



2023 Annual Groundwater Monitoring Report

**St. Clair Power Plant Former Bottom
Ash Basins
4901 Pointe Drive
East China Township, Michigan**

January 2024

Prepared For:

DTE Electric Company

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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, which applies to the DTE Electric Company (DTE Electric) St. Clair Power Plant (SCPP) Bottom Ash Basins (BABs¹) 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 the calendar year 2023 activities at the BABs.

The BABs operated under the detection monitoring program at the start of the 2023 annual reporting period and remained in the detection monitoring program through the end of the 2023 annual reporting period. The semiannual detection monitoring events for 2023 were completed in April and October 2023 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 2023 are presented in this report.

No SSIs over prediction limits were noted for the Appendix III constituents in the downgradient wells during the 2023 monitoring period. A potential SSI outside prediction limits was noted for total dissolved solids in one monitoring well during the April 2023 monitoring event and pH and chloride in one monitoring well in the October 2023 monitoring event. These potential SSIs were not statistically significant (i.e. verification resampling did not confirm the exceedances). In addition, based on the hydrogeology at the Site, with the presence of the vertically and horizontally extensive clay-rich confining till beneath the BABs, there is no reasonable probability for the uppermost aquifer to have been affected by CCR from operations.

In addition, DTE Electric has completed CCR removal activities at the SCPP BABs CCR unit while remaining in detection monitoring. Closure by removal activities related to the BABs began on August 15, 2022, and the removal of CCR from the BABs was completed in February 2023, including the concrete-lined canal connecting the East and West BABs. The BABs were backfilled following CCR removal with topsoil and seeding cover placement complete by May 19, 2023.

Finally, Appendix IV parameters were analyzed in the April and October 2023 monitoring events to demonstrate that the Groundwater Protection Standards (GWPS) are met subsequent to CCR removal in accordance with §257.102(c). No exceedances of GWPS were detected for

¹ For consistency throughout this document, the SCPP Bottom Ash Basins are referred to as the “BABs” even though CCR removal and closure by removal activities were completed in May 2023 and the former BABs are now backfilled.

the Appendix IV parameters in either monitoring events during the 2023 monitoring period. Therefore, in accordance with §257.102(h), a completion of closure notification will be completed by March 1, 2024, documenting that closure has been completed in accordance with the closure plan and in compliance with §257.102(c).

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, which applies to the DTE Electric Company (DTE Electric) St. Clair Power Plant (SCPP) Bottom Ash Basins (BABs). 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 2023 activities at the BABs (2023 Annual Report).

In the *2022 Annual Groundwater Monitoring Report for the St. Clair Power Plant Bottom Ash Basins CCR Unit (2022 Annual Report)* (TRC, January 2023), DTE Electric reported no concentrations over the background limits for any of the Appendix III indicator parameters. Therefore, DTE Electric continued detection monitoring at the SCPP BABs CCR unit in 2023 pursuant to §257.94 of the CCR Rule. This 2023 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 2023 semiannual groundwater monitoring events for the BABs. Detection monitoring for these events continued to be performed in accordance with the *CCR Groundwater Monitoring and Quality Assurance Project Plan – DTE Electric Company St. Clair Power Plant Bottom Ash Basins (QAPP)* (TRC, July 2016; revised August 2017) and statistically evaluated per the *Groundwater Statistical Evaluation Plan – St. Clair Power Plant Coal Combustion Residual Bottom Ash Basins (Stats Plan)* (TRC, October 2017). As part of the statistical evaluation, the data collected during detection monitoring events are evaluated to identify statistically significant increases (SSIs) of detection monitoring parameters compared to background levels.

In addition, DTE Electric has completed CCR removal activities at the BABs while remaining in detection monitoring. Appendix IV parameters were analyzed at the BABs monitoring network in April and October 2023 to demonstrate that the Groundwater Protection Standards (GWPS) are met subsequent to CCR removal in accordance with §257.102(c). The establishment of the GWPS and the Appendix IV results are presented in Section 4 of this Report.

1.2 Site Overview

The SCPP BABs CCR unit is located in Section 19, Township 4 North, Range 17 East, at 4901 Pointe Drive, East China Township in St. Clair County, Michigan. The SCPP including the east BAB was constructed in the early 1950s and the west BAB was constructed in 1996, just south of the DTE Electric SCPP main building. The power plant is located approximately three miles south of St. Clair, Michigan immediately to the west of the St. Clair River.

The property had been used continuously as a coal fired power plant since Detroit Edison Company (now DTE Electric) began power plant operations at SCPP in 1953 and is constructed

over a natural continuous clay-rich soil base as shown in historical soil borings performed at the SCPP property. DTE Electric ceased operation of the coal-fired boilers at the SCPP on May 31, 2022, completed washdowns of CCR containing equipment on August 12, 2022, and commenced physical isolation of the BABs from power plant infrastructure on September 1, 2022, and thus has permanently ceased receipt of CCR and non-CCR waste streams at the BABs and has initiated closure as described in 40 C.F.R. § 257.102(c).

Closure by removal activities related to the BABs began on August 15, 2022 and the removal of CCR from the BABs was completed in February 2023. The BABs were backfilled following CCR removal with topsoil and seeding cover placement complete by May 19, 2023 (Barr, June 2023).

1.3 Geology/Hydrogeology

The former SCPP BABs CCR unit is located immediately adjacent to the west edge of the St. Clair River. The SCPP CCR unit is underlain by glacial silty-clay till, with a few isolated sand lenses, and a silt and clay-rich hardpan base directly overlying the shale bedrock (likely the Bedford Shale). The shale bedrock lower confining unit is generally encountered at depths greater than 130 ft bgs. No significant soil or gravel intervals were encountered at any of the groundwater monitoring system well locations. However, during soil boring advancement for the groundwater monitoring system well locations, some signs of saturation were observed throughout a 5-foot interval along the interface between the overlying till/hardpan and the underlying shale bedrock. The underlying shale does not yield groundwater, rather it is an aquiclude that prevents groundwater flow (i.e., is not an aquifer).

Although the encountered zone of saturation along the interface did not yield significant groundwater, it was conservatively interpreted as the first underlying saturated zone that would presumably become affected with CCR constituents, since it was saturated, and although the hydraulic conductivity was low, exhibited a much higher conductivity than the clay-rich soils between the bottom of the basin and the monitored zone. Therefore, the potential uppermost aquifer as described above was present beneath at least 120 feet of vertically contiguous silty clay-rich till that serves as a natural confining hydraulic barrier that isolates the underlying uppermost potential aquifer. The first underlying saturated zone (the potential uppermost aquifer) that would presumably become affected with CCR constituents is located at the silty clay hardpan/shale bedrock interface (130.5 to 132 ft bgs) and is limited to no more than 4 feet thick.

A definitive groundwater flow direction to the east-southeast with a mean gradient of approximately 0.004 to 0.005 feet/feet within the uppermost aquifer is evident around the BABs, however potential groundwater flow within this uppermost aquifer is very low (less than 0.06 feet per year).

In addition, the elevation of CCR-affected water maintained within the BABs was very similar to the potentiometric surface elevations in the uppermost aquifer at the BABs CCR unit area. This suggests that if the CCR affected surface water in the BABs was able to penetrate the silty clay-rich underlying confining unit, the head on that release likely would travel radially away from the BABs within the uppermost aquifer. However, with the very thick continuous silty clay-rich

confining unit beneath the SCPP, there is no reasonable probability for the uppermost aquifer to have been affected by CCR from SCPP operations that began in the 1950s.

2.0 Groundwater Monitoring

2.1 Monitoring Well Network

A groundwater monitoring system has been established for the SCPP BABs CCR unit as detailed in the *Groundwater Monitoring System Summary Report – DTE Electric Company St. Clair Power Plant Bottom Ash Basins Coal Combustion Residual Unit* (GWMS Report) (TRC, October 2017). The detection monitoring well network for the BABs currently consists of four monitoring wells that are screened in the uppermost aquifer. Monitoring wells MW-16-01 through MW-16-04 are located around the east and west perimeter of the former BABs and provide data on both background and downgradient groundwater quality that has not been affected by the BABs (total of four background/downgradient monitoring wells). 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, 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 monitoring event for 2023 was performed on April 27 and 28, 2023 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 four monitoring well locations and surface water measuring point MP-01. Groundwater samples were collected from the four detection monitoring wells for the Appendix III indicator parameters and field parameters. A summary of the groundwater data collected during the April 2023 event is provided in Table 1 (static groundwater elevation data), Table 2 (field data), and Table 3 (analytical results).

The second semiannual groundwater monitoring event for 2023 was performed on October 11 and 12, 2023 by TRC personnel and samples were analyzed by Eurofins in accordance with the QAPP. Static water elevation data were collected at all four monitoring well locations and surface water measuring point MP-01. Groundwater samples were collected from the four detection monitoring wells for the Appendix III indicator parameters and field parameters. A summary of the groundwater data collected during the October 2023 event is provided in 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 2023 sampling events show that groundwater within the uppermost aquifer generally flows to the east-southeast across the SCPP BABs CCR unit. Groundwater potentiometric surface elevations measured across the SCPP BABs CCR unit during the April and October 2023 sampling events are provided in Table 1 and were used to construct the groundwater potentiometric surface maps shown on Figure 3 and Figure 4, respectively. The groundwater flow rate and direction is consistent with previous monitoring events. The average hydraulic gradients throughout the SCPP BABs were 0.0030 feet/feet during the first semiannual 2023 monitoring event and 0.0024 ft/ft during the second semiannual 2023 monitoring event, resulting in estimated average seepage velocities of approximately 0.00098 ft/day or 0.036 ft/year (approximately 0.43 inches/year) and 0.000078 ft/day or 0.028 ft/year (approximately 0.34 inches/year), respectively, using the average hydraulic conductivity of 0.013 ft/day (TRC, 2017) and an assumed effective porosity of 0.4.

As presented in the GWMS Report, there is a horizontally expansive clay with substantial vertical thickness that isolates the uppermost aquifer from the SCPP BABs CCR unit. The general flow rate and direction in the uppermost aquifer from both events are similar to that identified in previous monitoring rounds and continues to demonstrate that groundwater flows at a low rate and the compliance wells are appropriately positioned to detect the presence of Appendix III parameters that could potentially migrate from the SCPP BABs CCR unit.

3.0 Statistical Evaluation

3.1 Establishing Background Limits

As discussed in the Stats Plan, intrawell statistical methods for the BABs CCR unit were selected based on the geology and hydrogeology at the Site (primarily the presence of clay/hydraulic barrier, the relatively small footprint of the BABs, and the low vertical and horizontal groundwater flow velocity), in addition to other supporting lines of evidence that the aquifer is unaffected by the CCR unit (such as the consistency in concentrations of water quality data). An intrawell statistical approach requires that each of the downgradient wells doubles as a background and compliance well, 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 four established detection monitoring wells (MW-16-01 through MW-16-04). The 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 SCPP BABs CCR unit by comparing concentrations in the detection monitoring wells to their respective background limits for each Appendix III indicator parameter.

3.2 Data Comparison to Background Limits – First Semiannual Event (April 2023)

The concentrations of the indicator parameters in each of the detection monitoring wells (MW-16-01 through MW-16-04) were compared to their respective statistical background limits calculated from the background data collected from each individual well (i.e., monitoring data from MW-16-01 is compared to the background limit developed using the background dataset from MW-16-01, and so forth).

The comparisons of the April 2023 monitoring event data to background limits are presented in Table 3. The statistical evaluation of the April 2023 detection monitoring indicator parameters showed a potential initial SSI over background for:

- Total dissolved solids (TDS) at MW-16-03.

There were no potential SSIs over background for boron, calcium, chloride, fluoride, pH, or sulfate.

3.3 Verification Resampling for the First 2023 Semiannual Event

Verification resampling is performed per the Stats Plan and the *USEPA's Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance* (Unified Guidance, USEPA, 2009) to achieve performance standards as specified by §257.93(g) in the CCR Rule. Per the Stats Plan, if there is an exceedance of a prediction limit for one or more of the parameters, the well(s) of concern will be resampled within 30 days of the completion of the initial statistical

analysis. Only constituents that initially exceed their statistical limit (i.e., have no previously recorded SSIs) will be analyzed for verification purposes.

