07	MDM	Mt. Juliet, TN
Volatile Organic Compounds (GC) by Method 8015D/GRO	WG2123363	1	08/29/23 13:59	09/02/23 04:31	DWR	Mt. Juliet, TN
Volatile Organic Compounds (GC/MS) by Method 8260B	WG2124141	1	08/29/23 13:59	08/31/23 07:30	DWR	Mt. Juliet, TN
Semi-Volatile Organic Compounds (GC) by Method 8015M	WG2123682	1	08/30/23 16:21	08/31/23 01:02	KAP	Mt. Juliet, TN

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.



Erica McNeese
Project Manager

- ¹ Cp
- ² Tc
- ³ Ss
- ⁴ Cn
- ⁵ Sr
- ⁶ Qc
- ⁷ Gl
- ⁸ Al
- ⁹ Sc

Collected date/time: 08/24/23 07:45

L1649983

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	92.5		1	08/28/2023 13:57	WG2122143

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	143		9.95	21.6	1	09/02/2023 02:13	WG2125527

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0235	0.108	1	09/01/2023 22:27	WG2123363
(S) a,a,a-Trifluorotoluene(FID)	92.5			77.0-120		09/01/2023 22:27	WG2123363

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000543	0.00116	1	08/30/2023 15:54	WG2123846
Toluene	U		0.00151	0.00582	1	08/30/2023 15:54	WG2123846
Ethylbenzene	U		0.000858	0.00291	1	08/30/2023 15:54	WG2123846
Total Xylenes	U		0.00102	0.00756	1	08/30/2023 15:54	WG2123846
(S) Toluene-d8	114			75.0-131		08/30/2023 15:54	WG2123846
(S) 4-Bromofluorobenzene	87.4			67.0-138		08/30/2023 15:54	WG2123846
(S) 1,2-Dichloroethane-d4	90.6			70.0-130		08/30/2023 15:54	WG2123846

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	U		1.74	4.33	1	08/31/2023 02:34	WG2123506
C28-C36 Motor Oil Range	0.664	J	0.296	4.33	1	08/31/2023 02:34	WG2123506
(S) o-Terphenyl	66.1			18.0-148		08/31/2023 02:34	WG2123506

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Collected date/time: 08/24/23 08:00

L1649983

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	%			date / time	
Total Solids	93.4		1	08/28/2023 13:57	WG2122143

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Chloride	249		9.85	21.4	1	09/01/2023 20:06	WG2125524

Volatile Organic Compounds (GC) by Method 8015D/GRO

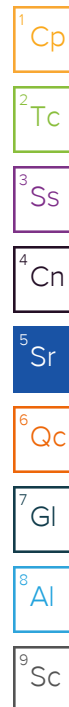
Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
TPH (GC/FID) Low Fraction	U		0.0232	0.107	1	09/01/2023 22:51	WG2123363
(S) <i>a,a,a</i> -Trifluorotoluene(FID)	92.1			77.0-120		09/01/2023 22:51	WG2123363

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
Benzene	U		0.000533	0.00114	1	08/30/2023 16:13	WG2123846
Toluene	U		0.00148	0.00571	1	08/30/2023 16:13	WG2123846
Ethylbenzene	U		0.000841	0.00285	1	08/30/2023 16:13	WG2123846
Total Xylenes	U		0.00100	0.00742	1	08/30/2023 16:13	WG2123846
(S) <i>Toluene-d8</i>	113			75.0-131		08/30/2023 16:13	WG2123846
(S) <i>4-Bromofluorobenzene</i>	89.8			67.0-138		08/30/2023 16:13	WG2123846
(S) <i>1,2-Dichloroethane-d4</i>	85.6			70.0-130		08/30/2023 16:13	WG2123846

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis	Batch
	mg/kg		mg/kg	mg/kg		date / time	
C10-C28 Diesel Range	65.7		1.72	4.28	1	08/31/2023 13:28	WG2123506
C28-C36 Motor Oil Range	163		0.293	4.28	1	08/31/2023 13:28	WG2123506
(S) <i>o</i> -Terphenyl	58.3			18.0-148		08/31/2023 13:28	WG2123506



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	85.3		1	08/28/2023 13:57	WG2122143

¹ Cp

² Tc

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	651		11.1	24.2	1.03	09/01/2023 20:15	WG2125524

³ Ss

⁴ Cn

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0254	0.117	1	09/01/2023 23:16	WG2123363
(S) a,a,a-Trifluorotoluene(FID)	91.5			77.0-120		09/01/2023 23:16	WG2123363

⁵ Sr

⁶ Qc

⁷ Gl

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000628	0.00134	1	08/30/2023 16:33	WG2123846
Toluene	U		0.00175	0.00672	1	08/30/2023 16:33	WG2123846
Ethylbenzene	U		0.000991	0.00336	1	08/30/2023 16:33	WG2123846
Total Xylenes	U		0.00118	0.00874	1	08/30/2023 16:33	WG2123846
(S) Toluene-d8	113			75.0-131		08/30/2023 16:33	WG2123846
(S) 4-Bromofluorobenzene	85.0			67.0-138		08/30/2023 16:33	WG2123846
(S) 1,2-Dichloroethane-d4	83.9			70.0-130		08/30/2023 16:33	WG2123846

⁸ Al

⁹ Sc

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.89	4.69	1	08/31/2023 01:49	WG2123506
C28-C36 Motor Oil Range	U		0.321	4.69	1	08/31/2023 01:49	WG2123506
(S) o-Terphenyl	59.2			18.0-148		08/31/2023 01:49	WG2123506

Collected date/time: 08/24/23 08:35

L1649983

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	92.2		1	08/28/2023 13:57	WG2122143

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	289		9.98	21.7	1	09/01/2023 20:25	WG2125524

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0235	0.108	1	09/01/2023 23:40	WG2123363
(S) a,a,a-Trifluorotoluene(FID)	92.1			77.0-120		09/01/2023 23:40	WG2123363

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000547	0.00117	1	08/30/2023 16:53	WG2123846
Toluene	U		0.00152	0.00585	1	08/30/2023 16:53	WG2123846
Ethylbenzene	U		0.000863	0.00293	1	08/30/2023 16:53	WG2123846
Total Xylenes	U		0.00103	0.00761	1	08/30/2023 16:53	WG2123846
(S) Toluene-d8	114			75.0-131		08/30/2023 16:53	WG2123846
(S) 4-Bromofluorobenzene	87.3			67.0-138		08/30/2023 16:53	WG2123846
(S) 1,2-Dichloroethane-d4	85.9			70.0-130		08/30/2023 16:53	WG2123846

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.75	4.34	1	08/31/2023 00:18	WG2123506
C28-C36 Motor Oil Range	0.637	J	0.297	4.34	1	08/31/2023 00:18	WG2123506
(S) o-Terphenyl	58.3			18.0-148		08/31/2023 00:18	WG2123506

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Collected date/time: 08/24/23 08:45

L1649983

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	89.7		1	08/28/2023 13:57	WG2122143

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	265		10.3	22.3	1	09/01/2023 20:34	WG2125524

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0242	0.111	1	09/02/2023 00:04	WG2123363
(S) a,a,a-Trifluorotoluene(FID)	91.8			77.0-120		09/02/2023 00:04	WG2123363

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000574	0.00123	1	08/30/2023 17:13	WG2123846
Toluene	U		0.00160	0.00615	1	08/30/2023 17:13	WG2123846
Ethylbenzene	U		0.000906	0.00307	1	08/30/2023 17:13	WG2123846
Total Xylenes	U		0.00108	0.00799	1	08/30/2023 17:13	WG2123846
(S) Toluene-d8	110			75.0-131		08/30/2023 17:13	WG2123846
(S) 4-Bromofluorobenzene	95.8			67.0-138		08/30/2023 17:13	WG2123846
(S) 1,2-Dichloroethane-d4	83.4			70.0-130		08/30/2023 17:13	WG2123846

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U	J6	1.79	4.46	1	08/31/2023 00:31	WG2123506
C28-C36 Motor Oil Range	1.00	J	0.305	4.46	1	08/31/2023 00:31	WG2123506
(S) o-Terphenyl	97.6			18.0-148		08/31/2023 00:31	WG2123506

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Collected date/time: 08/24/23 08:57

L1649983

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	85.3		1	08/28/2023 13:57	WG2122143

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	280		10.8	23.4	1	09/01/2023 20:44	WG2125524

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	0.0724	B J	0.0254	0.117	1	09/02/2023 00:28	WG2123363
(S) a,a,a-Trifluorotoluene(FID)	90.1			77.0-120		09/02/2023 00:28	WG2123363

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Benzene	U		0.000628	0.00134	1	08/30/2023 17:32	WG2123846
Toluene	U		0.00175	0.00672	1	08/30/2023 17:32	WG2123846
Ethylbenzene	U		0.000991	0.00336	1	08/30/2023 17:32	WG2123846
Total Xylenes	U		0.00118	0.00874	1	08/30/2023 17:32	WG2123846
(S) Toluene-d8	101			75.0-131		08/30/2023 17:32	WG2123846
(S) 4-Bromofluorobenzene	90.0			67.0-138		08/30/2023 17:32	WG2123846
(S) 1,2-Dichloroethane-d4	89.1			70.0-130		08/30/2023 17:32	WG2123846

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.89	4.69	1	08/31/2023 15:30	WG2124324
C28-C36 Motor Oil Range	0.496	J	0.321	4.69	1	08/31/2023 15:30	WG2124324
(S) o-Terphenyl	61.1			18.0-148		08/31/2023 15:30	WG2124324

Collected date/time: 08/24/23 09:10

L1649983

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	83.9		1	08/29/2023 12:31	WG2122150

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	183		11.2	24.3	1.02	09/01/2023 20:53	WG2125524

Volatile Organic Compounds (GC) by Method 8015D/GRO

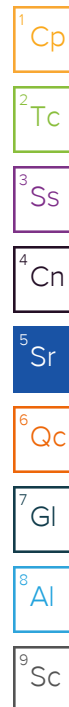
Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0259	0.119	1	09/02/2023 00:53	WG2123363
(S) a,a,a-Trifluorotoluene(FID)	91.7			77.0-120		09/02/2023 00:53	WG2123363

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000647	0.00139	1	08/30/2023 17:52	WG2123846
Toluene	U		0.00180	0.00693	1	08/30/2023 17:52	WG2123846
Ethylbenzene	U		0.00102	0.00346	1	08/30/2023 17:52	WG2123846
Total Xylenes	U		0.00122	0.00900	1	08/30/2023 17:52	WG2123846
(S) Toluene-d8	115			75.0-131		08/30/2023 17:52	WG2123846
(S) 4-Bromofluorobenzene	87.4			67.0-138		08/30/2023 17:52	WG2123846
(S) 1,2-Dichloroethane-d4	86.7			70.0-130		08/30/2023 17:52	WG2123846

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.92	4.77	1	08/31/2023 15:43	WG2124324
C28-C36 Motor Oil Range	U		0.326	4.77	1	08/31/2023 15:43	WG2124324
(S) o-Terphenyl	67.0			18.0-148		08/31/2023 15:43	WG2124324



Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	84.4		1	08/29/2023 12:31	WG2122150

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	227		10.9	23.7	1	09/01/2023 21:03	WG2125524

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0257	0.118	1	09/02/2023 01:17	WG2123363
(S) a,a,a-Trifluorotoluene(FID)	92.0			77.0-120		09/02/2023 01:17	WG2123363

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000639	0.00137	1	08/30/2023 18:11	WG2123846
Toluene	U		0.00178	0.00684	1	08/30/2023 18:11	WG2123846
Ethylbenzene	U		0.00101	0.00342	1	08/30/2023 18:11	WG2123846
Total Xylenes	U		0.00120	0.00889	1	08/30/2023 18:11	WG2123846
(S) Toluene-d8	111			75.0-131		08/30/2023 18:11	WG2123846
(S) 4-Bromofluorobenzene	86.9			67.0-138		08/30/2023 18:11	WG2123846
(S) 1,2-Dichloroethane-d4	89.4			70.0-130		08/30/2023 18:11	WG2123846

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.91	4.74	1	08/31/2023 15:56	WG2124324
C28-C36 Motor Oil Range	2.07	J	0.324	4.74	1	08/31/2023 15:56	WG2124324
(S) o-Terphenyl	58.9			18.0-148		08/31/2023 15:56	WG2124324

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	90.8		1	08/29/2023 12:31	WG2122150

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	1290		10.1	22.0	1	09/01/2023 21:12	WG2125524

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0239	0.110	1	09/02/2023 01:41	WG2123363
(S) a,a,a-Trifluorotoluene(FID)	91.7			77.0-120		09/02/2023 01:41	WG2123363

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000561	0.00120	1	08/30/2023 18:31	WG2123846
Toluene	U		0.00156	0.00601	1	08/30/2023 18:31	WG2123846
Ethylbenzene	U		0.000886	0.00300	1	08/30/2023 18:31	WG2123846
Total Xylenes	U		0.00106	0.00781	1	08/30/2023 18:31	WG2123846
(S) Toluene-d8	115			75.0-131		08/30/2023 18:31	WG2123846
(S) 4-Bromofluorobenzene	90.1			67.0-138		08/30/2023 18:31	WG2123846
(S) 1,2-Dichloroethane-d4	85.4			70.0-130		08/30/2023 18:31	WG2123846

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.77	4.40	1	08/31/2023 16:09	WG2124324
C28-C36 Motor Oil Range	2.55	J	0.302	4.40	1	08/31/2023 16:09	WG2124324
(S) o-Terphenyl	59.8			18.0-148		08/31/2023 16:09	WG2124324

1	Cp
2	Tc
3	Ss
4	Cn
5	Sr
6	Qc
7	Gl
8	Al
9	Sc

Collected date/time: 08/24/23 10:15

L1649983

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	89.5		1	08/29/2023 12:31	WG2122150

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	1130		10.3	22.4	1	09/02/2023 02:51	WG2125527

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0243	0.112	1	09/06/2023 00:55	WG2126788
(S) a,a,a-Trifluorotoluene(FID)	92.2			77.0-120		09/06/2023 00:55	WG2126788

