2022 Annual Groundwater Monitoring Report

Sibley Quarry Coal Combustion Residual Landfill
801 Fort Street
Trenton, Michigan

January 2023

Prepared For:

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TABLE OF CONTENTS

TABLES

FIGURES

APPENDICES

Executive Summary

On April 17, 2015, the United States Environmental Protection Agency (USEPA) published the final rule for the regulation and management of Coal Combustion Residuals (CCR) under the Resource Conservation and Recovery Act (RCRA) (the CCR Rule), as amended. The CCR Rule, which became effective on October 19, 2015 (with amendments in 2018 and 2020), applies to the DTE Electric Company (DTE Electric) Sibley Quarry Landfill (SQLF) CCR unit. Pursuant to the CCR Rule, no later than January 31, 2018, and annually thereafter, the owner or operator of a CCR unit must prepare an annual groundwater monitoring and corrective action report for the CCR unit documenting the status of groundwater monitoring and corrective action for the preceding year in accordance with §257.90(e). On behalf of DTE Electric, TRC Engineers Michigan, Inc., the engineering entity of TRC, has prepared this Annual Groundwater Monitoring Report for calendar year 2022 activities at the SQLF CCR unit.

The SQLF was operating under the detection monitoring program at the start of the 2022 annual reporting period and remained in the detection monitoring program through the end of the 2022 annual reporting period. The semiannual detection monitoring events for 2022 were completed in April and October 2022 and included sampling and analyzing groundwater within the groundwater monitoring system for the indicator parameters listed in Appendix III to the CCR Rule. As part of the statistical evaluation, the data collected during detection monitoring events are evaluated to identify statistically significant increases (SSIs) in Appendix III parameters to determine if concentrations in groundwater exceed prediction limits. All the monitoring data that has been collected and evaluated under §257.90 through §257.98 in 2022 are presented in this report.

No initial SSIs were recorded for the 2022 monitoring period; therefore, detection monitoring will be continued at the SQLF CCR unit in accordance with §257.94.

Additionally, based on the hydrogeology at the Site, the uppermost aquifer is in an area where pumping has been performed continuously since before CCR disposal began and will continue to be dewatered, by which a continuous inward hydraulic gradient is maintained. As a result, there is no reasonable probability for the uppermost aquifer perimeter monitoring wells to have been affected by the SQLF CCR unit operations to date, nor could they be in the future under current pumping conditions.

1.0 Introduction

1.1 Program Summary

On April 17, 2015, the United States Environmental Protection Agency (USEPA) published the final rule for the regulation and management of Coal Combustion Residuals (CCR) under the Resource Conservation and Recovery Act (RCRA) (the CCR Rule), as amended. The CCR Rule, which became effective on October 19, 2015 (with amendments in 2018 and 2020), applies to the DTE Electric Company (DTE Electric) Sibley Quarry Landfill Coal Combustion Residual Landfill (SQLF) CCR unit. Pursuant to the CCR Rule, no later than January 31, 2018, and annually thereafter, the owner or operator of a CCR unit must prepare an annual groundwater monitoring and corrective action report for the CCR unit documenting the status of groundwater monitoring and corrective action for the preceding year in accordance with §257.90(e). On behalf of DTE Electric, TRC Engineers Michigan, Inc., the engineering entity of TRC, has prepared this Annual Groundwater Monitoring Report for calendar year 2022 activities at the SQLF CCR unit (2022 Annual Report).

As documented in the *2021 Annual Groundwater Monitoring Report for the Sibley Quarry Landfill* (2021 Annual Report) (TRC, January 2022), potential statistically significant increases (SSIs) over prediction limits were noted for a few Appendix III constituents in one or more wells during the April and October 2021 semiannual detection monitoring events. These potential SSIs were evaluated and determined to be a result of natural variability in groundwater quality as documented in an alternative source demonstration (ASD) and not attributable to the SQLF CCR unit. As such, DTE Electric continued detection monitoring at the SQLF CCR Unit in 2022 pursuant to §257.94 of the CCR Rule.

This 2022 Annual Report presents the monitoring results and the statistical evaluation of the detection monitoring parameters (Appendix III to Part 257 of the CCR Rule) for the April and October 2022 semiannual groundwater monitoring events for the SQLF CCR unit. Detection monitoring for these events continued to be performed in accordance with the *CCR Groundwater Monitoring and Quality Assurance Project Plan – DTE Electric Company Sibley Quarry Coal Combustion Residual Landfill* (QAPP) (TRC, August 2016; revised March 2017) and statistically evaluated per the *Groundwater Statistical Evaluation Plan – DTE Electric Company Sibley Quarry Coal Combustion Residual Landfill* (Stats Plan) (TRC, October 2017). As part of the statistical evaluation, the data collected during detection monitoring events are evaluated to identify SSIs of detection monitoring parameters compared to background levels.

1.2 Site Overview

The SQLF is located in Section 7, Township 4 South, Range 11 East, at 801 Fort Street in Trenton, Wayne County, Michigan (Figure 1). The SQLF is located about two miles north of the DTE Electric Trenton Power Plant. The SQLF is bounded mostly by Fort Street to the west, Sibley Road to the north, the former Detroit and Toledo Shore Line Railroad and West Jefferson Avenue to the east, and the former Vulcan Mold & Iron Company (now owned by Danou Enterprises) and the DTE Electric Jefferson Substation to the south.

The SQLF is a licensed Coal Ash Landfill owned and operated by DTE Electric. In 2022 the disposal facility received the majority of CCR from the Trenton Channel and Monroe Power Plants. It is anticipated that the SQLF will receive CCR from the Monroe Power Plant Bottom Ash Impoundment closure through 2024. The SQLF is operated under the current operating license number 9602 in accordance with Michigan Part 115 of the Natural Resources and Environmental Protection Act (NREPA), PA 451 of 1994, as amended.

1.3 Geology/Hydrogeology

The SQLF CCR unit is located approximately one-half mile west of the Detroit River. The Sibley quarry was originally developed to mine limestone beginning in the mid-1800s and was mined to over 300 feet below ground surface (ft bgs) in some areas before mining activities ceased. In 1951, Detroit Edison (now DTE Electric) acquired Sibley Quarry and began to manage CCR in the SQLF. As part of normal operations, the SQLF is continuously dewatered to approximately 300 ft bgs maintaining a water level in the bottom of the quarry by pumping an average of approximately 1.5 million gallons per day.

The SQLF resides in an area characterized by near surface deposits of glacio-lacustrine clay and silt units on top of thick strata of dolomite and limestone bedrock. The SQLF is located in an area where the Dundee Formation (mostly limestone) and the Detroit River Group (limestone, dolostone and some sandstone) underlie the unconsolidated glacial drift and are the uppermost aquifer. At SQLF, the Dundee Formation is overlain by anywhere from less than 15 feet to more than 70 feet of unconsolidated material, most of which is clay-rich soil with some fill. The top of the Dundee Formation limestone/dolostone bedrock was encountered at depths ranging from 16.5 to 74.5 ft bgs and including the underlying Detroit River Group limestone/dolostone/ sandstone, extends to depths ranging from 235 to over 310 ft bgs. The underlying Sylvania Sandstone was encountered at depths ranging from 235 to 300 ft bgs in some locations at the SQLF.

As expected, data show that groundwater levels are significantly lower within the bedrock in monitoring wells that are the closest to the quarry where significant pumping is occurring, with water levels ranging from 120 to more than 250 ft bgs. Groundwater flow is consistently inward toward the base of the quarry due to continuous pumping that hydraulically controls groundwater flow. The pumped water from the quarry is managed in accordance with a National Pollution Discharge Elimination System (NPDES) permit. Quarry dewatering results in all the perimeter uppermost aquifer CCR monitoring wells being upgradient of the SQLF CCR unit.

Because the uppermost aquifer is in an area where pumping has been performed continuously before CCR disposal began, and will be continued to be dewatered, a continuous inward hydraulic gradient is maintained. As a result, there is no reasonable probability for the uppermost aquifer perimeter monitoring wells to have been affected by the SQLF CCR unit operations to date, nor could they be in the future under current pumping conditions.

2.0 Groundwater Monitoring

2.1 Monitoring Well Network

A groundwater monitoring system has been established for the SQLF CCR unit as detailed in the *Groundwater Monitoring System Summary Report – DTE Electric Company Sibley Quarry Coal Combustion Residual Landfill* (GWMS Report) (TRC, October 2017). The detection monitoring well network for the SQLF CCR unit currently consists of eight monitoring wells, MW-101 through MW-107 and MW-108A, which replaced decommissioned monitoring well MW-108 in January 2017. Monitoring wells MW-101 through MW-107 and MW-108A are located around the perimeter of the SQLF and provide data on both background and perimeter groundwater quality that has not been affected by the CCR unit (total of eight background/compliance monitoring wells) given that inward gradients are maintained by continuous dewatering within the quarry. All monitoring wells are screened in the uppermost aquifer. The monitoring well locations are shown on Figure 2.

2.2 Semiannual Groundwater Monitoring

The semiannual monitoring parameters for the detection groundwater monitoring program were selected per the CCR Rule's Appendix III to Part 257 – Constituents for Detection Monitoring. The Appendix III indicator parameters consist of boron, calcium, chloride, fluoride, pH (field reading), sulfate, and total dissolved solids (TDS) and were analyzed in accordance with the sampling and analysis plan included within the QAPP. In addition to pH, the collected field parameters included dissolved oxygen, oxidation reduction potential, specific conductivity, temperature, and turbidity.

2.2.1 Data Summary

The first semiannual groundwater detection monitoring event for 2022 was performed on April 27, 2022, by TRC personnel and samples were analyzed by Eurofins Environment Testing America (Eurofins) in accordance with the QAPP. Static water elevation data were collected at all eight monitoring well locations. Groundwater samples were collected from the eight detection monitoring wells for the Appendix III indicator parameters and field parameters. A summary of the groundwater data collected during the April 2022 event is provided on Table 1 (static groundwater elevation data), Table 2 (field data), and Table 3 (analytical results).

The second semiannual groundwater detection monitoring event for 2022 was performed October 4 and 5, 2022 by TRC personnel and samples were analyzed by Eurofins in accordance with the QAPP. Static water elevation data were collected at all eight monitoring well locations. Groundwater samples were collected from the eight detection monitoring wells for the Appendix III indicator parameters and field parameters. A summary of the groundwater data collected during the October 2022 event is provided on Table 1 (static groundwater elevation data), Table 2 (field data), and Table 4 (analytical results). The laboratory analytical reports are included in Appendix A.

2.2.2 Data Quality Review

Data from each round were evaluated for completeness, overall quality and usability, method-specified sample holding times, precision and accuracy, and potential sample contamination. The data were found to be complete and usable for the purposes of the CCR monitoring program. Data quality reviews are summarized in Appendix B.

2.2.3 Groundwater Flow Rate and Direction

Groundwater elevation data collected during the April and October 2022 sampling events continue to show that groundwater within the uppermost aquifer flows radially into the quarry as a result of continuous pumping/dewatering at the Site. Groundwater potentiometric surface elevations measured across the site during the April 2022 and the October 2022 sampling events are provided on Table 1 and were used to construct the groundwater potentiometric surface maps shown on Figures 3 and 4, respectively.

The data indicates that current groundwater flow rates and direction are consistent with previous monitoring events. The average hydraulic gradients throughout the site were 0.090 ft/ft for the April 2022 monitoring event and 0.088 ft/ft for the October 2022 monitoring event, resulting in estimated average seepage velocities of approximately 6.1 ft/day or 2,230 ft/year and 6.0 ft/day or 2,190 ft/year, respectively, using the average hydraulic conductivity of 6.8 ft/day (Golder, 2015) and an assumed effective porosity of 0.1.

Given that groundwater flow is maintained inward toward the quarry under active pumping, all the perimeter monitoring wells in the groundwater monitoring system are located in an upgradient position relative to the landfill. Therefore, there is no potential for groundwater to migrate away from the SQLF CCR unit.

3.0 Statistical Evaluation

3.1 Establishing Background Limits

As discussed in the Stats Plan, intrawell statistical methods for the SQLF were selected because the uppermost aquifer is in an area where pumping has been performed continuously since before CCR disposal began, and will be continued to be dewatered, resulting in a maintained continuous inward hydraulic gradient. Given that groundwater flow is inward under pumping conditions toward the quarry, all the perimeter monitoring wells in the groundwater monitoring system are located in an upgradient position relative to the landfill. Therefore, monitoring of the SQLF CCR unit using interwell statistical methods (upgradient to downgradient) is not possible. This also supports that the aquifer is unaffected by the CCR unit, where, as a result of the continuously maintained inward gradient, there is no reasonable probability for the perimeter monitoring wells within the uppermost aquifer to have been affected by the SQLF CCR unit operations to date, nor could they be in the future under current pumping conditions. An intrawell statistical approach requires that each of the monitoring wells double as background and compliance wells, where data from each individual well during a detection monitoring event is compared to a statistical limit developed using the background dataset from that same well.

Per the Stats Plan, background limits were established for the Appendix III indicator parameters following the collection of at least eight background monitoring events using data collected from each of the eight established detection monitoring wells (MW-101 through MW-107 and MW-108A). The initial statistical evaluation of the background data is presented in the 2017 Annual Report. The Appendix III background limits for each monitoring well will be used throughout the detection monitoring period to determine whether groundwater has been impacted from the SQLF CCR unit by comparing concentrations in the detection monitoring wells to their respective background limits for each Appendix III indicator parameter. Prediction limits are periodically updated to reflect the additional data and additional temporal variability observed over time. The Appendix III prediction limits for the SQLF were updated in December 2021 to incorporate additional data collected since 2017 as presented in the December 15, 2021 Technical Memorandum, *Prediction Limit Update – DTE Electric Company, Sibley Quarry Landfill* (included as Appendix C in the *2021 Annual Groundwater Monitoring Report – DTE Electric Company, Sibley Quarry Landfill, Coal Combustion Residual Unit*, TRC, January 2022).

3.2 Data Comparison to Background Limits – First 2022 Semiannual Event (April 2022)

The concentrations of the indicator parameters in each of the detection monitoring wells (MW-101 through MW-107 and MW-108A) were compared to their respective statistical background limits calculated from the background data collected from each individual well (i.e., monitoring data from MW-101 is compared to the background limit developed using the background dataset from MW-101, and so forth). The comparisons for the April 2022 monitoring event are presented on Table 3. The statistical evaluation of the April 2022 Appendix III indicator parameters showed no initial potential SSIs over background.

The April 2022 data shows the chloride concentration at MW-101 exceeded the statistical prediction limits. However, the chloride concentration at MW-101 has been demonstrated to be from natural variability and not from the CCR unit as presented in the still applicable *Alternate Source Demonstration: 2020 First Semiannual Detection Monitoring Sampling Event Sibley Quarry Coal Combustion Residual Landfill, Trenton, Michigan*.

3.3 Data Comparison to Background Limits – Second Semiannual Event (October 2022)

The concentrations of the indicator parameters in each of the detection monitoring wells (MW-101 through MW-107 and MW-108A) were compared to their respective statistical background limits calculated from the background data collected from each individual well (i.e., monitoring data from MW-101 is compared to the background limit developed using the background dataset from MW-101, and so forth). The statistical evaluation of the October 2022 Appendix III indicator parameters showed all concentrations were below the prediction limits, therefore, there were no SSIs over background. A summary of the analytical results collected during the October 2022 monitoring event are presented on Table 4.

4.0 Conclusions and Recommendations

No initial SSIs over background limits were observed during the April 2022 or October 2022 monitoring events.

As discussed above, and in the GWMS Report, because the uppermost aquifer is in an area where pumping has been performed continuously since before CCR disposal began and will be continued to be dewatered as a continuous inward hydraulic gradient is maintained. As a result, there is no reasonable probability for the uppermost aquifer perimeter monitoring wells to have been affected by the SQLF CCR unit operations to date, nor could they be in the future under current pumping conditions. Therefore, detection monitoring will be continued at the SQLF CCR unit in accordance with §257.94.

No corrective actions were performed in 2022. The next semiannual monitoring event at the SQLF CCR unit is scheduled for the second calendar quarter of 2023.

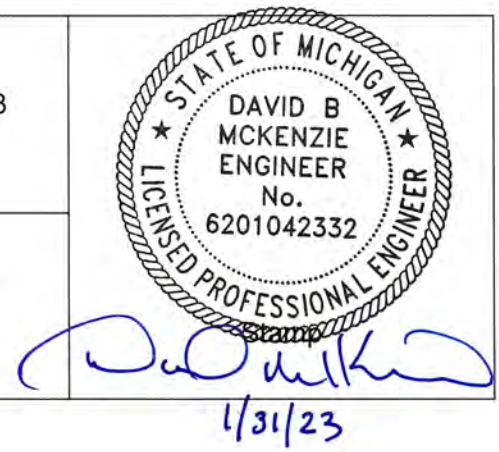
5.0 Groundwater Monitoring Report Certification

The U.S. EPA's Disposal of Coal Combustion Residuals from Electric Utilities Final Rule Title 40 CFR Part 257 §257.90(e) requires that the owner or operator of an existing CCR unit prepare an annual groundwater monitoring and corrective action report.