Verification resampling for the April 2023 event was conducted on June 14 and 16, 2023 by TRC personnel. Groundwater samples were collected for TDS at MW-16-03 in accordance with the QAPP. A summary of the analytical results collected during the resampling event is provided on Table 3. The associated data quality review is included in Appendix B.

The verification sampling results for TDS at MW-16-03, are below their respective prediction limits. Consequently, no SSIs will be recorded from the April 2023 detection monitoring event in accordance with the Stats Plan and the Unified Guidance.

3.4 Data Comparison to Background Limits – Second Semiannual Event (October 2023)

The concentrations of the indicator parameters in each of the detection monitoring wells (MW-16-01 through MW-16-04) were compared to their respective statistical background limits calculated from the background data collected from each individual well (i.e., monitoring data from MW-16-01 is compared to the background limit developed using the background dataset from MW-16-01, and so forth). The comparisons of the October 2023 monitoring event are presented on Table 4. The statistical evaluation of the October 2023 Appendix III indicator parameters showed a potential initial SSI over background for:

- pH at MW-16-02; and
- Chloride at MW-16-01

There were no potential SSIs over background for boron, calcium, fluoride, sulfate, or TDS.

3.5 Verification Resampling for the Second Semiannual Event

Verification resampling for the October 2023 event was conducted on October 27 (pH) and December 7 (chloride), 2023 by TRC personnel. Field readings were collected for pH at MW-16-02 and a groundwater sample was collected for chloride analysis from MW-16-01 in accordance with the QAPP. A summary of the analytical results collected during the resampling event is provided on Table 4. The associated data quality review is included in Appendix B.

The verification sampling results for pH at MW-16-02 and chloride at MW-16-01 are below their respective prediction limits. Consequently, the initial potential SSIs for pH and chloride from the October 2023 event are not confirmed. Therefore, in accordance with the Stats Plan and the Unified Guidance, the initial exceedance is not statistically significant, and no SSI will be recorded for pH or chloride for the October 2023 detection monitoring event.

4.0 Closure Activities

DTE Electric is in the process of pursuing closure for the SCPP BABs CCR unit while remaining in detection monitoring. Closure by removal activities related to the BABs began on August 15, 2022 and the removal of CCR from the BABs was completed in February 2023, including the concrete-lined canal connecting the East and West BABs (Barr, June 2023). The BABs were backfilled following CCR removal with topsoil and seeding cover placement complete by May 19, 2023. In support of closure of the SCPP BABs CCR unit, two rounds of closure sampling (April and October 2023) for the Appendix IV parameters were completed at the BABs monitoring network to demonstrate that the GWPS are met subsequent to the closure of the BABs by removal in accordance with §257.102(c).

4.1 Establishing Groundwater Protection Standards

In accordance with §257.102(c) DTE Electric must demonstrate that groundwater concentrations do not exceed the GWPS established under §257.95(h) for Appendix IV constituents. TRC calculated background statistical limits and developed GWPS for the Appendix IV parameters for the SCPP BABs CCR unit in accordance with §257.95(h) as presented in Appendix C.

4.2 Data Comparison to Groundwater Protection Standards

The Appendix IV groundwater data collected in April and October 2023 were compared to the calculated GWPSs for each individual well (i.e., monitoring data from MW-16-01 is compared to the GWPS developed using the background dataset from MW-16-01, and so forth). As shown in Appendix C, the Appendix IV groundwater results were all below their respective GWPSs for the first and second semiannual closure monitoring events conducted consecutively in April and October 2023.

5.0 Conclusions and Recommendations

No SSIs over prediction limits or post-CCR removal GWPS exceedances were recorded for the Appendix III and Appendix IV constituents in the compliance wells during the 2023 monitoring period. As discussed above, and in the GWMS Report, with the very thick continuous silty clay-rich confining unit beneath the SCPP BABs CCR unit, there is no reasonable probability for the uppermost aquifer to have been affected by CCR from SCPP operations. No corrective actions were performed in 2023.

As no exceedances of GWPS were noted for the Appendix IV parameters for two consecutive closure monitoring events during the 2023 monitoring period a completion of closure notification will be completed by March 1, 2024, documenting that closure has been completed in accordance with the closure plan and in compliance with §257.102(c). Therefore, detection and closure monitoring at the SCPP BABs CCR unit will be discontinued in 2024 and upon Michigan Department of Environment, Great Lakes and Energy approval the monitoring well network will be properly decommissioned.



6.0 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
St. Clair Power Plant Bottom Ash Basins
East China Township, Michigan**

CERTIFICATION

I hereby certify that the annual groundwater monitoring and corrective action report presented within this document for the SCPP BABs 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, 2025	  January 31, 2024
Company: TRC Engineers Michigan, Inc.	Date: January 31, 2024	

7.0 References

- Barr Engineering Company (Barr). June 27, 2023. Construction Documentation Report, St. Clair Power Plant Bottom Ash Basin, Coal Combustion Residual Closure. Prepared for DTE Electric Company.
- TRC. July 2016; Revised March and August. CCR Groundwater Monitoring and Quality Assurance Project Plan – DTE Electric Company St. Clair Power Plant Bottom Ash Basins, 4901 Pointe Drive, East China Township, Michigan. Prepared for DTE Electric Company.
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- USEPA. 2009. Statistical Analysis of Groundwater Monitoring Data at RCRA facilities, Unified Guidance. Office of Conservation and Recovery. EPA 530/R-09-007.
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- 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
Groundwater Elevation Summary - April to October 2023
St. Clair Power Plant Bottom Ash Basins – RCRA CCR Monitoring Program
East China Township, Michigan

	MP-01		MW-16-01		MW-16-02		MW-16-03		MW-16-04	
Date Installed	3/23/2016		3/31/2016		3/29/2016		3/25/2016		3/23/2016	
TOC Elevation	580.84 ⁽¹⁾		584.74		581.43		581.39		580.95	
Geologic Unit of Screened Interval	NA		Silty Clay Shale Interface		Silty Clay Shale Interface		Silty Clay/Hardpan Shale Interface		Silty Clay/Hardpan Shale Interface	
Screened Interval Elevation	NA		458.1 to 453.1		456.2 to 451.2		455.1 to 450.1		455.0 to 450.0	
Unit	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
04/27/2023	4.24	576.60	3.11	581.63	1.32	580.11	1.30	580.09	0.90	580.05
10/11/2023	5.80	575.04	3.33	581.41	1.30	580.13	1.05	580.34	0.80	580.15

Notes:

Elevations are reported in feet relative to the North American Vertical Datum of 1988.

ft BTOC - feet below top of casing

NA - not applicable

NM - not measured.

1) Elevation represents the point of reference used to collect surface water level measurements.

Table 2
 Summary of Field Data – April to December 2023
 St. Clair Power Plant Bottom Ash Basins – RCRA CCR Monitoring Program
 East China Township, Michigan

Sample Location	Sample Date	Dissolved Oxygen (mg/L)	Oxidation Reduction Potential (mV)	pH (SU)	Specific Conductivity (umhos/cm)	Temperature (°C)	Turbidity (NTU)
MW-16-01	4/28/2023	1.00	-61.3	8.2	3,352	12.40	10.72
	10/12/2023	2.80	19.9	7.5	2,928	13.70	3.90
	12/7/2023 ⁽³⁾	1.49	-37.5	7.8	2,901	11.90	9.52
MW-16-02	4/28/2023	0.90	-140.9	8.0	4,729	11.80	16.60
	10/12/2023	2.50	40.0	7.3	6,346	14.60	10.00
	10/27/2023 ⁽²⁾	0.18	-52.0	7.6	6,820	15.80	10.00
MW-16-03	4/28/2023	0.90	-114.2	7.9	5,221	12.60	3.61
	6/15/2023 ⁽¹⁾	0.11	-219.3	7.7	6,425	14.60	18.00
	10/12/2023	2.20	-3.0	7.5	4,667	14.50	4.00
MW-16-04	4/28/2023	0.90	-41.1	7.9	5,977	10.80	15.00
	10/12/2023	2.20	-15.2	7.6	5,825	16.30	47.00

Notes:

mg/L -Milligrams per Liter.

mV - Millivolts.

SU - Standard Units.

umhos/cm - Micromhos per centimeter.

°C - Degrees Celsius.

NTU - Nephelometric Turbidity Unit

- (1) Results shown for verification sampling performed on 6/15/2023.
- (2) Results shown for verification sampling performed on 10/27/2023.
- (3) Results shown for verification sampling performed on 12/7/2023.

Table 3
 Comparison of Appendix III Parameter Results to Background Limits – April and June 2023
 St. Clair Power Plant Former Bottom Ash Basins – RCRA CCR Monitoring Program
 East China Township, Michigan

Sample Location:		MW-16-01		MW-16-02		MW-16-03			MW-16-04	
Sample Date:		4/28/2023	PL	4/28/2023	PL	4/28/2023	6/15/2023 ⁽¹⁾	PL	4/28/2023	PL
Constituent	Unit	Data		Data		Data			Data	
Appendix III										
Boron	ug/L	2,200	2,600	2,100	2,400	2,100	--	2,300	2,500	2,600
Calcium	ug/L	19,000	24,000	37,000	69,000	46,000	--	61,000	37,000	57,000
Chloride	mg/L	1,200	1,400	2,000	2,100	2,200	--	2,200	2,600	2,800
Fluoride	mg/L	1.9	2.1	1.4	1.6	1.3	--	1.6	1.4	1.7
pH, Field	su	8.2	7.2 - 8.6	8.0	7.5 - 8.3	7.9	--	7.3 - 8.5	7.9	7.3 - 8.4
Sulfate	mg/L	< 2.0	62	< 5.0	25	< 2.0	--	25	< 5.0	25
Total Dissolved Solids	mg/L	2,100	2,500	3,300	3,600	5,100	3,400	4,000	4,200	4,400

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.

-- not analyzed during verification event

(1) - Results shown for verification sampling performed on 6/15/2023.

Bold font indicates an exceedance of the Prediction Limit (PL).

Table 4
 Comparison of Appendix III Parameter Results to Background Limits – October and December 2023
 St. Clair Power Plant Bottom Ash Basins – RCRA CCR Monitoring Program
 East China Township, Michigan

Sample Location:		MW-16-01			MW-16-02			MW-16-03		MW-16-04	
Sample Date:		10/12/2023	12/7/2023 ⁽²⁾	PL	10/12/2023	10/27/2023 ⁽¹⁾	PL	10/12/2023	PL	10/12/2023	PL
Constituent	Unit	Data			Data			Data		Data	
Appendix III											
Boron	ug/L	2,200	--	2,600	2,100	--	2,400	2,100	2,300	2,500	2,600
Calcium	ug/L	20,000	--	24,000	38,000	--	69,000	48,000	61,000	38,000	57,000
Chloride	mg/L	1,500	1,200	1,400	2,100	--	2,100	2,200	2,200	2,700	2,800
Fluoride	mg/L	2.0	--	2.1	1.6	--	1.6	1.4	1.6	1.7	1.7
pH, Field	su	7.5	--	7.2 - 8.6	7.3	7.6	7.5 - 8.3	7.5	7.3 - 8.5	7.6	7.3 - 8.4
Sulfate	mg/L	< 2	--	62	< 2	--	25	< 5	25	< 5	25
Total Dissolved Solids	mg/L	2,000	--	2,500	2,900	--	3,600	3,200	4,000	3,800	4,400

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) Results shown for verification sampling performed on 10/27/2023.

(2) Results shown for verification sampling performed on 12/7/2023.