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000577	0.00124	1	08/30/2023 18:51	WG2123846
Toluene	U		0.00161	0.00618	1	08/30/2023 18:51	WG2123846
Ethylbenzene	U		0.000911	0.00309	1	08/30/2023 18:51	WG2123846
Total Xylenes	U		0.00109	0.00803	1	08/30/2023 18:51	WG2123846
(S) Toluene-d8	113			75.0-131		08/30/2023 18:51	WG2123846
(S) 4-Bromofluorobenzene	90.5			67.0-138		08/30/2023 18:51	WG2123846
(S) 1,2-Dichloroethane-d4	90.4			70.0-130		08/30/2023 18:51	WG2123846

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	2.08	J	1.80	4.47	1	08/31/2023 16:22	WG2124324
C28-C36 Motor Oil Range	6.59		0.306	4.47	1	08/31/2023 16:22	WG2124324
(S) o-Terphenyl	62.5			18.0-148		08/31/2023 16:22	WG2124324

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	87.2		1	08/29/2023 12:31	WG2122150

¹ Cp

² Tc

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	703		10.6	22.9	1	09/02/2023 03:00	WG2125527

³ Ss

⁴ Cn

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0249	0.115	1	09/02/2023 02:30	WG2123363
(S) a,a,a-Trifluorotoluene(FID)	92.1			77.0-120		09/02/2023 02:30	WG2123363

⁵ Sr

⁶ Qc

⁷ Gl

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000605	0.00130	1	08/30/2023 19:10	WG2123846
Toluene	U		0.00168	0.00648	1	08/30/2023 19:10	WG2123846
Ethylbenzene	U		0.000955	0.00324	1	08/30/2023 19:10	WG2123846
Total Xylenes	U		0.00114	0.00842	1	08/30/2023 19:10	WG2123846
(S) Toluene-d8	113			75.0-131		08/30/2023 19:10	WG2123846
(S) 4-Bromofluorobenzene	87.4			67.0-138		08/30/2023 19:10	WG2123846
(S) 1,2-Dichloroethane-d4	86.1			70.0-130		08/30/2023 19:10	WG2123846

⁸ Al

⁹ Sc

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.85	4.59	1	08/31/2023 16:36	WG2124324
C28-C36 Motor Oil Range	0.362	J	0.314	4.59	1	08/31/2023 16:36	WG2124324
(S) o-Terphenyl	63.5			18.0-148		08/31/2023 16:36	WG2124324

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	91.6		1	08/29/2023 12:31	WG2122150

¹ Cp

² Tc

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	507		10.1	22.0	1.01	09/02/2023 03:10	WG2125527

³ Ss

⁴ Cn

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0237	0.109	1	09/02/2023 02:54	WG2123363
(S) a,a,a-Trifluorotoluene(FID)	91.8			77.0-120		09/02/2023 02:54	WG2123363

⁵ Sr

⁶ Qc

⁷ Gl

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000552	0.00118	1	08/31/2023 06:11	WG2124141
Toluene	U		0.00154	0.00591	1	08/31/2023 06:11	WG2124141
Ethylbenzene	U		0.000872	0.00296	1	08/31/2023 06:11	WG2124141
Total Xylenes	U		0.00104	0.00769	1	08/31/2023 06:11	WG2124141
(S) Toluene-d8	103			75.0-131		08/31/2023 06:11	WG2124141
(S) 4-Bromofluorobenzene	97.6			67.0-138		08/31/2023 06:11	WG2124141
(S) 1,2-Dichloroethane-d4	96.9			70.0-130		08/31/2023 06:11	WG2124141

⁸ Al

⁹ Sc

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.76	4.37	1	08/31/2023 00:09	WG2123682
C28-C36 Motor Oil Range	U		0.299	4.37	1	08/31/2023 00:09	WG2123682
(S) o-Terphenyl	56.9			18.0-148		08/31/2023 00:09	WG2123682

Collected date/time: 08/24/23 11:05

L1649983

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	89.9		1	08/29/2023 12:31	WG2122150

Wet Chemistry by Method 300.0

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Chloride	3350		51.2	111	5	09/02/2023 03:19	WG2125527

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0241	0.111	1	09/02/2023 03:19	WG2123363
(S) a,a,a-Trifluorotoluene(FID)	92.5			77.0-120		09/02/2023 03:19	WG2123363

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
Benzene	U		0.000572	0.00123	1	08/31/2023 06:31	WG2124141
Toluene	U		0.00159	0.00613	1	08/31/2023 06:31	WG2124141
Ethylbenzene	U		0.000903	0.00306	1	08/31/2023 06:31	WG2124141
Total Xylenes	U		0.00108	0.00796	1	08/31/2023 06:31	WG2124141
(S) Toluene-d8	97.9			75.0-131		08/31/2023 06:31	WG2124141
(S) 4-Bromofluorobenzene	96.6			67.0-138		08/31/2023 06:31	WG2124141
(S) 1,2-Dichloroethane-d4	96.6			70.0-130		08/31/2023 06:31	WG2124141

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry)	Qualifier	MDL (dry)	RDL (dry)	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	5.63		1.79	4.45	1	08/31/2023 00:22	WG2123682
C28-C36 Motor Oil Range	U		0.305	4.45	1	08/31/2023 00:22	WG2123682
(S) o-Terphenyl	53.5			18.0-148		08/31/2023 00:22	WG2123682

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Collected date/time: 08/24/23 11:15

L1649983

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	90.2		1	08/29/2023 12:31	WG2122150

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	3870		51.0	111	5	09/02/2023 03:48	WG2125527

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0241	0.111	1	09/06/2023 01:19	WG2126788
(S) a,a,a-Trifluorotoluene(FID)	92.3			77.0-120		09/06/2023 01:19	WG2126788

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000569	0.00122	1	08/31/2023 06:51	WG2124141
Toluene	U		0.00158	0.00609	1	08/31/2023 06:51	WG2124141
Ethylbenzene	U		0.000898	0.00304	1	08/31/2023 06:51	WG2124141
Total Xylenes	U		0.00107	0.00792	1	08/31/2023 06:51	WG2124141
(S) Toluene-d8	94.6			75.0-131		08/31/2023 06:51	WG2124141
(S) 4-Bromofluorobenzene	93.3			67.0-138		08/31/2023 06:51	WG2124141
(S) 1,2-Dichloroethane-d4	98.4			70.0-130		08/31/2023 06:51	WG2124141

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	7.01		1.78	4.43	1	08/31/2023 00:36	WG2123682
C28-C36 Motor Oil Range	0.351	J	0.304	4.43	1	08/31/2023 00:36	WG2123682
(S) o-Terphenyl	54.7			18.0-148		08/31/2023 00:36	WG2123682

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Collected date/time: 08/24/23 11:30

L1649983

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	89.5		1	08/29/2023 12:31	WG2122150

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	3090		51.4	112	5	09/02/2023 03:57	WG2125527

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0243	0.112	1	09/02/2023 04:07	WG2123363
(S) a,a,a-Trifluorotoluene(FID)	92.1			77.0-120		09/02/2023 04:07	WG2123363

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000578	0.00124	1	08/31/2023 07:10	WG2124141
Toluene	U		0.00161	0.00618	1	08/31/2023 07:10	WG2124141
Ethylbenzene	U		0.000912	0.00309	1	08/31/2023 07:10	WG2124141
Total Xylenes	U		0.00109	0.00804	1	08/31/2023 07:10	WG2124141
(S) Toluene-d8	99.5			75.0-131		08/31/2023 07:10	WG2124141
(S) 4-Bromofluorobenzene	89.9			67.0-138		08/31/2023 07:10	WG2124141
(S) 1,2-Dichloroethane-d4	94.3			70.0-130		08/31/2023 07:10	WG2124141

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	3.69	J	1.80	4.47	1	08/31/2023 00:49	WG2123682
C28-C36 Motor Oil Range	U		0.306	4.47	1	08/31/2023 00:49	WG2123682
(S) o-Terphenyl	53.0			18.0-148		08/31/2023 00:49	WG2123682

1 Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Total Solids by Method 2540 G-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Total Solids	94.5		1	08/29/2023 12:31	WG2122150

1 Cp

2 Tc

Wet Chemistry by Method 300.0

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Chloride	1310		9.73	21.2	1	09/02/2023 04:07	WG2125527

3 Ss

4 Cn

Volatile Organic Compounds (GC) by Method 8015D/GRO

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
TPH (GC/FID) Low Fraction	U		0.0230	0.106	1	09/02/2023 04:31	WG2123363
(S) a,a,a-Trifluorotoluene(FID)	91.8			77.0-120		09/02/2023 04:31	WG2123363

5 Sr

6 Qc

7 Gl

Volatile Organic Compounds (GC/MS) by Method 8260B

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
Benzene	U		0.000521	0.00112	1	08/31/2023 07:30	WG2124141
Toluene	U		0.00145	0.00558	1	08/31/2023 07:30	WG2124141
Ethylbenzene	U		0.000822	0.00279	1	08/31/2023 07:30	WG2124141
Total Xylenes	U		0.000982	0.00725	1	08/31/2023 07:30	WG2124141
(S) Toluene-d8	100			75.0-131		08/31/2023 07:30	WG2124141
(S) 4-Bromofluorobenzene	98.6			67.0-138		08/31/2023 07:30	WG2124141
(S) 1,2-Dichloroethane-d4	98.8			70.0-130		08/31/2023 07:30	WG2124141

8 Al

9 Sc

Semi-Volatile Organic Compounds (GC) by Method 8015M

Analyte	Result (dry) mg/kg	Qualifier	MDL (dry) mg/kg	RDL (dry) mg/kg	Dilution	Analysis date / time	Batch
C10-C28 Diesel Range	U		1.70	4.23	1	08/31/2023 01:02	WG2123682
C28-C36 Motor Oil Range	U		0.290	4.23	1	08/31/2023 01:02	WG2123682
(S) o-Terphenyl	54.0			18.0-148		08/31/2023 01:02	WG2123682

Total Solids by Method 2540 G-2011 [L1649983-01,02,03,04,05,06](#)

Method Blank (MB)

(MB) R3966487-1 08/28/23 13:57

	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
Analyte	%		%	%
Total Solids	0.00100			

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

L1649974-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1649974-01 08/28/23 13:57 • (DUP) R3966487-3 08/28/23 13:57

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	89.7	89.7	1	0.00268		10

⁷Gl

⁸Al

Laboratory Control Sample (LCS)

(LCS) R3966487-2 08/28/23 13:57

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
Analyte	%	%	%	%	
Total Solids	50.0	50.0	100	85.0-115	

⁹Sc

Total Solids by Method 2540 G-2011 [L1649983-07,08,09,10,11,12,13,14,15,16](#)

Method Blank (MB)

(MB) R3967066-1 08/29/23 12:31

	MB Result	<u>MB Qualifier</u>	MB MDL	MB RDL
Analyte	%		%	%
Total Solids	0.00100			

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

L1649983-12 Original Sample (OS) • Duplicate (DUP)

(OS) L1649983-12 08/29/23 12:31 • (DUP) R3967066-3 08/29/23 12:31

	Original Result	DUP Result	Dilution	DUP RPD	<u>DUP Qualifier</u>	DUP RPD Limits
Analyte	%	%		%		%
Total Solids	91.6	90.9	1	0.803		10

⁷Gl

⁸Al

Laboratory Control Sample (LCS)

(LCS) R3967066-2 08/29/23 12:31

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	<u>LCS Qualifier</u>
Analyte	%	%	%	%	
Total Solids	50.0	50.0	100	85.0-115	

⁹Sc

Method Blank (MB)

(MB) R3968663-1 09/01/23 18:38				
	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Chloride	U		9.20	20.0

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

L1650317-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1650317-03 09/01/23 21:22 • (DUP) R3968663-3 09/01/23 21:31						
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Chloride	822	793	1.01	3.59		20

L1650317-13 Original Sample (OS) • Duplicate (DUP)

(OS) L1650317-13 09/01/23 22:47 • (DUP) R3968663-4 09/01/23 22:57						
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Chloride	667	736	1	9.85		20

Laboratory Control Sample (LCS)

(LCS) R3968663-2 09/01/23 18:47					
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Chloride	200	201	100	90.0-110	

L1650317-13 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1650317-13 09/01/23 22:47 • (MS) R3968663-5 09/02/23 00:09 • (MSD) R3968663-6 09/02/23 00:18												
	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Chloride	500	667	1270	1310	120	129	1	80.0-120		J5	3.35	20

Wet Chemistry by Method 300.0

L1649983-01,10,11,12,13,14,15,16

Method Blank (MB)

(MB) R3968664-1 09/02/23 01:54

	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/kg		mg/kg	mg/kg
Chloride	U		9.20	20.0

L1649983-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1649983-01 09/02/23 02:13 • (DUP) R3968664-3 09/02/23 02:22

	Original Result (dry)	DUP Result (dry)	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/kg	mg/kg		%		%
Chloride	143	134	1	6.77		20

L1650471-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1650471-01 09/02/23 05:51 • (DUP) R3968664-6 09/02/23 06:01

	Original Result (dry)	DUP Result (dry)	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte				%		%
Chloride	1420	1210	1.01	16.0		20

Laboratory Control Sample (LCS)

(LCS) R3968664-2 09/02/23 02:03

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/kg	mg/kg	%	%	
Chloride	200	199	99.4	90.0-110	

L1649983-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1649983-01 09/02/23 02:13 • (MS) R3968664-4 09/02/23 02:32 • (MSD) R3968664-5 09/02/23 02:41

	Spike Amount (dry)	Original Result (dry)	MS Result (dry)	MSD Result (dry)	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/kg	mg/kg	mg/kg	mg/kg	%	%		%			%	%
Chloride	541	143	664	659	96.4	95.4	1	80.0-120			0.810	20

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Volatile Organic Compounds (GC) by Method 8015D/GRO

[L1649983-01,02,03,04,05,06,07,08,09,11,12,13,15,16](#)

Method Blank (MB)