Annual Groundwater Monitoring Report Certification
Sibley Quarry Coal Combustion Residual Landfill
Trenton, Michigan

CERTIFICATION

I hereby certify that the annual groundwater and corrective action report presented within this document for the SQLF CCR unit has been prepared to meet the requirements of Title 40 CFR §257.90(e) of the Federal CCR Rule. This document is accurate and has been prepared in accordance with good engineering practices, including the consideration of applicable industry standards, and with the requirements of Title 40 CFR §257.90(e).

Name: David B. McKenzie, P.E.	Expiration Date: December 17, 2023	
Company: TRC Engineers Michigan, Inc.	Date: January 31, 2023	1/31/23

6.0 References

TRC. August 2016; Revised March 2017. CCR Groundwater Monitoring and Quality Assurance Project Plan – DTE Electric Company – Sibley Quarry Coal Combustion Residual Landfill, 801 Fort Street, Trenton, Michigan. Prepared for DTE Electric Company.

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TRC. January 2022. 2021 Annual Groundwater Monitoring Report – DTE Electric Company, Sibley Quarry Landfill, Coal Combustion Residual Unit. Prepared for DTE Electric Company

USEPA. 2009. Statistical Analysis of Groundwater Monitoring Data at RCRA facilities, Unified Guidance. Office of Conservation and Recovery. EPA 530/R-09-007.

USEPA. April 2015. 40 CFR Parts 257 and 261. Hazardous and Solid Waste Management System: Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule. 80 Federal Register 74 (April 17, 2015), pp. 21301-21501 (80 FR 21301).

USEPA. July 2018. 40 CFR Part 257. Hazardous and Solid Waste Management System: Disposal of Coal Combustion Residuals from Electric Utilities; Amendments to the National Minimum Criteria (Phase One, Part One); Final Rule. 83 Federal Register 146 (July 30, 2018), pp. 36435-36456 (83 FR 36435).

USEPA. April 2018. Barnes Johnson (Office of Resource Conservation and Recovery) to James Roewer (c/o Edison Electric Institute) and Douglas Green, Margaret Fawal (Venable LLP). Re: Coal Combustion Residuals Rule Groundwater Monitoring Requirements. April 30, 2018. United States Environmental Protection Agency, Washington, D.C. 20460. Office of Solid Waste and Emergency Response, now the Office of Land and Emergency Management.

Tables

Table 1
Summary of Groundwater Elevation Data – April and October 2022
Sibley Quarry Landfill – RCRA CCR Monitoring Program
Trenton, Michigan

Well ID	MW-101		MW-102		MW-103		MW-104		MW-105		MW-106		MW-107		MW-108A	
Date Installed	7/14/2015		7/16/2015		7/15/2015		7/16/2015		3/30/2016		3/28/2016		4/6/2016		1/24/2017	
TOC Elevation	617.67		615.03		607.23		608.39		593.28		606.75		610.03		594.06	
Geologic Unit of Screened Interval	Limestone Bedrock		Limestone Bedrock		Limestone Bedrock		Limestone Bedrock		Limestone Bedrock		Limestone Bedrock		Limestone Bedrock		Sandstone Bedrock	
Bottom of Open Hole Elevation	295.2		342.6		294.7		296.0		290.7		304.0		336.5		290.5	
Unit	ft BTOC	ft	ft BTOC	ft	ft BTOC	ft	ft BTOC	ft	ft BTOC	ft	ft BTOC	ft	ft BTOC	ft	ft BTOC	ft
Measurement Date	Depth to Water	GW Elevation	Depth to Water	GW Elevation	Depth to Water	GW Elevation	Depth to Water	GW Elevation	Depth to Water	GW Elevation	Depth to Water	GW Elevation	Depth to Water	GW Elevation	Depth to Water	GW Elevation
04/27/2022	169.95	447.72	234.78	380.25	180.10	427.13	119.25	489.14	20.82	572.46	183.90	422.85	155.55	454.48	51.82	542.24
10/04/2022	176.42	441.25	238.59	376.44	164.80	442.43	119.16	489.23	23.04	570.24	182.64	424.11	155.77	454.26	55.02[1]	539.04

Notes:

Elevations are reported in feet relative to the national geodetic vertical datum of 1929.

ft BTOC - feet below top of casing

(1) - Well was gauged on October 5, 2022.

Table 2
Summary of Field Data – April and October 2022
Sibley Quarry Landfill – RCRA CCR Monitoring Program
Trenton, Michigan

Sample Location	Sample Date	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	pH (SU)	Specific Conductivity (umhos/cm)	Temperature (deg C)	Turbidity (NTU)
MW-101	4/27/2022	2.64	-56.7	7.2	3,317	10.30	9.27
	10/4/2022	4.28	69.8	7.0	1,469	12.80	3.01
MW-102	4/27/2022	9.45	-47.9	7.2	3,357	10.60	3.50
	10/4/2022	5.83	31.9	7.0	1,682	12.20	1.68
MW-103	4/27/2022	1.50	-395.7	7.0	5,580	10.70	1.43
	10/5/2022	1.14	-291.9	6.7	2,561	13.40	0.00
MW-104	4/27/2022	1.49	-345.3	7.2	5,380	10.60	1.45
	10/4/2022	1.03	-269.3	7.1	2,571	13.60	1.32
MW-105	4/27/2022	1.47	-162.0	7.0	18,111	10.70	0.95
	10/4/2022	1.16	-49.1	6.9	9,905	14.30	0.00
MW-106	4/27/2022	1.46	-396.5	7.0	5,362	11.90	2.30
	10/4/2022	1.60	-266.8	6.9	2,635	14.20	2.80
MW-107	4/27/2022	1.15	-365.2	6.9	58,095	10.30	7.12
	10/4/2022	1.19	-291.0	6.7	37,948	12.40	2.96
MW-108A	4/27/2022	1.36	-253.1	7.0	10,642	11.20	1.09
	10/5/2022	1.12	-102.0	6.8	5,123	13.30	0.00

Notes:
mg/L -Milligrams per Liter.
mV - Millivolts.
SU - Standard Units.
umhos/cm - Micromhos per centimeter.
°C - Degrees Celsius.
NTU - Nephelometric Turbidity Unit

Table 3
Comparison of Appendix III Parameter Results to Background Limits – April 2022
Sibley Quarry Landfill – RCRA CCR Monitoring Program
Trenton, Michigan

Sample Location:		MW-101		MW-102		MW-103		MW-104		MW-105		MW-106		MW-107		MW-108A	
Sample Date:		4/27/2022	PL	4/27/2022	PL	4/27/2022	PL	4/27/2022	PL	4/27/2022	PL	4/27/2022	PL	4/27/2022	PL	4/27/2022	PL
Constituent	Unit	Data		Data		Data		Data		Data		Data		Data		Data	
Appendix III																	
Boron	ug/L	310	320	150	150	780	820	750	950	2,100	2,600	710	2,400	1,600	1,600	1,300	1,400
Calcium	ug/L	180,000	260,000	210,000	300,000	500,000	630,000	420,000	520,000	640,000	790,000	550,000	640,000	1,300,000	1,500,000	390,000	460,000
Chloride	mg/L	**240**[(1)]	220	200	260	140	160	220	690	3,100	4,500	110	180	19,000	21,000	1,500	2,100
Fluoride	mg/L	1.8	2.0	1.4	1.8	1.8	2.0	1.6	2.3	1.2	5.8	1.7	3.0	< 2.5	2.5	1.1	2.5
pH, Field	su	7.2	6.8 - 7.8	7.2	6.5 - 7.6	7.0	6.7 - 7.6	7.2	6.8 - 7.9	7.0	6.6 - 7.9	7.0	6.5 - 7.6	6.9	6.5 - 7.6	7.0	6.7 - 7.0
Sulfate	mg/L	530	700	510	720	1,900	2,100	1,700	1,900	1,900	2,200	1,800	2,100	3,100	3,700	1,000	1,200
Total Dissolved Solids	mg/L	1,400	1,400	1,400	1,700	3,200	3,600	2,800	3,700	6,800	9,400	3,200	3,200	37,000	39,000	4,200	4,900

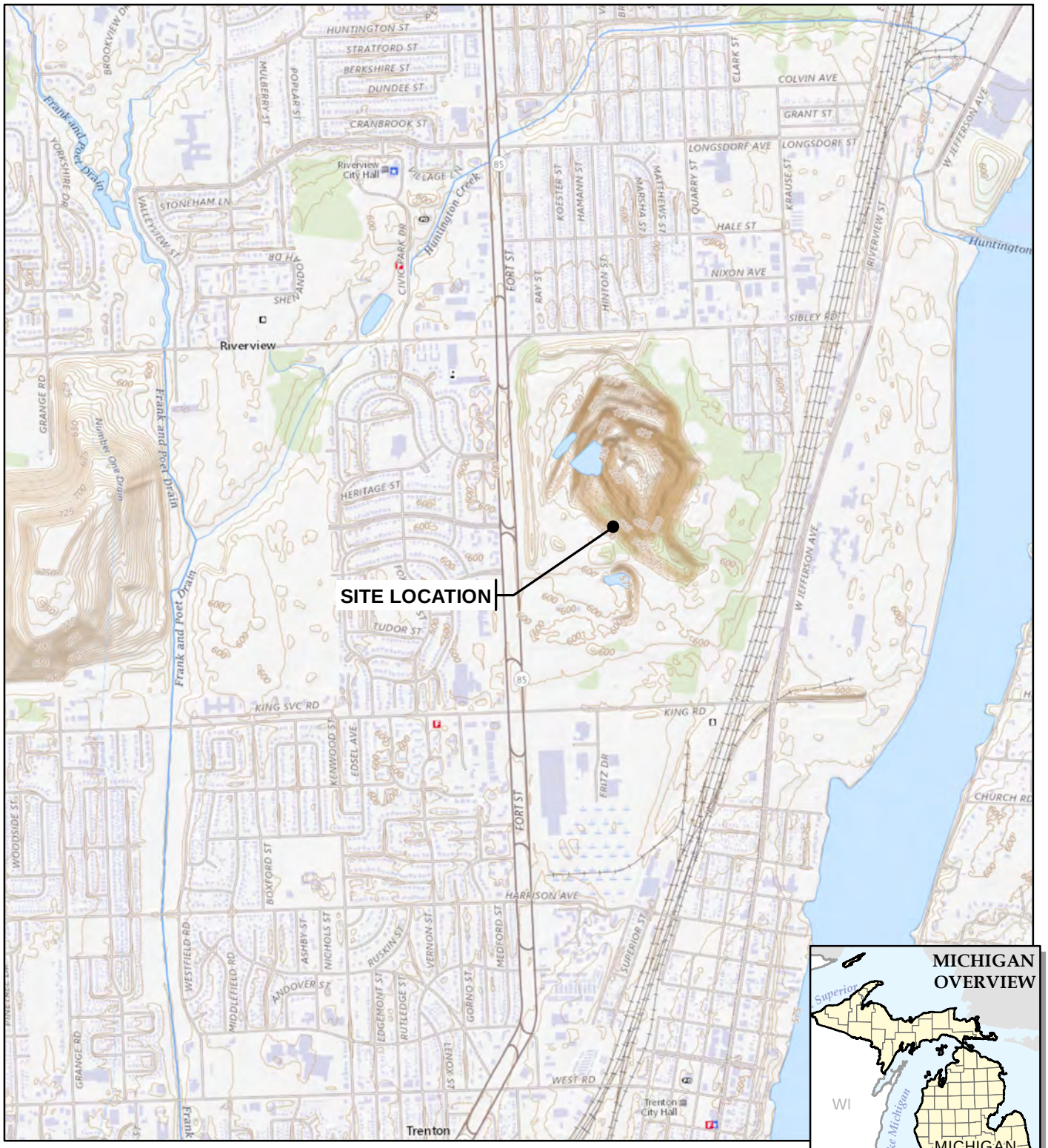
Notes:
ug/L - micrograms per liter.
mg/L - milligrams per liter.
SU - standard units; pH is a field parameter.
All metals were analyzed as total unless otherwise specified.
Bold font indicates an exceedance of the Prediction Limit (PL).
(1) Exceedance was determined to be from an alternate source in the Alternate Source Demonstration: 2020 First Semiannual Detection Monitoring Sampling Event Sibley Quarry Coal Combustion Residual Landfill, Trenton, Michigan, dated August 26, 2020.

Table 4
Comparison of Appendix III Parameter Results to Background Limits – October 2022
Sibley Quarry Landfill – RCRA CCR Monitoring Program
Trenton, Michigan

Sample Location:		MW-101		MW-102		MW-103		MW-104		MW-105		MW-106		MW-107		MW-108A	
Sample Date:		10/4/2022	PL	10/4/2022	PL	10/5/2022	PL	10/4/2022	PL	10/4/2022	PL	10/4/2022	PL	10/4/2022	PL	10/5/2022	PL
Constituent	Unit	Data		Data		Data		Data		Data		Data		Data		Data	
Appendix III																	
Boron	ug/L	300	320	130	150	720	820	700	950	2,500	2,600	770	2,400	1,400	1,600	1,200	1,400
Calcium	ug/L	210,000	260,000	270,000	300,000	560,000	630,000	460,000	520,000	710,000	790,000	560,000	640,000	1,300,000	1,500,000	390,000	460,000
Chloride	mg/L	190	220	230	260	140	160	220	690	3,500	4,500	120	180	19,000	21,000	1,700	2,100
Fluoride	mg/L	2.0	2.0	1.8	1.8	1.9	2.0	1.7	2.3	1.3	5.8	1.8	3.0	< 5	2.5	1.2	2.5
pH, Field	su	7.0	6.8 - 7.8	7.0	6.5 - 7.6	6.7	6.7 - 7.6	7.1	6.8 - 7.9	6.9	6.6 - 7.9	6.9	6.5 - 7.6	6.7	6.5 - 7.6	6.8	6.7 - 7.0
Sulfate	mg/L	540	700	620	720	1,900	2,100	1,800	1,900	2,100	2,200	2,000	2,100	3,300	3,700	1,100	1,200
Total Dissolved Solids	mg/L	1,300	1,400	1,500	1,700	3,100	3,600	2,600	3,700	8,200	9,400	2,800	3,200	31,000	39,000	4,100	4,900

Notes:
ug/L - micrograms per liter.
mg/L - milligrams per liter.
SU - standard units; pH is a field parameter.
All metals were analyzed as total unless otherwise specified.

Figures



BASE MAP FROM USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE SERIES.

N

1 " = 2,000 '
1:24,000

0 2,000 4,000
FEET

TRC
1540 Eisenhower Place
Ann Arbor, MI 48108-3284
Phone: 734.971.7080
www.trccompanies.com
TRC - GIS

PROJECT:
DTE ELECTRIC COMPANY
SIBLEY QUARRY LANDFILL
801 FORT STREET
TRENTON, MICHIGAN

TITLE:
SITE LOCATION MAP

DRAWN BY:	A. ADAIR
CHECKED BY:	H. SCHNAIDT
APPROVED BY:	V. BUENING
DATE:	JANUARY 2023
PROJ. NO.:	413591.0002
FILE:	FEDERAL_413591_1002_01_SLM.mxd

FIGURE 1

T:\1-PROJECTS\CCR\413591_Sibley_Quarry_Landfill\2-APRX\FEDERAL_413591_1002_01_SLM.mxd -- Saved By: MOPEL on 1/4/2023, 11:14:01 AM

LEGEND

- MONITORING WELLS
- DECOMMISSIONED MONITORING WELL
- SIBLEY QUARRY PROPERTY LINE
- SOLID WASTE DISPOSAL AREA BOUNDARY
- 1 FILL AREA DESIGNATION

NOTES

1. BASE MAP IMAGERY FROM GOOGLE EARTH PRO. AND PARTNERS, (5/7/2022).
2. SITE LAYOUT INFORMATION FROM GEOREFERENCED CAD FILE. FEATURES ARE APPROXIMATE.
3. SURVEY PERFORMED BY THE DTE SURVEY GROUP IN AUGUST 2015, MAY 2016 AND JANUARY 2017.

0 600 1,200 Feet

1 " = 600 '

1:7,200

N

PROJECT:

DTE ELECTRIC COMPANY
SIBLEY QUARRY LANDFILL
801 FORT STREET
TRENTON, MICHIGAN

TITLE:

MONITORING NETWORK AND SITE PLAN

DRAWN BY:	A. ADAIR	PROJ NO.:	461816.0002
CHECKED BY:	H. SCHNAIDT		**FIGURE 2**
APPROVED BY:	V. BUENING		
DATE:	JANUARY 2023		

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FILE NO.: FEDERAL_461816_1002_02_MN.mxd

TRC - GIS

Coordinate System: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl (Foot)
Map Rotation: 0

Plot Date: 1/23/2023, 09:37:38 AM by AADAIR -- LAYOUT: ANSI B(11"x17")
Path: T:\1-PROJECTS\CCR\413591_Sibley_Quarry_Landfill\2-APRX\FEDERAL_461816_1002_02_MN.mxd

LEGEND

- DECOMMISSIONED MONITORING WELL
- MONITORING WELLS
- SIBLEY QUARRY PROPERTY LINE
- SOLID WASTE DISPOSAL AREA BOUNDARY
- 1 — FILL AREA
- (439.08) — GROUNDWATER ELEVATION (FT NGVD 1929)
- POTENTIOMETRIC SURFACE CONTOUR (50-FT INTERVAL, DASHED WHERE INFERRED)
- INFERRED GROUNDWATER FLOW DIRECTION

NOTES

1. BASE MAP IMAGERY FROM GOOGLE EARTH PRO. AND PARTNERS, (5/7/2022).
2. SITE LAYOUT INFORMATION FROM GEOREFERENCED CAD FILE. FEATURES ARE APPROXIMATE.
3. SURVEY PERFORMED BY THE DTE SURVEY GROUP IN AUGUST 2015, MAY 2016 AND JANUARY 2017.
4. GROUNDWATER ELEVATIONS DISPLAYED IN FEET RELATIVE TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929.