Table 5
 Comparison of Appendix IV Parameter Results to Groundwater Protection Standards - April 2023
 St. Clair Power Plant Bottom Ash Basins - RCRA CCR Monitoring Program
 East China Township, Michigan

Constituent	Unit	Intrawell							
		MW-16-01		MW-16-02		MW-16-03		MW-16-04	
		GWPS	4/28/2023	GWPS	4/28/2023	GWPS	4/28/2023	GWPS	4/28/2023
Antimony	ug/L	6.0	< 2	6.0	< 2	6.0	< 2	6.0	< 2
Arsenic	ug/L	10	< 5	12	< 5	10	< 5	10	< 5
Barium	ug/L	2,000	220	2,000	400	2,000	450	2,000	670
Beryllium	ug/L	4.0	< 1	4.0	< 1	4.0	< 1	4.0	< 1
Cadmium	ug/L	5.0	< 1	5.0	< 1	5.0	< 1	5.0	< 1
Chromium	ug/L	100	< 2	100	2.3	100	2.1	100	< 2
Cobalt	ug/L	6.0	1.0	9.5	< 1	6.0	< 1	16	< 1
Fluoride	mg/L	4.0	1.9	4.0	1.5	4.0	1.3	4.0	1.5
Lead	ug/L	15	< 1	15	< 1	15	< 1	15	< 1
Lithium	ug/L	66	53	92	66	77	68	150	98
Mercury	ug/L	2.0	< 0.2	2.0	< 0.2	2.0	< 0.2	2.0	< 0.2
Molybdenum	ug/L	100	25	100	25	100	22	100	17
Radium-226/228	pCi/L	5.00	1.43	5.00	2.31	5.00	2.96	6.97	4.83
Selenium	ug/L	50	< 5	50	< 5	50	< 5	50	< 5
Thallium	ug/L	2.0	< 1	2.0	< 1	2.0	< 1	2.0	< 1

Notes:

MCL - Maximum Contaminant Level, EPA Drinking Water Standards and Health Advisories, April 2012.

RSL - Regional Screening Level from 83 FR 36435.

UTL - Upper Tolerance Limit (95%) of the background data set.

GWPS - Groundwater Protection Standard. Appendix IV GWPS is the higher of the MCL/RSL and UTL.

ug/L = micrograms per liter

mg/L = milligrams per liter

pCi/L = picocuries per liter

Table 6
 Comparison of Appendix IV Parameter Results to Groundwater Protection Standards - October 2023
 St. Clair Power Plant Bottom Ash Basins - RCRA CCR Monitoring Program
 East China Township, Michigan

Constituent	Unit	Intrawell							
		MW-16-01		MW-16-02		MW-16-03		MW-16-04	
		GWPS	10/12/2023	GWPS	10/12/2023	GWPS	10/12/2023	GWPS	10/12/2023
Antimony	ug/L	6.0	< 2	6.0	< 2	6.0	< 2	6.0	< 2
Arsenic	ug/L	10	< 5	12	< 5	10	< 5	10	< 5
Barium	ug/L	2,000	220	2,000	410	2,000	450	2,000	650
Beryllium	ug/L	4.0	< 1	4.0	< 1	4.0	< 1	4.0	< 1
Cadmium	ug/L	5.0	< 1	5.0	< 1	5.0	< 1	5.0	< 1
Chromium	ug/L	100	< 2	100	2.0	100	< 2	100	3.1
Cobalt	ug/L	6.0	< 1	9.5	< 1	6.0	< 1	16	1.3
Fluoride	mg/L	4.0	2.0	4.0	1.6	4.0	1.4	4.0	1.7
Lead	ug/L	15	< 1	15	< 1	15	< 1	15	1.8
Lithium	ug/L	66	52	92	62	77	64	150	96
Mercury	ug/L	2.0	< 0.2	2.0	< 0.2	2.0	< 0.2	2.0	< 0.2
Molybdenum	ug/L	100	25	100	25	100	22	100	17
Radium-226/228	pCi/L	5.00	1.60	5.00	4.73	5.00	4.95	6.97	5.40
Selenium	ug/L	50	< 5	50	< 5	50	< 5	50	< 5
Thallium	ug/L	2.0	< 1	2.0	< 1	2.0	< 1	2.0	< 1

Notes:

MCL - Maximum Contaminant Level, EPA Drinking Water Standards and Health Advisories, April 2012.

RSL - Regional Screening Level from 83 FR 36435.

UTL - Upper Tolerance Limit (95%) of the background data set.

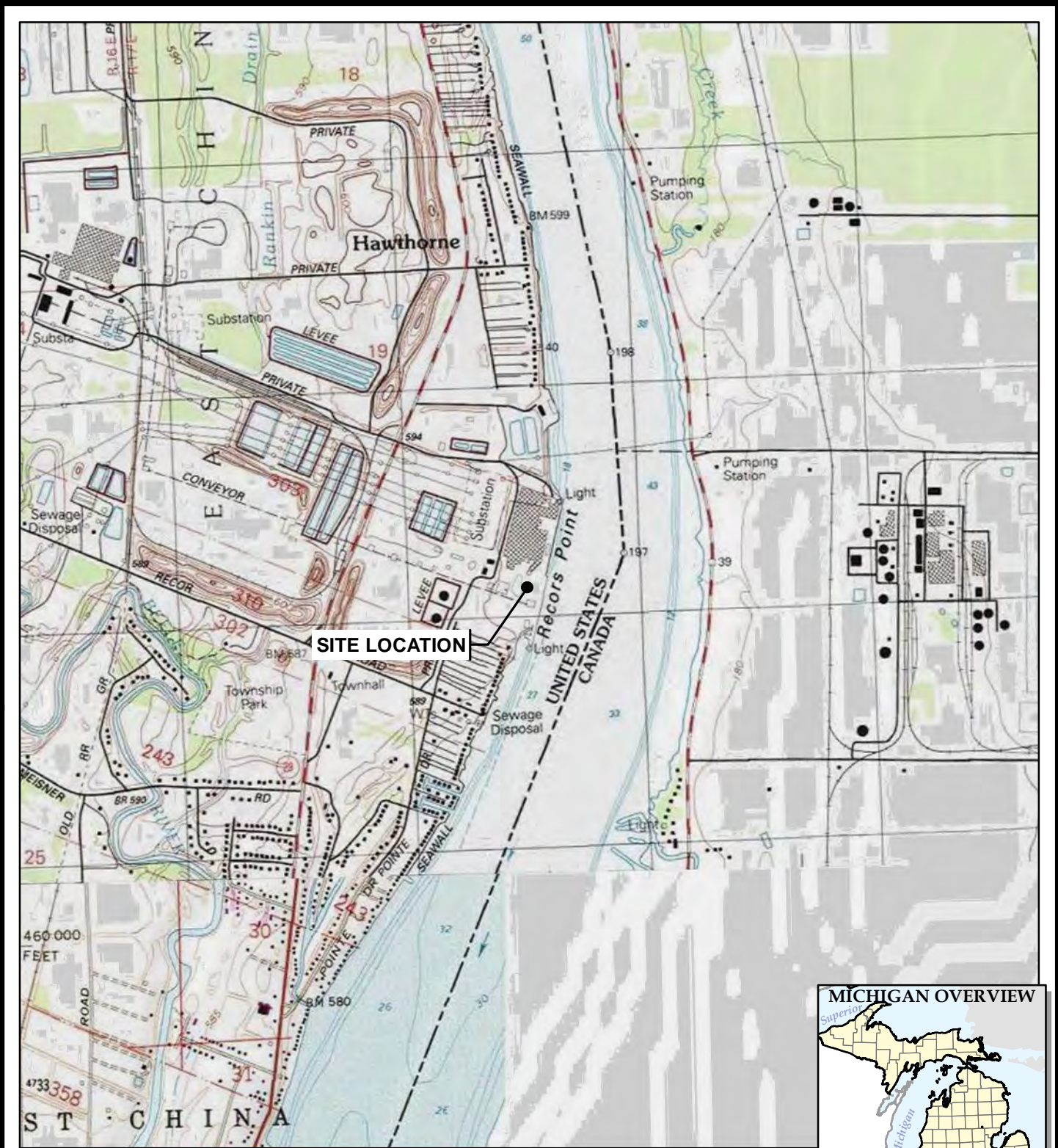
GWPS - Groundwater Protection Standard. Appendix IV GWPS is the higher of the MCL/RSL and UTL.

ug/L = micrograms per liter

mg/L = milligrams per liter

pCi/L = picocuries per liter

Figures



BASE MAP FROM USGS 7.5 MINUTE TOPOGRAPHIC QUADRANGLE SERIES.



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

TRC - GIS



PROJECT:	DTE ELECTRIC COMPANY FORMER ST. CLAIR POWER PLANT 4901 POINTE DRIVE EAST CHINA TOWNSHIP, MICHIGAN
TITLE:	SITE LOCATION MAP

DRAWN BY:	A. FOJTIK
CHECKED BY:	A. WHALEY
APPROVED BY:	V. BUENING
DATE:	JANUARY 2024
PROJ. NO.:	518728.0004.0000
FILE:	518728-0004-001slm.mxd

FIGURE 1

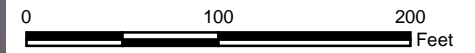


LEGEND


-  MONITORING WELLS
-  SURFACE WATER MEASURING POINT

NOTES

1. BASE MAP IMAGERY FROM ESRI WORLD IMAGERY, (10/2022).
2. WELL LOCATIONS SURVEYED BY BMJ ENGINEERS AND SURVEYORS INC. IN APRIL 2016.



1" = 100'
1:1,200

PROJECT:		DTE ELECTRIC COMPANY FORMER ST. CLAIR POWER PLANT BOTTOM ASH BASINS 4901 POINTE DRIVE EAST CHINA TOWNSHIP, MICHIGAN	
TITLE:		SITE PLAN	
DRAWN BY:	A. FOJTIK	PROJ NO.:	518728.0004.0000
CHECKED BY:	A. WHALEY	FIGURE 2	
APPROVED BY:	V. BUENING		
DATE:	JANUARY 2024		
		1540 Eisenhower Place Ann Arbor, MI 48108-3284 Phone: 734.971.7080 www.trccompanies.com	
FILE NO.:		518728-0004-002.mxd	

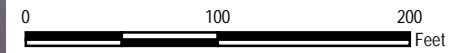
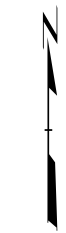


LEGEND

- MONITORING WELLS
- SURFACE WATER MEASURING POINT
- *MEASURES WATER ELEVATION IN ST. CLAIR RIVER
- (579.85) GROUNDWATER ELEVATION (FT NAVD88)
- GROUNDWATER ELEVATION CONTOUR (0.5-FT INTERVAL, DASHED WHERE INFERRED)

NOTES

1. BASE MAP IMAGERY FROM ESRI WORLD IMAGERY, (10/2022).
2. WELL LOCATIONS SURVEYED BY BMJ ENGINEERS AND SURVEYORS INC. IN APRIL 2016.
3. GROUNDWATER ELEVATIONS DISPLAYED IN FEET RELATIVE TO NORTH AMERICAN VERTICAL DATUM OF 1988.
4. ELEVATION DATA FROM MP-01 IS REPRESENTATIVE OF SURFACE WATER THAT IS NOT HYDRAULICALLY CONNECTED TO THE UPPERMOST AQUIFER AND IS NOT USED TO DEVELOP GROUNDWATER CONTOURS.