(MB) R3969198-2 09/01/23 21:14

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0276	⬇	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	99.6			77.0-120

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3969198-1 09/01/23 19:53

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	6.83	124	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			102	77.0-120	

Volatile Organic Compounds (GC) by Method 8015D/GRO

[L1649983-10,14](#)

Method Blank (MB)

(MB) R3969870-2 09/06/23 00:08

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
TPH (GC/FID) Low Fraction	0.0506	⬇	0.0217	0.100
(S) a,a,a-Trifluorotoluene(FID)	95.1			77.0-120

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Laboratory Control Sample (LCS)

(LCS) R3969870-1 09/05/23 22:54

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
TPH (GC/FID) Low Fraction	5.50	5.11	92.9	72.0-127	
(S) a,a,a-Trifluorotoluene(FID)			101	77.0-120	

Volatile Organic Compounds (GC/MS) by Method 8260B

L1649983-01,02,03,04,05,06,07,08,09,10,11

Method Blank (MB)

(MB) R3967489-3 08/30/23 10:43

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Toluene	U		0.00130	0.00500
Ethylbenzene	U		0.000737	0.00250
Total Xylenes	U		0.000880	0.00650
(S) Toluene-d8	116			75.0-131
(S) 4-Bromofluorobenzene	88.5			67.0-138
(S) 1,2-Dichloroethane-d4	81.4			70.0-130

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3967489-1 08/30/23 09:05 • (LCSD) R3967489-2 08/30/23 09:24

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.114	0.108	91.2	86.4	70.0-123			5.41	20
Toluene	0.125	0.132	0.124	106	99.2	75.0-121			6.25	20
Ethylbenzene	0.125	0.134	0.126	107	101	74.0-126			6.15	20
Total Xylenes	0.375	0.393	0.354	105	94.4	72.0-127			10.4	20
(S) Toluene-d8				111	112	75.0-131				
(S) 4-Bromofluorobenzene				92.4	92.4	67.0-138				
(S) 1,2-Dichloroethane-d4				86.8	92.7	70.0-130				

Volatile Organic Compounds (GC/MS) by Method 8260B

L1649983-12,13,14,15,16

Method Blank (MB)

(MB) R3968185-3 08/31/23 04:33

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
Benzene	U		0.000467	0.00100
Toluene	U		0.00130	0.00500
Ethylbenzene	U		0.000737	0.00250
Total Xylenes	U		0.000880	0.00650
(S) Toluene-d8	99.4			75.0-131
(S) 4-Bromofluorobenzene	94.6			67.0-138
(S) 1,2-Dichloroethane-d4	97.2			70.0-130

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3968185-1 08/31/23 02:54 • (LCSD) R3968185-2 08/31/23 03:14

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCSD Result mg/kg	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Benzene	0.125	0.143	0.136	114	109	70.0-123			5.02	20
Toluene	0.125	0.118	0.121	94.4	96.8	75.0-121			2.51	20
Ethylbenzene	0.125	0.120	0.116	96.0	92.8	74.0-126			3.39	20
Total Xylenes	0.375	0.338	0.354	90.1	94.4	72.0-127			4.62	20
(S) Toluene-d8				95.6	94.7	75.0-131				
(S) 4-Bromofluorobenzene				93.8	96.4	67.0-138				
(S) 1,2-Dichloroethane-d4				106	104	70.0-130				

⁷ Gl

⁸ Al

⁹ Sc

Semi-Volatile Organic Compounds (GC) by Method 8015M

L1649983-01,02,03,04,05

Method Blank (MB)

(MB) R3967616-1 08/30/23 23:12

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C36 Motor Oil Range	U		0.274	4.00
(S) o-Terphenyl	57.2			18.0-148

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Laboratory Control Sample (LCS)

(LCS) R3967616-2 08/30/23 23:25

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	36.3	72.6	50.0-150	
(S) o-Terphenyl			80.5	18.0-148	

L1649983-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1649983-05 08/31/23 00:31 • (MS) R3967616-3 08/31/23 00:44 • (MSD) R3967616-4 08/31/23 00:57

Analyte	Spike Amount (dry) mg/kg	Original Result (dry) mg/kg	MS Result (dry) mg/kg	MSD Result (dry) mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	55.1	U	25.9	30.9	47.0	56.5	1	50.0-150	J6		17.7	20
(S) o-Terphenyl					60.5	63.0		18.0-148				

Semi-Volatile Organic Compounds (GC) by Method 8015M [L1649983-12,13,14,15,16](#)

Method Blank (MB)

(MB) R3967922-1 08/30/23 23:29

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C36 Motor Oil Range	U		0.274	4.00
(S) o-Terphenyl	68.0			18.0-148

Laboratory Control Sample (LCS)

(LCS) R3967922-2 08/30/23 23:42

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	32.7	65.4	50.0-150	
(S) o-Terphenyl			60.7	18.0-148	

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Method Blank (MB)

(MB) R3968069-1 08/31/23 15:02

Analyte	MB Result mg/kg	MB Qualifier	MB MDL mg/kg	MB RDL mg/kg
C10-C28 Diesel Range	U		1.61	4.00
C28-C36 Motor Oil Range	U		0.274	4.00
(S) o-Terphenyl	55.7			18.0-148

1
Cp

2
Tc

3
Ss

4
Cn

5
Sr

6
Qc

7
Gl

8
Al

9
Sc

Laboratory Control Sample (LCS)

(LCS) R3968069-2 08/31/23 15:17

Analyte	Spike Amount mg/kg	LCS Result mg/kg	LCS Rec. %	Rec. Limits %	LCS Qualifier
C10-C28 Diesel Range	50.0	30.1	60.2	50.0-150	
(S) o-Terphenyl			61.7	18.0-148	

L1650174-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1650174-02 08/31/23 16:49 • (MS) R3968069-3 08/31/23 17:02 • (MSD) R3968069-4 08/31/23 17:15

Analyte	Spike Amount mg/kg	Original Result mg/kg	MS Result mg/kg	MSD Result mg/kg	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
C10-C28 Diesel Range	50.0	1.69	36.2	31.4	69.0	59.4	1	50.0-150			14.2	20
(S) o-Terphenyl					52.4	53.5		18.0-148				

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

(dry)	Results are reported based on the dry weight of the sample. [this will only be present on a dry report basis for soils].
MDL	Method Detection Limit.
MDL (dry)	Method Detection Limit.
RDL	Reported Detection Limit.
RDL (dry)	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(S)	Surrogate (Surrogate Standard) - Analytes added to every blank, sample, Laboratory Control Sample/Duplicate and Matrix Spike/Duplicate; used to evaluate analytical efficiency by measuring recovery. Surrogates are not expected to be detected in all environmental media.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
B	The same analyte is found in the associated blank.
J	The identification of the analyte is acceptable; the reported value is an estimate.
J5	The sample matrix interfered with the ability to make any accurate determination; spike value is high.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey--NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio--VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1 6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1 4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA -- ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA -- ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA--Crypto	TN00003		

¹ Drinking Water ² Underground Storage Tanks ³ Aquatic Toxicity ⁴ Chemical/Microbiological ⁵ Mold ⁶ Wastewater n/a Accreditation not applicable

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.

* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

Arcadis - Chevron - NM

401 East Main Street
Suite 400
El Paso, TX 79901

Report to:
Sarah Johnson

Project Description:
SCB Unit 3

City/State
Collected:

Please Circle:
PT MT CT ET

Phone: 915-747-3902

Client Project #
30180414

Lab Project #
CHEVARCNM-SCBUNIT3

Collected by (print):

Chris Payton

Site/Facility ID #
SCB UNIT 3

P.O. #

Collected by (signature):

Chris Payton

Rush? (Lab MUST Be Notified)

___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Date Results Needed

Standard

Immediately
Packed on Ice N ___ Y ☒

Pres
Chk

Analysis / Container / Preservative



MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody
constitutes acknowledgment and acceptance of the
Pace Terms and Conditions found at:
<https://info.pacelabs.com/hubs/pas-standard-terms.pdf>

SDG # L1649983

G177

Acctnum: CHEVARCNM

Template: T235721

Prelogin: P1017032

PM: 526 - Chris McCord

PB:

Shipped Via: FedEX Ground

Remarks Sample # (lab only)

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	CHLORIDE-300, DRONM 4ozClr-NoPres	GRO, V8260BTEX, TS 4ozClr-NoPres	Total TPH (GRO, DRO, ORO)										
SB-49-S-4-230824	G	SS	4	08-24-23	0745	2	X	X	X										-01
SB-49-S-6-230824	G	SS	6	08-24-23	0800	2	X	X	X										-02
SB-49-S-8-230824	G	SS	8	08-24-23	0810	2	X	X	X										-03
SB-50-S-4-230824	G	SS	4	08-24-23	0835	2	X	X	X										-04
SB-50-S-6-230824	G	SS	6	08-24-23	0845	2	X	X	X										-05
SB-50-S-8-230824	G	SS	8	08-24-23	0857	2	X	X	X										-06
SB-50-S-10-230824	G	SS	10	08-24-23	0910	2	X	X	X										-07
SB-50-S-12-230824	G	SS	12	08-24-23	0930	2	X	X	X										-08
SB-51-S-4-230824	G	SS	4	08-24-23	1005	2	X	X	X										-09
SB-51-S-6-230824	G	SS	6	08-24-23	1015	2	X	X	X										-10

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other

Remarks:

pH _____ Temp _____

Flow _____ Other _____

Samples returned via:
___ UPS ___ FedEx ___ Courier

Tracking #

6841 8349 9998

Relinquished by: (Signature)

Chris Payton

Date:

08-24-23

Time:

1415

Received by: (Signature)

Trip Blank Received: Yes / No

HCL / MeOH
TBR

Relinquished by: (Signature)

Date:

Time:

Received by: (Signature)

Temp: 5.6 ± 0.8 °C Bottles Received: 32

If preservation required by Login: Date/Time

Relinquished by: (Signature)

Date:

Time:

Received for lab by: (Signature)

Date: 8-25-23 Time: 845

Hold:

Condition:
NCF / OK

Sample Receipt Checklist
COC Seal Present/Intact: ☒ Y ☒ N
COC Signed/Accurate: ☒ Y ☒ N
Bottles arrive intact: ☒ Y ☒ N
Correct bottles used: ☒ Y ☒ N
Sufficient volume sent: ☒ Y ☒ N
If Applicable
VOA Zero Headspace: ☒ Y ☒ N
Preservation Correct/Checked: ☒ Y ☒ N
RAD Screen <0.5 mR/hr: ☒ Y ☒ N

Arcadis - Chevron - NM

401 East Main Street
Suite 400
El Paso, TX 79901

Report to:
Sarah Johnson

Project Description:
SCB Unit 3

Phone: 915-747-3902

Client Project #
30180414

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CHEVARCNM-SCBUNIT3

Collected by (print):

Chris Payton

Site/Facility ID #
SCB UNIT 3

P.O. #

Collected by (signature):

Chris Payton

Rush? (Lab MUST Be Notified)

☐ Same Day ☐ Five Day
☐ Next Day ☐ 5 Day (Rad Only)
☐ Two Day ☐ 10 Day (Rad Only)
☐ Three Day

Quote #

Date Results Needed

Standard

Immediately
Packed on Ice N ☐ Y ☒

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs
SB-51-S-8-230824	G	SS	8	8-24-23	1030	2
SB-51-S-10-230824	G	SS	10	8-24-23	1040	2
SB-52-S-4-230824	G	SS	4	8-24-23	1105	2
SB-52-S-6-230824	G	SS	6	8-24-23	1115	2
SB-52-S-8-230824	G	SS	8	8-24-23	1130	2
SB-52-S-10-230824	G	SS	10	8-24-23	1140	2
		SS				2
		SS				2
		SS				2
		SS				2

* Matrix:
 SS - Soil AIR - Air F - Filter
 GW - Groundwater B - Bioassay
 WW - WasteWater
 DW - Drinking Water
 OT - Other

Remarks:

Samples returned via:
☐ UPS ☐ FedEx ☐ Courier

Tracking #

Received by: (Signature)

pH _____ Temp _____

Flow _____ Other _____

Trip Blank Received: Yes ☒ No ☐

HCL / MeOH
TBR

Temp 5.6 ± 0.8 °C Bottles Received: 32

Date: 8-25-23 Time: 845

Sample Receipt Checklist

COC Seal Present/Intact: ☐ NP ☒ Y ☐ N
 COC Signed/Accurate: ☒ Y ☐ N
 Bottles arrive intact: ☒ Y ☐ N
 Correct bottles used: ☒ Y ☐ N
 Sufficient volume sent: ☒ Y ☐ N
 If Applicable
 VOA Zero Headspace: ☐ Y ☐ N
 Preservation Correct/Checked: ☒ Y ☐ N
 RAD Screen <0.5 mR/hr: ☒ Y ☐ N

If preservation required by Login: Date/Time

Hold: Condition: NCF ☒ OK

Billing Information:

Accounts Payable
401 East Main Street
Suite 400
El Paso, TX 79901

Pres
Chk

Email To:

sarah.johnson@arcadis.com;laura.gloria@arcadi

Please Circle:
PT MT CT ET

CHLORIDE-300, DRONM 4oz Clr-NoPres

GRO, V8260BTEX, TS 4oz Clr-NoPres

Total TPH (GLO, DRO, DRO)

Analysis / Container / Preservative



MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody
constitutes acknowledgment and acceptance of the
Pace Terms and Conditions found at:
<https://info.pacelabs.com/hubs/pas-standard-terms.pdf>

SDG # 21649983

Table #

Acctnum: CHEVARCNM

Template: T235721

Prelogin: P1017032

PM: 526 - Chris McCord

PB:

Shipped Via: FedEX Ground

Remarks Sample # (lab only)

11

12

13

14

15

16

Appendix E

Remediation Work Plan (iCLB0601142847)



New Mexico Oil Conservation Division
District I
1625 N. French Drive
Hobbs, New Mexico 88240

Arcadis U.S., Inc.
10205 Westheimer Road
Suite 800
Houston
Texas 77042
Phone: 713 953 4800
Fax: 713 977 4620
www.arcadis.com

Date: July 17, 2024

Subject: South Culebra Bluff Unit 3
Soil Remediation Work Plan – Wellhead Area
Case No. 2RP-3984
Inspection No. iCLB0601142847
Eddy County, New Mexico

TX Engineering License # F-533
TX Geoscientist License # 50158

Dear Whom it May Concern,

Arcadis U.S., Inc. (Arcadis) has prepared this Work Plan for Chevron Environmental Management Company (CEMC) on behalf of Chevron U.S.A. Inc., through its division Chevron North America Exploration and Production Company to perform environmental remediation services for the South Culebra Bluff (SCB) Unit 3 (Site), located in Eddy County, New Mexico on privately owned land. Environmental remediation at the Site is required by the New Mexico Oil Conservation Division (NMOCD).