N

0 600 1,200 Feet

1 " = 600 '
1:7,200

PROJECT:
DTE ELECTRIC COMPANY
SIBLEY QUARRY LANDFILL
801 FORT STREET
TRENTON, MICHIGAN

TITLE:
GROUNDWATER POTENTIOMETRIC SURFACE MAP APRIL 2022

DRAWN BY:	A. ADAIR	PROJ NO.:	461816.0002
CHECKED BY:	H. SCHNAIDT		
APPROVED BY:	V. BUENING		**FIGURE 3**
DATE:	JANUARY 2023		

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FILE NO.: STATE_461816_303_GWP.mxd

TRC - GIS
Coordinate System: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl (Foot)
Map Rotation: 0
Plot Date: 1/23/2023, 09:52:52 AM by AADAIR -- LAYOUT: ANSI B (11"x17")
Path: T:\1-PROJECTS\CCR\413591_Sibley_Quarry_Landfill\2-APRX\STATE_461816_303_GWP.mxd

LEGEND

- DECOMMISSIONED MONITORING WELL
- MONITORING WELLS
- SIBLEY QUARRY PROPERTY LINE
- SOLID WASTE DISPOSAL AREA BOUNDARY
- 1 — FILL AREA
- (439.08) — GROUNDWATER ELEVATION (FT NGVD 1929)
- POTENTIOMETRIC SURFACE CONTOUR (50-FT INTERVAL, DASHED WHERE INFERRED)
- INFERRED GROUNDWATER FLOW DIRECTION

NOTES

1. BASE MAP IMAGERY FROM GOOGLE EARTH PRO. AND PARTNERS, (5/7/2022).
2. SITE LAYOUT INFORMATION FROM GEOREFERENCED CAD FILE. FEATURES ARE APPROXIMATE.
3. SURVEY PERFORMED BY THE DTE SURVEY GROUP IN AUGUST 2015, MAY 2016 AND JANUARY 2017.
4. GROUNDWATER ELEVATIONS DISPLAYED IN FEET RELATIVE TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929.

N

0 600 1,200 Feet

1 " = 600 '
1:7,200

PROJECT:
DTE ELECTRIC COMPANY
SIBLEY QUARRY LANDFILL
801 FORT STREET
TRENTON, MICHIGAN

TITLE:
GROUNDWATER POTENTIOMETRIC SURFACE MAP OCTOBER 2022

DRAWN BY:	A. ADAIR	PROJ NO.:	461816.0002
CHECKED BY:	H. SCHNAIDT		
APPROVED BY:	V. BUENING		**FIGURE 4**
DATE:	JANUARY 2023		

TRC
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FILE NO.: FEDERAL_413591_1002_04_GWP.mxd

Plot Date: 1/23/2023, 09:39:36 AM by AADAIR -- LAYOUT: ANSI B(11"x17")
Path: T:\1-PROJECTS\CCR\413591_Sibley_Quarry_Landfill\2-APRX\FEDERAL_413591_1002_04_GWP.mxd
Coordinate System: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl (Foot)
Map Rotation: 0

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Appendix A
Laboratory Reports

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Tel: (330)497-9396

Laboratory Job ID: 240-165752-1
Client Project/Site: CCR DTE Sibley Quarry

For:
TRC Environmental Corporation.
1540 Eisenhower Place
Ann Arbor, Michigan 48108-7080

Attn: Mr. Vincent Buening

Authorized for release by:
5/11/2022 7:20:31 PM

Kris Brooks, Project Manager II
(330)966-9790
Kris.Brooks@et.eurofinsus.com

Table of Contents

Definitions/Glossary

Client: TRC Environmental Corporation.
Job ID: 240-165752-1
Project/Site: CCR DTE Sibley Quarry

Qualifiers

Metals

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: TRC Environmental Corporation.
Project/Site: CCR DTE Sibley Quarry

Job ID: 240-165752-1

Job ID: 240-165752-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-165752-1

Comments
No additional comments.

Receipt
The samples were received on 4/29/2022 8:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.1° C.

Metals
No additional analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
Method 9056A: The following samples were diluted due to the nature of the sample matrix: MW-107_20220427 (240-165752-7) and DUP-01_20220427 (240-165752-11). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Method Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE Sibley Quarry

Job ID: 240-165752-1

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	TAL CAN
6020	Metals (ICP/MS)	SW846	TAL CAN
9056A	Anions, Ion Chromatography	SW846	TAL CAN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL CAN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL CAN

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Sample Summary

Client: TRC Environmental Corporation.
Job ID: 240-165752-1
Project/Site: CCR DTE Sibley Quarry

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-165752-1	MW-101_20220427	Water	04/27/22 10:30	04/29/22 08:00
240-165752-2	MW-102_20220427	Water	04/27/22 09:40	04/29/22 08:00
240-165752-3	MW-103_20220427	Water	04/27/22 14:00	04/29/22 08:00
240-165752-4	MW-104_20220427	Water	04/27/22 12:25	04/29/22 08:00
240-165752-5	MW-105_20220427	Water	04/27/22 11:20	04/29/22 08:00
240-165752-6	MW-106_20220427	Water	04/27/22 13:10	04/29/22 08:00
240-165752-7	MW-107_20220427	Water	04/27/22 08:20	04/29/22 08:00
240-165752-8	MW-108A_20220427	Water	04/27/22 15:15	04/29/22 08:00
240-165752-9	QUARRY SUMP_20220427	Water	04/27/22 14:30	04/29/22 08:00
240-165752-10	QUARRY DISCHARGE_20220427	Water	04/27/22 11:45	04/29/22 08:00
240-165752-11	DUP-01_20220427	Water	04/27/22 00:00	04/29/22 08:00

Detection Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE Sibley Quarry

Job ID: 240-165752-1

Client Sample ID: MW-101_20220427 — Lab Sample ID: 240-165752-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	310		100	57	ug/L	1		6010B	Total Recoverable
Calcium	180000		1000	1000	ug/L	1		6020	Total Recoverable
Iron	180		100	100	ug/L	1		6020	Total Recoverable
Chloride	240		10	10	mg/L	10		9056A	Total/NA
Fluoride	1.8		0.050	0.050	mg/L	1		9056A	Total/NA
Sulfate	530		10	10	mg/L	10		9056A	Total/NA
Total Dissolved Solids	1400		20	20	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW-102_20220427 — Lab Sample ID: 240-165752-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	150		100	57	ug/L	1		6010B	Total Recoverable
Calcium	210000		1000	1000	ug/L	1		6020	Total Recoverable
Iron	800		100	100	ug/L	1		6020	Total Recoverable
Chloride	200		1.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	1.4		0.050	0.050	mg/L	1		9056A	Total/NA
Sulfate	510		10	10	mg/L	10		9056A	Total/NA
Total Dissolved Solids	1400		20	20	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW-103_20220427 — Lab Sample ID: 240-165752-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	780		100	57	ug/L	1		6010B	Total Recoverable
Calcium	500000		1000	1000	ug/L	1		6020	Total Recoverable
Chloride	140		1.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	1.8		0.050	0.050	mg/L	1		9056A	Total/NA
Sulfate	1900		10	10	mg/L	10		9056A	Total/NA
Total Dissolved Solids	3200		40	40	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW-104_20220427 — Lab Sample ID: 240-165752-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	750		100	57	ug/L	1		6010B	Total Recoverable
Calcium	420000		1000	1000	ug/L	1		6020	Total Recoverable
Chloride	220		10	10	mg/L	10		9056A	Total/NA
Fluoride	1.6		0.050	0.050	mg/L	1		9056A	Total/NA
Sulfate	1700		10	10	mg/L	10		9056A	Total/NA
Total Dissolved Solids	2800		40	40	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW-105_20220427 — Lab Sample ID: 240-165752-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2100		100	57	ug/L	1		6010B	Total Recoverable
Calcium	640000		1000	1000	ug/L	1		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-105_20220427 (Continued) — Lab Sample ID: 240-165752-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	1900		100	100	ug/L	1		6020	Total Recoverable
Chloride	3100		50	50	mg/L	50		9056A	Total/NA
Fluoride	1.2		0.25	0.25	mg/L	5		9056A	Total/NA
Sulfate	1900		50	50	mg/L	50		9056A	Total/NA
Total Dissolved Solids	6800		100	100	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW-106_20220427 — Lab Sample ID: 240-165752-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	710		100	57	ug/L	1		6010B	Total Recoverable
Calcium	550000		1000	1000	ug/L	1		6020	Total Recoverable
Iron	8700		100	100	ug/L	1		6020	Total Recoverable
Chloride	110		1.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	1.7		0.050	0.050	mg/L	1		9056A	Total/NA
Sulfate	1800		10	10	mg/L	10		9056A	Total/NA
Total Dissolved Solids	3200		40	40	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW-107_20220427 — Lab Sample ID: 240-165752-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1600		100	57	ug/L	1		6010B	Total Recoverable
Calcium	1300000		1000	1000	ug/L	1		6020	Total Recoverable
Iron	1000		100	100	ug/L	1		6020	Total Recoverable
Chloride	19000		100	100	mg/L	100		9056A	Total/NA
Sulfate	3100		100	100	mg/L	100		9056A	Total/NA
Total Dissolved Solids	37000		1000	1000	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW-108A_20220427 — Lab Sample ID: 240-165752-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1300		100	57	ug/L	1		6010B	Total Recoverable
Calcium	390000		1000	1000	ug/L	1		6020	Total Recoverable
Iron	670		100	100	ug/L	1		6020	Total Recoverable
Chloride	1500		20	20	mg/L	20		9056A	Total/NA
Fluoride	1.1		0.10	0.10	mg/L	2		9056A	Total/NA
Sulfate	1000		20	20	mg/L	20		9056A	Total/NA
Total Dissolved Solids	4200		50	50	mg/L	1		SM 2540C	Total/NA

Client Sample ID: QUARRY SUMP_20220427 — Lab Sample ID: 240-165752-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2600		100	57	ug/L	1		6010B	Total Recoverable
Calcium	700000		1000	1000	ug/L	1		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

Client Sample ID: QUARRY SUMP_20220427 (Continued) — Lab Sample ID: 240-165752-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	180		100	100	ug/L	1		6020	Total Recoverable
Chloride	3300		50	50	mg/L	50		9056A	Total/NA
Fluoride	1.5		0.25	0.25	mg/L	5		9056A	Total/NA
Sulfate	2000		50	50	mg/L	50		9056A	Total/NA
Total Dissolved Solids	8400		100	100	mg/L	1		SM 2540C	Total/NA

Client Sample ID: QUARRY DISCHARGE_20220427 — Lab Sample ID: 240-165752-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2600		100	57	ug/L	1		6010B	Total Recoverable
Calcium	700000		1000	1000	ug/L	1		6020	Total Recoverable
Iron	300		100	100	ug/L	1		6020	Total Recoverable
Chloride	3400		50	50	mg/L	50		9056A	Total/NA
Fluoride	1.5		0.25	0.25	mg/L	5		9056A	Total/NA
Sulfate	2100		50	50	mg/L	50		9056A	Total/NA
Total Dissolved Solids	8200		100	100	mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP-01_20220427 — Lab Sample ID: 240-165752-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1600		100	57	ug/L	1		6010B	Total Recoverable
Calcium	1200000		1000	1000	ug/L	1		6020	Total Recoverable
Iron	930		100	100	ug/L	1		6020	Total Recoverable
Chloride	20000		100	100	mg/L	100		9056A	Total/NA
Sulfate	3300		100	100	mg/L	100		9056A	Total/NA
Total Dissolved Solids	34000		1000	1000	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE Sibley Quarry

Job ID: 240-165752-1

Client Sample ID: MW-101_20220427

Lab Sample ID: 240-165752-1

Date Collected: 04/27/22 10:30

Matrix: Water

Date Received: 04/29/22 08:00

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	310		100	57	ug/L		05/02/22 14:00	05/04/22 19:33	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	180000		1000	1000	ug/L		05/02/22 14:00	05/03/22 19:43	1
Iron	180		100	100	ug/L		05/02/22 14:00	05/03/22 19:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	240		10	10	mg/L			05/09/22 01:52	10
Fluoride	1.8		0.050	0.050	mg/L			05/09/22 00:46	1
Sulfate	530		10	10	mg/L			05/09/22 01:52	10
Total Dissolved Solids	1400		20	20	mg/L			05/02/22 11:18	1

Client: TRC Environmental Corporation.
Project/Site: CCR DTE Sibley Quarry

Job ID: 240-165752-1

Client Sample ID: MW-102_20220427
Date Collected: 04/27/22 09:40
Date Received: 04/29/22 08:00

Lab Sample ID: 240-165752-2
Matrix: Water

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	150		100	57	ug/L		05/02/22 14:00	05/04/22 19:37	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	210000		1000	1000	ug/L		05/02/22 14:00	05/03/22 19:50	1
Iron	800		100	100	ug/L		05/02/22 14:00	05/03/22 19:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	200		1.0	1.0	mg/L			05/09/22 02:13	1
Fluoride	1.4		0.050	0.050	mg/L			05/09/22 02:13	1
Sulfate	510		10	10	mg/L			05/09/22 02:35	10
Total Dissolved Solids	1400		20	20	mg/L			05/02/22 11:18	1

Client: TRC Environmental Corporation.
Project/Site: CCR DTE Sibley Quarry

Job ID: 240-165752-1

Client Sample ID: MW-103_20220427
Date Collected: 04/27/22 14:00
Date Received: 04/29/22 08:00

Lab Sample ID: 240-165752-3
Matrix: Water

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	780		100	57	ug/L		05/02/22 14:00	05/04/22 19:50	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	500000		1000	1000	ug/L		05/02/22 14:00	05/03/22 19:53	1
Iron	100	U	100	100	ug/L		05/02/22 14:00	05/03/22 19:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	140		1.0	1.0	mg/L			05/09/22 02:57	1
Fluoride	1.8		0.050	0.050	mg/L			05/09/22 02:57	1
Sulfate	1900		10	10	mg/L			05/09/22 03:18	10
Total Dissolved Solids	3200		40	40	mg/L			05/02/22 11:18	1

Client: TRC Environmental Corporation.
Project/Site: CCR DTE Sibley Quarry

Job ID: 240-165752-1

Client Sample ID: MW-104_20220427
Date Collected: 04/27/22 12:25
Date Received: 04/29/22 08:00

Lab Sample ID: 240-165752-4
Matrix: Water

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	750		100	57	ug/L		05/02/22 14:00	05/04/22 19:54	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	420000		1000	1000	ug/L		05/02/22 14:00	05/03/22 19:55	1
Iron	100	U	100	100	ug/L		05/02/22 14:00	05/03/22 19:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	220		10	10	mg/L			05/09/22 04:02	10
Fluoride	1.6		0.050	0.050	mg/L			05/09/22 03:40	1
Sulfate	1700		10	10	mg/L			05/09/22 04:02	10
Total Dissolved Solids	2800		40	40	mg/L			05/02/22 11:10	1

Client: TRC Environmental Corporation.
Project/Site: CCR DTE Sibley Quarry

Job ID: 240-165752-1

Client Sample ID: MW-105_20220427
Date Collected: 04/27/22 11:20
Date Received: 04/29/22 08:00

Lab Sample ID: 240-165752-5
Matrix: Water

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2100		100	57	ug/L		05/02/22 14:00	05/04/22 19:58	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	640000		1000	1000	ug/L		05/02/22 14:00	05/03/22 19:58	1
Iron	1900		100	100	ug/L		05/02/22 14:00	05/03/22 19:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3100		50	50	mg/L			05/09/22 04:45	50
Fluoride	1.2		0.25	0.25	mg/L			05/09/22 04:23	5
Sulfate	1900		50	50	mg/L			05/09/22 04:45	50
Total Dissolved Solids	6800		100	100	mg/L			05/02/22 11:10	1

Client: TRC Environmental Corporation.
Project/Site: CCR DTE Sibley Quarry

Job ID: 240-165752-1

Client Sample ID: MW-106_20220427
Date Collected: 04/27/22 13:10
Date Received: 04/29/22 08:00

Lab Sample ID: 240-165752-6
Matrix: Water

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	710		100	57	ug/L		05/02/22 14:00	05/04/22 20:03	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	550000		1000	1000	ug/L		05/02/22 14:00	05/03/22 20:00	1
Iron	8700		100	100	ug/L		05/02/22 14:00	05/03/22 20:00	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	110		1.0	1.0	mg/L			05/09/22 05:07	1
Fluoride	1.7		0.050	0.050	mg/L			05/09/22 05:07	1
Sulfate	1800		10	10	mg/L			05/09/22 06:12	10
Total Dissolved Solids	3200		40	40	mg/L			05/02/22 11:18	1