1" = 100'
1:1,200

PROJECT:		DTE ELECTRIC COMPANY FORMER ST. CLAIR POWER PLANT BOTTOM ASH BASINS 4901 POINTE DRIVE EAST CHINA TOWNSHIP, MICHIGAN	
TITLE:		GROUNDWATER POTENTIOMETRIC SURFACE MAP APRIL 2023	
DRAWN BY:	A. FOJTIK	PROJ NO.:	518728.0004.0000
CHECKED BY:	A. WHALEY	FIGURE 3	
APPROVED BY:	V. BUENING		
DATE:	JANUARY 2024		






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FILE NO: 518728-0004-003b.mxd

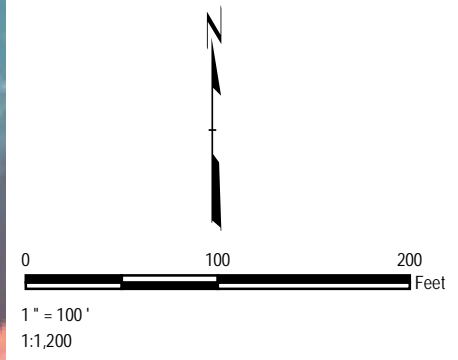



LEGEND

-  MONITORING WELLS
-  SURFACE WATER MEASURING POINT
*MEASURES WATER ELEVATION IN ST. CLAIR RIVER
- (579.85)* GROUNDWATER ELEVATION (FT NAVD88)
-  GROUNDWATER ELEVATION CONTOUR
(0.5-FT INTERVAL, DASHED WHERE INFERRED)

NOTES

1. BASE MAP IMAGERY FROM ESRI WORLD IMAGERY, (10/2022).
2. WELL LOCATIONS SURVEYED BY BMJ ENGINEERS AND SURVEYORS INC. IN APRIL 2016.
3. GROUNDWATER ELEVATIONS DISPLAYED IN FEET RELATIVE TO NORTH AMERICAN VERTICAL DATUM OF 1988.
4. ELEVATION DATA FROM MP-01 IS REPRESENTATIVE OF SURFACE WATER THAT IS NOT HYDRAULICALLY CONNECTED TO THE UPPERMOST AQUIFER AND IS NOT USED TO DEVELOP GROUNDWATER CONTOURS.



PROJECT:		DTE ELECTRIC COMPANY FORMER ST. CLAIR POWER PLANT BOTTOM ASH BASINS 4901 POINTE DRIVE EAST CHINA TOWNSHIP, MICHIGAN	
TITLE:		GROUNDWATER POTENTIOMETRIC SURFACE MAP OCTOBER 2023	
DRAWN BY:	A. FOJTIK	PROJ NO.:	518728.0004.0000
CHECKED BY:	A. WHALEY	FIGURE 4	
APPROVED BY:	V. BUENING		
DATE:	JANUARY 2024		
		1540 Eisenhower Place Ann Arbor, MI 48108-3284 Phone: 734.971.7080 www.trccompanies.com	
FILE NO.:		518728-0004-004.mxd	

Appendix A

Laboratory Analytical Reports



ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Vincent Buening
TRC Environmental Corporation.
1540 Eisenhower Place
Ann Arbor, Michigan 48108-7080

Generated 1/18/2024 4:52:34 PM Revision 2

JOB DESCRIPTION

CCR DTE St. Clair Power

JOB NUMBER

240-184674-1

Eurofins Cleveland

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization



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

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Revision 2



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Definitions/Glossary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-1

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: CCR DTE St. Clair Power

Job ID: 240-184674-1

Job ID: 240-184674-1

Eurofins Cleveland

Job Narrative 240-184674-1

REVISION

The report being provided is a revision of the original report sent on 5/19/2023. The report (revision 2) is being revised due to lower the reporting limit for chromium.

Report revision history

Revision 1 - 6/7/2023 - Reason - Client would like the results reported to the RL only..

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 5/4/2023 8:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 1.4°C, 1.8°C, 2.4°C and 2.6°C

Metals

Method 6020B: Some requested practical quantitation limits (PQLs) on the following samples fall below the laboratory's verified standard quantitation limit: MW-16-01 (240-184674-1), MW-16-02 (240-184674-2), MW-16-03 (240-184674-3), MW-16-04 (240-184674-4), DUP-01 (240-184674-5) and EB-01 (240-184674-6). The continuing calibration blanks and method blanks may not support the lower PQL.

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

General Chemistry

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

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Method Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-1

Method	Method Description	Protocol	Laboratory
6020B	Metals (ICP/MS)	SW846	EET CLE
7470A	Mercury (CVAA)	SW846	EET CLE
9056A	Anions, Ion Chromatography	SW846	EET CLE
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CLE
7470A	Preparation, Mercury	SW846	EET CLE

Protocol References:

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

Laboratory References:

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



Sample Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-184674-1	MW-16-01	Ground Water	04/28/23 14:53	05/04/23 08:00
240-184674-2	MW-16-02	Ground Water	04/28/23 13:01	05/04/23 08:00
240-184674-3	MW-16-03	Ground Water	04/28/23 11:35	05/04/23 08:00
240-184674-4	MW-16-04	Ground Water	04/28/23 10:15	05/04/23 08:00
240-184674-5	DUP-01	Ground Water	04/28/23 00:00	05/04/23 08:00
240-184674-6	EB-01	Water	04/28/23 15:00	05/04/23 08:00

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Detection Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-1

Client Sample ID: MW-16-01

Lab Sample ID: 240-184674-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Barium	220		5.0	ug/L	1		6020B	Total Recoverable
Molybdenum	25		5.0	ug/L	1		6020B	Total Recoverable
Lithium	53		8.0	ug/L	1		6020B	Total Recoverable
Fluoride	1.9		0.25	mg/L	5		9056A	Total/NA

Client Sample ID: MW-16-02

Lab Sample ID: 240-184674-2

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Barium	400		5.0	ug/L	1		6020B	Total Recoverable
Chromium	2.3		2.0	ug/L	1		6020B	Total Recoverable
Molybdenum	25		5.0	ug/L	1		6020B	Total Recoverable
Lithium	66		8.0	ug/L	1		6020B	Total Recoverable
Fluoride	1.5		0.25	mg/L	5		9056A	Total/NA

Client Sample ID: MW-16-03

Lab Sample ID: 240-184674-3

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Barium	450		5.0	ug/L	1		6020B	Total Recoverable
Chromium	2.1		2.0	ug/L	1		6020B	Total Recoverable
Molybdenum	22		5.0	ug/L	1		6020B	Total Recoverable
Lithium	68		8.0	ug/L	1		6020B	Total Recoverable
Fluoride	1.3		0.25	mg/L	5		9056A	Total/NA

Client Sample ID: MW-16-04

Lab Sample ID: 240-184674-4

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Barium	670		5.0	ug/L	1		6020B	Total Recoverable
Molybdenum	17		5.0	ug/L	1		6020B	Total Recoverable
Lithium	98		8.0	ug/L	1		6020B	Total Recoverable
Fluoride	1.5		0.25	mg/L	5		9056A	Total/NA

Client Sample ID: DUP-01

Lab Sample ID: 240-184674-5

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Barium	470		5.0	ug/L	1		6020B	Total Recoverable
Chromium	2.6		2.0	ug/L	1		6020B	Total Recoverable
Molybdenum	23		5.0	ug/L	1		6020B	Total Recoverable
Lithium	70		8.0	ug/L	1		6020B	Total Recoverable
Fluoride	1.3		0.25	mg/L	5		9056A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cleveland

Detection Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-1

Client Sample ID: EB-01

Lab Sample ID: 240-184674-6

No Detections.

- 1
- 2
- 3
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- 6
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- 8
- 9
- 10
- 11
- 12
- 13

This Detection Summary does not include radiochemical test results.

Eurofins Cleveland

Client Sample Results

Client: TRC Environmental Corporation.
 Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-1

Client Sample ID: MW-16-01

Lab Sample ID: 240-184674-1

Date Collected: 04/28/23 14:53

Matrix: Ground Water

Date Received: 05/04/23 08:00

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	ug/L		05/05/23 14:00	05/08/23 21:43	1
Arsenic	5.0	U	5.0	ug/L		05/05/23 14:00	05/08/23 21:43	1
Barium	220		5.0	ug/L		05/05/23 14:00	05/08/23 21:43	1
Beryllium	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:43	1
Cadmium	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:43	1
Cobalt	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:43	1
Chromium	2.0	U	2.0	ug/L		05/05/23 14:00	05/08/23 21:43	1
Molybdenum	25		5.0	ug/L		05/05/23 14:00	05/08/23 21:43	1
Lead	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:43	1
Selenium	5.0	U	5.0	ug/L		05/05/23 14:00	05/08/23 21:43	1
Thallium	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:43	1
Lithium	53		8.0	ug/L		05/05/23 14:00	05/08/23 21:43	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	ug/L		05/05/23 14:00	05/08/23 19:03	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride (SW846 9056A)	1.9		0.25	mg/L			05/18/23 08:30	5

Client Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-1

Client Sample ID: MW-16-02

Lab Sample ID: 240-184674-2

Date Collected: 04/28/23 13:01

Matrix: Ground Water

Date Received: 05/04/23 08:00

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	ug/L		05/05/23 14:00	05/08/23 21:45	1
Arsenic	5.0	U	5.0	ug/L		05/05/23 14:00	05/08/23 21:45	1
Barium	400		5.0	ug/L		05/05/23 14:00	05/08/23 21:45	1
Beryllium	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:45	1
Cadmium	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:45	1
Cobalt	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:45	1
Chromium	2.3		2.0	ug/L		05/05/23 14:00	05/08/23 21:45	1
Molybdenum	25		5.0	ug/L		05/05/23 14:00	05/08/23 21:45	1
Lead	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:45	1
Selenium	5.0	U	5.0	ug/L		05/05/23 14:00	05/08/23 21:45	1
Thallium	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:45	1
Lithium	66		8.0	ug/L		05/05/23 14:00	05/08/23 21:45	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	ug/L		05/05/23 14:00	05/08/23 19:10	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride (SW846 9056A)	1.5		0.25	mg/L			05/18/23 08:50	5

Client Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-1

Client Sample ID: MW-16-03

Lab Sample ID: 240-184674-3

Date Collected: 04/28/23 11:35

Matrix: Ground Water

Date Received: 05/04/23 08:00

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	ug/L		05/05/23 14:00	05/08/23 21:53	1
Arsenic	5.0	U	5.0	ug/L		05/05/23 14:00	05/08/23 21:53	1
Barium	450		5.0	ug/L		05/05/23 14:00	05/08/23 21:53	1
Beryllium	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:53	1
Cadmium	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:53	1
Cobalt	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:53	1
Chromium	2.1		2.0	ug/L		05/05/23 14:00	05/08/23 21:53	1
Molybdenum	22		5.0	ug/L		05/05/23 14:00	05/08/23 21:53	1
Lead	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:53	1
Selenium	5.0	U	5.0	ug/L		05/05/23 14:00	05/08/23 21:53	1
Thallium	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:53	1
Lithium	68		8.0	ug/L		05/05/23 14:00	05/08/23 21:53	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	ug/L		05/05/23 14:00	05/08/23 19:12	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride (SW846 9056A)	1.3		0.25	mg/L			05/18/23 09:10	5

Client Sample Results

Client: TRC Environmental Corporation.
 Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-1

Client Sample ID: MW-16-04

Lab Sample ID: 240-184674-4

Date Collected: 04/28/23 10:15

Matrix: Ground Water

Date Received: 05/04/23 08:00

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	ug/L		05/05/23 14:00	05/08/23 21:56	1
Arsenic	5.0	U	5.0	ug/L		05/05/23 14:00	05/08/23 21:56	1
Barium	670		5.0	ug/L		05/05/23 14:00	05/08/23 21:56	1
Beryllium	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:56	1
Cadmium	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:56	1
Cobalt	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:56	1
Chromium	2.0	U	2.0	ug/L		05/05/23 14:00	05/08/23 21:56	1
Molybdenum	17		5.0	ug/L		05/05/23 14:00	05/08/23 21:56	1
Lead	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:56	1
Selenium	5.0	U	5.0	ug/L		05/05/23 14:00	05/08/23 21:56	1
Thallium	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:56	1
Lithium	98		8.0	ug/L		05/05/23 14:00	05/08/23 21:56	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	ug/L		05/05/23 14:00	05/08/23 19:14	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride (SW846 9056A)	1.5		0.25	mg/L			05/18/23 09:30	5

Client Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-1

Client Sample ID: DUP-01
Date Collected: 04/28/23 00:00
Date Received: 05/04/23 08:00