Project Summary

The Site is in Bureau of Land Management (BLM) legal land description Unit G, Section 23, Township 23 South, Range 28 East, in Eddy County, New Mexico.

On January 11, 2006, during a routine inspection conducted by the NMOCD (iCLB0601142847), the inspector observed staining and standing fluids around the wellhead.

On January 27, 2006, White Buffalo Environmental Services (WBESI) submitted a remediation plan to the NMOCD to address the staining and standing fluids. WBESI proposed to complete site remediation activities in accordance with the historical NMOCD soil screening standards of 50 milligrams per kilogram (mg/kg) for benzene, toluene, ethylbenzene, total xylenes (BTEX) and 1,000 mg/kg for total petroleum hydrocarbons (TPH). Depth to groundwater less than 50 feet below ground surface (bgs) required vertical delineation for chloride to 250 mg/kg. On January 30, 2006, NMOCD approved the remediation work plan with limitations outlined in the *Remediation Work Plan Conditions of Approval – South Culebra Bluff Unit No. 3*.

Between March and May 2006, WBESI subcontracted Range Resources to complete the site remediation (excavation) activities proposed in the approved remediation work plan. The summary report submitted to NMOCD (WBESI July 2006) indicated that no soil sample analytical results were reported above the applicable historical remediation limits of 50 mg/kg for BTEX, 1,000 mg/kg for TPH, and 250 mg/kg for chloride.

NMOCD

July 17, 2024

WBESI submitted the response to the *Letter of Violation for Range Operating New Mexico, Inc. Inspection, South Culebra Bluff (SCB) Unit No. 003* dated July 10, 2006, which concluded that remedial activities were completed and requested closure from NMOCD; no response to the closure request by WBESI for 2RP-3984 has been located by Arcadis.

On April 1-2, 2020, Arcadis personnel collected soil samples at eight locations (SS-1 through SS-8) surrounding the wellhead with a hand auger at depths ranging from the surface to 6 feet bgs. The soil samples were analyzed for chloride, TPH as gasoline (TPH-GRO), TPH as diesel (TPH-DRO), TPH as oil (TPH-ORO), and BTEX by United States Environmental Protection Agency (USEPA) Methods 300, 8015 and 8021B, respectively. Analytical results associated with recent assessment activities conducted in 2020 indicated that the extent of BTEX in soil has been delineated, but concentrations of TPH and chloride were reported above applicable screening limits and additional delineation activities were required.

On September 13-16, 2021, Arcadis personnel collected soil samples at fifteen locations (SS-28 through SS-42) surrounding the wellhead with a backhoe at depths ranging from the surface to approximately 13 feet bgs. The soil samples were analyzed for chloride, TPH-GRO, TPH-DRO, and TPH-ORO by USEPA Methods 300 and 8015, respectively. Chloride exceeded the New Mexico Administrative Code (NMAC) standard of 600 mg/kg in 42 of the 62 soil samples collected, with concentrations ranging from 612 mg/kg at SS-40 (1'-2' bgs) to 11,000 mg/kg at SS-35 (0-0.5' bgs). Total TPH exceeded the NMAC standard of 100 mg/kg in 12 of the 62 soil samples collected with concentrations ranging from 107 mg/kg at SS-34 (1'-2' bgs) to 9,740 mg/kg at SS-30 (0-0.5').

On August 21 through 24, 2023, Arcadis personnel collected 21 soil samples from five test trench locations (SB-43 through SB-47) and one temporary monitoring well location (TW-1) surrounding the former wellhead. The test trenches were advanced using a backhoe and the temporary monitoring well locations were advanced using air rotary equipment. Soil samples were collected at depths ranging from the surface (0-0.5' bgs) to approximately 40 feet bgs. The soil samples were analyzed for chloride by USEPA Method 300, total TPH by USEPA Method 8015, and BTEX by USEPA Method 8260. Chloride exceeded the NMAC standard of 600 mg/kg in 8 of the 21 soil samples collected, with concentrations ranging from 600 mg/kg at SB-43 (8' bgs) to 2,840 mg/kg at SB-44 (4' bgs). Total TPH and BTEX did not exceed the NMAC standard of 100 mg/Kg and 50 mg/kg, respectively, in any of the 21 soil samples collected.

A cumulative soil sample location map is included as **Figure 1** and a cumulative summary of the soil sample analytical results is included as **Table 1**. The 2023 test trench and temporary monitoring well locations are depicted on **Figure 2**.

Depth to water at TW-1 was determined to be 38 feet bgs from the top of casing (TOC) which extended approximately two feet above ground surface. Therefore, depth to groundwater at the Site was confirmed to be less than 50 feet bgs in 2023. A groundwater sample was collected from TMW-1 prior to plugging activities and analyzed for chloride, TPH, BTEX, and total dissolved solids (TDS) by USEPA Methods 300, 8015M, 8021B, and 2540C respectively. Chloride exceeded the New Mexico Water Quality Control Commission (NMWQCC) groundwater screening standard of 250 milligrams per liter (mg/L) at TW-1 at a concentration of 1,790 mg/L. TDS exceeded the NMWQCC groundwater screening standard of 1,000 mg/L at TW-1 at a concentration of 5,520 mg/L. BTEX and TPH were not detected at TW-1. A background temporary monitoring well (TW-2) was also installed to approximately 40 feet bgs with a recorded depth to groundwater at 27 feet bgs. A groundwater sample was collected from TMW-2 prior to plugging activities and analyzed for chloride, TPH, BTEX, and TDS by USEPA Methods 300, 8015, 8021B, and 2540C respectively. Chloride exceeded the NMWQCC groundwater screening standard of 250 mg/L at TW-2 at concentrations of 1,830 mg/L. TDS exceeded the NMWQCC groundwater

NMOCD
July 17, 2024

screening standard of 1,000 mg/L at TW-2 at concentrations of 5,590 mg/L. TPH-ORO was detected at TW-2 at a concentration of 0.0241 mg/L. BTEX was not detected at TW-2.

A cumulative summary of the groundwater analytical results is included as **Table 2**.

Proposed Work Plan

Soil remediation activities (i.e., excavation) will be conducted in the areas with soil exceeding the NMAC closure screening levels for the specific analytical constituents specified in Table 1 – Closure Criteria for Soils Impacted by a Release within revised Rule 19.15.29 for sites with groundwater less than 50 feet bgs and accompanied with confirmation soil sample analysis. Field screening of soils for chloride and petroleum hydrocarbons will be performed to guide excavation activities and confirmation samples. Arcadis field geologists will collect confirmation soil samples from the sidewalls and bases of the excavation area. Subsequently, the excavation will be backfilled with clean material similar to the surrounding area. The proposed excavation boundary is presented in **Figure 2**. Arcadis is requesting approval of the following soil remediation activities:

- Prior to mobilizing equipment to the Site, a New Mexico 811 utility notification will be made at least 48-hours prior to mobilization.
- Arcadis will contract GPRS to locate subsurface utilities prior to starting any digging.
- Soils will be field screened for chloride during excavation activities utilizing Hach chloride test strips and for volatile organic compounds (VOCs) utilizing a photo-ionization detector (PID).
- Excavated soils will be stored on bermed plastic sheeting during excavation activities.
- Five-point composite confirmation soil samples will be collected from the excavation floor and sidewalls at 200 square foot intervals for laboratory analysis.
- The confirmation samples will be collected in clean, laboratory-supplied sample containers, labeled, placed on ice, cooled to approximately 4 degrees Celsius and delivered to Eurofins Xenco Laboratory in Midland, Texas under chain-of-custody protocol. Soil samples will be analyzed for the following analyses:
 - BTEX by USEPA Method 8021B;
 - TPH-GRO by USEPA Method 8015;
 - TPH-DRO by USEPA Method 8015;
 - TPH-ORO by USEPA by Method 8015; and
 - Chloride by USEPA Method 300.
- It is anticipated that approximately 3,555 cubic yards (cy) of shallow soil will be excavated.
- Excavated soils will be transported to R360 Environmental Solutions disposal facility.

The excavation will then be backfilled with similar material to the surrounding native area.

Reporting

A report summarizing the remediation activities completed at the Site will be submitted to the NMOCD. The report will summarize the results of the remediation activities and will include a sample location map, tabulation of the soil analytical results, excavation boundaries map, and photographic documentation.

NMOCD
July 17, 2024

Work Plan Approval Request

Arcadis is prepared to initiate the scope of work within 90 days of receiving written approval from the NMOCD and submit a closer request report within 30 days following completion of remediation activities. A separate reclamation report will be submitted to NMOCD following approval of the closure request. If you have any questions or comments with regards to this work plan, please do not hesitate to contact Sarah Johnson at (931) 436-0316 or sarah.johnson@arcadis.com or Armando Martinez with CEMC at (505) 690-5408 or amarti@chevron.com. Your timely response to this correspondence is appreciated.

Sincerely,
Arcadis U.S., Inc.

Sarah Johnson
Certified Project Manager

Email: sarah.johnson@arcadis.com
Direct Line: 931.436.0316

CC. Armando Martinez

Enclosures:

Table 1.	Summary of Cumulative Soil Analytical Data
Table 2.	Summary of Cumulative Groundwater Analytical Data
Figure 1.	Cumulative Soil Sample Location Map
Figure 2.	Proposed Excavation Area Map

Tables



Table 1
Cumulative Soil Analytical Results
Chevron Environmental Management Company
South Culebra Bluff Unit 3
Loving, New Mexico

Sample I.D. No.	Sample Depth (feet bgs)	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	Total TPH	Chloride
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
NMAC Standards			10	--	--	--	50	100	600
SS-1	0 - 6"	04/01/20	<0.000695	<0.00152	<0.00113	<0.00125	<0.00152	1,972 U	7,060
	1'-6"	04/01/20	<0.000694	<0.00152	<0.00112	<0.00124	<0.00152	410 U	3,810
SS-2	0 - 6"	04/01/20	<0.000655	<0.00144	<0.00106	<0.00118	<0.00144	535	1,780
	2'	04/01/20	<0.000648	<0.00142	<0.00105	<0.00116	<0.00142	458 J	3,860
SS-3	4'	04/01/20	<0.000702	<0.00154	<0.00114	<0.00126	<0.00154	220 U	6,050
	0 - 6"	04/01/20	<0.000671	<0.00147	<0.00109	<0.00120	<0.00147	1,3870 J	5400 F1 F2
SS-4	0 - 6"	04/01/20	<0.000739	<0.00162	<0.00120	<0.00133	<0.00162	5,081 U	1,950 B
	2'	04/01/20	<0.000685	<0.00150	<0.00111	<0.00123	<0.00150	8,122	5,150
SS-5	4'	04/01/20	<0.000754	<0.00165	<0.00122	<0.00135	<0.00165	10,129	422 B
	0 - 6"	04/01/20	<0.000786	<0.00172	<0.00127	<0.00141	<0.00172	125 U	9,610
SS-6	2'	04/01/20	<0.000895	<0.00196	<0.00145	<0.00160	<0.00196	35 U	12,400
	4'	04/01/20	<0.000713	<0.00156	<0.00115	<0.00128	<0.00156	30 J	10,100
SS-7	0 - 6"	04/01/20	<0.000692	<0.00152	<0.00112	<0.00124	<0.00152	400 U	626 B
	0 - 6"	04/01/20	<0.000623	<0.00137	<0.00101	<0.00112	<0.00137	949 U	11,300
SS-8	2'	04/01/20	<0.000642	0.00207 J	<0.00104	<0.00115	0.00207 J	3,269	6,700
	4'	04/01/20	<0.000691	<0.00151	<0.00112	<0.00124	<0.00151	1,809 U	3,000
SS-8	0 - 6"	04/01/20	<0.000649	<0.00142	<0.00105	<0.00116	<0.00142	171 U	6,950
SS-28	0 - 0.5'	09/15/21	--	--	--	--	--	0.751 U J	1,270
	1' - 2'	09/15/21	--	--	--	--	--	1.02	772
	3' - 4'	09/15/21	--	--	--	--	--	0.452	546
	5' - 6'	09/15/21	--	--	--	--	--	0.696	1,110
	7' - 8'	09/15/21	--	--	--	--	--	0.799	1,160
SS-29	0 - 0.5'	09/15/21	--	--	--	--	--	10.54	649
	1' - 2'	09/15/21	--	--	--	--	--	6.07	1,820
	3' - 4'	09/15/21	--	--	--	--	--	1.06	40.5
	5' - 6'	09/15/21	--	--	--	--	--	0.878	57.9
SS-30	0 - 0.5'	09/15/21	--	--	--	--	--	9,740	1,730
	1' - 2'	09/15/21	--	--	--	--	--	7.79	2,190
	3' - 4'	09/15/21	--	--	--	--	--	0.637	638
	5' - 6'	09/15/21	--	--	--	--	--	3.02	628
	7' - 8'	09/15/21	--	--	--	--	--	0.539	429
SS-31	0 - 0.5'	09/15/21	--	--	--	--	--	251	4,390
	1' - 2'	09/15/21	--	--	--	--	--	0.746	1,270
	3' - 4'	09/15/21	--	--	--	--	--	0.0702	744
	5' - 6'	09/15/21	--	--	--	--	--	<2.78	393
	7' - 8'	09/15/21	--	--	--	--	--	0.524	545
SS-32	0 - 0.5'	09/15/21	--	--	--	--	--	5,120	1,570
	1' - 2'	09/15/21	--	--	--	--	--	559	2,460
	3' - 4'	09/15/21	--	--	--	--	--	0.514	2,100
	5' - 6'	09/15/21	--	--	--	--	--	<2.78	2,560
	7' - 8'	09/15/21	--	--	--	--	--	1.24	704
SS-33	0 - 0.5'	09/15/21	--	--	--	--	--	3,800	1,220
	1' - 2'	09/15/21	--	--	--	--	--	0.783	616
	3' - 4'	09/15/21	--	--	--	--	--	<2.69	1,230
	5' - 6'	09/15/21	--	--	--	--	--	<2.07	772
SS-34	0 - 0.5'	09/15/21	--	--	--	--	--	1,391	2,640
	1' - 2'	09/15/21	--	--	--	--	--	107	395
	3' - 4'	09/15/21	--	--	--	--	--	<2.85	1,770
	5' - 6'	09/15/21	--	--	--	--	--	<2.41	167
SS-35	0 - 0.5'	09/16/21	--	--	--	--	--	12	11,000
	1' - 2'	09/16/21	--	--	--	--	--	<2.15	1,950
	3' - 4'	09/16/21	--	--	--	--	--	2.45	1,390
	5' - 6'	09/16/21	--	--	--	--	--	1.17	955
SS-36	0 - 0.5'	09/16/21	--	--	--	--	--	4.61	1,470
	1' - 2'	09/16/21	--	--	--	--	--	<2.85	4,410
	3' - 4'	09/16/21	--	--	--	--	--	<2.90	2,830
SS-37	0 - 0.5'	09/16/21	--	--	--	--	--	0.503	2,600
	1' - 2'	09/16/21	--	--	--	--	--	<2.28	1,970
	3' - 4'	09/16/21	--	--	--	--	--	<2.15	1,750
	5' - 6'	09/16/21	--	--	--	--	--	<2.02	915