Client: TRC Environmental Corporation.
Project/Site: CCR DTE Sibley Quarry

Job ID: 240-165752-1

Client Sample ID: MW-107_20220427
Date Collected: 04/27/22 08:20
Date Received: 04/29/22 08:00

Lab Sample ID: 240-165752-7
Matrix: Water

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1600		100	57	ug/L		05/02/22 14:00	05/04/22 20:07	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1300000		1000	1000	ug/L		05/02/22 14:00	05/03/22 20:03	1
Iron	1000		100	100	ug/L		05/02/22 14:00	05/03/22 20:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	19000		100	100	mg/L			05/07/22 03:33	100
Fluoride	5.0	U	5.0	5.0	mg/L			05/07/22 03:33	100
Sulfate	3100		100	100	mg/L			05/07/22 03:33	100
Total Dissolved Solids	37000		1000	1000	mg/L			05/02/22 11:18	1

Client: TRC Environmental Corporation.
Project/Site: CCR DTE Sibley Quarry

Job ID: 240-165752-1

Client Sample ID: MW-108A_20220427
Date Collected: 04/27/22 15:15
Date Received: 04/29/22 08:00

Lab Sample ID: 240-165752-8
Matrix: Water

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1300		100	57	ug/L		05/02/22 14:00	05/04/22 20:12	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	390000		1000	1000	ug/L		05/02/22 14:00	05/03/22 20:05	1
Iron	670		100	100	ug/L		05/02/22 14:00	05/03/22 20:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1500		20	20	mg/L			05/07/22 04:33	20
Fluoride	1.1		0.10	0.10	mg/L			05/07/22 04:13	2
Sulfate	1000		20	20	mg/L			05/07/22 04:33	20
Total Dissolved Solids	4200		50	50	mg/L			05/04/22 09:57	1

Client: TRC Environmental Corporation.
Project/Site: CCR DTE Sibley Quarry

Job ID: 240-165752-1

Client Sample ID: QUARRY SUMP_20220427
Date Collected: 04/27/22 14:30
Date Received: 04/29/22 08:00

Lab Sample ID: 240-165752-9
Matrix: Water

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2600		100	57	ug/L		05/02/22 14:00	05/04/22 20:16	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	700000		1000	1000	ug/L		05/02/22 14:00	05/03/22 20:08	1
Iron	180		100	100	ug/L		05/02/22 14:00	05/03/22 20:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3300		50	50	mg/L			05/07/22 05:14	50
Fluoride	1.5		0.25	0.25	mg/L			05/07/22 04:53	5
Sulfate	2000		50	50	mg/L			05/07/22 05:14	50
Total Dissolved Solids	8400		100	100	mg/L			05/02/22 11:18	1

Client: TRC Environmental Corporation.
Project/Site: CCR DTE Sibley Quarry

Job ID: 240-165752-1

Client Sample ID: QUARRY DISCHARGE_20220427
Date Collected: 04/27/22 11:45
Date Received: 04/29/22 08:00

Lab Sample ID: 240-165752-10
Matrix: Water

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2600		100	57	ug/L		05/02/22 14:00	05/04/22 20:21	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	700000		1000	1000	ug/L		05/02/22 14:00	05/03/22 20:10	1
Iron	300		100	100	ug/L		05/02/22 14:00	05/03/22 20:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3400		50	50	mg/L			05/07/22 05:54	50
Fluoride	1.5		0.25	0.25	mg/L			05/07/22 05:34	5
Sulfate	2100		50	50	mg/L			05/07/22 05:54	50
Total Dissolved Solids	8200		100	100	mg/L			05/02/22 11:10	1

Client: TRC Environmental Corporation.
Project/Site: CCR DTE Sibley Quarry

Job ID: 240-165752-1

Client Sample ID: DUP-01_20220427
Date Collected: 04/27/22 00:00
Date Received: 04/29/22 08:00

Lab Sample ID: 240-165752-11
Matrix: Water

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1600		100	57	ug/L		05/02/22 14:00	05/04/22 20:25	1

Method: 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1200000		1000	1000	ug/L		05/02/22 14:00	05/03/22 20:13	1
Iron	930		100	100	ug/L		05/02/22 14:00	05/03/22 20:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	20000		100	100	mg/L			05/07/22 06:54	100
Fluoride	5.0	U	5.0	5.0	mg/L			05/07/22 06:54	100
Sulfate	3300		100	100	mg/L			05/07/22 06:54	100
Total Dissolved Solids	34000		1000	1000	mg/L			05/02/22 11:18	1

Client: TRC Environmental Corporation.
Project/Site: CCR DTE Sibley Quarry

Job ID: 240-165752-1

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 240-524742/1-A
Matrix: Water
Analysis Batch: 525195

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 524742

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	57	ug/L		05/02/22 14:00	05/04/22 19:24	1

Lab Sample ID: LCS 240-524742/2-A
Matrix: Water
Analysis Batch: 525195

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 524742

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1000	943		ug/L		94	80 - 120

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 240-524742/1-A
Matrix: Water
Analysis Batch: 525061

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 524742

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1000	U	1000	1000	ug/L		05/02/22 14:00	05/03/22 19:09	1
Iron	100	U	100	100	ug/L		05/02/22 14:00	05/03/22 19:09	1

Lab Sample ID: LCS 240-524742/3-A
Matrix: Water
Analysis Batch: 525061

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 524742

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	25000	23000		ug/L		92	80 - 120
Iron	5000	4580		ug/L		92	80 - 120

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 240-525329/3
Matrix: Water
Analysis Batch: 525329

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	U	1.0	1.0	mg/L			05/08/22 12:49	1
Fluoride	0.050	U	0.050	0.050	mg/L			05/08/22 12:49	1
Sulfate	1.0	U	1.0	1.0	mg/L			05/08/22 12:49	1

Lab Sample ID: LCS 240-525329/4
Matrix: Water
Analysis Batch: 525329

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	49.5		mg/L		99	90 - 110
Fluoride	2.50	2.58		mg/L		103	90 - 110
Sulfate	50.0	50.8		mg/L		102	90 - 110

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 240-525338/3
Matrix: Water
Analysis Batch: 525338

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	U	1.0	1.0	mg/L			05/07/22 02:53	1
Fluoride	0.050	U	0.050	0.050	mg/L			05/07/22 02:53	1
Sulfate	1.0	U	1.0	1.0	mg/L			05/07/22 02:53	1

Lab Sample ID: LCS 240-525338/4
Matrix: Water
Analysis Batch: 525338

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	48.4		mg/L		97	90 - 110
Fluoride	2.50	2.46		mg/L		99	90 - 110
Sulfate	50.0	50.1		mg/L		100	90 - 110

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-524707/1
Matrix: Water
Analysis Batch: 524707

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	10	U	10	10	mg/L			05/02/22 11:10	1

Lab Sample ID: LCS 240-524707/2
Matrix: Water
Analysis Batch: 524707

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	482	448		mg/L		93	80 - 120

Lab Sample ID: MB 240-524713/1
Matrix: Water
Analysis Batch: 524713

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	10	U	10	10	mg/L			05/02/22 11:18	1

Lab Sample ID: LCS 240-524713/2
Matrix: Water
Analysis Batch: 524713

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	482	449		mg/L		93	80 - 120

Lab Sample ID: MB 240-525094/1
Matrix: Water
Analysis Batch: 525094

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	10	U	10	10	mg/L			05/04/22 09:57	1

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: LCS 240-525094/2
Matrix: Water
Analysis Batch: 525094

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	482	460		mg/L		95	80 - 120

Metals

Prep Batch: 524742

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-165752-1	MW-101_20220427	Total Recoverable	Water	3005A	
240-165752-2	MW-102_20220427	Total Recoverable	Water	3005A	
240-165752-3	MW-103_20220427	Total Recoverable	Water	3005A	
240-165752-4	MW-104_20220427	Total Recoverable	Water	3005A	
240-165752-5	MW-105_20220427	Total Recoverable	Water	3005A	
240-165752-6	MW-106_20220427	Total Recoverable	Water	3005A	
240-165752-7	MW-107_20220427	Total Recoverable	Water	3005A	
240-165752-8	MW-108A_20220427	Total Recoverable	Water	3005A	
240-165752-9	QUARRY SUMP_20220427	Total Recoverable	Water	3005A	
240-165752-10	QUARRY DISCHARGE_20220427	Total Recoverable	Water	3005A	
240-165752-11	DUP-01_20220427	Total Recoverable	Water	3005A	
MB 240-524742/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-524742/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-524742/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 525061

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-165752-1	MW-101_20220427	Total Recoverable	Water	6020	524742
240-165752-2	MW-102_20220427	Total Recoverable	Water	6020	524742
240-165752-3	MW-103_20220427	Total Recoverable	Water	6020	524742
240-165752-4	MW-104_20220427	Total Recoverable	Water	6020	524742
240-165752-5	MW-105_20220427	Total Recoverable	Water	6020	524742
240-165752-6	MW-106_20220427	Total Recoverable	Water	6020	524742
240-165752-7	MW-107_20220427	Total Recoverable	Water	6020	524742
240-165752-8	MW-108A_20220427	Total Recoverable	Water	6020	524742
240-165752-9	QUARRY SUMP_20220427	Total Recoverable	Water	6020	524742
240-165752-10	QUARRY DISCHARGE_20220427	Total Recoverable	Water	6020	524742
240-165752-11	DUP-01_20220427	Total Recoverable	Water	6020	524742
MB 240-524742/1-A	Method Blank	Total Recoverable	Water	6020	524742
LCS 240-524742/3-A	Lab Control Sample	Total Recoverable	Water	6020	524742

Analysis Batch: 525195

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-165752-1	MW-101_20220427	Total Recoverable	Water	6010B	524742
240-165752-2	MW-102_20220427	Total Recoverable	Water	6010B	524742
240-165752-3	MW-103_20220427	Total Recoverable	Water	6010B	524742
240-165752-4	MW-104_20220427	Total Recoverable	Water	6010B	524742
240-165752-5	MW-105_20220427	Total Recoverable	Water	6010B	524742
240-165752-6	MW-106_20220427	Total Recoverable	Water	6010B	524742
240-165752-7	MW-107_20220427	Total Recoverable	Water	6010B	524742
240-165752-8	MW-108A_20220427	Total Recoverable	Water	6010B	524742
240-165752-9	QUARRY SUMP_20220427	Total Recoverable	Water	6010B	524742
240-165752-10	QUARRY DISCHARGE_20220427	Total Recoverable	Water	6010B	524742
240-165752-11	DUP-01_20220427	Total Recoverable	Water	6010B	524742
MB 240-524742/1-A	Method Blank	Total Recoverable	Water	6010B	524742
LCS 240-524742/2-A	Lab Control Sample	Total Recoverable	Water	6010B	524742

General Chemistry

Analysis Batch: 524707

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-165752-4	MW-104_20220427	Total/NA	Water	SM 2540C	
240-165752-5	MW-105_20220427	Total/NA	Water	SM 2540C	
240-165752-10	QUARRY DISCHARGE_20220427	Total/NA	Water	SM 2540C	
MB 240-524707/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-524707/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 524713

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-165752-1	MW-101_20220427	Total/NA	Water	SM 2540C	
240-165752-2	MW-102_20220427	Total/NA	Water	SM 2540C	
240-165752-3	MW-103_20220427	Total/NA	Water	SM 2540C	
240-165752-6	MW-106_20220427	Total/NA	Water	SM 2540C	
240-165752-7	MW-107_20220427	Total/NA	Water	SM 2540C	
240-165752-9	QUARRY SUMP_20220427	Total/NA	Water	SM 2540C	
240-165752-11	DUP-01_20220427	Total/NA	Water	SM 2540C	
MB 240-524713/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-524713/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 525094

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-165752-8	MW-108A_20220427	Total/NA	Water	SM 2540C	
MB 240-525094/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-525094/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 525329

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-165752-1	MW-101_20220427	Total/NA	Water	9056A	
240-165752-1	MW-101_20220427	Total/NA	Water	9056A	
240-165752-2	MW-102_20220427	Total/NA	Water	9056A	
240-165752-2	MW-102_20220427	Total/NA	Water	9056A	
240-165752-3	MW-103_20220427	Total/NA	Water	9056A	
240-165752-3	MW-103_20220427	Total/NA	Water	9056A	
240-165752-4	MW-104_20220427	Total/NA	Water	9056A	
240-165752-4	MW-104_20220427	Total/NA	Water	9056A	
240-165752-5	MW-105_20220427	Total/NA	Water	9056A	
240-165752-5	MW-105_20220427	Total/NA	Water	9056A	
240-165752-6	MW-106_20220427	Total/NA	Water	9056A	
240-165752-6	MW-106_20220427	Total/NA	Water	9056A	
MB 240-525329/3	Method Blank	Total/NA	Water	9056A	
LCS 240-525329/4	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 525338

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-165752-7	MW-107_20220427	Total/NA	Water	9056A	
240-165752-8	MW-108A_20220427	Total/NA	Water	9056A	
240-165752-8	MW-108A_20220427	Total/NA	Water	9056A	
240-165752-9	QUARRY SUMP_20220427	Total/NA	Water	9056A	
240-165752-9	QUARRY SUMP_20220427	Total/NA	Water	9056A	
240-165752-10	QUARRY DISCHARGE_20220427	Total/NA	Water	9056A	
240-165752-10	QUARRY DISCHARGE_20220427	Total/NA	Water	9056A	
240-165752-11	DUP-01_20220427	Total/NA	Water	9056A	

General Chemistry (Continued)

Analysis Batch: 525338 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-525338/3	Method Blank	Total/NA	Water	9056A	
LCS 240-525338/4	Lab Control Sample	Total/NA	Water	9056A	

Lab Chronicle

Client: TRC Environmental Corporation.
Project/Site: CCR DTE Sibley Quarry

Job ID: 240-165752-1

Client Sample ID: MW-101_20220427

Lab Sample ID: 240-165752-1

Date Collected: 04/27/22 10:30

Matrix: Water

Date Received: 04/29/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			524742	05/02/22 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010B		1	525195	05/04/22 19:33	KLC	TAL CAN
Total Recoverable	Prep	3005A			524742	05/02/22 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020		1	525061	05/03/22 19:43	DSH	TAL CAN
Total/NA	Analysis	9056A		1	525329	05/09/22 00:46	JMB	TAL CAN
Total/NA	Analysis	9056A		10	525329	05/09/22 01:52	JMB	TAL CAN
Total/NA	Analysis	SM 2540C		1	524713	05/02/22 11:18	KMS	TAL CAN

Client Sample ID: MW-102_20220427

Lab Sample ID: 240-165752-2

Date Collected: 04/27/22 09:40

Matrix: Water

Date Received: 04/29/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			524742	05/02/22 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010B		1	525195	05/04/22 19:37	KLC	TAL CAN
Total Recoverable	Prep	3005A			524742	05/02/22 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020		1	525061	05/03/22 19:50	DSH	TAL CAN
Total/NA	Analysis	9056A		1	525329	05/09/22 02:13	JMB	TAL CAN
Total/NA	Analysis	9056A		10	525329	05/09/22 02:35	JMB	TAL CAN
Total/NA	Analysis	SM 2540C		1	524713	05/02/22 11:18	KMS	TAL CAN

Client Sample ID: MW-103_20220427

Lab Sample ID: 240-165752-3

Date Collected: 04/27/22 14:00

Matrix: Water

Date Received: 04/29/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			524742	05/02/22 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010B		1	525195	05/04/22 19:50	KLC	TAL CAN
Total Recoverable	Prep	3005A			524742	05/02/22 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020		1	525061	05/03/22 19:53	DSH	TAL CAN
Total/NA	Analysis	9056A		1	525329	05/09/22 02:57	JMB	TAL CAN
Total/NA	Analysis	9056A		10	525329	05/09/22 03:18	JMB	TAL CAN
Total/NA	Analysis	SM 2540C		1	524713	05/02/22 11:18	KMS	TAL CAN

Client Sample ID: MW-104_20220427

Lab Sample ID: 240-165752-4

Date Collected: 04/27/22 12:25

Matrix: Water

Date Received: 04/29/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			524742	05/02/22 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010B		1	525195	05/04/22 19:54	KLC	TAL CAN
Total Recoverable	Prep	3005A			524742	05/02/22 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020		1	525061	05/03/22 19:55	DSH	TAL CAN
Total/NA	Analysis	9056A		1	525329	05/09/22 03:40	JMB	TAL CAN

Lab Chronicle

Client: TRC Environmental Corporation.
Job ID: 240-165752-1
Project/Site: CCR DTE Sibley Quarry

Client Sample ID: MW-104_20220427
Lab Sample ID: 240-165752-4
Date Collected: 04/27/22 12:25
Matrix: Water
Date Received: 04/29/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	9056A		10	525329	05/09/22 04:02	JMB	TAL CAN
Total/NA	Analysis	SM 2540C		1	524707	05/02/22 11:10	KMS	TAL CAN