Lab Sample ID: 240-184674-5
Matrix: Ground Water

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	ug/L		05/05/23 14:00	05/08/23 21:59	1
Arsenic	5.0	U	5.0	ug/L		05/05/23 14:00	05/08/23 21:59	1
Barium	470		5.0	ug/L		05/05/23 14:00	05/08/23 21:59	1
Beryllium	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:59	1
Cadmium	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:59	1
Cobalt	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:59	1
Chromium	2.6		2.0	ug/L		05/05/23 14:00	05/08/23 21:59	1
Molybdenum	23		5.0	ug/L		05/05/23 14:00	05/08/23 21:59	1
Lead	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:59	1
Selenium	5.0	U	5.0	ug/L		05/05/23 14:00	05/08/23 21:59	1
Thallium	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:59	1
Lithium	70		8.0	ug/L		05/05/23 14:00	05/08/23 21:59	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	ug/L		05/05/23 14:00	05/08/23 19:16	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride (SW846 9056A)	1.3		0.25	mg/L			05/18/23 10:31	5

Client Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-1

Client Sample ID: EB-01

Lab Sample ID: 240-184674-6

Date Collected: 04/28/23 15:00

Matrix: Water

Date Received: 05/04/23 08:00

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	ug/L		05/05/23 14:00	05/08/23 22:01	1
Arsenic	5.0	U	5.0	ug/L		05/05/23 14:00	05/08/23 22:01	1
Barium	5.0	U	5.0	ug/L		05/05/23 14:00	05/08/23 22:01	1
Beryllium	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 22:01	1
Cadmium	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 22:01	1
Cobalt	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 22:01	1
Chromium	2.0	U	2.0	ug/L		05/05/23 14:00	05/08/23 22:01	1
Molybdenum	5.0	U	5.0	ug/L		05/05/23 14:00	05/08/23 22:01	1
Lead	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 22:01	1
Selenium	5.0	U	5.0	ug/L		05/05/23 14:00	05/08/23 22:01	1
Thallium	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 22:01	1
Lithium	8.0	U	8.0	ug/L		05/05/23 14:00	05/08/23 22:01	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	ug/L		05/05/23 14:00	05/08/23 19:19	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride (SW846 9056A)	0.050	U	0.050	mg/L			05/18/23 07:09	1

QC Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-572237/1-A
Matrix: Water
Analysis Batch: 572569

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 572237

Analyte	MB MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Antimony	2.0	U	2.0	ug/L		05/05/23 14:00	05/08/23 20:39	1
Arsenic	5.0	U	5.0	ug/L		05/05/23 14:00	05/08/23 20:39	1
Barium	5.0	U	5.0	ug/L		05/05/23 14:00	05/08/23 20:39	1
Beryllium	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 20:39	1
Cadmium	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 20:39	1
Cobalt	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 20:39	1
Chromium	2.0	U	2.0	ug/L		05/05/23 14:00	05/08/23 20:39	1
Molybdenum	5.0	U	5.0	ug/L		05/05/23 14:00	05/08/23 20:39	1
Lead	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 20:39	1
Selenium	5.0	U	5.0	ug/L		05/05/23 14:00	05/08/23 20:39	1
Thallium	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 20:39	1
Lithium	8.0	U	8.0	ug/L		05/05/23 14:00	05/08/23 20:39	1

Lab Sample ID: LCS 240-572237/2-A
Matrix: Water
Analysis Batch: 572569

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 572237

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	1000	947		ug/L		95	80 - 120
Barium	1000	964		ug/L		96	80 - 120
Beryllium	500	441		ug/L		88	80 - 120
Cadmium	500	478		ug/L		96	80 - 120
Cobalt	500	483		ug/L		97	80 - 120
Chromium	500	482		ug/L		96	80 - 120
Molybdenum	500	470		ug/L		94	80 - 120
Lead	500	446		ug/L		89	80 - 120
Selenium	1000	944		ug/L		94	80 - 120
Thallium	1000	916		ug/L		92	80 - 120
Lithium	500	490		ug/L		98	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-572242/1-A
Matrix: Water
Analysis Batch: 572543

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 572242

Analyte	MB MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Mercury	0.20	U	0.20	ug/L		05/05/23 14:00	05/08/23 18:20	1

Lab Sample ID: LCS 240-572242/2-A
Matrix: Water
Analysis Batch: 572543

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 572242

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits

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QC Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 240-573780/3
Matrix: Water
Analysis Batch: 573780

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.050	U	0.050	mg/L			05/18/23 06:29	1

Lab Sample ID: LCS 240-573780/4
Matrix: Water
Analysis Batch: 573780

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	2.50	2.67		mg/L		107	90 - 110

Lab Sample ID: 240-184674-6 MS
Matrix: Water
Analysis Batch: 573780

Client Sample ID: EB-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	0.050	U	2.50	2.81		mg/L		112	80 - 120

Lab Sample ID: 240-184674-6 MSD
Matrix: Water
Analysis Batch: 573780

Client Sample ID: EB-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Fluoride	0.050	U	2.50	2.69		mg/L		108	80 - 120	4	15

QC Association Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-1

Metals

Prep Batch: 572237

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-184674-1	MW-16-01	Total Recoverable	Ground Water	3005A	
240-184674-2	MW-16-02	Total Recoverable	Ground Water	3005A	
240-184674-3	MW-16-03	Total Recoverable	Ground Water	3005A	
240-184674-4	MW-16-04	Total Recoverable	Ground Water	3005A	
240-184674-5	DUP-01	Total Recoverable	Ground Water	3005A	
240-184674-6	EB-01	Total Recoverable	Water	3005A	
MB 240-572237/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-572237/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 572242

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-184674-1	MW-16-01	Total/NA	Ground Water	7470A	
240-184674-2	MW-16-02	Total/NA	Ground Water	7470A	
240-184674-3	MW-16-03	Total/NA	Ground Water	7470A	
240-184674-4	MW-16-04	Total/NA	Ground Water	7470A	
240-184674-5	DUP-01	Total/NA	Ground Water	7470A	
240-184674-6	EB-01	Total/NA	Water	7470A	
MB 240-572242/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-572242/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 572543

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-184674-1	MW-16-01	Total/NA	Ground Water	7470A	572242
240-184674-2	MW-16-02	Total/NA	Ground Water	7470A	572242
240-184674-3	MW-16-03	Total/NA	Ground Water	7470A	572242
240-184674-4	MW-16-04	Total/NA	Ground Water	7470A	572242
240-184674-5	DUP-01	Total/NA	Ground Water	7470A	572242
240-184674-6	EB-01	Total/NA	Water	7470A	572242
MB 240-572242/1-A	Method Blank	Total/NA	Water	7470A	572242
LCS 240-572242/2-A	Lab Control Sample	Total/NA	Water	7470A	572242

Analysis Batch: 572569

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-184674-1	MW-16-01	Total Recoverable	Ground Water	6020B	572237
240-184674-2	MW-16-02	Total Recoverable	Ground Water	6020B	572237
240-184674-3	MW-16-03	Total Recoverable	Ground Water	6020B	572237
240-184674-4	MW-16-04	Total Recoverable	Ground Water	6020B	572237
240-184674-5	DUP-01	Total Recoverable	Ground Water	6020B	572237
240-184674-6	EB-01	Total Recoverable	Water	6020B	572237
MB 240-572237/1-A	Method Blank	Total Recoverable	Water	6020B	572237
LCS 240-572237/2-A	Lab Control Sample	Total Recoverable	Water	6020B	572237

General Chemistry

Analysis Batch: 573780

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-184674-1	MW-16-01	Total/NA	Ground Water	9056A	
240-184674-2	MW-16-02	Total/NA	Ground Water	9056A	
240-184674-3	MW-16-03	Total/NA	Ground Water	9056A	
240-184674-4	MW-16-04	Total/NA	Ground Water	9056A	
240-184674-5	DUP-01	Total/NA	Ground Water	9056A	

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QC Association Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-1

General Chemistry (Continued)

Analysis Batch: 573780 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-184674-6	EB-01	Total/NA	Water	9056A	
MB 240-573780/3	Method Blank	Total/NA	Water	9056A	
LCS 240-573780/4	Lab Control Sample	Total/NA	Water	9056A	
240-184674-6 MS	EB-01	Total/NA	Water	9056A	
240-184674-6 MSD	EB-01	Total/NA	Water	9056A	

- 1
- 2
- 3
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- 13

Lab Chronicle

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-1

Client Sample ID: MW-16-01
Date Collected: 04/28/23 14:53
Date Received: 05/04/23 08:00

Lab Sample ID: 240-184674-1
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			572237	MRL	EET CLE	05/05/23 14:00
Total Recoverable	Analysis	6020B		1	572569	DSH	EET CLE	05/08/23 21:43
Total/NA	Prep	7470A			572242	MRL	EET CLE	05/05/23 14:00
Total/NA	Analysis	7470A		1	572543	AJC	EET CLE	05/08/23 19:03
Total/NA	Analysis	9056A		5	573780	JWW	EET CLE	05/18/23 08:30

Client Sample ID: MW-16-02
Date Collected: 04/28/23 13:01
Date Received: 05/04/23 08:00

Lab Sample ID: 240-184674-2
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			572237	MRL	EET CLE	05/05/23 14:00
Total Recoverable	Analysis	6020B		1	572569	DSH	EET CLE	05/08/23 21:45
Total/NA	Prep	7470A			572242	MRL	EET CLE	05/05/23 14:00
Total/NA	Analysis	7470A		1	572543	AJC	EET CLE	05/08/23 19:10
Total/NA	Analysis	9056A		5	573780	JWW	EET CLE	05/18/23 08:50

Client Sample ID: MW-16-03
Date Collected: 04/28/23 11:35
Date Received: 05/04/23 08:00

Lab Sample ID: 240-184674-3
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			572237	MRL	EET CLE	05/05/23 14:00
Total Recoverable	Analysis	6020B		1	572569	DSH	EET CLE	05/08/23 21:53
Total/NA	Prep	7470A			572242	MRL	EET CLE	05/05/23 14:00
Total/NA	Analysis	7470A		1	572543	AJC	EET CLE	05/08/23 19:12
Total/NA	Analysis	9056A		5	573780	JWW	EET CLE	05/18/23 09:10

Client Sample ID: MW-16-04
Date Collected: 04/28/23 10:15
Date Received: 05/04/23 08:00

Lab Sample ID: 240-184674-4
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			572237	MRL	EET CLE	05/05/23 14:00
Total Recoverable	Analysis	6020B		1	572569	DSH	EET CLE	05/08/23 21:56
Total/NA	Prep	7470A			572242	MRL	EET CLE	05/05/23 14:00
Total/NA	Analysis	7470A		1	572543	AJC	EET CLE	05/08/23 19:14
Total/NA	Analysis	9056A		5	573780	JWW	EET CLE	05/18/23 09:30

Lab Chronicle

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-1

Client Sample ID: DUP-01

Date Collected: 04/28/23 00:00

Date Received: 05/04/23 08:00

Lab Sample ID: 240-184674-5

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			572237	MRL	EET CLE	05/05/23 14:00
Total Recoverable	Analysis	6020B		1	572569	DSH	EET CLE	05/08/23 21:59
Total/NA	Prep	7470A			572242	MRL	EET CLE	05/05/23 14:00
Total/NA	Analysis	7470A		1	572543	AJC	EET CLE	05/08/23 19:16
Total/NA	Analysis	9056A		5	573780	JWW	EET CLE	05/18/23 10:31

Client Sample ID: EB-01

Date Collected: 04/28/23 15:00

Date Received: 05/04/23 08:00

Lab Sample ID: 240-184674-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			572237	MRL	EET CLE	05/05/23 14:00
Total Recoverable	Analysis	6020B		1	572569	DSH	EET CLE	05/08/23 22:01
Total/NA	Prep	7470A			572242	MRL	EET CLE	05/05/23 14:00
Total/NA	Analysis	7470A		1	572543	AJC	EET CLE	05/08/23 19:19
Total/NA	Analysis	9056A		1	573780	JWW	EET CLE	05/18/23 07:09

Laboratory References:

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

Accreditation/Certification Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-1