Table 1
Cumulative Soil Analytical Results
Chevron Environmental Management Company
South Culebra Bluff Unit 3
Loving, New Mexico

Sample I.D. No.	Sample Depth (feet bgs)	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	Total TPH	Chloride
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
NMAC Standards			10	--	--	--	50	100	600
SS-38	0 - 0.5'	09/16/21	--	--	--	--	--	99	741
	1' - 2'	09/16/21	--	--	--	--	--	<2.05	185 J3
	3' - 4'	09/16/21	--	--	--	--	--	0.425	269
	0 - 0.5'	09/16/21	--	--	--	--	--	389	81.2
SS-39	1' - 2'	09/16/21	--	--	--	--	--	30	68.6
	3' - 4'	09/16/21	--	--	--	--	--	<2.32	20.7 J
	0 - 0.5'	09/16/21	--	--	--	--	--	2.09	2,370
	1' - 2'	09/16/21	--	--	--	--	--	0.420	612 J3/J6
SS-40	3' - 4'	09/16/21	--	--	--	--	--	<2.44	508
	5' - 6'	09/16/21	--	--	--	--	--	148	315
	7' - 8'	09/16/21	--	--	--	--	--	215	243
	0 - 0.5'	09/16/21	--	--	--	--	--	44	633
SS-41	1' - 2'	09/16/21	--	--	--	--	--	1,364	1,310
	3' - 4'	09/16/21	--	--	--	--	--	1,597	503
	5' - 6'	09/16/21	--	--	--	--	--	<2.15	403
	0 - 0.5'	09/16/21	--	--	--	--	--	<2.368	3,230
SS-42	1 - 2'	09/16/21	--	--	--	--	--	1.18	2,120
	3' - 4'	09/16/21	--	--	--	--	--	<2.02	421
	5' - 6'	09/16/21	--	--	--	--	--	<2.40	142
	4'	08/21/2023	<0.000546	0.00187 J	<0.000861	<0.00103	0.00187 J	0.704 B J	1,100
SB-43	6'	08/21/2023	<0.000562	<0.00157	<0.000887	<0.00106	<0.00157	0.0252 B J	1,120
	8'	08/21/2023	<0.000525	0.00147 J	<0.000829	<0.000990	0.00147 J	0.0417 B J	600
	10'	08/21/2023	<0.000503	<0.00140	<0.000794	<0.000948	<0.00140	40.886 B J	446
	4'	08/21/2023	<0.000877	<0.00244	<0.00138	<0.00165	<0.00244	0.0687 B J	775
SB-44	4' (DUP)	08/21/2023	<0.000549	<0.00153	<0.000866	<0.00103	<0.00153	0.7764 B J	2,840
	6'	08/21/2023	<0.000704	<0.00196	<0.00111	<0.00133	<0.00196	0.0273 B J	99
	8'	08/21/2023	<0.000503	<0.00140	<0.000794	<0.000949	<0.00140	0.0344 B J	280
	SB-45	4'	08/22/2023	<0.000575	0.00166 J	<0.000907	<0.00108	0.00166 J	1.1134 B J
SB-46	4'	08/22/2023	<0.000541	<0.00151	<0.000853	<0.00102	<0.00151	0.0469 B J	154 J3
	4'	08/22/2023	<0.000565	<0.00157	<0.000892	<0.00107	<0.00157	0.0465 B J	1,090
SB-47	6'	08/22/2023	<0.000569	<0.00158	<0.000897	0.00357 J	0.00357 J	0.0333 B J	1,680
	8'	08/22/2023	<0.000715	<0.00199	<0.00113	<0.00135	<0.00199	0.0323 B J	87
	4'	08/22/2023	<0.000589	<0.00164	<0.000930	<0.00111	<0.00164	2.21 J	836
TW-1	10'	08/22/2023	<0.000486	<0.00135	<0.000767	<0.000916	<0.00135	0.6357 B J	89
	15'	08/22/2023	<0.000482	<0.00134	<0.000761	<0.000909	<0.00134	1.01 J	91
	20'	08/22/2023	<0.000508	<0.00141	<0.000801	<0.000957	<0.00141	0.0303 B J	247
	25'	08/22/2023	<0.000491	<0.00137	<0.000774	<0.000925	<0.00137	0.4134 B J	92
	30'	08/22/2023	<0.000493	<0.00137	<0.000778	<0.000929	<0.00137	0.5213 B J	57
	35'	08/22/2023	<0.000494	<0.00137	<0.000779	<0.000930	<0.00137	0.7532 B J	65
	40'	08/22/2023	<0.000543	<0.00151	<0.000857	<0.00102	<0.00151	0.0426 B J	269

Legend:

Bold and italicized analytes exceeds NMAC Standards

NMAC : New Mexico Administration Code

mg/kg: Milligram per Kilogram

'<' Indicates the analyte was not detected at or above the Method Detection Limit (MDL)

"' "': Indicates one foot

"' "': Indicates inches

"--" : Indicates Not Analyzed or Not Applicable

bgs: below ground surface

U: Indicates the analyte was analyzed for but not detected

B: The same analyte is found in the associated blank.

J: The identification of the analyte is acceptable; the reported value is an estimate.

J3: The associated batch QC was outside the established quality control range for precision.

J6: The sample matrix interfered with the ability to make any accurate determination; spike value is low.

F1: MS and/or MSD recovery exceeds control limits

F2: MS/MSD RPD exceeds control limits

DUP: Duplicate Sample

Notes:

1. Chloride analyzed by Method EPA 300.0

2. Total Petroleum Hydrocarbons (TPH) - Diesel Range Organics (DRO) [C10-C28] and Oil Range Organics (ORO) [C28-36] analyzed by (GC) Method EPA 8015D

3. BTEX analyzed by EPA Method 8260B

4. Closure Criteria New Mexico Administrative Code 19.15.29.12.E(2)

Table 2
Cumulative Groundwater Analytical Results
Chevron Environmental Management Company
South Culebra Bluff Unit 3
Loving, New Mexico



Sample I.D. No.	Date	Organic Compounds				Total Petroleum Hydrocarbons			Groundwater Quality	
		Benzene	Ethylbenzene	Toluene	Xylenes	C6-C10	C-10-C28	C28-C36	Chloride	Total Dissolved Solids
		(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
NMWQCC Human Health Standards for Groundwater ¹										
		0.01	0.75	0.75	0.62	--	--	--	250	1,000
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
TW-1	8/24/2023	<0.0000941	<0.000137	<0.000278	<0.000174	<0.0314	<0.0222	<0.0118	1,790	5,520
TW-2	8/24/2023	<0.0000941	<0.000137	<0.000278	<0.000174	<0.0314	<0.0222	0.0241 J	1,830	5,590

Legend:

Bold values indicate concentrations above NMWQCC Other Standards for Domestic Water Supply.

NMWQCC Human Health Standards Per NMAC 20.6.2.3103A.

'<' Indicates the analyte was not detected at or above the Method Detection Limit (MDL)

mg/L: Milligram per Litre

BTEX: Benzene, Toluene, Ethylbenzene, and Total Xylenes

NMAC: New Mexico Administration Code

TPH GRO: Total Petroleum Hydrocarbons Gasoline Range Organics

TPH MRO: Total Petroleum Hydrocarbons Motor Oil Range Organics

TPH DRO: Total Petroleum Hydrocarbon Diesel Range Organics

" " " : Indicates one foot

USEPA: United States Environmental Protection Agency

J: The identification of the analyte is acceptable; the reported value is an estimate.

Notes:

1. Chloride analyzed by USEPA Method 300.0

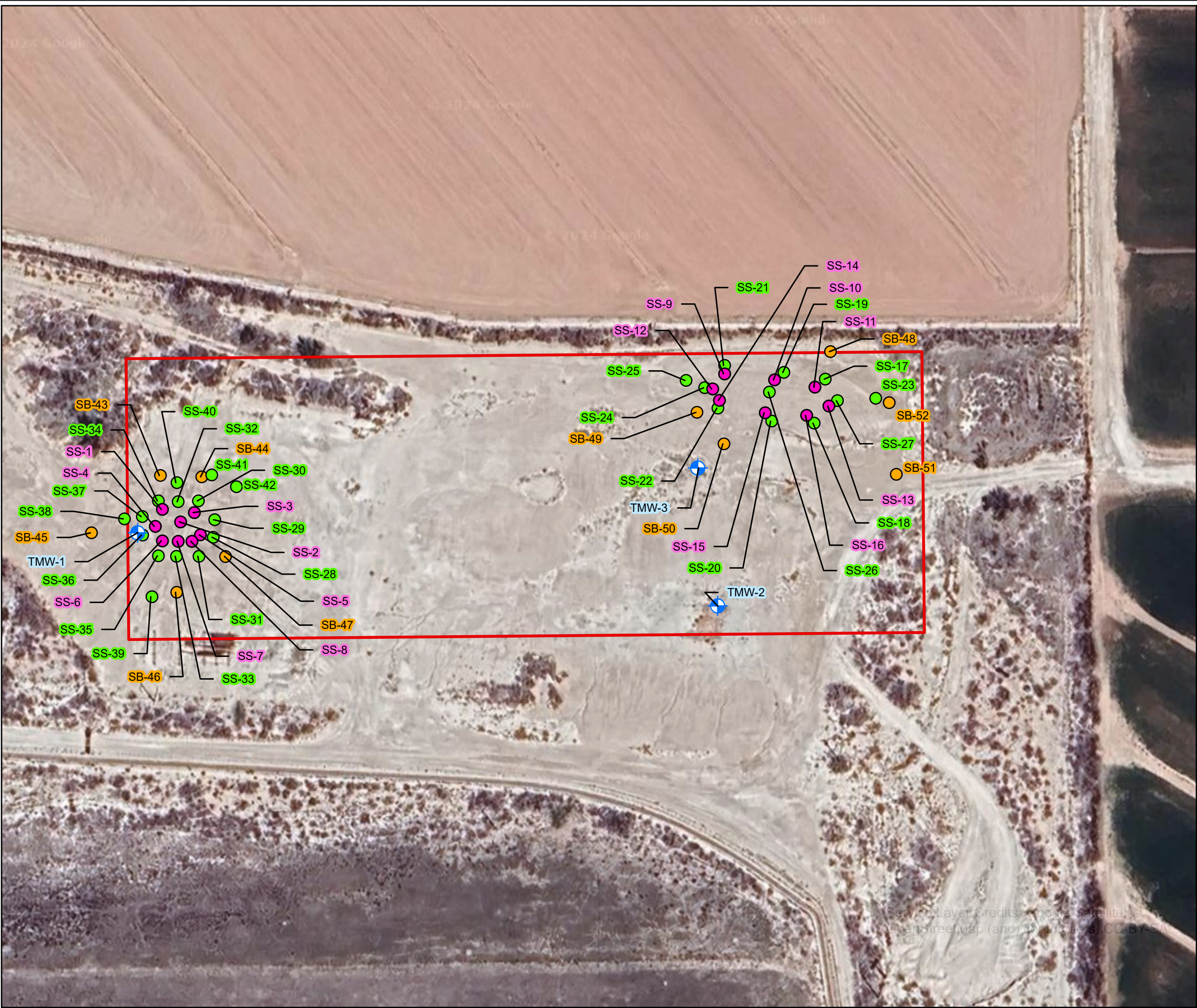
2. TPH analyzed by USEPA Method 8015M

3. BTEX analyzed by USEPA Method 8260B

4. Closure Criteria New Mexico Administrative Code 19.15.29.12.E(2)

Figures

City: Houston Div/Group: Remediation West-Air Group Created By: W Berry Last Saved By: wberry Client (Project #)
Tx_EHSS/ArcGIS_Pro/Land/Chevron/S_Culebra_Bluff_Unit_3/S_Culebra_Bluff_Unit_3.aprx 3/26/2024 10:00 AM

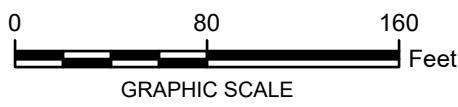


Legend

- Temporary Well Location
- Soil Sample Location - 2020
- Soil Sample Location - 2021
- Test Trench Location - 2023
- Investigation Area

Note:

Image Source, ESRI Online - Google Satellite, April 2023



CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
SOUTH CULEBRA BLUFF UNIT 3
246 GR HOWARD ROAD, LOVING, NEW MEXICO

**CUMULATIVE SOIL SAMPLE
LOCATION MAP**



FIGURE
1

User Name: avi00976 DATE: 10/19/2023 6:20:40 PM
PATH: \\ENVChevron_South Culebra Bluff\\SCB_Unit3\\MXD\\Figure3_Soil Analytical Results Map.mxd

32°17'30"N



Legend

- SOIL SAMPLE LOCATION
- TEMPORARY WELL LOCATION
- INVESTIGATION AREA
- PROPOSED EXCAVATION AREA

- Notes:**
- 1. **Bold** and italicized analytes exceeds NMAC Standards.
 - 2. < Indicates the analyte was not detected at or above the Method Detection Limit (MDL).
 - 3. NMAC Indicates New Mexico Administration Code.
 - 4. BTEX Indicates Benzene, Toluene, Ethylbenzene, and Total Xylenes.
 - 5. J = The identification of the analyte is acceptable; the reported value is an estimate.
 - 6. J3 = The associated batch QC was outside the established quality control range for precision.
 - 7. B Indicates Compound was found in the blank and sample.
 - 8. mg/kg = Milligram per Kilogram.
 - 9. " " " = Indicates one foot.
 - 10. bgs = Below ground surface.
 - 11. DUP = Duplicate Sample.
 - 12. Chloride analyzed by USEPA Method 300.0.
 - 13. Gasoline Range Organics [C6-C10] analyzed by USEPA Method 8015D.
 - 14. Diesel Range Organics [C10-C28] and Oil Range Organics [C28-36] analyzed by USEPA Method 8015M.
 - 15. Total TPH is sum of result value of Gasoline Range Organics [C6-C10], Diesel Range Organics [C10-C28] and Oil Range Organics [C28-36]
 - 16. BTEX analyzed by EPA Method 8260B.
 - 17. Closure Criteria New Mexico Administrative Code 19.15.29.12.E(2).

CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
SOUTH CULEBRA BLUFF UNIT 3
246 GR HOWARD ROAD LOVING, NEW MEXICO

PROPOSED EXCAVATION AREA MAP



Appendix F

Additional Assessment Work Plan (nKMW1103249928)



New Mexico Oil Conservation Division
District I
1625 N. French Drive
Hobbs, New Mexico 88240

Date: July 17, 2024

Subject: South Culebra Bluff Unit 3
Additional Assessment Work Plan
Case No. 2RP-599
Incident No. nKMW1103249928
Eddy County, New Mexico

Arcadis U.S., Inc.
10205 Westheimer Road
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Phone: 713 953 4800
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TX Engineering License # F-533
TX Geoscientist License # 50158

Dear Whom it May Concern,

Arcadis U.S., Inc. (Arcadis) has prepared this Work Plan for Chevron Environmental Management Company (CEMC) on behalf of Chevron U.S.A. Inc., through its division Chevron North America Exploration and Production Company to perform environmental remediation services for the South Culebra Bluff (SCB) Unit 3 (Site), located in Eddy County, New Mexico on privately owned land. Environmental remediation at the Site is required by the New Mexico Oil Conservation Division (NMOCD).

Project Summary

The Site is in Bureau of Land Management (BLM) legal land description Unit G, Section 23, Township 23 South, Range 28 East, in Eddy County, New Mexico.

Per the Initial C-141 Form, submitted to the NMOCD on January 26, 2011, an eroded tank union caused the pump to fail and shut off on January 25, 2011. As a result of the pump failure, approximately 250 barrels (bbls) of produced water were released within the firewalls of the tank battery with 210 bbls reportedly recovered.

Safety and Environmental Solutions, Inc. (SES) conducted a limited site assessment at the Site tank battery on January 27, 2011, inclusive of installing two test trenches with a backhoe to depths of approximately six feet below ground surface (bgs) at both locations. Per the *Range Operating New Mexico, Inc. SCB #3 Battery Delineation Report/Work Plan* dated February 19, 2011, prepared by SES, soil samples were collected from both trenches at multiple depths and concentrations of chloride and total petroleum hydrocarbons (TPH) were detected above the applicable historical NMOCD screening criteria for the Site of 1,000 mg/kg for TPH and 250 mg/kg for chloride. Benzene, toluene, ethylbenzene, and xylenes (BTEX) were not detected in any of the samples collected. The impacted area was not delineated due to numerous underground lines within the bermed area. SES requested approval for the accessible area to be excavated to a depth of 1-foot bgs and that additional assessment/remediation activities be deferred until the facility is abandoned. No additional information is currently available on the NMOCD database, and it is unknown if the proposed excavation activities were conducted.

NMOCD

July 17, 2024

Chevron acquired the lease for this well in October 2018. On July 17, 2019, Arcadis requested, on behalf of CEMC, a review of documentation and NMOCD approval for closure at the Site for the area surrounding the wellhead (2RP-3984). On September 12, 2019, the NMOCD rejected the closure request for the Site, citing previous sampling results exceeded the current New Mexico Administration Code (NMAC) soil screening levels of 50 mg/kg for BTEX, 100 mg/kg for TPH, and 600 mg/kg for chloride for sites with depth to groundwater less than 50 feet bgs.

Arcadis performed a subsequent soil assessment on April 1-2, 2020, collecting soil samples with a hand auger from eight locations (SS-9 through SS-16) surrounding the tank battery at depths ranging from the surface to 6 feet bgs. The soil samples were analyzed for chloride, total TPH, and BTEX by United States Environmental Protection Agency (USEPA) Methods 300, 8015 and 8021B, respectively. Chloride exceeded the NMAC standard of 600 mg/kg in nine of the 18 samples collected, with concentrations ranging from 660 mg/kg at SS-10 (2 feet bgs) to 6,740 mg/kg at SS-13 (2 feet bgs). Total TPH exceeded the NMAC standard of 100 mg/kg in 17 of the 18 samples collected, with concentrations ranging from 229 mg/kg at SS-14 (4 feet bgs) to 16,291 mg/kg at SS-16 (0-6 inches bgs).

On September 13-16, 2021, Arcadis personnel collected soil samples from 11 test trenches (SS-17 through SS-27) with a backhoe surrounding the tank battery at depths ranging from the surface to 10 feet bgs. The soil samples were analyzed for chloride and total TPH by USEPA Methods 300 and 8015, respectively. Chloride exceeded the NMAC standard of 600 mg/kg in 28 of the 36 samples collected, with concentrations ranging from 713 mg/kg at SS-24 (0-0.5 feet bgs) to 17,500 mg/kg at SS-19 (3-4 feet bgs). Total TPH exceeded the NMAC standard of 100 mg/kg in nine of the 36 samples collected, with concentrations ranging from 100 mg/kg at SS-20 (3-4 feet bgs) to 20,880 mg/kg at SS-20 (9-10 feet bgs).

On August 21 through 24, 2023, Arcadis personnel collected soil samples from five test trench locations (SB-48 through SB-52) surrounding the tank battery and two temporary monitoring wells (TW-2 and TW-3). The test trenches were advanced using a backhoe and the temporary monitoring well locations were advanced using air rotary equipment. Soil samples were collected at depths ranging from 4 to 35 feet bgs. The soil samples were analyzed for chloride, total TPH, and BTEX by USEPA Methods 300, 8015 and 8021B, respectively. Chloride exceeded the NMAC standard of 600 mg/kg in 15 of the 34 samples collected, with concentrations ranging from 689 mg/kg at TW-2 (4 feet bgs) to 3,870 mg/kg at SB-52 (6 feet bgs). Total TPH exceeded the NMAC standard of 100 mg/kg in two of the 34 samples collected, with concentrations ranging from 145 mg/kg at TW-3 to 228 mg/kg at SB-49 (6 feet bgs).

A cumulative soil sample location map is included as **Figure 1** and a cumulative summary of the soil sample analytical results is included as **Table 1**.

Depth to water at TW-2 and TW-3 was determined to be 27 feet bgs from the top of casing (TOC) which extended approximately two feet above ground surface. Therefore, depth to groundwater at the Site was confirmed to be less than 50 feet bgs in 2023. A groundwater sample was collected from TW-2 and TW-3 prior to plugging activities and analyzed for chloride, TPH, BTEX, and total dissolved solids (TDS) by USEPA Methods 300, 8015, 8021B, and 2540C, respectively. Chloride exceeded the New Mexico Water Quality Control Commission (NMWQCC) groundwater screening standard of 250 milligrams per liter (mg/L) at TW-2 and TW-3 at concentrations of 1,830 mg/L and 1,780 mg/L, respectively. TDS exceeded the NMWQCC groundwater screening standard of 1,000 mg/L at TW-2 and TW-3 at concentrations of 5,590 mg/L and 5,220 mg/L, respectively. BTEX was not detected at TW-2 or TW-3. TPH-ORO was detected at TW-2 at a concentration of 0.0241 mg/L.

A cumulative summary of the groundwater analytical results is included as **Table 2**.

NMOCD
July 17, 2024

Proposed Work Plan

Analytical data collected during assessment activities conducted in 2023 indicated that the horizontal and vertical extent of chloride and TPH in soil has not been fully delineated near the former tank battery area. CEMC proposes conducting additional soil and groundwater assessment activities inclusive of advancing six soil borings with one soil boring completed as a temporary monitoring well.

The soil borings will be advanced utilizing air rotary methods to approximately 20 feet bgs. Representative soil samples will be collected during soil boring installation at the surface, 4 feet bgs, 10 feet bgs, 15 feet bgs and 20 feet bgs. Additional soil samples will be collected if determined necessary from observations made by the field geologist during drilling activities.

The temporary monitoring well will be installed to a depth of approximately 40 feet bgs at an area assumed downgradient of the impacted area to assess potential groundwater migration. The proposed soil boring and temporary monitoring well locations are depicted on **Figure 1**.

Arcadis is requesting approval of the following soil and groundwater assessment activities:

- Prior to mobilizing equipment to the Site, a New Mexico 811 utility notification will be made at least 48-hours prior to mobilization.
- Arcadis will contract GPRS to locate subsurface utilities prior to starting any digging.
- Five soil borings will be installed to approximately 20 feet bgs, and one soil boring to approximately 40 feet bgs that will be converted to a temporary monitoring well. Soil borings will be logged utilizing the Unified Soil Classification System (USCS) and boring locations will be documented using a global positioning system (GPS) device.
- Representative soil samples will be collected during the soil borings at the surface, 4 feet bgs, 10 feet bgs, 15 feet bgs, and 20 feet bgs. Additional soil samples will be collected during the temporary monitoring well installation at 5-foot intervals and within the soil to water interface zone. The soil samples will be collected in clean, laboratory-supplied sample containers, labeled, placed on ice, cooled to approximately 4 degrees Celsius and delivered to Eurofins Xenco Laboratory in Midland, Texas under chain-of-custody protocol. Soil samples will be analyzed for the following analyses:
 - BTEX by USEPA Method 8021B;
 - Total TPH by USEPA Method 8015; and
 - Chloride by USEPA Method 300.
- Soil cuttings will be used to backfill all soil borings to 10 feet bgs, and the top 10 feet bgs will be backfilled with hydrated bentonite pellets up to the ground surface.
- One temporary monitoring well will be installed into the groundwater bearing unit. Groundwater in the area is approximately 27 feet bgs. The temporary monitoring well will be constructed with two-inch diameter schedule 80 PVC (Poly Vinyl Chloride) casing slotted screen. The top of the screen will be installed 2 feet above the groundwater table and extended into the groundwater bearing unit. A sand pack will be installed from the bottom of the well to 2 feet above the screened interval.
- The well will be purged for approximately 30 minutes after installation.
- Investigative derived waste (IDW) (purge water from well development) will be drummed in 55-gallon drums, properly labeled, and stored on-site. The drums content will be assumed to be classified as non-hazardous

NMOCD

July 17, 2024

and properly disposed of at a NMOCD approved disposal facility. The temporary monitoring well will be plugged and abandoned upon completion of sampling.

- The temporary monitoring well will be gauged and sampled approximately 24 hours following installation. The temporary monitoring well will be gauged to determine depth to water and depth to light non-aqueous phase liquid (LNAPL) if present. The temporary monitoring well will be purged using low-flow methodologies, and a groundwater sample will be collected for the following laboratory analysis:
 - BTEX by USEPA Method 8260
 - Total TPH USEPA by Method 8015M
 - Chloride by USEPA Method 300.0; and
 - Total Dissolved Solids (TDS) by USEPA Method 2540C

Reporting

A report summarizing the soil and groundwater sampling activities completed at the Site will be submitted to the NMOCD. The report will summarize the results of the assessment activities and will include a sample location map, tabulation of the soil and groundwater analytical results, and photographic documentation. A Remediation Work Plan will also be submitted following completion of delineation activities.

Work Plan Approval Request

Arcadis is prepared to initiate the scope of work within 90 days of receiving written approval from the NMOCD and submit a remediation work plan within 30 days following completion of assessment activities. If you have any questions or comments with regards to this work plan, please do not hesitate to contact Sarah Johnson at (931) 436-0316 or sarah.johnson@arcadis.com or Armando Martinez with CEMC at (505) 690-5408 or amarti@chevron.com. Your timely response to this correspondence is appreciated.

Sincerely,
Arcadis U.S., Inc.