Client Sample ID: MW-105_20220427
Lab Sample ID: 240-165752-5
Date Collected: 04/27/22 11:20
Matrix: Water
Date Received: 04/29/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			524742	05/02/22 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010B		1	525195	05/04/22 19:58	KLC	TAL CAN
Total Recoverable	Prep	3005A			524742	05/02/22 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020		1	525061	05/03/22 19:58	DSH	TAL CAN
Total/NA	Analysis	9056A		5	525329	05/09/22 04:23	JMB	TAL CAN
Total/NA	Analysis	9056A		50	525329	05/09/22 04:45	JMB	TAL CAN
Total/NA	Analysis	SM 2540C		1	524707	05/02/22 11:10	KMS	TAL CAN

Client Sample ID: MW-106_20220427
Lab Sample ID: 240-165752-6
Date Collected: 04/27/22 13:10
Matrix: Water
Date Received: 04/29/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			524742	05/02/22 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010B		1	525195	05/04/22 20:03	KLC	TAL CAN
Total Recoverable	Prep	3005A			524742	05/02/22 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020		1	525061	05/03/22 20:00	DSH	TAL CAN
Total/NA	Analysis	9056A		1	525329	05/09/22 05:07	JMB	TAL CAN
Total/NA	Analysis	9056A		10	525329	05/09/22 06:12	JMB	TAL CAN
Total/NA	Analysis	SM 2540C		1	524713	05/02/22 11:18	KMS	TAL CAN

Client Sample ID: MW-107_20220427
Lab Sample ID: 240-165752-7
Date Collected: 04/27/22 08:20
Matrix: Water
Date Received: 04/29/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			524742	05/02/22 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010B		1	525195	05/04/22 20:07	KLC	TAL CAN
Total Recoverable	Prep	3005A			524742	05/02/22 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020		1	525061	05/03/22 20:03	DSH	TAL CAN
Total/NA	Analysis	9056A		100	525338	05/07/22 03:33	JMB	TAL CAN
Total/NA	Analysis	SM 2540C		1	524713	05/02/22 11:18	KMS	TAL CAN

Lab Chronicle

Client: TRC Environmental Corporation.
Job ID: 240-165752-1
Project/Site: CCR DTE Sibley Quarry

Client Sample ID: MW-108A_20220427
Lab Sample ID: 240-165752-8

Date Collected: 04/27/22 15:15
Matrix: Water
Date Received: 04/29/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			524742	05/02/22 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010B		1	525195	05/04/22 20:12	KLC	TAL CAN
Total Recoverable	Prep	3005A			524742	05/02/22 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020		1	525061	05/03/22 20:05	DSH	TAL CAN
Total/NA	Analysis	9056A		2	525338	05/07/22 04:13	JMB	TAL CAN
Total/NA	Analysis	9056A		20	525338	05/07/22 04:33	JMB	TAL CAN
Total/NA	Analysis	SM 2540C		1	525094	05/04/22 09:57	MED	TAL CAN

Client Sample ID: QUARRY SUMP_20220427
Lab Sample ID: 240-165752-9

Date Collected: 04/27/22 14:30
Matrix: Water
Date Received: 04/29/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			524742	05/02/22 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010B		1	525195	05/04/22 20:16	KLC	TAL CAN
Total Recoverable	Prep	3005A			524742	05/02/22 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020		1	525061	05/03/22 20:08	DSH	TAL CAN
Total/NA	Analysis	9056A		5	525338	05/07/22 04:53	JMB	TAL CAN
Total/NA	Analysis	9056A		50	525338	05/07/22 05:14	JMB	TAL CAN
Total/NA	Analysis	SM 2540C		1	524713	05/02/22 11:18	KMS	TAL CAN

Client Sample ID: QUARRY DISCHARGE_20220427
Lab Sample ID: 240-165752-10

Date Collected: 04/27/22 11:45
Matrix: Water
Date Received: 04/29/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			524742	05/02/22 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010B		1	525195	05/04/22 20:21	KLC	TAL CAN
Total Recoverable	Prep	3005A			524742	05/02/22 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020		1	525061	05/03/22 20:10	DSH	TAL CAN
Total/NA	Analysis	9056A		5	525338	05/07/22 05:34	JMB	TAL CAN
Total/NA	Analysis	9056A		50	525338	05/07/22 05:54	JMB	TAL CAN
Total/NA	Analysis	SM 2540C		1	524707	05/02/22 11:10	KMS	TAL CAN

Client Sample ID: DUP-01_20220427
Lab Sample ID: 240-165752-11

Date Collected: 04/27/22 00:00
Matrix: Water
Date Received: 04/29/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			524742	05/02/22 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6010B		1	525195	05/04/22 20:25	KLC	TAL CAN
Total Recoverable	Prep	3005A			524742	05/02/22 14:00	MRL	TAL CAN
Total Recoverable	Analysis	6020		1	525061	05/03/22 20:13	DSH	TAL CAN
Total/NA	Analysis	9056A		100	525338	05/07/22 06:54	JMB	TAL CAN

Lab Chronicle

Client: TRC Environmental Corporation.
Project/Site: CCR DTE Sibley Quarry

Job ID: 240-165752-1

Client Sample ID: DUP-01_20220427

Lab Sample ID: 240-165752-11

Date Collected: 04/27/22 00:00

Matrix: Water

Date Received: 04/29/22 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	524713	05/02/22 11:18	KMS	TAL CAN

Laboratory References:

TAL CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Accreditation/Certification Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE Sibley Quarry

Job ID: 240-165752-1

Laboratory: Eurofins Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-27-23
Connecticut	State	PH-0590	12-31-23
Florida	NELAP	E87225	06-30-22
Georgia	State	4062	02-23-22 *
Illinois	NELAP	200004	07-31-22
Iowa	State	421	06-01-23
Kentucky (UST)	State	112225	02-27-23
Kentucky (WW)	State	KY98016	12-31-22
Minnesota	NELAP	039-999-348	12-31-22
Minnesota (Petrofund)	State	3506	08-01-23
New Jersey	NELAP	OH001	06-30-22
New York	NELAP	10975	04-01-23
Ohio	State	8303	02-23-23
Ohio VAP	State	CL0024	02-27-23
Oregon	NELAP	4062	02-27-23
Pennsylvania	NELAP	68-00340	08-31-22
Texas	NELAP	T104704517-22-16	08-31-22
Virginia	NELAP	11570	09-14-22
Washington	State	C971	01-12-23
West Virginia DEP	State	210	12-31-22

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Phone (330) 497-9396 Phone (330) 497-0772

0.1/01

Chain of Custody Record

MICHIGAN 190

eurofins | Environment Testing America

Client Information	Sampler: B. VALEN	Lab PM: Brooks, Kris M	Carrier Tracking No(s):	COC No: 240-93656-31882.1
Client Contact: Jacob Krenz	Phone:	E-Mail: Kris.Brooks@Eurofinset.com	State of Origin:	Page: Page 1 of 1
Company: TRC Environmental Corporation	PWSID:			Job #:
Address: 1540 Eisenhower Place	Due Date Requested:			
City: Ann Arbor	TAT Requested (days):			
State, Zip: MI, 48108-7080	Compliance Project: Δ Yes Δ No			
Phone: 313-971-7080(Tel) 313-971-9022(Fax)	PO #: 179970 - 2022			
Email: JKrenz@trccompanies.com	WO #: 370029.0002			
Project Name: CCR DTE Sibley Quarry	Project #: 24016805			
Site: Michigan	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2540C_Calcd TDS, 9056A_28D Chloride, Fluoride, Sulfate	6010B Bo, 6020 Ca, Fe	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	D		
MW-101_20220427	4.27.22	1030	G	Water	N	N	X	X		
MW-102_20220427		0940		Water			X	X		
MW-103_20220427		1400		Water			X	X		
MW-104_20220427		1225		Water			X	X		
MW-105_20220427		1120		Water			X	X		
MW-106_20220427		1310		Water			X	X		
MW-107_20220427		0820		Water			X	X		
MW-108A_20220427		1515		Water			X	X		
QUARRY SUMP_20220427		1430		Water			X	X		
QUARRY DISHCARGE_20220427		1145		Water			X	X		
DUP-01_20220427							X	X		

240-165752 Chain of Custody

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	B. VALEN	4.27.22 1800	TRC	TRC STOR	4.27.22 1800	TRC
2		4/28/22 1207	TRC		4/28/22 1210	ETA
3		4/28/22 1492	ETA		4-29-22 0800	ETA

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

Ver: 01/16/2019

5/11/2022

Eurofins TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login # : 165752

Client TRC Site Name

Cooler unpacked by: Justin H

Cooler Received on 4-29-22 Opened on 4-29-22

FedEx: 1st Grd Exp UPS FAS (Clipper) Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

TestAmerica Cooler # T4 Foam Box Client Cooler Box Other

Packing material used: (Bubble Wrap) Foam Plastic Bag None Other

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-13 (CF **0.0** °C) Observed Cooler Temp. 0.1 °C Corrected Cooler Temp. 0.1 °C
   IR GUN #IR-15 (CF **-0.7**°C) Observed Cooler Temp. °C Corrected Cooler Temp. °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1	(Yes)	No
-Were the seals on the outside of the cooler(s) signed & dated?	(Yes)	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	(No)
-Were tamper/custody seals intact and uncompromised?	(Yes)	No NA
3. Shippers' packing slip attached to the cooler(s)?	Yes	(No)
4. Did custody papers accompany the sample(s)?	(Yes)	No
5. Were the custody papers relinquished & signed in the appropriate place?	(Yes)	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	(Yes)	No
7. Did all bottles arrive in good condition (Unbroken)?	(Yes)	No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	(Yes)	No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y(N)), and sample type of grab/comp(Y/N)?		
10. Were correct bottle(s) used for the test(s) indicated?	(Yes)	No
11. Sufficient quantity received to perform indicated analyses?	(Yes)	No
12. Are these work share samples and all listed on the COC?	Yes	(No)
If yes, Questions 13-17 have been checked at the originating laboratory.		
13. Were all preserved sample(s) at the correct pH upon receipt?	(Yes)	No NA pH Strip Lot# **HC157842**
14. Were VOAs on the COC?	Yes	(No)
15. Were air bubbles >6 mm in any VOA vials? ● ← Larger than this.	Yes	No (NA)
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot #	Yes	(No)
17. Was a LL Hg or Me Hg trip blank present?	Yes	(No)

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM Date by via Verbal Voice Mail Other

Concerning

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

19. SAMPLE CONDITION

Sample(s) were received after the recommended holding time had expired.
Sample(s) were received in a broken container.
Sample(s) were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) were further preserved in the laboratory.
Time preserved: Preservative(s) added/Lot number(s):

VOA Sample Preservation - Date/Time VOAs Frozen:

WI-NC-099

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservative Added (mls)	Lot #
MW-101_20220427	240-165752-B-1	Plastic 500ml - with Nitric Acid	<2			
MW-102_20220427	240-165752-B-2	Plastic 500ml - with Nitric Acid	<2			
MW-103_20220427	240-165752-B-3	Plastic 500ml - with Nitric Acid	<2			
MW-104_20220427	240-165752-B-4	Plastic 500ml - with Nitric Acid	<2			
MW-105_20220427	240-165752-B-5	Plastic 500ml - with Nitric Acid	<2			
MW-106_20220427	240-165752-B-6	Plastic 500ml - with Nitric Acid	<2			
MW-107_20220427	240-165752-B-7	Plastic 500ml - with Nitric Acid	<2			
MW-108A_20220427	240-165752-B-8	Plastic 500ml - with Nitric Acid	<2			
QUARRY SUMP_20220427	240-165752-B-9	Plastic 500ml - with Nitric Acid	<2			
QUARRY DISCHARGE_20220427	240-165752-B-10	Plastic 500ml - with Nitric Acid	<2			
DWUP-01_20220427	240-165752-B-11	Plastic 500ml - with Nitric Acid	<2			

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ANALYTICAL REPORT

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Tel: (330)497-9396

Laboratory Job ID: 240-174234-1
Client Project/Site: CCR DTE Sibley Quarry
Revision: 1

For:
TRC Environmental Corporation.
1540 Eisenhower Place
Ann Arbor, Michigan 48108-7080

Attn: Mr. Vincent Buening

Patrick O'Meara

Authorized for release by:
10/31/2022 12:36:18 PM
Patrick O'Meara, Manager of Project Management
(330)966-5725
Patrick.O'Meara@et.eurofinsus.com

Designee for

Kris Brooks, Project Manager II
(330)966-9790
Kris.Brooks@et.eurofinsus.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Table of Contents

Definitions/Glossary

Client: TRC Environmental Corporation. Job ID: 240-174234-1
Project/Site: CCR DTE Sibley Quarry

Qualifiers

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 240-174234-1

Laboratory: Eurofins Canton

Narrative

Job Narrative
240-174234-1
Revised

Additional Comments
Revision 10/31/2022: Provided reanalysis result for fluoride on sample MW-107_20221004 (240-174234-7).

Receipt
The samples were received on 10/7/2022 9:30 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.8°C

Metals
No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry
Method 9056A_28D: The following samples were diluted due to the nature of the sample matrix: MW-107_20221004 (240-174234-7) and DUP-01_20221004 (240-174234-11). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Method Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE Sibley Quarry

Job ID: 240-174234-1

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	EET CAN
6020	Metals (ICP/MS)	SW846	EET CAN
9056A	Anions, Ion Chromatography	SW846	EET CAN
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CAN
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CAN

Protocol References:

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Sample Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE Sibley Quarry

Job ID: 240-174234-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-174234-1	MW-101_20221004	Water	10/04/22 11:55	10/07/22 09:30
240-174234-2	MW-102_2022101004	Water	10/04/22 11:13	10/07/22 09:30
240-174234-3	MW-103_20221005	Water	10/05/22 11:21	10/07/22 09:30
240-174234-4	MW-104_20221004	Water	10/04/22 13:48	10/07/22 09:30
240-174234-5	MW-105_20221004	Water	10/04/22 12:50	10/07/22 09:30
240-174234-6	MW-106_20221004	Water	10/04/22 14:48	10/07/22 09:30
240-174234-7	MW-107_20221004	Water	10/04/22 09:46	10/07/22 09:30
240-174234-8	MW-108A_20221005	Water	10/05/22 12:12	10/07/22 09:30
240-174234-9	QUARRY SUMP_20221005	Water	10/05/22 13:10	10/07/22 09:30
240-174234-10	QUARRY DISHCHARGE_20221004	Water	10/04/22 13:16	10/07/22 09:30
240-174234-11	DUP-01_20221004	Water	10/04/22 00:00	10/07/22 09:30

Detection Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE Sibley Quarry

Job ID: 240-174234-1

Client Sample ID: MW-101_20221004 — Lab Sample ID: 240-174234-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	300		100	57	ug/L	1		6010B	Total Recoverable
Calcium	210000		1000	1000	ug/L	1		6020	Total Recoverable
Chloride	190		1.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	2.0		0.050	0.050	mg/L	1		9056A	Total/NA
Sulfate	540		5.0	5.0	mg/L	5		9056A	Total/NA
Total Dissolved Solids	1300		20	20	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW-102_2022101004 — Lab Sample ID: 240-174234-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	130		100	57	ug/L	1		6010B	Total Recoverable
Calcium	270000		1000	1000	ug/L	1		6020	Total Recoverable
Iron	470		100	100	ug/L	1		6020	Total Recoverable
Chloride	230		10	10	mg/L	10		9056A	Total/NA
Fluoride	1.8		0.050	0.050	mg/L	1		9056A	Total/NA
Sulfate	620		10	10	mg/L	10		9056A	Total/NA
Total Dissolved Solids	1500		20	20	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW-103_20221005 — Lab Sample ID: 240-174234-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	720		100	57	ug/L	1		6010B	Total Recoverable
Calcium	560000		1000	1000	ug/L	1		6020	Total Recoverable
Chloride	140		1.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	1.9		0.050	0.050	mg/L	1		9056A	Total/NA
Sulfate	1900		20	20	mg/L	20		9056A	Total/NA
Total Dissolved Solids	3100		40	40	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW-104_20221004 — Lab Sample ID: 240-174234-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	700		100	57	ug/L	1		6010B	Total Recoverable
Calcium	460000		1000	1000	ug/L	1		6020	Total Recoverable
Iron	360		100	100	ug/L	1		6020	Total Recoverable
Chloride	220		10	10	mg/L	10		9056A	Total/NA
Fluoride	1.7		0.050	0.050	mg/L	1		9056A	Total/NA
Sulfate	1800		10	10	mg/L	10		9056A	Total/NA
Total Dissolved Solids	2600		40	40	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW-105_20221004 — Lab Sample ID: 240-174234-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2500		100	57	ug/L	1		6010B	Total Recoverable
Calcium	710000		1000	1000	ug/L	1		6020	Total Recoverable

This Detection Summary does not include radiochemical test results.