Laboratory: Eurofins Cleveland

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	07-05-23
Connecticut	State	PH-0590	06-29-23
Florida	NELAP	E87225	05-24-23
Georgia	State	4062	06-27-23
Illinois	NELAP	200004	07-24-23
Iowa	State	421	05-31-23
Kentucky (UST)	State	112225	02-28-24
Kentucky (WW)	State	KY98016	12-31-23
Michigan	State	9135	07-17-23
Minnesota	NELAP	039-999-348	12-28-23
Minnesota (Petrofund)	State	3506	08-01-23
New Jersey	NELAP	OH001	06-30-23
New York	NELAP	10975	06-12-23
Ohio	State	8303	06-27-23
Ohio VAP	State	ORELAP 4062	06-27-23
Oregon	NELAP	4062	05-24-23
Pennsylvania	NELAP	68-00340	06-13-23
Texas	NELAP	T104704517-22-19	08-31-23
Virginia	NELAP	460175	08-03-23
West Virginia DEP	State	210	12-19-23

Eurofins - Canton Sample Receipt Form/Narrative Login #: 184674
Barberton Facility

Client TBC Environmental Corporation Site Name _____ Cooler unpacked by: Leah M. Smith
Cooler Received on 05-04-23 Opened on 05-04-23

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

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

Eurofins Cooler # EC 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 # 22 (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 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 NA
-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)? Yes No
- 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# HC208070
- 14. Were VOAs on the COC? Yes No NA
- 15. Were air bubbles >6 mm in any VOA vials? Yes No NA ● ← Larger than this.
- 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: _____
None of the 250 ml p's have labels

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: _____

Login #: 184674

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Eurofins - Canton Sample Receipt Multiple Cooler Form				
Cooler Description (Circle)	IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)
EC Client Box Other	IR GUN #: 22	1.8	1.8	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: 22	2.4	2.4	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: 22	1.4	1.4	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: 22	2.6	2.6	Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
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EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None
EC Client Box Other	IR GUN #: _____			Wet Ice Blue Ice Dry Ice Water None

See Temperature Excursion Form

WI-NC-099 Cooler Receipt Form Page 2 - Multiple Coolers

Temperature readings: _____

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container</u>		<u>Preservative</u>	
			<u>pH</u>	<u>Temp</u>	<u>Added (mls)</u>	<u>Lot #</u>
MW-16-01	240-184674-B-1	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
MW-16-01	240-184674-C-1	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW-16-01	240-184674-D-1	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW-16-02	240-184674-B-2	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
MW-16-02	240-184674-C-2	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW-16-02	240-184674-D-2	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW-16-03	240-184674-B-3	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
MW-16-03	240-184674-C-3	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW-16-03	240-184674-D-3	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW-16-04	240-184674-B-4	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
MW-16-04	240-184674-C-4	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW-16-04	240-184674-D-4	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
DUP-01	240-184674-B-5	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
DUP-01	240-184674-C-5	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
DUP-01	240-184674-D-5	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
EB-01	240-184674-B-6	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
EB-01	240-184674-C-6	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
EB-01	240-184674-D-6	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____

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ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Vincent Buening
TRC Environmental Corporation.
1540 Eisenhower Place
Ann Arbor, Michigan 48108-7080

Generated 6/21/2023 7:52:59 PM

JOB DESCRIPTION

CCR DTE SCPP 1AS23 Verification

JOB NUMBER

240-187144-1

Eurofins Cleveland

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization



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



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Definitions/Glossary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE SCPP 1AS23 Verification

Job ID: 240-187144-1

Qualifiers

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.
α	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 SSCP 1AS23 Verification

Job ID: 240-187144-1

Job ID: 240-187144-1

Laboratory: Eurofins Cleveland

Narrative

Job Narrative
240-187144-1

Receipt

The samples were received on 6/16/2023 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 time was 2.0°C

General Chemistry

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

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Method Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE SSCP 1AS23 Verification

Job ID: 240-187144-1

Method	Method Description	Protocol	Laboratory
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CLE

Protocol References:

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

Laboratory References:

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



Sample Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE SCPP 1AS23 Verification

Job ID: 240-187144-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-187144-1	MW-16-03	Water	06/15/23 09:50	06/16/23 08:00
240-187144-2	DUP-01	Water	06/15/23 00:00	06/16/23 08:00
240-187144-3	EB-01	Water	06/14/23 09:20	06/16/23 08:00

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Detection Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE SSCP 1AS23 Verification

Job ID: 240-187144-1

Client Sample ID: MW-16-03

Lab Sample ID: 240-187144-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	3400		50	mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP-01

Lab Sample ID: 240-187144-2

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Total Dissolved Solids	3400		50	mg/L	1		SM 2540C	Total/NA

Client Sample ID: EB-01

Lab Sample ID: 240-187144-3

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Cleveland



Client Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE SCPP 1AS23 Verification

Job ID: 240-187144-1

Client Sample ID: MW-16-03

Lab Sample ID: 240-187144-1

Date Collected: 06/15/23 09:50

Matrix: Water

Date Received: 06/16/23 08:00

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	3400		50	mg/L			06/20/23 10:15	1

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Client Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE SCPP 1AS23 Verification

Job ID: 240-187144-1

Client Sample ID: DUP-01

Lab Sample ID: 240-187144-2

Date Collected: 06/15/23 00:00

Matrix: Water

Date Received: 06/16/23 08:00

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	3400		50	mg/L			06/20/23 10:15	1

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Client Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE SSCP 1AS23 Verification

Job ID: 240-187144-1

Client Sample ID: EB-01

Lab Sample ID: 240-187144-3

Date Collected: 06/14/23 09:20

Matrix: Water

Date Received: 06/16/23 08:00

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids (SM 2540C)	10	U	10	mg/L			06/20/23 10:15	1

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QC Sample Results

Client: TRC Environmental Corporation.
 Project/Site: CCR DTE SSCP 1AS23 Verification

Job ID: 240-187144-1

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

Lab Sample ID: MB 240-577835/1
Matrix: Water
Analysis Batch: 577835

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	10	U	10	mg/L			06/20/23 10:15	1

Lab Sample ID: LCS 240-577835/2
Matrix: Water
Analysis Batch: 577835

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	518	491		mg/L		95	80 - 120

Lab Sample ID: 240-187144-3 DU
Matrix: Water
Analysis Batch: 577835

Client Sample ID: EB-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	10	U	10	U	mg/L		NC	20



QC Association Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE SSCP 1AS23 Verification

Job ID: 240-187144-1

General Chemistry

Analysis Batch: 577835

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-187144-1	MW-16-03	Total/NA	Water	SM 2540C	
240-187144-2	DUP-01	Total/NA	Water	SM 2540C	
240-187144-3	EB-01	Total/NA	Water	SM 2540C	
MB 240-577835/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-577835/2	Lab Control Sample	Total/NA	Water	SM 2540C	
240-187144-3 DU	EB-01	Total/NA	Water	SM 2540C	

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Lab Chronicle

Client: TRC Environmental Corporation.
Project/Site: CCR DTE SCPP 1AS23 Verification

Job ID: 240-187144-1

Client Sample ID: MW-16-03

Lab Sample ID: 240-187144-1

Date Collected: 06/15/23 09:50

Matrix: Water

Date Received: 06/16/23 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	SM 2540C		1	577835	GH	EET CLE	06/20/23 10:15

Client Sample ID: DUP-01

Lab Sample ID: 240-187144-2

Date Collected: 06/15/23 00:00

Matrix: Water

Date Received: 06/16/23 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	SM 2540C		1	577835	GH	EET CLE	06/20/23 10:15

Client Sample ID: EB-01

Lab Sample ID: 240-187144-3

Date Collected: 06/14/23 09:20

Matrix: Water

Date Received: 06/16/23 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	SM 2540C		1	577835	GH	EET CLE	06/20/23 10:15

Laboratory References:

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

Accreditation/Certification Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE SSCP 1AS23 Verification

Job ID: 240-187144-1

Laboratory: Eurofins Cleveland

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	02-27-24
Connecticut	State	PH-0590	06-29-23
Florida	NELAP	E87225	06-30-23
Georgia	State	4062	02-28-24
Illinois	NELAP	200004	07-31-23
Iowa	State	421	06-01-25
Kentucky (UST)	State	112225	02-28-24
Kentucky (WW)	State	KY98016	12-31-23
Michigan	State	9135	02-27-24
Minnesota	NELAP	039-999-348	12-31-23
Minnesota (Petrofund)	State	3506	08-01-23
New Jersey	NELAP	OH001	06-30-23
New York	NELAP	10975	04-02-24
Ohio	State	8303	02-27-24
Ohio VAP	State	ORELAP 4062	02-27-24
Oregon	NELAP	4062	02-27-24
Pennsylvania	NELAP	68-00340	08-31-24
Texas	NELAP	T104704517-22-17	08-31-23
Virginia	NELAP	460175	09-14-23
West Virginia DEP	State	210	12-31-23

Regulatory Program: DW NPDES RCRA Other:

Project Manager: Email: vbuening@trccompanies.com

Client Contact: 1540 Eisenhower Place
 City/State/Zip: Ann Arbor MI 48108
 Phone: 7349717080
 Project Name: DTE CCR SCPP 1AS23 Verification
 P O # 199490

Site Contact: Lab Contact: Kris Brooks Date: Carrier: COCs

Sample Identification	Sample Date	Sample Time	Sample Type (C-Comp, G-G-Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	TDS (2540C, Calculated)	Sample Specific Notes:
MW-16-03	6/15/23	0950	G	GW	1	N	N	X	
DUP-01	6/15/23		G	GW	1	N	N	X	
EB-01	6/15/23	0900	G	GW	1	N	N	X	



Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4=HNO3, 5=NaOH, 6= Other

Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

Special Instructions/QC Requirements & Comments: Non-Hazard Flammable Skin Irritant Unknown Poison B Return to Client Disposal by Lab Archive for Months

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:	Therm ID No.:
<i>[Signature]</i>	TRC	6-15-23/55	<i>[Signature]</i>	EEENA	6/15/23 1515	61513 1202
<i>[Signature]</i>	EEENA	6/16/23	<i>[Signature]</i>	EEENA	6-16-23	800

Barberton Facility

Client TRC Site Name _____ Cooler unpacked by Nancy Rager
 Cooler Received on 6-16-23 Opened on 6-16-23
 FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off Eurofins Courier Other _____

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

Eurofins Cooler # ES 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 # 22 (CF +0.0 °C) Observed Cooler Temp. 2.0 °C Corrected Cooler Temp. 2.0 °C

- | | | |
|---|--|--|
| 2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity <u>1</u> | Yes <input checked="" type="radio"/> No <input type="radio"/> | Tests that are not checked for pH by Receiving:

VOAs
Oil and Grease
TOC |
| -Were the seals on the outside of the cooler(s) signed & dated? | Yes <input checked="" type="radio"/> No <input type="radio"/> NA <input type="radio"/> | |
| -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? | Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| -Were tamper/custody seals intact and uncompromised? | Yes <input checked="" type="radio"/> No <input type="radio"/> NA <input type="radio"/> | |
| 3. Shippers' packing slip attached to the cooler(s)? | Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| 4. Did custody papers accompany the sample(s)? | Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| 5. Were the custody papers relinquished & signed in the appropriate place? | Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| 6. Was/were the person(s) who collected the samples clearly identified on the COC? | Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| 7. Did all bottles arrive in good condition (Unbroken)? | Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| 8. Could all bottle labels (ID/Date/Time) be reconciled with the COC? | Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| 9. For each sample, does the COC specify preservatives (Y/N), # of containers (Y/N), and sample type of grab/comp (Y/N)? | Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| 10. Were correct bottle(s) used for the test(s) indicated? | Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| 11. Sufficient quantity received to perform indicated analyses? | Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| 12. Are these work share samples and all listed on the COC?
If yes, Questions 13-17 have been checked at the originating laboratory. | Yes <input checked="" type="radio"/> No <input type="radio"/> | |
| 13. Were all preserved sample(s) at the correct pH upon receipt? | Yes <input type="radio"/> No <input checked="" type="radio"/> NA <input type="radio"/> pH Strip Lot# 10BDH4321 | |
| 14. Were VOAs on the COC? | Yes <input type="radio"/> No <input checked="" type="radio"/> NA <input type="radio"/> | |
| 15. Were air bubbles >6 mm in any VOA vials? Larger than this. | Yes <input type="radio"/> No <input checked="" type="radio"/> NA <input type="radio"/> | |
| 16. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ | Yes <input type="radio"/> No <input checked="" type="radio"/> | |
| 17. Was a LL Hg or Me Hg trip blank present? _____ | Yes <input type="radio"/> No <input checked="" type="radio"/> | |

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: _____



 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Mr. Vincent Buening
TRC Environmental Corporation.
1540 Eisenhower Place
Ann Arbor, Michigan 48108-7080

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JOB DESCRIPTION

CCR DTE St. Clair Power

JOB NUMBER

240-193602-1

Eurofins Cleveland

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization



Authorized for release by
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Revision 1



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Definitions/Glossary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-1

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: CCR DTE St. Clair Power

Job ID: 240-193602-1

Job ID: 240-193602-1

Eurofins Cleveland

Job Narrative 240-193602-1

REVISION

The report being provided is a revision of the original report sent on 10/27/2023. The report (revision 1) is being revised due to lower the reporting limit for chromium.