Sarah Johnson
Certified Project Manager

Email: sarah.johnson@arcadis.com
Direct Line: 931.436.0316

NMOCD
July 17, 2024

CC. Armando Martinez

Enclosures:

- | | |
|-----------|---|
| Table 1. | Summary of Cumulative Soil Analytical Data |
| Table 2. | Summary of Cumulative Groundwater Analytical Data |
| Figure 1. | Proposed Soil Boring & Temp Well Location Map |

Tables



Table 1
2023 Soil Analytical Results
Chevron Environmental Management Company
South Culebra Bluff Unit 3
Loving, New Mexico

Sample I.D. No.	Sample Depth (feet bgs)	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	Total TPH	Chloride
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
NMAC Standards			10	--	--	--	50	100	600
SS-9	0 - 6"	04/02/20	<0.000630	0.00162 J	<0.00102	<0.00113	0.00162 J	12,772	393
	2'	04/02/20	<0.000679	<0.00149	<0.00110	<0.00122	<0.00149	9,672	472
SS-10	0 - 6"	04/02/20	<0.000653	<0.00143	<0.00106	<0.00117	<0.00143	8,481	190
	2'	04/02/20	<0.000722	<0.00158	<0.00117	<0.00130	<0.00158	568	660
SS-11	0 - 6"	04/02/20	<0.000766	<0.00168	<0.00124	<0.00137	<0.00168	482	1,620
	1'10"	04/02/20	<0.000699	<0.00153	<0.00113	<0.00125	<0.00153	1,832	493
SS-12	0 - 6"	04/02/20	<0.000646	0.00227 J	<0.00105	<0.00116	0.00227 J	1,988	245
	2'	04/02/20	<0.000692	0.00336 J	<0.00112	<0.00124	0.00336 J	437	431
SS-13	0 - 6"	04/02/20	<0.000680	<0.00149	<0.00110	<0.00122	<0.00149	5,221	1,260
	2'	04/02/20	<0.000813	0.121	0.00141 J	0.0607	0.18311	1,205	6,740
SS-14	0 - 6"	04/02/20	<0.000730	0.00342 J	<0.00118	<0.00131	0.00342 J	3,481	331
	2'	04/02/20	<0.000730	<0.00160	<0.00118	<0.00131	<0.00160	1,411	864
	4'	04/02/20	<0.000682	<0.00149	<0.00110	<0.00122	<0.00149	229	230
	6'	04/02/20	<0.000785	<0.00172	<0.00127	<0.00141	<0.00172	78	497
SS-15	0 - 6"	04/02/20	<0.000729	<0.00160	<0.00118	<0.00131	<0.00160	2,533	758
	2'	04/02/20	<0.000735	<0.00161	<0.00119	<0.00132	<0.00161	1,693	787
SS-16	0 - 6"	04/02/20	<0.000659	<0.00144	<0.00107	<0.00118	<0.00144	16,291	219 B
	2'	04/02/20	<0.000696	<0.00152	<0.00113	<0.00125	<0.00152	4,202	286 F1
SS-17	3' - 4'	09/13/21	--	--	--	--	--	39	1,570
	6' - 7'	09/13/21	--	--	--	--	--	6.25	2,180
	7' - 8'	09/13/21	--	--	--	--	--	0.704	1,590
	9' - 10'	09/13/21	--	--	--	--	--	837	1,780
SS-18	3' - 4'	09/13/21	--	--	--	--	--	32.2	2,440
	6' - 7'	09/13/21	--	--	--	--	--	4.00	3,930
	10' - 11'	09/13/21	--	--	--	--	--	6.49	2,830
SS-19	3' - 4'	09/13/21	--	--	--	--	--	546	17,500
	6' - 7'	09/13/21	--	--	--	--	--	1.34	3,370
	11' - 12'	09/13/21	--	--	--	--	--	10.3	3,450
	3' - 4'	09/13/21	--	--	--	--	--	100	2,740
SS-20	6' - 7'	09/13/21	--	--	--	--	--	143	1,680
	9' - 10'	09/13/21	--	--	--	--	--	20,880	3,160
	12 - 13'	09/13/21	--	--	--	--	--	8,037	6,620
	3' - 4'	09/14/21	--	--	--	--	--	439	5,710
SS-21	6' - 7'	09/14/21	--	--	--	--	--	1.18	306
	9' - 10'	09/14/21	--	--	--	--	--	1.01	1,310
	3' - 4'	09/14/21	--	--	--	--	--	0.55	310
SS-22	6' - 7'	09/14/21	--	--	--	--	--	1.04	541
	9' - 10'	09/14/21	--	--	--	--	--	5.05	203
	0 - 0.5'	09/14/21	--	--	--	--	--	14.6	5,850
SS-23	1' - 2'	09/14/21	--	--	--	--	--	129	2,720
	3' - 4'	09/14/21	--	--	--	--	--	2.89	2,980
	5' - 6'	09/14/21	--	--	--	--	--	3.62	4,120
	7' - 8'	09/14/21	--	--	--	--	--	0.0398	873
	0 - 0.5'	09/14/21	--	--	--	--	--	77	713
SS-24	1' - 2'	09/14/21	--	--	--	--	--	99	3,010
	3' - 4'	09/14/21	--	--	--	--	--	120	6,730
	6' - 7'	09/14/21	--	--	--	--	--	1.61	434
	9' - 10'	09/14/21	--	--	--	--	--	1.17	717
	0 - 0.5'	09/14/21	--	--	--	--	--	58	390
SS-25	3' - 4'	09/14/21	--	--	--	--	--	1.81	847
	5' - 6'	09/14/21	--	--	--	--	--	0.995	591
	7' - 8'	09/14/21	--	--	--	--	--	0.572	432
SS-26	9' - 10'	09/14/21	--	--	--	--	--	1.89	3,830
SS-27	9' - 10'	09/14/21	--	--	--	--	--	2.77	2,670
SB-48	4'	08/22/2023	<0.000560	<0.00156	<0.000884	<0.00106	<0.00156	1.2255 B J	2,650
	6'	08/22/2023	<0.000574	<0.00160	<0.000906	<0.00108	<0.0016	0.8781 B J	2,580
	8'	08/22/2023	<0.000557	<0.00155	<0.000880	<0.00105	<0.00155	0.0914 B J	2,000
	10'	08/22/2023	<0.000590	<0.00164	<0.000931	<0.00111	<0.00164	13.3212 B J	2,330
SB-49	4'	08/24/2023	<0.000543	<0.00151	<0.000858	<0.00102	<0.00151	0.664 J	143
	6'	08/24/2023	<0.000533	<0.00148	<0.000841	<0.00100	<0.00148	228.7	249
	8'	08/24/2023	<0.000628	<0.00175	<0.000991	<0.00118	<0.00175	<1.89	651

Table 1
2023 Soil Analytical Results
Chevron Environmental Management Company
South Culebra Bluff Unit 3
Loving, New Mexico

Sample I.D. No.	Sample Depth (feet bgs)	Date	Benzene	Toluene	Ethylbenzene	Total Xylenes	Total BTEX	Total TPH	Chloride
			(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
NMAC Standards			10	--	--	--	50	100	600
SB-50	4'	08/24/2023	<0.000547	<0.00152	<0.000863	<0.00103	<0.00152	0.637 J	289
	6'	08/24/2023	<0.000574	<0.00160	<0.000906	<0.00108	<0.00160	1.00 J	265
	8'	08/24/2023	<0.000628	<0.00175	<0.000991	<0.00118	<0.00175	0.5684 B J	280
	10'	08/24/2023	<0.000647	<0.00180	<0.00102	<0.00122	<0.00180	<1.92	183
	12'	08/24/2023	<0.000639	<0.00178	<0.00101	<0.00120	<0.00178	2.07 J	227
SB-51	4'	08/24/2023	<0.000561	<0.00156	<0.000886	<0.00106	<0.00156	2.55 J	1,290
	6'	08/24/2023	<0.000577	<0.00161	<0.000911	<0.00109	<0.00161	8.67 J	1,130
	8'	08/24/2023	<0.000605	<0.00168	<0.000955	<0.00114	<0.00168	0.362 J	703
	10'	08/24/2023	<0.000552	<0.00154	<0.000872	<0.00104	<0.00154	<1.76	507
SB-52	4'	08/24/2023	<0.000572	<0.00159	<0.000903	<0.00108	<0.00159	5.63	3,350
	6'	08/24/2023	<0.000569	<0.00158	<0.000898	<0.00107	<0.00158	7.361 J	3,870
	8'	08/24/2023	<0.000578	<0.00161	<0.000912	<0.00109	<0.00161	3.69 J	3,090
	10'	08/24/2023	<0.000521	<0.00145	<0.000822	<0.000982	<0.00145	<1.70	1,310
TW-2	4'	08/22/2023	<0.000563	<0.00157	<0.000888	0.00108 J	0.00108 J	4.08 J	689
	10'	08/22/2023	<0.000827	<0.00230	<0.00131	<0.00156	<0.00230	<2.23	293
	15'	08/22/2023	<0.000615	<0.00171	<0.000971	<0.00116	<0.00171	0.0348 B J	430
	20'	08/22/2023	<0.000512	<0.00142	<0.000808	<0.000964	<0.00142	0.0413 B J	970
	25'	08/22/2023	<0.000524	<0.00146	<0.000826	<0.000987	<0.00146	0.0299 B J	1,840
	30'	08/22/2023	<0.000609	<0.00170	<0.000961	<0.00115	<0.00170	0.0392 B J	143
	35'	08/22/2023	<0.000570	<0.00159	<0.000899	<0.00107	<0.00159	0.0364 B J	67
TW-3	4'	08/22/2023	<0.000521	<0.00145	<0.000822	<0.000981	<0.00145	145.8236 B J	21.5
	10'	08/22/2023	<0.000581	0.00211 J	<0.000917	0.00131 J	0.00342 J	0.0251 B J	22.2 J
	15'	08/22/2023	<0.000525	<0.00146	<0.000829	<0.000990	<0.00146	0.0442 B J	119
	20'	08/22/2023	<0.000506	<0.00141	<0.000799	<0.000954	<0.00141	1.5177 B J	247
	25'	08/22/2023	<0.000486	<0.00135	<0.000768	<0.000917	<0.00135	0.9389 B J	143
	30'	08/22/2023	<0.000566	<0.00158	<0.000894	<0.00107	<0.00158	0.3504 B J	29
	35'	08/22/2023	<0.000523	0.00151 J	<0.000825	<0.000985	0.00151 J	2.6999 B J	113

Legend:**Bold and italicized** analytes exceeds NMAC Standards

NMAC : New Mexico Administration Code

mg/kg: Milligram per Kilogram

< Indicates the analyte was not detected at or above the Method Detection Limit (MDL)

" 1 " : Indicates one foot

" " " : Indicates inches

" -- " : Indicates Not Analyzed or Not Applicable

bgs: below ground surface

B: The same analyte is found in the associated blank.

J: The identification of the analyte is acceptable; the reported value is an estimate.

J3: The associated batch QC was outside the established quality control range for precision.

J6: The sample matrix interfered with the ability to make any accurate determination; spike value is low.

F1: MS and/or MSD recovery exceeds control limits

F2: MS/MSD RPD exceeds control limits

DUP: Duplicate Sample

Notes:

1. Chloride analyzed by Method EPA 300.0

2. Total Petroleum Hydrocarbons (TPH) - Diesel Range Organics (DRO) [C10-C28] and Oil Range Organics (ORO) [C28-36] analyzed by (GC) Method EPA 8015D

3. BTEX analyzed by EPA Method 8260B

4. Closure Criteria New Mexico Administrative Code 19.15.29.12.E(2)

Table 2
Groundwater Analytical Results
Chevron Environmental Management Company
South Culebra Bluff Unit 3
Loving, New Mexico



Sample I.D. No.	Date	Organic Compounds				Total Petroleum Hydrocarbons			Groundwater Quality	
		Benzene	Ethylbenzene	Toluene	Xylenes	C6-C10	C-10-C28	C28-C36	Chloride	Total Dissolved Solids
		(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
NMWQCC Human Health Standards for Groundwater ¹										
		0.005	0.75	0.75	0.62	--	--	--	250	1,000
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
TW-2	8/24/2023	<0.0000941	<0.000137	<0.000278	<0.000174	<0.0314	<0.0222	0.0241 J	1,830	5,590
TW-3	8/24/2023	<0.0000941	<0.000137	<0.000278	<0.000174	<0.0314	<0.0222	<0.0118	1,780	5,220

Legend:

Bold values indicate concentrations above NMWQCC Other Standards for Domestic Water Supply.

NMWQCC Human Health Standards Per NMAC 20.6.2.3103A.

'<' Indicates the analyte was not detected at or above the Method Detection Limit (MDL)

mg/L: Milligram per Litre

BTEX: Benzene, Toluene, Ethylbenzene, and Total Xylenes

NMAC: New Mexico Administration Code

TPH GRO: Total Petroleum Hydrocarbons Gasoline Range Organics

TPH MRO: Total Petroleum Hydrocarbons Motor Oil Range Organics

TPH DRO: Total Petroleum Hydrocarbon Diesel Range Organics

" " " : Indicates one foot

USEPA: United States Environmental Protection Agency

J: The identification of the analyte is acceptable; the reported value is an estimate.