Eurofins Canton

Client Sample ID: MW-105_20221004 (Continued) — Lab Sample ID: 240-174234-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	2600		100	100	ug/L	1		6020	Total Recoverable
Chloride	3500		50	50	mg/L	50		9056A	Total/NA
Fluoride	1.3		0.25	0.25	mg/L	5		9056A	Total/NA
Sulfate	2100		50	50	mg/L	50		9056A	Total/NA
Total Dissolved Solids	8200		100	100	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW-106_20221004 — Lab Sample ID: 240-174234-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	770		100	57	ug/L	1		6010B	Total Recoverable
Calcium	560000		1000	1000	ug/L	1		6020	Total Recoverable
Iron	5400		100	100	ug/L	1		6020	Total Recoverable
Chloride	120		1.0	1.0	mg/L	1		9056A	Total/NA
Fluoride	1.8		0.050	0.050	mg/L	1		9056A	Total/NA
Sulfate	2000		10	10	mg/L	10		9056A	Total/NA
Total Dissolved Solids	2800		40	40	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW-107_20221004 — Lab Sample ID: 240-174234-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1400		100	57	ug/L	1		6010B	Total Recoverable
Calcium	1300000		1000	1000	ug/L	1		6020	Total Recoverable
Iron	590		100	100	ug/L	1		6020	Total Recoverable
Chloride	19000		100	100	mg/L	100		9056A	Total/NA
Sulfate	3300		100	100	mg/L	100		9056A	Total/NA
Total Dissolved Solids	31000		1000	1000	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW-108A_20221005 — Lab Sample ID: 240-174234-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1200		100	57	ug/L	1		6010B	Total Recoverable
Calcium	390000		1000	1000	ug/L	1		6020	Total Recoverable
Iron	630		100	100	ug/L	1		6020	Total Recoverable
Chloride	1700		20	20	mg/L	20		9056A	Total/NA
Fluoride	1.2		0.10	0.10	mg/L	2		9056A	Total/NA
Sulfate	1100		20	20	mg/L	20		9056A	Total/NA
Total Dissolved Solids	4100		50	50	mg/L	1		SM 2540C	Total/NA

Client Sample ID: QUARRY SUMP_20221005 — Lab Sample ID: 240-174234-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2600		100	57	ug/L	1		6010B	Total Recoverable
Calcium	730000		1000	1000	ug/L	1		6020	Total Recoverable
Chloride	3500		50	50	mg/L	50		9056A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: QUARRY SUMP_20221005 (Continued) — Lab Sample ID: 240-174234-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Fluoride	1.4		0.25	0.25	mg/L	5		9056A	Total/NA
Sulfate	2100		50	50	mg/L	50		9056A	Total/NA
Total Dissolved Solids	8400		100	100	mg/L	1		SM 2540C	Total/NA

Client Sample ID: QUARRY DISHCHARGE_20221004 — Lab Sample ID: 240-174234-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	2400		100	57	ug/L	1		6010B	Total Recoverable
Calcium	680000		1000	1000	ug/L	1		6020	Total Recoverable
Iron	220		100	100	ug/L	1		6020	Total Recoverable
Chloride	3600		50	50	mg/L	50		9056A	Total/NA
Fluoride	1.4		0.25	0.25	mg/L	5		9056A	Total/NA
Sulfate	2100		50	50	mg/L	50		9056A	Total/NA
Total Dissolved Solids	8500		100	100	mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP-01_20221004 — Lab Sample ID: 240-174234-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Boron	1400		100	57	ug/L	1		6010B	Total Recoverable
Calcium	1300000		1000	1000	ug/L	1		6020	Total Recoverable
Iron	720		100	100	ug/L	1		6020	Total Recoverable
Chloride	19000		100	100	mg/L	100		9056A	Total/NA
Sulfate	3200		100	100	mg/L	100		9056A	Total/NA
Total Dissolved Solids	30000		1000	1000	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Client: TRC Environmental Corporation.
Project/Site: CCR DTE Sibley Quarry

Job ID: 240-174234-1

Client Sample ID: MW-101_20221004
Date Collected: 10/04/22 11:55
Date Received: 10/07/22 09:30

Lab Sample ID: 240-174234-1
Matrix: Water

Method: SW846 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	300		100	57	ug/L		10/10/22 12:00	10/13/22 00:33	1

Method: SW846 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	210000		1000	1000	ug/L		10/10/22 12:00	10/11/22 12:56	1
Iron	100	U	100	100	ug/L		10/10/22 12:00	10/11/22 12:56	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (SW846 9056A)	190		1.0	1.0	mg/L			10/22/22 18:19	1
Fluoride (SW846 9056A)	2.0		0.050	0.050	mg/L			10/22/22 18:19	1
Sulfate (SW846 9056A)	540		5.0	5.0	mg/L			10/22/22 18:41	5
Total Dissolved Solids (SM 2540C)	1300		20	20	mg/L			10/10/22 09:47	1

Client: TRC Environmental Corporation.
Project/Site: CCR DTE Sibley Quarry

Job ID: 240-174234-1

Client Sample ID: MW-102_2022101004
Date Collected: 10/04/22 11:13
Date Received: 10/07/22 09:30

Lab Sample ID: 240-174234-2
Matrix: Water

Method: SW846 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	130		100	57	ug/L		10/10/22 12:00	10/13/22 00:54	1

Method: SW846 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	270000		1000	1000	ug/L		10/10/22 12:00	10/11/22 13:10	1
Iron	470		100	100	ug/L		10/10/22 12:00	10/11/22 13:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (SW846 9056A)	230		10	10	mg/L			10/22/22 20:08	10
Fluoride (SW846 9056A)	1.8		0.050	0.050	mg/L			10/22/22 19:46	1
Sulfate (SW846 9056A)	620		10	10	mg/L			10/22/22 20:08	10
Total Dissolved Solids (SM 2540C)	1500		20	20	mg/L			10/10/22 09:47	1

Client: TRC Environmental Corporation.
Project/Site: CCR DTE Sibley Quarry

Job ID: 240-174234-1

Client Sample ID: MW-103_20221005

Lab Sample ID: 240-174234-3

Date Collected: 10/05/22 11:21

Matrix: Water

Date Received: 10/07/22 09:30

Method: SW846 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	720		100	57	ug/L		10/10/22 12:00	10/13/22 00:58	1

Method: SW846 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	560000		1000	1000	ug/L		10/10/22 12:00	10/11/22 13:13	1
Iron	100	U	100	100	ug/L		10/10/22 12:00	10/11/22 13:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (SW846 9056A)	140		1.0	1.0	mg/L			10/22/22 20:30	1
Fluoride (SW846 9056A)	1.9		0.050	0.050	mg/L			10/22/22 20:30	1
Sulfate (SW846 9056A)	1900		20	20	mg/L			10/24/22 23:28	20
Total Dissolved Solids (SM 2540C)	3100		40	40	mg/L			10/11/22 09:58	1

Client: TRC Environmental Corporation.
Project/Site: CCR DTE Sibley Quarry

Job ID: 240-174234-1

Client Sample ID: MW-104_20221004

Lab Sample ID: 240-174234-4

Date Collected: 10/04/22 13:48

Matrix: Water

Date Received: 10/07/22 09:30

Method: SW846 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	700		100	57	ug/L		10/10/22 12:00	10/13/22 01:11	1

Method: SW846 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	460000		1000	1000	ug/L		10/10/22 12:00	10/11/22 13:20	1
Iron	360		100	100	ug/L		10/10/22 12:00	10/11/22 13:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (SW846 9056A)	220		10	10	mg/L			10/22/22 21:35	10
Fluoride (SW846 9056A)	1.7		0.050	0.050	mg/L			10/22/22 21:13	1
Sulfate (SW846 9056A)	1800		10	10	mg/L			10/22/22 21:35	10
Total Dissolved Solids (SM 2540C)	2600		40	40	mg/L			10/10/22 09:47	1

Client: TRC Environmental Corporation.
Project/Site: CCR DTE Sibley Quarry

Job ID: 240-174234-1

Client Sample ID: MW-105_20221004

Lab Sample ID: 240-174234-5

Date Collected: 10/04/22 12:50

Matrix: Water

Date Received: 10/07/22 09:30

Method: SW846 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2500		100	57	ug/L		10/10/22 12:00	10/13/22 01:15	1

Method: SW846 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	710000		1000	1000	ug/L		10/10/22 12:00	10/11/22 13:23	1
Iron	2600		100	100	ug/L		10/10/22 12:00	10/11/22 13:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (SW846 9056A)	3500		50	50	mg/L			10/22/22 22:18	50
Fluoride (SW846 9056A)	1.3		0.25	0.25	mg/L			10/22/22 21:56	5
Sulfate (SW846 9056A)	2100		50	50	mg/L			10/22/22 22:18	50
Total Dissolved Solids (SM 2540C)	8200		100	100	mg/L			10/10/22 09:47	1

Client Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE Sibley Quarry

Job ID: 240-174234-1

Client Sample ID: MW-106_20221004

Lab Sample ID: 240-174234-6

Date Collected: 10/04/22 14:48

Matrix: Water

Date Received: 10/07/22 09:30

Method: SW846 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	770		100	57	ug/L		10/10/22 12:00	10/13/22 01:20	1

Method: SW846 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	560000		1000	1000	ug/L		10/10/22 12:00	10/11/22 13:25	1
Iron	5400		100	100	ug/L		10/10/22 12:00	10/11/22 13:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (SW846 9056A)	120		1.0	1.0	mg/L			10/22/22 22:40	1
Fluoride (SW846 9056A)	1.8		0.050	0.050	mg/L			10/22/22 22:40	1
Sulfate (SW846 9056A)	2000		10	10	mg/L			10/22/22 23:01	10
Total Dissolved Solids (SM 2540C)	2800		40	40	mg/L			10/10/22 09:47	1

Client Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE Sibley Quarry

Job ID: 240-174234-1

Client Sample ID: MW-107_20221004

Date Collected: 10/04/22 09:46
Date Received: 10/07/22 09:30

Lab Sample ID: 240-174234-7

Matrix: Water

Method: SW846 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1400		100	57	ug/L		10/10/22 12:00	10/13/22 01:24	1

Method: SW846 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1300000		1000	1000	ug/L		10/10/22 12:00	10/11/22 13:28	1
Iron	590		100	100	ug/L		10/10/22 12:00	10/11/22 13:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (SW846 9056A)	19000		100	100	mg/L			10/23/22 00:07	100
Fluoride (SW846 9056A)	2.5	U	2.5	2.5	mg/L			10/29/22 18:27	50
Sulfate (SW846 9056A)	3300		100	100	mg/L			10/23/22 00:07	100
Total Dissolved Solids (SM 2540C)	31000		1000	1000	mg/L			10/10/22 09:47	1

Client: TRC Environmental Corporation.
Project/Site: CCR DTE Sibley Quarry

Job ID: 240-174234-1

Client Sample ID: MW-108A_20221005

Lab Sample ID: 240-174234-8

Date Collected: 10/05/22 12:12

Matrix: Water

Date Received: 10/07/22 09:30

Method: SW846 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1200		100	57	ug/L		10/10/22 12:00	10/13/22 01:28	1

Method: SW846 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	390000		1000	1000	ug/L		10/10/22 12:00	10/11/22 13:30	1
Iron	630		100	100	ug/L		10/10/22 12:00	10/11/22 13:30	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (SW846 9056A)	1700		20	20	mg/L			10/23/22 01:12	20
Fluoride (SW846 9056A)	1.2		0.10	0.10	mg/L			10/23/22 00:50	2
Sulfate (SW846 9056A)	1100		20	20	mg/L			10/23/22 01:12	20
Total Dissolved Solids (SM 2540C)	4100		50	50	mg/L			10/11/22 09:58	1

Client Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE Sibley Quarry

Job ID: 240-174234-1

Client Sample ID: QUARRY SUMP_20221005

Lab Sample ID: 240-174234-9

Date Collected: 10/05/22 13:10

Matrix: Water

Date Received: 10/07/22 09:30

Method: SW846 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2600		100	57	ug/L		10/10/22 12:00	10/13/22 01:33	1

Method: SW846 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	730000		1000	1000	ug/L		10/10/22 12:00	10/11/22 13:33	1
Iron	100	U	100	100	ug/L		10/10/22 12:00	10/11/22 13:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (SW846 9056A)	3500		50	50	mg/L			10/22/22 13:23	50
Fluoride (SW846 9056A)	1.4		0.25	0.25	mg/L			10/22/22 13:03	5
Sulfate (SW846 9056A)	2100		50	50	mg/L			10/22/22 13:23	50
Total Dissolved Solids (SM 2540C)	8400		100	100	mg/L			10/11/22 09:58	1

Client: TRC Environmental Corporation.
Project/Site: CCR DTE Sibley Quarry

Job ID: 240-174234-1

Client Sample ID: QUARRY DISHCHARGE_20221004

Lab Sample ID: 240-174234-10

Date Collected: 10/04/22 13:16

Matrix: Water

Date Received: 10/07/22 09:30

Method: SW846 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2400		100	57	ug/L		10/10/22 12:00	10/13/22 01:38	1

Method: SW846 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	680000		1000	1000	ug/L		10/10/22 12:00	10/11/22 13:35	1
Iron	220		100	100	ug/L		10/10/22 12:00	10/11/22 13:35	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (SW846 9056A)	3600		50	50	mg/L			10/22/22 14:03	50
Fluoride (SW846 9056A)	1.4		0.25	0.25	mg/L			10/22/22 13:43	5
Sulfate (SW846 9056A)	2100		50	50	mg/L			10/22/22 14:03	50
Total Dissolved Solids (SM 2540C)	8500		100	100	mg/L			10/10/22 09:47	1

Client Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE Sibley Quarry

Job ID: 240-174234-1

Client Sample ID: DUP-01_20221004

Lab Sample ID: 240-174234-11

Date Collected: 10/04/22 00:00

Matrix: Water

Date Received: 10/07/22 09:30

Method: SW846 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1400		100	57	ug/L		10/10/22 12:00	10/13/22 01:42	1

Method: SW846 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1300000		1000	1000	ug/L		10/10/22 12:00	10/11/22 13:38	1
Iron	720		100	100	ug/L		10/10/22 12:00	10/11/22 13:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (SW846 9056A)	19000		100	100	mg/L			10/25/22 03:10	100
Fluoride (SW846 9056A)	5.0	U	5.0	5.0	mg/L			10/25/22 03:10	100
Sulfate (SW846 9056A)	3200		100	100	mg/L			10/25/22 03:10	100
Total Dissolved Solids (SM 2540C)	30000		1000	1000	mg/L			10/10/22 09:47	1

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 240-546353/1-A
Matrix: Water
Analysis Batch: 546730

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 546353

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	57	ug/L		10/10/22 12:00	10/13/22 00:25	1

Lab Sample ID: LCS 240-546353/2-A
Matrix: Water
Analysis Batch: 546730

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 546353

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1000	1010		ug/L		101	80 - 120

Lab Sample ID: 240-174234-1 MS
Matrix: Water
Analysis Batch: 546730

Client Sample ID: MW-101_20221004
Prep Type: Total Recoverable
Prep Batch: 546353

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	300		1000	1370		ug/L		107	75 - 125

Lab Sample ID: 240-174234-1 MSD
Matrix: Water
Analysis Batch: 546730

Client Sample ID: MW-101_20221004
Prep Type: Total Recoverable
Prep Batch: 546353

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Boron	300		1000	1370		ug/L		108	75 - 125	0	20

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 240-546353/1-A
Matrix: Water
Analysis Batch: 546658

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 546353

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	1000	U	1000	1000	ug/L		10/10/22 12:00	10/11/22 12:51	1
Iron	100	U	100	100	ug/L		10/10/22 12:00	10/11/22 12:51	1

Lab Sample ID: LCS 240-546353/3-A
Matrix: Water
Analysis Batch: 546658

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 546353

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	25000	23600		ug/L		94	80 - 120
Iron	5000	4620		ug/L		92	80 - 120

Lab Sample ID: 240-174234-1 MS
Matrix: Water
Analysis Batch: 546658

Client Sample ID: MW-101_20221004
Prep Type: Total Recoverable
Prep Batch: 546353

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Calcium	210000		25000	236000	4	ug/L		92	75 - 125
Iron	100	U	5000	5120		ug/L		102	75 - 125

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 240-174234-1 MSD
Matrix: Water
Analysis Batch: 546658

Client Sample ID: MW-101_20221004
Prep Type: Total Recoverable
Prep Batch: 546353

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Calcium	210000		25000	236000	4	ug/L		89	75 - 125	0	20
Iron	100	U	5000	5220		ug/L		104	75 - 125	2	20

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 240-548229/3
Matrix: Water
Analysis Batch: 548229

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	U	1.0	1.0	mg/L			10/22/22 11:05	1
Fluoride	0.050	U	0.050	0.050	mg/L			10/22/22 11:05	1
Sulfate	1.0	U	1.0	1.0	mg/L			10/22/22 11:05	1

Lab Sample ID: LCS 240-548229/4
Matrix: Water
Analysis Batch: 548229

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	50.6		mg/L		101	90 - 110
Fluoride	2.50	2.66		mg/L		106	90 - 110
Sulfate	50.0	52.8		mg/L		106	90 - 110

Lab Sample ID: MB 240-548244/3
Matrix: Water
Analysis Batch: 548244

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	U	1.0	1.0	mg/L			10/22/22 11:02	1
Fluoride	0.050	U	0.050	0.050	mg/L			10/22/22 11:02	1
Sulfate	1.0	U	1.0	1.0	mg/L			10/22/22 11:02	1