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 10/14/2023 8:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 0.1°C and 0.3°C

Metals

Method 6020B: Some requested practical quantitation limits (PQLs) on the following samples fall below the laboratory's verified standard quantitation limit: MW-16-01 (240-193602-1), MW-16-02 (240-193602-2), MW-16-03 (240-193602-3), MW-16-04 (240-193602-4), DUP-01 (240-193602-5) and EB-01 (240-193602-6). The continuing calibration blanks and method blanks may not support the lower PQL.

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-16-01 (240-193602-1), MW-16-02 (240-193602-2), MW-16-03 (240-193602-3), MW-16-04 (240-193602-4) and DUP-01 (240-193602-5). 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.

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Method Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-1

Method	Method Description	Protocol	Laboratory
6010D	Metals (ICP)	SW846	EET CLE
6020B	Metals (ICP/MS)	SW846	EET CLE
7470A	Mercury (CVAA)	SW846	EET CLE
9056A	Anions, Ion Chromatography	SW846	EET CLE
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CLE
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CLE
7470A	Preparation, Mercury	SW846	EET CLE

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 CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396

Sample Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-193602-1	MW-16-01	Water	10/12/23 10:00	10/14/23 08:00
240-193602-2	MW-16-02	Water	10/12/23 09:04	10/14/23 08:00
240-193602-3	MW-16-03	Water	10/12/23 11:49	10/14/23 08:00
240-193602-4	MW-16-04	Water	10/12/23 12:57	10/14/23 08:00
240-193602-5	DUP-01	Water	10/12/23 00:00	10/14/23 08:00
240-193602-6	EB-01	Water	10/11/23 10:40	10/14/23 08:00

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Detection Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-1

Client Sample ID: MW-16-01

Lab Sample ID: 240-193602-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Boron	2200		100	ug/L	1		6010D	Total Recoverable
Barium	220		5.0	ug/L	1		6020B	Total Recoverable
Calcium	20000		1000	ug/L	1		6020B	Total Recoverable
Iron	570		100	ug/L	1		6020B	Total Recoverable
Lithium	52		8.0	ug/L	1		6020B	Total Recoverable
Molybdenum	25		5.0	ug/L	1		6020B	Total Recoverable
Chloride	1500		10	mg/L	10		9056A	Total/NA
Fluoride	2.0		0.10	mg/L	2		9056A	Total/NA
Total Dissolved Solids	2000		40	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW-16-02

Lab Sample ID: 240-193602-2

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Boron	2100		100	ug/L	1		6010D	Total Recoverable
Barium	410		5.0	ug/L	1		6020B	Total Recoverable
Calcium	38000		1000	ug/L	1		6020B	Total Recoverable
Chromium	2.0		2.0	ug/L	1		6020B	Total Recoverable
Iron	1000		100	ug/L	1		6020B	Total Recoverable
Lithium	62		8.0	ug/L	1		6020B	Total Recoverable
Molybdenum	25		5.0	ug/L	1		6020B	Total Recoverable
Chloride	2100		20	mg/L	20		9056A	Total/NA
Fluoride	1.6		0.10	mg/L	2		9056A	Total/NA
Total Dissolved Solids	2900		50	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW-16-03

Lab Sample ID: 240-193602-3

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Boron	2100		100	ug/L	1		6010D	Total Recoverable
Barium	450		5.0	ug/L	1		6020B	Total Recoverable
Calcium	48000		1000	ug/L	1		6020B	Total Recoverable
Iron	930		100	ug/L	1		6020B	Total Recoverable
Lithium	64		8.0	ug/L	1		6020B	Total Recoverable
Molybdenum	22		5.0	ug/L	1		6020B	Total Recoverable
Chloride	2200		25	mg/L	25		9056A	Total/NA
Fluoride	1.4		0.25	mg/L	5		9056A	Total/NA
Total Dissolved Solids	3200		50	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cleveland

Detection Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-1

Client Sample ID: MW-16-04

Lab Sample ID: 240-193602-4

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Boron	2500		100	ug/L	1		6010D	Total Recoverable
Barium	650		5.0	ug/L	1		6020B	Total Recoverable
Calcium	38000		1000	ug/L	1		6020B	Total Recoverable
Chromium	3.1		2.0	ug/L	1		6020B	Total Recoverable
Cobalt	1.3		1.0	ug/L	1		6020B	Total Recoverable
Iron	3200		100	ug/L	1		6020B	Total Recoverable
Lead	1.8		1.0	ug/L	1		6020B	Total Recoverable
Lithium	96		8.0	ug/L	1		6020B	Total Recoverable
Molybdenum	17		5.0	ug/L	1		6020B	Total Recoverable
Chloride	2700		25	mg/L	25		9056A	Total/NA
Fluoride	1.7		0.25	mg/L	5		9056A	Total/NA
Total Dissolved Solids	3800		50	mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP-01

Lab Sample ID: 240-193602-5

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Boron	2200		100	ug/L	1		6010D	Total Recoverable
Barium	210		5.0	ug/L	1		6020B	Total Recoverable
Calcium	19000		1000	ug/L	1		6020B	Total Recoverable
Iron	570		100	ug/L	1		6020B	Total Recoverable
Lithium	49		8.0	ug/L	1		6020B	Total Recoverable
Molybdenum	25		5.0	ug/L	1		6020B	Total Recoverable
Chloride	1300		20	mg/L	20		9056A	Total/NA
Fluoride	2.0		0.10	mg/L	2		9056A	Total/NA
Total Dissolved Solids	2100		40	mg/L	1		SM 2540C	Total/NA

Client Sample ID: EB-01

Lab Sample ID: 240-193602-6

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	1.0		1.0	mg/L	1		9056A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cleveland

Client Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-1

Client Sample ID: MW-16-01

Lab Sample ID: 240-193602-1

Date Collected: 10/12/23 10:00

Matrix: Water

Date Received: 10/14/23 08:00

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2200		100	ug/L		10/16/23 14:00	10/18/23 05:54	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	ug/L		10/16/23 14:00	10/18/23 16:44	1
Arsenic	5.0	U	5.0	ug/L		10/16/23 14:00	10/18/23 16:44	1
Barium	220		5.0	ug/L		10/16/23 14:00	10/18/23 16:44	1
Beryllium	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:44	1
Cadmium	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:44	1
Calcium	20000		1000	ug/L		10/16/23 14:00	10/18/23 16:44	1
Chromium	2.0	U	2.0	ug/L		10/16/23 14:00	10/18/23 16:44	1
Cobalt	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:44	1
Iron	570		100	ug/L		10/16/23 14:00	10/18/23 16:44	1
Lead	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:44	1
Lithium	52		8.0	ug/L		10/16/23 14:00	10/18/23 16:44	1
Molybdenum	25		5.0	ug/L		10/16/23 14:00	10/18/23 16:44	1
Selenium	5.0	U	5.0	ug/L		10/16/23 14:00	10/18/23 16:44	1
Thallium	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:44	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	ug/L		10/16/23 14:00	10/18/23 14:19	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (SW846 9056A)	1500		10	mg/L			10/21/23 12:26	10
Fluoride (SW846 9056A)	2.0		0.10	mg/L			10/21/23 12:06	2
Sulfate (SW846 9056A)	2.0	U	2.0	mg/L			10/21/23 12:06	2
Total Dissolved Solids (SM 2540C)	2000		40	mg/L			10/19/23 09:19	1

Client Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-1

Client Sample ID: MW-16-02

Lab Sample ID: 240-193602-2

Date Collected: 10/12/23 09:04

Matrix: Water

Date Received: 10/14/23 08:00

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2100		100	ug/L		10/16/23 14:00	10/18/23 05:59	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	ug/L		10/16/23 14:00	10/18/23 16:46	1
Arsenic	5.0	U	5.0	ug/L		10/16/23 14:00	10/18/23 16:46	1
Barium	410		5.0	ug/L		10/16/23 14:00	10/18/23 16:46	1
Beryllium	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:46	1
Cadmium	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:46	1
Calcium	38000		1000	ug/L		10/16/23 14:00	10/18/23 16:46	1
Chromium	2.0		2.0	ug/L		10/16/23 14:00	10/18/23 16:46	1
Cobalt	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:46	1
Iron	1000		100	ug/L		10/16/23 14:00	10/18/23 16:46	1
Lead	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:46	1
Lithium	62		8.0	ug/L		10/16/23 14:00	10/18/23 16:46	1
Molybdenum	25		5.0	ug/L		10/16/23 14:00	10/18/23 16:46	1
Selenium	5.0	U	5.0	ug/L		10/16/23 14:00	10/18/23 16:46	1
Thallium	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:46	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	ug/L		10/16/23 14:00	10/18/23 14:21	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (SW846 9056A)	2100		20	mg/L			10/21/23 04:03	20
Fluoride (SW846 9056A)	1.6		0.10	mg/L			10/21/23 03:43	2
Sulfate (SW846 9056A)	2.0	U	2.0	mg/L			10/21/23 03:43	2
Total Dissolved Solids (SM 2540C)	2900		50	mg/L			10/19/23 09:19	1

Client Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-1

Client Sample ID: MW-16-03

Lab Sample ID: 240-193602-3

Date Collected: 10/12/23 11:49

Matrix: Water

Date Received: 10/14/23 08:00

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2100		100	ug/L		10/16/23 14:00	10/18/23 06:03	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	ug/L		10/16/23 14:00	10/18/23 16:49	1
Arsenic	5.0	U	5.0	ug/L		10/16/23 14:00	10/18/23 16:49	1
Barium	450		5.0	ug/L		10/16/23 14:00	10/18/23 16:49	1
Beryllium	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:49	1
Cadmium	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:49	1
Calcium	48000		1000	ug/L		10/16/23 14:00	10/18/23 16:49	1
Chromium	2.0	U	2.0	ug/L		10/16/23 14:00	10/18/23 16:49	1
Cobalt	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:49	1
Iron	930		100	ug/L		10/16/23 14:00	10/18/23 16:49	1
Lead	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:49	1
Lithium	64		8.0	ug/L		10/16/23 14:00	10/18/23 16:49	1
Molybdenum	22		5.0	ug/L		10/16/23 14:00	10/18/23 16:49	1
Selenium	5.0	U	5.0	ug/L		10/16/23 14:00	10/18/23 16:49	1
Thallium	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:49	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	ug/L		10/16/23 14:00	10/18/23 14:23	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (SW846 9056A)	2200		25	mg/L			10/21/23 07:24	25
Fluoride (SW846 9056A)	1.4		0.25	mg/L			10/21/23 07:04	5
Sulfate (SW846 9056A)	5.0	U	5.0	mg/L			10/21/23 07:04	5
Total Dissolved Solids (SM 2540C)	3200		50	mg/L			10/19/23 09:19	1