Notes:

1. Chloride analyzed by USEPA Method 300.0

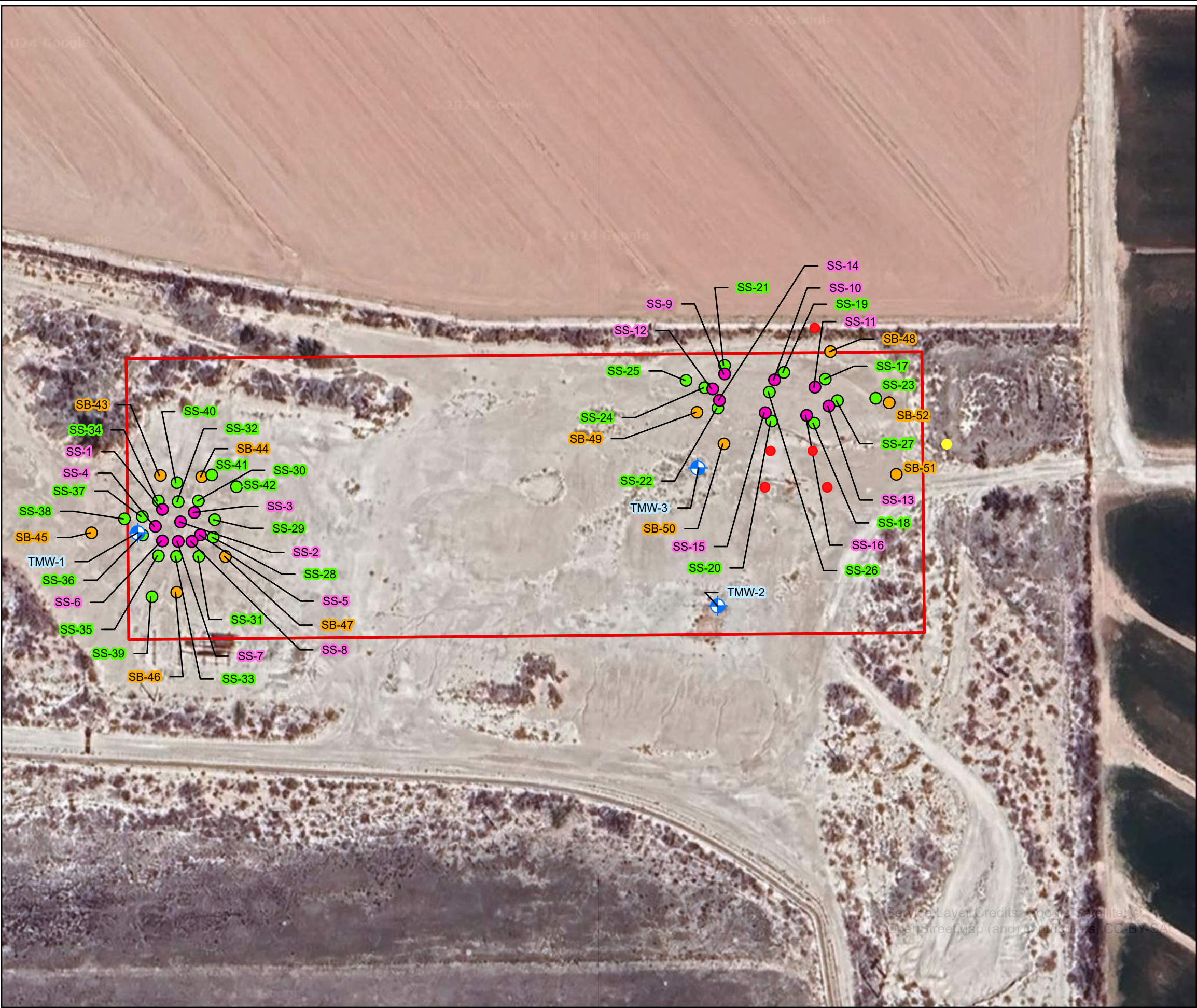
2. TPH analyzed by USEPA Method 8015M

3. BTEX analyzed by USEPA Method 8260B

4. Closure Criteria New Mexico Administrative Code 19.15.29.12.E(2)

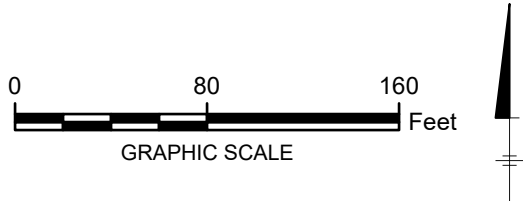
Figures

City: Houston Div/Group: Remediation West-Air Group Created By: W Berry Last Saved By: wberry Client (Project #)
Tx_EHSS/ArcGIS_Pro/Land/Chevron/S_Culebra_Bluff_Unit_3/S_Culebra_Bluff_Unit_3.aprx 3/26/2024 10:00 AM



- Legend**
- Temporary Well Location
 - Soil Sample Location - 2020
 - Soil Sample Location - 2021
 - Test Trench Location - 2023
 - Investigation Area
 - Proposed Soil Boring Location
 - Proposed Temporary Well Location

Note:
Image Source, ESRI Online - Google Satellite, April 2023



CHEVRON ENVIRONMENTAL MANAGEMENT COMPANY
SOUTH CULEBRA BLUFF UNIT 3
246 GR HOWARD ROAD, LOVING, NEW MEXICO

**PROPOSED SOIL BORING &
TEMP WELL LOCATION MAP**

Arcadis U.S., Inc.
10205 Westheimer Road, Suite 800
Houston
Texas 77042
Phone: 713 953 4800
Fax: 713 977 4620
www.arcadis.com

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/ocd/contact-us>

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

QUESTIONS

Action 388168

QUESTIONS

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 388168
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Prerequisites	
Incident ID (n#)	nKMW1103249928
Incident Name	NKMW1103249928 SOUTH CULEBRA BLUFF UNIT 3 @ 30-015-22700
Incident Type	Produced Water Release
Incident Status	Deferral Request Approved
Incident Well	[30-015-22700] SOUTH CULEBRA BLUFF UNIT #003

Location of Release Source	
Please answer all the questions in this group.	
Site Name	South Culebra Bluff Unit 3
Date Release Discovered	01/25/2011
Surface Owner	Private

Incident Details	
Please answer all the questions in this group.	
Incident Type	Produced Water Release
Did this release result in a fire or is the result of a fire	No
Did this release result in any injuries	No
Has this release reached or does it have a reasonable probability of reaching a watercourse	No
Has this release endangered or does it have a reasonable probability of endangering public health	No
Has this release substantially damaged or will it substantially damage property or the environment	No
Is this release of a volume that is or may with reasonable probability be detrimental to fresh water	No

Nature and Volume of Release	
Material(s) released, please answer all that apply below. Any calculations or specific justifications for the volumes provided should be attached to the follow-up C-141 submission.	
Crude Oil Released (bbls) Details	Not answered.
Produced Water Released (bbls) Details	Cause: Corrosion Pump Produced Water Released: 250 BBL Recovered: 210 BBL Lost: 40 BBL.
Is the concentration of chloride in the produced water >10,000 mg/l	Yes
Condensate Released (bbls) Details	Not answered.
Natural Gas Vented (Mcf) Details	Not answered.
Natural Gas Flared (Mcf) Details	Not answered.
Other Released Details	Not answered.
Are there additional details for the questions above (i.e. any answer containing Other, Specify, Unknown, and/or Fire, or any negative lost amounts)	Not answered.

Sante Fe Main Office
Phone: (505) 476-3441

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

QUESTIONS, Page 2

Action 388168

QUESTIONS (continued)

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 388168
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Nature and Volume of Release (continued)	
Is this a gas only submission (i.e. only significant Mcf values reported)	No, according to supplied volumes this does not appear to be a "gas only" report.
Was this a major release as defined by Subsection A of 19.15.29.7 NMAC	Yes
Reasons why this would be considered a submission for a notification of a major release	From paragraph A. "Major release" determine using: (1) an unauthorized release of a volume, excluding gases, of 25 barrels or more.
With the implementation of the 19.15.27 NMAC (05/25/2021), venting and/or flaring of natural gas (i.e. gas only) are to be submitted on the C-129 form.	

Initial Response

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

The source of the release has been stopped	True
The impacted area has been secured to protect human health and the environment	True
Released materials have been contained via the use of berms or dikes, absorbent pads, or other containment devices	True
All free liquids and recoverable materials have been removed and managed appropriately	True
If all the actions described above have not been undertaken, explain why	Not answered.

Per Paragraph (4) of Subsection B of 19.15.29.8 NMAC the responsible party may commence remediation immediately after discovery of a release. If remediation has begun, please prepare and attach a narrative of actions to date in the follow-up C-141 submission. If remedial efforts have been successfully completed or if the release occurred within a lined containment area (see Subparagraph (a) of Paragraph (5) of Subsection A of 19.15.29.11 NMAC), please prepare and attach all information needed for closure evaluation in the follow-up C-141 submission.

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.

I hereby agree and sign off to the above statement	Name: Amy Barnhill Title: Waste & Water Specialist Email: ABarnhill@chevron.com Date: 09/30/2024
--	---

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Phone: (505) 476-3441

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

QUESTIONS, Page 3

Action 388168

QUESTIONS (continued)

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 388168
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS**Site Characterization**

Please answer all the questions in this group (only required when seeking remediation plan approval and beyond). 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 in feet below ground surface (ft bgs)	Between 26 and 50 (ft.)
What method was used to determine the depth to ground water	Direct Measurement
Did this release impact groundwater or surface water	No
What is the minimum distance, between the closest lateral extents of the release and the following surface areas:	
A continuously flowing watercourse or any other significant watercourse	Between ½ and 1 (mi.)
Any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)	Between 1 and 5 (mi.)
An occupied permanent residence, school, hospital, institution, or church	Between 500 and 1000 (ft.)
A spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes	Between ½ and 1 (mi.)
Any other fresh water well or spring	Between ½ and 1 (mi.)
Incorporated municipal boundaries or a defined municipal fresh water well field	Greater than 5 (mi.)
A wetland	Between ½ and 1 (mi.)
A subsurface mine	Greater than 5 (mi.)
An (non-karst) unstable area	Greater than 5 (mi.)
Categorize the risk of this well / site being in a karst geology	Medium
A 100-year floodplain	Between ½ and 1 (mi.)
Did the release impact areas not on an exploration, development, production, or storage site	No

Remediation Plan

Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.

Requesting a remediation plan approval with this submission	Yes
<i>Attach a comprehensive report demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined, pursuant to 19.15.29.11 NMAC and 19.15.29.13 NMAC.</i>	
Have the lateral and vertical extents of contamination been fully delineated	Yes
Was this release entirely contained within a lined containment area	No

Soil Contamination Sampling: (Provide the highest observable value for each, in milligrams per kilograms.)

Chloride (EPA 300.0 or SM4500 Cl B)	17500
TPH (GRO+DRO+MRO) (EPA SW-846 Method 8015M)	20880
GRO+DRO (EPA SW-846 Method 8015M)	14830
BTEX (EPA SW-846 Method 8021B or 8260B)	0
Benzene (EPA SW-846 Method 8021B or 8260B)	0

Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.

On what estimated date will the remediation commence	06/02/2025
On what date will (or did) the final sampling or liner inspection occur	06/13/2025
On what date will (or was) the remediation complete(d)	06/20/2025
What is the estimated surface area (in square feet) that will be reclaimed	11988
What is the estimated volume (in cubic yards) that will be reclaimed	3555
What is the estimated surface area (in square feet) that will be remediated	11988
What is the estimated volume (in cubic yards) that will be remediated	3555

These estimated dates and measurements are recognized to be the best guess or calculation at the time of submission and may (be) change(d) over time as more remediation efforts are completed.

The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/ocd/contact-us>

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

QUESTIONS, Page 4

Action 388168

QUESTIONS (continued)

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 388168
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Remediation Plan (continued)	
<i>Please answer all the questions that apply or are indicated. This information must be provided to the appropriate district office no later than 90 days after the release discovery date.</i>	
This remediation will (or is expected to) utilize the following processes to remediate / reduce contaminants:	
<i>(Select all answers below that apply.)</i>	
(Ex Situ) Excavation and off-site disposal (i.e. dig and haul, hydrovac, etc.)	Yes
Which OCD approved facility will be used for off-site disposal	R360 ARTESIA LLC LANDFARM [FEEM0112340644]
OR which OCD approved well (API) will be used for off-site disposal	Not answered.
OR is the off-site disposal site, to be used, out-of-state	Not answered.
OR is the off-site disposal site, to be used, an NMED facility	Not answered.
(Ex Situ) Excavation and on-site remediation (i.e. On-Site Land Farms)	Not answered.
(In Situ) Soil Vapor Extraction	Not answered.
(In Situ) Chemical processing (i.e. Soil Shredding, Potassium Permanganate, etc.)	Not answered.
(In Situ) Biological processing (i.e. Microbes / Fertilizer, etc.)	Not answered.
(In Situ) Physical processing (i.e. Soil Washing, Gypsum, Disking, etc.)	Not answered.
Ground Water Abatement pursuant to 19.15.30 NMAC	Not answered.
OTHER (Non-listed remedial process)	Not answered.
<i>Per Subsection B of 19.15.29.11 NMAC unless the site characterization report includes completed efforts at remediation, the report must include a proposed remediation plan in accordance with 19.15.29.12 NMAC, which includes the anticipated timelines for beginning and completing the remediation.</i>	
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.	
I hereby agree and sign off to the above statement	Name: Amy Barnhill Title: Waste & Water Specialist Email: ABarnhill@chevron.com Date: 09/30/2024
<i>The OCD recognizes that proposed remediation measures may have to be minimally adjusted in accordance with the physical realities encountered during remediation. If the responsible party has any need to significantly deviate from the remediation plan proposed, then it should consult with the division to determine if another remediation plan submission is required.</i>	

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QUESTIONS, Page 5

Action 388168

QUESTIONS (continued)

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 388168
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Deferral Requests Only	
Only answer the questions in this group if seeking a deferral upon approval this submission. Each of the following items must be confirmed as part of any request for deferral of remediation.	
Requesting a deferral of the remediation closure due date with the approval of this submission	No

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QUESTIONS, Page 6

Action 388168

QUESTIONS (continued)

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 388168
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

QUESTIONS

Sampling Event Information	
Last sampling notification (C-141N) recorded	{Unavailable.}

Remediation Closure Request	
Only answer the questions in this group if seeking remediation closure for this release because all remediation steps have been completed.	
Requesting a remediation closure approval with this submission	No

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CONDITIONS

Action 388168

CONDITIONS

Operator: CHEVRON U S A INC 6301 Deauville Blvd Midland, TX 79706	OGRID: 4323
	Action Number: 388168
	Action Type: [C-141] Site Char./Remediation Plan C-141 (C-141-v-Plan)

CONDITIONS

Created By	Condition	Condition Date
michael.buchanan	The 2023 Soil and Groundwater Assessment and proposed work plan is approved to include the following conditions. 1. Continue to delineate soil--vertically and horizontally--near the former tank battery area as planned, for TPH and chloride. 2. At this time, a screening level of 2,500 mg/L for chloride, and 6,500 mg/L for TDS in groundwater is not approved. Please propose the advancement of two (2) monitoring wells either side gradient or upgradient, and at minimum of fifty (50) feet away from the area of concern and in an undisturbed area. 3. Please submit a proposal for the 2 background monitoring well advancements within 30 days from receipt of this determination.	2/26/2025