Lab Sample ID: LCS 240-548244/4
Matrix: Water
Analysis Batch: 548244

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	49.7		mg/L		99	90 - 110
Fluoride	2.50	2.56		mg/L		103	90 - 110
Sulfate	50.0	51.3		mg/L		103	90 - 110

Lab Sample ID: MB 240-548495/3
Matrix: Water
Analysis Batch: 548495

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	U	1.0	1.0	mg/L			10/24/22 18:47	1
Fluoride	0.050	U	0.050	0.050	mg/L			10/24/22 18:47	1
Sulfate	1.0	U	1.0	1.0	mg/L			10/24/22 18:47	1

Method: 9056A - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 240-548495/4
Matrix: Water
Analysis Batch: 548495

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	49.3		mg/L		99	90 - 110
Fluoride	2.50	2.56		mg/L		102	90 - 110
Sulfate	50.0	50.8		mg/L		102	90 - 110

Lab Sample ID: MB 240-549409/3
Matrix: Water
Analysis Batch: 549409

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	U	1.0	1.0	mg/L			10/29/22 16:17	1
Fluoride	0.050	U	0.050	0.050	mg/L			10/29/22 16:17	1
Sulfate	1.0	U	1.0	1.0	mg/L			10/29/22 16:17	1

Lab Sample ID: LCS 240-549409/4
Matrix: Water
Analysis Batch: 549409

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chloride	50.0	51.0		mg/L		102	90 - 110
Fluoride	2.50	2.68		mg/L		107	90 - 110
Sulfate	50.0	53.2		mg/L		106	90 - 110

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 240-546309/1
Matrix: Water
Analysis Batch: 546309

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	10	U	10	10	mg/L			10/10/22 09:47	1

Lab Sample ID: LCS 240-546309/2
Matrix: Water
Analysis Batch: 546309

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	493	469		mg/L		95	80 - 120

Lab Sample ID: 240-174234-6 DU
Matrix: Water
Analysis Batch: 546309

Client Sample ID: MW-106_20221004
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	2800		2910		mg/L		3	20

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: MB 240-546508/1
Matrix: Water
Analysis Batch: 546508

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	10	U	10	10	mg/L			10/11/22 09:58	1

Lab Sample ID: LCS 240-546508/2
Matrix: Water
Analysis Batch: 546508

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Dissolved Solids	493	471		mg/L		96	80 - 120

Metals

Prep Batch: 546353

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174234-1	MW-101_20221004	Total Recoverable	Water	3005A	
240-174234-2	MW-102_2022101004	Total Recoverable	Water	3005A	
240-174234-3	MW-103_20221005	Total Recoverable	Water	3005A	
240-174234-4	MW-104_20221004	Total Recoverable	Water	3005A	
240-174234-5	MW-105_20221004	Total Recoverable	Water	3005A	
240-174234-6	MW-106_20221004	Total Recoverable	Water	3005A	
240-174234-7	MW-107_20221004	Total Recoverable	Water	3005A	
240-174234-8	MW-108A_20221005	Total Recoverable	Water	3005A	
240-174234-9	QUARRY SUMP_20221005	Total Recoverable	Water	3005A	
240-174234-10	QUARRY DISHCHARGE_20221004	Total Recoverable	Water	3005A	
240-174234-11	DUP-01_20221004	Total Recoverable	Water	3005A	
MB 240-546353/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-546353/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-546353/3-A	Lab Control Sample	Total Recoverable	Water	3005A	
240-174234-1 MS	MW-101_20221004	Total Recoverable	Water	3005A	
240-174234-1 MS	MW-101_20221004	Total Recoverable	Water	3005A	
240-174234-1 MSD	MW-101_20221004	Total Recoverable	Water	3005A	
240-174234-1 MSD	MW-101_20221004	Total Recoverable	Water	3005A	

Analysis Batch: 546658

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174234-1	MW-101_20221004	Total Recoverable	Water	6020	546353
240-174234-2	MW-102_2022101004	Total Recoverable	Water	6020	546353
240-174234-3	MW-103_20221005	Total Recoverable	Water	6020	546353
240-174234-4	MW-104_20221004	Total Recoverable	Water	6020	546353
240-174234-5	MW-105_20221004	Total Recoverable	Water	6020	546353
240-174234-6	MW-106_20221004	Total Recoverable	Water	6020	546353
240-174234-7	MW-107_20221004	Total Recoverable	Water	6020	546353
240-174234-8	MW-108A_20221005	Total Recoverable	Water	6020	546353
240-174234-9	QUARRY SUMP_20221005	Total Recoverable	Water	6020	546353
240-174234-10	QUARRY DISHCHARGE_20221004	Total Recoverable	Water	6020	546353
240-174234-11	DUP-01_20221004	Total Recoverable	Water	6020	546353
MB 240-546353/1-A	Method Blank	Total Recoverable	Water	6020	546353
LCS 240-546353/3-A	Lab Control Sample	Total Recoverable	Water	6020	546353
240-174234-1 MS	MW-101_20221004	Total Recoverable	Water	6020	546353
240-174234-1 MSD	MW-101_20221004	Total Recoverable	Water	6020	546353

Analysis Batch: 546730

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174234-1	MW-101_20221004	Total Recoverable	Water	6010B	546353
240-174234-2	MW-102_2022101004	Total Recoverable	Water	6010B	546353
240-174234-3	MW-103_20221005	Total Recoverable	Water	6010B	546353
240-174234-4	MW-104_20221004	Total Recoverable	Water	6010B	546353
240-174234-5	MW-105_20221004	Total Recoverable	Water	6010B	546353
240-174234-6	MW-106_20221004	Total Recoverable	Water	6010B	546353
240-174234-7	MW-107_20221004	Total Recoverable	Water	6010B	546353
240-174234-8	MW-108A_20221005	Total Recoverable	Water	6010B	546353
240-174234-9	QUARRY SUMP_20221005	Total Recoverable	Water	6010B	546353
240-174234-10	QUARRY DISHCHARGE_20221004	Total Recoverable	Water	6010B	546353
240-174234-11	DUP-01_20221004	Total Recoverable	Water	6010B	546353
MB 240-546353/1-A	Method Blank	Total Recoverable	Water	6010B	546353

Metals (Continued)

Analysis Batch: 546730 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-546353/2-A	Lab Control Sample	Total Recoverable	Water	6010B	546353
240-174234-1 MS	MW-101_20221004	Total Recoverable	Water	6010B	546353
240-174234-1 MSD	MW-101_20221004	Total Recoverable	Water	6010B	546353

General Chemistry

Analysis Batch: 546309

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174234-1	MW-101_20221004	Total/NA	Water	SM 2540C	
240-174234-2	MW-102_2022101004	Total/NA	Water	SM 2540C	
240-174234-4	MW-104_20221004	Total/NA	Water	SM 2540C	
240-174234-5	MW-105_20221004	Total/NA	Water	SM 2540C	
240-174234-6	MW-106_20221004	Total/NA	Water	SM 2540C	
240-174234-7	MW-107_20221004	Total/NA	Water	SM 2540C	
240-174234-10	QUARRY DISHCHARGE_20221004	Total/NA	Water	SM 2540C	
240-174234-11	DUP-01_20221004	Total/NA	Water	SM 2540C	
MB 240-546309/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-546309/2	Lab Control Sample	Total/NA	Water	SM 2540C	
240-174234-6 DU	MW-106_20221004	Total/NA	Water	SM 2540C	

Analysis Batch: 546508

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174234-3	MW-103_20221005	Total/NA	Water	SM 2540C	
240-174234-8	MW-108A_20221005	Total/NA	Water	SM 2540C	
240-174234-9	QUARRY SUMP_20221005	Total/NA	Water	SM 2540C	
MB 240-546508/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-546508/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 548229

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174234-1	MW-101_20221004	Total/NA	Water	9056A	
240-174234-1	MW-101_20221004	Total/NA	Water	9056A	
240-174234-2	MW-102_2022101004	Total/NA	Water	9056A	
240-174234-2	MW-102_2022101004	Total/NA	Water	9056A	
240-174234-3	MW-103_20221005	Total/NA	Water	9056A	
240-174234-4	MW-104_20221004	Total/NA	Water	9056A	
240-174234-4	MW-104_20221004	Total/NA	Water	9056A	
240-174234-5	MW-105_20221004	Total/NA	Water	9056A	
240-174234-5	MW-105_20221004	Total/NA	Water	9056A	
240-174234-6	MW-106_20221004	Total/NA	Water	9056A	
240-174234-6	MW-106_20221004	Total/NA	Water	9056A	
240-174234-7	MW-107_20221004	Total/NA	Water	9056A	
240-174234-8	MW-108A_20221005	Total/NA	Water	9056A	
240-174234-8	MW-108A_20221005	Total/NA	Water	9056A	
MB 240-548229/3	Method Blank	Total/NA	Water	9056A	
LCS 240-548229/4	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 548244

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174234-9	QUARRY SUMP_20221005	Total/NA	Water	9056A	
240-174234-9	QUARRY SUMP_20221005	Total/NA	Water	9056A	

General Chemistry (Continued)

Analysis Batch: 548244 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174234-10	QUARRY DISHCHARGE_20221004	Total/NA	Water	9056A	
240-174234-10	QUARRY DISHCHARGE_20221004	Total/NA	Water	9056A	
MB 240-548244/3	Method Blank	Total/NA	Water	9056A	
LCS 240-548244/4	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 548495

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174234-3	MW-103_20221005	Total/NA	Water	9056A	
240-174234-11	DUP-01_20221004	Total/NA	Water	9056A	
MB 240-548495/3	Method Blank	Total/NA	Water	9056A	
LCS 240-548495/4	Lab Control Sample	Total/NA	Water	9056A	

Analysis Batch: 549409

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-174234-7	MW-107_20221004	Total/NA	Water	9056A	
MB 240-549409/3	Method Blank	Total/NA	Water	9056A	
LCS 240-549409/4	Lab Control Sample	Total/NA	Water	9056A	

Lab Chronicle

Client: TRC Environmental Corporation.
Project/Site: CCR DTE Sibley Quarry

Job ID: 240-174234-1

Client Sample ID: MW-101_20221004

Lab Sample ID: 240-174234-1

Date Collected: 10/04/22 11:55

Matrix: Water

Date Received: 10/07/22 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			546353	SHB	EET CAN	10/10/22 12:00
Total Recoverable	Analysis	6010B		1	546730	KLC	EET CAN	10/13/22 00:33
Total Recoverable	Prep	3005A			546353	SHB	EET CAN	10/10/22 12:00
Total Recoverable	Analysis	6020		1	546658	AJC	EET CAN	10/11/22 12:56
Total/NA	Analysis	9056A		1	548229	KMS	EET CAN	10/22/22 18:19
Total/NA	Analysis	9056A		5	548229	KMS	EET CAN	10/22/22 18:41
Total/NA	Analysis	SM 2540C		1	546309	MS	EET CAN	10/10/22 09:47

Client Sample ID: MW-102_2022101004

Lab Sample ID: 240-174234-2

Date Collected: 10/04/22 11:13

Matrix: Water

Date Received: 10/07/22 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			546353	SHB	EET CAN	10/10/22 12:00
Total Recoverable	Analysis	6010B		1	546730	KLC	EET CAN	10/13/22 00:54
Total Recoverable	Prep	3005A			546353	SHB	EET CAN	10/10/22 12:00
Total Recoverable	Analysis	6020		1	546658	AJC	EET CAN	10/11/22 13:10
Total/NA	Analysis	9056A		1	548229	KMS	EET CAN	10/22/22 19:46
Total/NA	Analysis	9056A		10	548229	KMS	EET CAN	10/22/22 20:08
Total/NA	Analysis	SM 2540C		1	546309	MS	EET CAN	10/10/22 09:47

Client Sample ID: MW-103_20221005

Lab Sample ID: 240-174234-3

Date Collected: 10/05/22 11:21

Matrix: Water

Date Received: 10/07/22 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			546353	SHB	EET CAN	10/10/22 12:00
Total Recoverable	Analysis	6010B		1	546730	KLC	EET CAN	10/13/22 00:58
Total Recoverable	Prep	3005A			546353	SHB	EET CAN	10/10/22 12:00
Total Recoverable	Analysis	6020		1	546658	AJC	EET CAN	10/11/22 13:13
Total/NA	Analysis	9056A		1	548229	KMS	EET CAN	10/22/22 20:30
Total/NA	Analysis	9056A		20	548495	JWW	EET CAN	10/24/22 23:28
Total/NA	Analysis	SM 2540C		1	546508	MS	EET CAN	10/11/22 09:58

Client Sample ID: MW-104_20221004

Lab Sample ID: 240-174234-4

Date Collected: 10/04/22 13:48

Matrix: Water

Date Received: 10/07/22 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			546353	SHB	EET CAN	10/10/22 12:00
Total Recoverable	Analysis	6010B		1	546730	KLC	EET CAN	10/13/22 01:11
Total Recoverable	Prep	3005A			546353	SHB	EET CAN	10/10/22 12:00
Total Recoverable	Analysis	6020		1	546658	AJC	EET CAN	10/11/22 13:20
Total/NA	Analysis	9056A		1	548229	KMS	EET CAN	10/22/22 21:13

Lab Chronicle

Client: TRC Environmental Corporation.
Project/Site: CCR DTE Sibley Quarry

Job ID: 240-174234-1

Client Sample ID: MW-104_20221004

Date Collected: 10/04/22 13:48
Date Received: 10/07/22 09:30

Lab Sample ID: 240-174234-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		10	548229	KMS	EET CAN	10/22/22 21:35
Total/NA	Analysis	SM 2540C		1	546309	MS	EET CAN	10/10/22 09:47

Client Sample ID: MW-105_20221004

Date Collected: 10/04/22 12:50
Date Received: 10/07/22 09:30

Lab Sample ID: 240-174234-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			546353	SHB	EET CAN	10/10/22 12:00
Total Recoverable	Analysis	6010B		1	546730	KLC	EET CAN	10/13/22 01:15
Total Recoverable	Prep	3005A			546353	SHB	EET CAN	10/10/22 12:00
Total Recoverable	Analysis	6020		1	546658	AJC	EET CAN	10/11/22 13:23
Total/NA	Analysis	9056A		5	548229	KMS	EET CAN	10/22/22 21:56
Total/NA	Analysis	9056A		50	548229	KMS	EET CAN	10/22/22 22:18
Total/NA	Analysis	SM 2540C		1	546309	MS	EET CAN	10/10/22 09:47

Client Sample ID: MW-106_20221004

Date Collected: 10/04/22 14:48
Date Received: 10/07/22 09:30

Lab Sample ID: 240-174234-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			546353	SHB	EET CAN	10/10/22 12:00
Total Recoverable	Analysis	6010B		1	546730	KLC	EET CAN	10/13/22 01:20
Total Recoverable	Prep	3005A			546353	SHB	EET CAN	10/10/22 12:00
Total Recoverable	Analysis	6020		1	546658	AJC	EET CAN	10/11/22 13:25
Total/NA	Analysis	9056A		1	548229	KMS	EET CAN	10/22/22 22:40
Total/NA	Analysis	9056A		10	548229	KMS	EET CAN	10/22/22 23:01
Total/NA	Analysis	SM 2540C		1	546309	MS	EET CAN	10/10/22 09:47

Client Sample ID: MW-107_20221004

Date Collected: 10/04/22 09:46
Date Received: 10/07/22 09:30

Lab Sample ID: 240-174234-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			546353	SHB	EET CAN	10/10/22 12:00
Total Recoverable	Analysis	6010B		1	546730	KLC	EET CAN	10/13/22 01:24
Total Recoverable	Prep	3005A			546353	SHB	EET CAN	10/10/22 12:00
Total Recoverable	Analysis	6020		1	546658	AJC	EET CAN	10/11/22 13:28
Total/NA	Analysis	9056A		100	548229	KMS	EET CAN	10/23/22 00:07
Total/NA	Analysis	9056A		50	549409	JWW	EET CAN	10/29/22 18:27
Total/NA	Analysis	SM 2540C		1	546309	MS	EET CAN	10/10/22 09:47

Lab Chronicle

Client: TRC Environmental Corporation.
Project/Site: CCR DTE Sibley Quarry

Job ID: 240-174234-1

Client Sample ID: MW-108A_20221005

Lab Sample ID: 240-174234-8

Date Collected: 10/05/22 12:12
Matrix: Water
Date Received: 10/07/22 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			546353	SHB	EET CAN	10/10/22 12:00
Total Recoverable	Analysis	6010B		1	546730	KLC	EET CAN	10/13/22 01:28
Total Recoverable	Prep	3005A			546353	SHB	EET CAN	10/10/22 12:00
Total Recoverable	Analysis	6020		1	546658	AJC	EET CAN	10/11/22 13:30
Total/NA	Analysis	9056A		2	548229	KMS	EET CAN	10/23/22 00:50
Total/NA	Analysis	9056A		20	548229	KMS	EET CAN	10/23/22 01:12
Total/NA	Analysis	SM 2540C		1	546508	MS	EET CAN	10/11/22 09:58

Client Sample ID: QUARRY SUMP_20221005

Lab Sample ID: 240-174234-9

Date Collected: 10/05/22 13:10
Matrix: Water
Date Received: 10/07/22 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			546353	SHB	EET CAN	10/10/22 12:00
Total Recoverable	Analysis	6010B		1	546730	KLC	EET CAN	10/13/22 01:33
Total Recoverable	Prep	3005A			546353	SHB	EET CAN	10/10/22 12:00
Total Recoverable	Analysis	6020		1	546658	AJC	EET CAN	10/11/22 13:33
Total/NA	Analysis	9056A		5	548244	KMS	EET CAN	10/22/22 13:03
Total/NA	Analysis	9056A		50	548244	KMS	EET CAN	10/22/22 13:23
Total/NA	Analysis	SM 2540C		1	546508	MS	EET CAN	10/11/22 09:58

Client Sample ID: QUARRY DISHCHARGE_20221004

Lab Sample ID: 240-174234-10

Date Collected: 10/04/22 13:16
Matrix: Water
Date Received: 10/07/22 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			546353	SHB	EET CAN	10/10/22 12:00
Total Recoverable	Analysis	6010B		1	546730	KLC	EET CAN	10/13/22 01:38
Total Recoverable	Prep	3005A			546353	SHB	EET CAN	10/10/22 12:00
Total Recoverable	Analysis	6020		1	546658	AJC	EET CAN	10/11/22 13:35
Total/NA	Analysis	9056A		5	548244	KMS	EET CAN	10/22/22 13:43
Total/NA	Analysis	9056A		50	548244	KMS	EET CAN	10/22/22 14:03
Total/NA	Analysis	SM 2540C		1	546309	MS	EET CAN	10/10/22 09:47

Client Sample ID: DUP-01_20221004

Lab Sample ID: 240-174234-11

Date Collected: 10/04/22 00:00
Matrix: Water
Date Received: 10/07/22 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			546353	SHB	EET CAN	10/10/22 12:00
Total Recoverable	Analysis	6010B		1	546730	KLC	EET CAN	10/13/22 01:42
Total Recoverable	Prep	3005A			546353	SHB	EET CAN	10/10/22 12:00
Total Recoverable	Analysis	6020		1	546658	AJC	EET CAN	10/11/22 13:38
Total/NA	Analysis	9056A		100	548495	JWW	EET CAN	10/25/22 03:10

Lab Chronicle

Client: TRC Environmental Corporation.
Project/Site: CCR DTE Sibley Quarry

Job ID: 240-174234-1

Client Sample ID: DUP-01_20221004

Date Collected: 10/04/22 00:00
Date Received: 10/07/22 09:30

Lab Sample ID: 240-174234-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	SM 2540C		1	546309	MS	EET CAN	10/10/22 09:47

Laboratory References:

EET CAN = Eurofins Canton, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Accreditation/Certification Summary

Client: TRC Environmental Corporation.
Job ID: 240-174234-1
Project/Site: CCR DTE Sibley Quarry

Laboratory: Eurofins Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-27-23
Connecticut	State	PH-0590	12-31-23
Florida	NELAP	E87225	06-30-23
Georgia	State	4062	02-27-23
Illinois	NELAP	200004	07-31-23
Iowa	State	421	06-01-23
Kentucky (UST)	State	112225	02-27-23
Kentucky (WW)	State	KY98016	12-31-22
Minnesota	NELAP	039-999-348	12-31-22
Minnesota (Petrofund)	State	3506	08-01-23
New Jersey	NELAP	OH001	06-30-23
New York	NELAP	10975	04-01-23
Ohio	State	8303	02-27-23
Ohio VAP	State	CL0024	02-27-23
Oregon	NELAP	4062	02-27-23
Pennsylvania	NELAP	68-00340	08-31-23
Texas	NELAP	T104704517-22-17	08-31-23
Virginia	NELAP	460175	09-14-23
Washington	State	C971	01-12-23
West Virginia DEP	State	210	12-31-22

Eurofins Canton
180 S. Van Buren Avenue
Barberton, OH 44203
Phone: 330-497-9396 Fax: 330-497-0772

MICHIGAN 190

Chain of Custody Record

2.1|2.8 MICHIGAN 190

eurofins | Environment Testing America

Client Information	Sampler: Henry Schmaltz	Lab PM: Brooks, Kris M	Carrier Tracking No(s):	COC No: 240-99746-31882.1
Client Contact: ~~Jacob Krenz~~ Ki CRATSENBURG	Phone:	E-Mail: Kris.Brooks@et.eurofinsus.com	State of Origin:	Page: Page 1 of 2
Company: TRC Environmental Corporation	PWSID:			Job #:
Address: 1540 Eisenhower Place	Due Date Requested:			
City: Ann Arbor	TAT Requested (days): Standard			
State, Zip: MI, 48108-7080	Compliance Project: Δ Yes Δ No			
Phone: 313-971-7080(Tel) 313-971-9022(Fax)	PO #: 179970 - 2022			
Email: JKrenz@trccompanies.com	WO #: 370029.0002			
Project Name: CCR DTE Sibley Quarry	Project #: 24016805			
Site: Michigan	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify), Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=wasteoil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2540C_Calcd - TDS	6010B, 6020	9056A_28D - Chloride, Fluoride and Sulfate	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	D	N		
MW-101 - 20221004	10/4/22	1155	G	Water	N	N	X	X	X		
MW-102 - 20221004	10/4/22	1113	G	Water	N	N	X	X	X		
MW-103 - 20221005	10/5/22	1121	G	Water	N	N	X	X	X		
MW-104 - 20221004	10/4/22	1348	G	Water	N	N	X	X	X		
MW-105 - 20221004	10/4/22	1250	G	Water	N	N	X	X	X		
MW-106 - 20221004	10/4/22	1448	G	Water	N	N	X	X	X		
MW-107 - 20221004	10/4/22	946	G	Water	N	N	X	X	X		
MW-108A - 20221005	10/5/22	1212	G	Water	N	N	X	X	X		
QUARRY SUMP - 20221005	10/5/22	1310	G	Water	N	N	X	X	X		
QUARRY DISHCARGE - 20221004	10/4/22	1316	G	Water	N	N	X	X	X		
DUP-01 - 20221004	10/4/22	—	G	Water	N	N	X	X	X		

240-174234 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Henry Schmaltz	10/5/22 1530		Kelly Mar	10/6/22 1240	EEN
Kelly Mar	10/6/22 1240	EENA	Courtney Boyer	10-7-22 930	BETX

Custody Seals Intact: Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

Eurofins - Canton Sample Receipt Form/Narrative Login # : 174234
Barberton Facility

Client TRC Site Name

Cooler Received on 10-7-22 Opened on 10-7-22

Cooler unpacked by: Tammy Boyle

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off Eurofins Courier Other

Receipt After-hours: Drop-off Date/Time Storage Location

Eurofins Cooler # 1A Foam Box Client Cooler Box Other

Packing material used: Bubble Wrap Foam Plastic Bag None Other

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt ☐ See Multiple Cooler Form
   IR GUN# IR-13 (CF +0.7 °C) Observed Cooler Temp. 2.1 °C Corrected Cooler Temp. 2.8 °C
   IR GUN #IR-15 (CF 0.0°C) Observed Cooler Temp. ____ °C Corrected Cooler Temp. ____ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1	Yes	No
-Were the seals on the outside of the cooler(s) signed & dated?	Yes	No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	No
-Were tamper/custody seals intact and uncompromised?	Yes	No NA
3. Shippers' packing slip attached to the cooler(s)?	Yes	No
4. Did custody papers accompany the sample(s)?	Yes	No
5. Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7. Did all bottles arrive in good condition (Unbroken)?	Yes	No
8. Could all bottle labels (ID/Date/Time) be reconciled with the COC?	Yes	No
9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)?		
10. Were correct bottle(s) used for the test(s) indicated?	Yes	No
11. Sufficient quantity received to perform indicated analyses?	Yes	No
12. Are these work share samples and all listed on the COC?	Yes	No
If yes, Questions 13-17 have been checked at the originating laboratory.		
13. Were all preserved sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# HC286797
14. Were VOAs on the COC?	Yes	No
15. Were air bubbles >6 mm in any VOA vials? ● ← Larger than this.	Yes	No NA
16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # ____	Yes	No
17. Was a LL Hg or Me Hg trip blank present? ____	Yes	No

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM ____ Date ____ by ____ via Verbal Voice Mail Other

Concerning ____

18. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES ☐ additional next page

Samples processed by:

19. SAMPLE CONDITION

Sample(s) ____ were received after the recommended holding time had expired.
Sample(s) ____ were received in a broken container.
Sample(s) ____ were received with bubble >6 mm in diameter. (Notify PM)

20. SAMPLE PRESERVATION

Sample(s) ____ were further preserved in the laboratory.
Time preserved: ____ Preservative(s) added/Lot number(s): ____

VOA Sample Preservation - Date/Time VOAs Frozen: ____

WI-NC-099

Login Container Summary Report

Temperature readings: _____

Client Sample ID	Lab ID	Container Type	Container pH	Container Temp	Preservative Added (mls)	Lot #
MW-101_20221004	240-174234-C-1	Plastic 250ml - with Nitric Acid	>2			
MW-102_2022101004	240-174234-C-2	Plastic 500ml - with Nitric Acid	>2			
MW-103_20221005	240-174234-C-3	Plastic 500ml - with Nitric Acid	>2			
MW-104_20221004	240-174234-C-4	Plastic 500ml - with Nitric Acid	>2			
MW-105_20221004	240-174234-C-5	Plastic 500ml - with Nitric Acid	>2			
MW-106_20221004	240-174234-C-6	Plastic 500ml - with Nitric Acid	>2			
MW-107_20221004	240-174234-C-7	Plastic 500ml - with Nitric Acid	>2			
MW-108A_20221005	240-174234-C-8	Plastic 500ml - with Nitric Acid	>2			
QUARRY SUMP_20221005	240-174234-C-9	Plastic 500ml - with Nitric Acid	>2			
QUARRY DISHCHARGE_20221004	240-174234-C-10	Plastic 500ml - with Nitric Acid	>2			
DUP-01_20221004	240-174234-C-11	Plastic 500ml - with Nitric Acid	>2			

Appendix B
Data Quality Review

Laboratory Data Quality Review
Groundwater Monitoring Event April 2022 (Detection Monitoring)
DTE Electric Company Sibley Quarry Landfill (SQLF)

Groundwater and water samples were collected by TRC for the April 2022 sampling event. Samples were analyzed for anions, total recoverable metals, and total dissolved solids by Eurofins Environment Testing America (Eurofins), located in Canton, Ohio. The laboratory analytical results are reported in laboratory report 240-165752-1.

During the April 2022 sampling event, a groundwater sample was collected from each of the following wells:

- MW-101
- MW-102
- MW-103
- MW-104
- MW-105
- MW-106
- MW-107
- MW-108A
- DUP-01

Each sample was analyzed for the following constituents:

Analyte Group	Method
Anions (Chloride, Fluoride, Sulfate)	SW846 9056A
Total Recoverable Boron	SW846 3005A/6010B
Total Recoverable Calcium	SW846 3005A/6020
Total Dissolved Solids	SM 2540C

TRC reviewed the laboratory data to assess data usability. The following sections summarize the data review procedure and the results of the review.

Data Quality Review Procedure

The analytical data were reviewed using the USEPA National Functional Guidelines for Inorganic Superfund Data Review (USEPA, 2020). The following items were included in the evaluation of the data:

- Sample receipt, as noted in the cover page or case narrative;
- Technical holding times for analyses;
- Reporting limits (RLs) compared to project-required RLs;
- Data for method blanks and equipment blanks, where applicable. Method blanks are used to assess potential contamination arising from laboratory sample preparation and/or analytical procedures. Equipment blanks are used to assess potential contamination arising from field procedures;
- Data for laboratory control samples (LCSs). The LCSs are used to assess the accuracy of the analytical method using a clean matrix;
- Data for matrix spike and matrix spike duplicate samples (MS/MSDs), when performed on project samples. The MS/MSDs are used to assess the accuracy and precision of the analytical method using a sample from the dataset;

- Data for laboratory duplicates, when performed on project samples. The laboratory duplicates are used to assess the precision of the analytical method using a sample from the dataset;
- Data for blind field duplicates. Field duplicate samples are used to assess variability introduced by the sampling and analytical processes; and
- Overall usability of the data.

This data usability report addresses the following items:

- Usability of the data if quality control (QC) results suggest potential problems with all or some of the data;
- Actions regarding specific QC criteria exceedances.

Review Summary

The data quality objectives and laboratory completeness goals for the project were met, and the data are usable for their intended purpose. A summary of the data quality review, including non-conformances and issues identified in this evaluation are noted below.

- Appendix III constituents will be utilized for the purposes of a detection monitoring program.
- Data are usable for the purposes of the detection monitoring program.

QA/QC Sample Summary

- Target analytes were not detected in the method blanks.
- LCS recoveries for all target analytes were within laboratory control limits.
- MS/MSD analyses were not performed on a sample from this sample set.
- The field duplicate pair samples were DUP-01 and MW-107 for total recoverable metals, sulfate, and TDS; relative percent differences (RPDs) between the parent and duplicate sample were within the QC limits.
- Samples MW-107 and DUP-01 were non-detect for sulfate at 5.0 mg/L, which is above the QAPP-required RL of 1.0 mg/L for sulfate, due to high concentrations of other anions.
- Sample MW-102 detected total recoverable boron at 150 ug/L which is below the QAPP requested RL of 200 ug/L.

Laboratory Data Quality Review
Groundwater Monitoring Event October 2022 (Detection Monitoring)
DTE Electric Company Sibley Quarry Landfill (DTE SQLF)

Groundwater samples were collected by TRC for the October 2022 sampling event. Samples were analyzed for anions, total recoverable metals, and total dissolved solids by Eurofins Environment Testing America (Eurofins), located in Canton, Ohio. The laboratory analytical results are reported in laboratory report 240-174234-1 (revision 1, dated 10/31/22).

During the October 2022 sampling event, a groundwater sample was collected from each of the following wells:

- MW-101
- MW-102
- MW-103
- MW-104
- MW-105
- MW-106
- MW-107
- MW-108A
- DUP-01

Each sample was analyzed for the following constituents:

Analyte Group	Method
Anions (Chloride, Fluoride, Sulfate)	SW846 9056A
Total Recoverable Boron	SW846 3005A/6010B
Total Recoverable Calcium	SW846 3005A/6020
Total Dissolved Solids	SM 2540C

TRC reviewed the laboratory data to assess data usability. The following sections summarize the data review procedure and the results of the review.

Data Quality Review Procedure

The analytical data were reviewed using the USEPA National Functional Guidelines for Inorganic Superfund Methods Data Review (USEPA, 2020). The following items were included in the evaluation of the data:

- Sample receipt, as noted in the cover page or case narrative;
- Technical holding times for analyses;
- Reporting limits (RLs) compared to project-required RLs;
- Data for method blanks, equipment blanks, and field blanks. Method blanks are used to assess potential contamination arising from laboratory sample preparation and/or analytical procedures. Field and equipment blanks are used to assess potential contamination arising from field procedures;
- Data for laboratory control samples (LCSs) and laboratory control sample duplicates (LCSDs), when performed. The LCSs and/or LCSDs are used to assess the accuracy of the analytical method using a clean matrix;

- Percent recoveries for matrix spike (MS) and matrix spike duplicates (MSD), when performed on project samples. Percent recoveries are calculated for each analyte spiked and used to assess bias due to sample matrix effects;
- Data for laboratory duplicates, when performed on project samples. The laboratory duplicates are replicate analyses of one sample and are used to assess the precision of the analytical method;
- Data for blind field duplicates. Field duplicate samples are used to assess variability introduced by the sampling and analytical processes; and
- Overall usability of the data.

This data usability report addresses the following items:

- Usability of the data if quality control (QC) results suggest potential problems with all or some of the data;
- Actions regarding specific QC criteria exceedances.

Review Summary

The data quality objectives and laboratory completeness goals for the project were met, and the data are usable for their intended purpose. A summary of the data quality review, including non-conformances and issues identified in this evaluation, are noted below.

- The reviewed Appendix III and IV will be utilized for the purposes of an assessment monitoring program.
- Data are usable for the purposes of the assessment monitoring program.
- When the data are evaluated through an assessment monitoring statistical program, findings below may be used to support the removal of outliers.

QA/QC Sample Summary

- The chain-of-custody (COC) and/or laboratory misidentified two samples MW-102 and QUARRY DISHCHARGE which should have been MW-102 and QUARRY DISCHARGE, respectively. The correct sample IDs are referenced in this review summary for these two samples.
- There was no equipment blank or field blank submitted with this dataset.
- MS/MSD analyses were performed on sample MW-101 for total recoverable boron, and calcium.
- Laboratory duplicate analyses were performed for TDS on sample MW-106. The relative percent difference (RPD) met the acceptance criteria.
- DUP-01 corresponds with MW-107; RPDs between the parent and duplicate sample were within the QC limits.
- The reporting limits (RLs) for fluoride (2.5 mg/L and 5 mg/L) in samples MW-107 and DUP-01, respectively, were above the QAPP-specified RL (0.05 mg/L) due to a 50-fold dilution for sample MW-107 and a 100-fold dilution for DUP-01 as a result of matrix interference (i.e., the elevated concentrations of chloride and sulfate).