Client Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-1

Client Sample ID: MW-16-04

Lab Sample ID: 240-193602-4

Date Collected: 10/12/23 12:57

Matrix: Water

Date Received: 10/14/23 08:00

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2500		100	ug/L		10/16/23 14:00	10/18/23 06:08	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	ug/L		10/16/23 14:00	10/18/23 16:51	1
Arsenic	5.0	U	5.0	ug/L		10/16/23 14:00	10/18/23 16:51	1
Barium	650		5.0	ug/L		10/16/23 14:00	10/18/23 16:51	1
Beryllium	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:51	1
Cadmium	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:51	1
Calcium	38000		1000	ug/L		10/16/23 14:00	10/18/23 16:51	1
Chromium	3.1		2.0	ug/L		10/16/23 14:00	10/18/23 16:51	1
Cobalt	1.3		1.0	ug/L		10/16/23 14:00	10/18/23 16:51	1
Iron	3200		100	ug/L		10/16/23 14:00	10/18/23 16:51	1
Lead	1.8		1.0	ug/L		10/16/23 14:00	10/18/23 16:51	1
Lithium	96		8.0	ug/L		10/16/23 14:00	10/18/23 16:51	1
Molybdenum	17		5.0	ug/L		10/16/23 14:00	10/18/23 16:51	1
Selenium	5.0	U	5.0	ug/L		10/16/23 14:00	10/18/23 16:51	1
Thallium	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:51	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	ug/L		10/16/23 14:00	10/18/23 14:25	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (SW846 9056A)	2700		25	mg/L			10/21/23 06:44	25
Fluoride (SW846 9056A)	1.7		0.25	mg/L			10/21/23 06:24	5
Sulfate (SW846 9056A)	5.0	U	5.0	mg/L			10/21/23 06:24	5
Total Dissolved Solids (SM 2540C)	3800		50	mg/L			10/19/23 09:19	1

Client Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-1

Client Sample ID: DUP-01

Lab Sample ID: 240-193602-5

Date Collected: 10/12/23 00:00

Matrix: Water

Date Received: 10/14/23 08:00

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2200		100	ug/L		10/16/23 14:00	10/18/23 06:12	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	ug/L		10/16/23 14:00	10/18/23 16:54	1
Arsenic	5.0	U	5.0	ug/L		10/16/23 14:00	10/18/23 16:54	1
Barium	210		5.0	ug/L		10/16/23 14:00	10/18/23 16:54	1
Beryllium	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:54	1
Cadmium	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:54	1
Calcium	19000		1000	ug/L		10/16/23 14:00	10/18/23 16:54	1
Chromium	2.0	U	2.0	ug/L		10/16/23 14:00	10/18/23 16:54	1
Cobalt	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:54	1
Iron	570		100	ug/L		10/16/23 14:00	10/18/23 16:54	1
Lead	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:54	1
Lithium	49		8.0	ug/L		10/16/23 14:00	10/18/23 16:54	1
Molybdenum	25		5.0	ug/L		10/16/23 14:00	10/18/23 16:54	1
Selenium	5.0	U	5.0	ug/L		10/16/23 14:00	10/18/23 16:54	1
Thallium	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:54	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	ug/L		10/16/23 14:00	10/18/23 14:31	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (SW846 9056A)	1300		20	mg/L			10/21/23 03:23	20
Fluoride (SW846 9056A)	2.0		0.10	mg/L			10/21/23 03:02	2
Sulfate (SW846 9056A)	2.0	U	2.0	mg/L			10/21/23 03:02	2
Total Dissolved Solids (SM 2540C)	2100		40	mg/L			10/19/23 09:19	1

Client Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-1

Client Sample ID: EB-01

Lab Sample ID: 240-193602-6

Date Collected: 10/11/23 10:40

Matrix: Water

Date Received: 10/14/23 08:00

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	ug/L		10/16/23 14:00	10/18/23 06:17	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	ug/L		10/16/23 14:00	10/18/23 16:56	1
Arsenic	5.0	U	5.0	ug/L		10/16/23 14:00	10/18/23 16:56	1
Barium	5.0	U	5.0	ug/L		10/16/23 14:00	10/18/23 16:56	1
Beryllium	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:56	1
Cadmium	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:56	1
Calcium	1000	U	1000	ug/L		10/16/23 14:00	10/18/23 16:56	1
Chromium	2.0	U	2.0	ug/L		10/16/23 14:00	10/18/23 16:56	1
Cobalt	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:56	1
Iron	100	U	100	ug/L		10/16/23 14:00	10/18/23 16:56	1
Lead	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:56	1
Lithium	8.0	U	8.0	ug/L		10/16/23 14:00	10/18/23 16:56	1
Molybdenum	5.0	U	5.0	ug/L		10/16/23 14:00	10/18/23 16:56	1
Selenium	5.0	U	5.0	ug/L		10/16/23 14:00	10/18/23 16:56	1
Thallium	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:56	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	ug/L		10/16/23 14:00	10/18/23 14:33	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (SW846 9056A)	1.0	U	1.0	mg/L			10/21/23 05:44	1
Fluoride (SW846 9056A)	0.050	U	0.050	mg/L			10/21/23 05:44	1
Sulfate (SW846 9056A)	1.0		1.0	mg/L			10/21/23 05:44	1
Total Dissolved Solids (SM 2540C)	50	U	50	mg/L			10/18/23 09:19	1

QC Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-1

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 240-590931/1-A
Matrix: Water
Analysis Batch: 591127

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 590931

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	ug/L		10/16/23 14:00	10/18/23 04:31	1

Lab Sample ID: LCS 240-590931/2-A
Matrix: Water
Analysis Batch: 591127

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 590931

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1000	1000		ug/L		100	80 - 120

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-590931/1-A
Matrix: Water
Analysis Batch: 591382

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 590931

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	ug/L		10/16/23 14:00	10/18/23 15:59	1
Arsenic	5.0	U	5.0	ug/L		10/16/23 14:00	10/18/23 15:59	1
Barium	5.0	U	5.0	ug/L		10/16/23 14:00	10/18/23 15:59	1
Beryllium	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 15:59	1
Cadmium	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 15:59	1
Calcium	1000	U	1000	ug/L		10/16/23 14:00	10/18/23 15:59	1
Chromium	2.0	U	2.0	ug/L		10/16/23 14:00	10/18/23 15:59	1
Cobalt	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 15:59	1
Iron	100	U	100	ug/L		10/16/23 14:00	10/18/23 15:59	1
Lead	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 15:59	1
Lithium	8.0	U	8.0	ug/L		10/16/23 14:00	10/18/23 15:59	1
Molybdenum	5.0	U	5.0	ug/L		10/16/23 14:00	10/18/23 15:59	1
Selenium	5.0	U	5.0	ug/L		10/16/23 14:00	10/18/23 15:59	1
Thallium	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 15:59	1

Lab Sample ID: LCS 240-590931/3-A
Matrix: Water
Analysis Batch: 591382

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 590931

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	100	101		ug/L		101	80 - 120
Arsenic	1000	941		ug/L		94	80 - 120
Barium	1000	940		ug/L		94	80 - 120
Beryllium	500	489		ug/L		98	80 - 120
Cadmium	500	482		ug/L		96	80 - 120
Calcium	25000	22000		ug/L		88	80 - 120
Chromium	500	494		ug/L		99	80 - 120
Cobalt	500	478		ug/L		96	80 - 120
Iron	5000	4530		ug/L		91	80 - 120
Lead	500	484		ug/L		97	80 - 120
Lithium	500	487		ug/L		97	80 - 120
Molybdenum	500	475		ug/L		95	80 - 120
Selenium	1000	955		ug/L		95	80 - 120

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QC Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-1

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

Lab Sample ID: LCS 240-590931/3-A
Matrix: Water
Analysis Batch: 591382

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 590931

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Thallium	1000	954		ug/L		95	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-590935/1-A
Matrix: Water
Analysis Batch: 591320

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 590935

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	ug/L		10/16/23 14:00	10/18/23 13:48	1

Lab Sample ID: LCS 240-590935/2-A
Matrix: Water
Analysis Batch: 591320

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 590935

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.87		ug/L		97	80 - 120

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 240-591640/3
Matrix: Water
Analysis Batch: 591640

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	U	1.0	mg/L			10/21/23 01:22	1
Fluoride	0.050	U	0.050	mg/L			10/21/23 01:22	1
Sulfate	1.0	U	1.0	mg/L			10/21/23 01:22	1

Lab Sample ID: LCS 240-591640/4
Matrix: Water
Analysis Batch: 591640

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	51.7		mg/L		103	90 - 110
Fluoride	2.50	2.74		mg/L		110	90 - 110
Sulfate	50.0	54.2		mg/L		108	90 - 110

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

Lab Sample ID: MB 240-591249/1
Matrix: Water
Analysis Batch: 591249

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	10	U	10	mg/L			10/18/23 09:19	1

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QC Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-1

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

Lab Sample ID: LCS 240-591249/2
Matrix: Water
Analysis Batch: 591249

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	336	317		mg/L		94	80 - 120

Lab Sample ID: MB 240-591417/1
Matrix: Water
Analysis Batch: 591417

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	10	U	10	mg/L			10/19/23 09:19	1

Lab Sample ID: LCS 240-591417/2
Matrix: Water
Analysis Batch: 591417

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	336	316		mg/L		94	80 - 120

Lab Sample ID: 240-193602-1 DU
Matrix: Water
Analysis Batch: 591417

Client Sample ID: MW-16-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	2000		1920		mg/L		5	20

QC Association Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-1

Metals

Prep Batch: 590931

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-193602-1	MW-16-01	Total Recoverable	Water	3005A	
240-193602-2	MW-16-02	Total Recoverable	Water	3005A	
240-193602-3	MW-16-03	Total Recoverable	Water	3005A	
240-193602-4	MW-16-04	Total Recoverable	Water	3005A	
240-193602-5	DUP-01	Total Recoverable	Water	3005A	
240-193602-6	EB-01	Total Recoverable	Water	3005A	
MB 240-590931/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-590931/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-590931/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 590935

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-193602-1	MW-16-01	Total/NA	Water	7470A	
240-193602-2	MW-16-02	Total/NA	Water	7470A	
240-193602-3	MW-16-03	Total/NA	Water	7470A	
240-193602-4	MW-16-04	Total/NA	Water	7470A	
240-193602-5	DUP-01	Total/NA	Water	7470A	
240-193602-6	EB-01	Total/NA	Water	7470A	
MB 240-590935/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-590935/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 591127

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-193602-1	MW-16-01	Total Recoverable	Water	6010D	590931
240-193602-2	MW-16-02	Total Recoverable	Water	6010D	590931
240-193602-3	MW-16-03	Total Recoverable	Water	6010D	590931
240-193602-4	MW-16-04	Total Recoverable	Water	6010D	590931
240-193602-5	DUP-01	Total Recoverable	Water	6010D	590931
240-193602-6	EB-01	Total Recoverable	Water	6010D	590931
MB 240-590931/1-A	Method Blank	Total Recoverable	Water	6010D	590931
LCS 240-590931/2-A	Lab Control Sample	Total Recoverable	Water	6010D	590931

Analysis Batch: 591320

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-193602-1	MW-16-01	Total/NA	Water	7470A	590935
240-193602-2	MW-16-02	Total/NA	Water	7470A	590935
240-193602-3	MW-16-03	Total/NA	Water	7470A	590935
240-193602-4	MW-16-04	Total/NA	Water	7470A	590935
240-193602-5	DUP-01	Total/NA	Water	7470A	590935
240-193602-6	EB-01	Total/NA	Water	7470A	590935
MB 240-590935/1-A	Method Blank	Total/NA	Water	7470A	590935
LCS 240-590935/2-A	Lab Control Sample	Total/NA	Water	7470A	590935

Analysis Batch: 591382

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-193602-1	MW-16-01	Total Recoverable	Water	6020B	590931
240-193602-2	MW-16-02	Total Recoverable	Water	6020B	590931
240-193602-3	MW-16-03	Total Recoverable	Water	6020B	590931
240-193602-4	MW-16-04	Total Recoverable	Water	6020B	590931
240-193602-5	DUP-01	Total Recoverable	Water	6020B	590931
240-193602-6	EB-01	Total Recoverable	Water	6020B	590931

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QC Association Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-1

Metals (Continued)

Analysis Batch: 591382 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-590931/1-A	Method Blank	Total Recoverable	Water	6020B	590931
LCS 240-590931/3-A	Lab Control Sample	Total Recoverable	Water	6020B	590931

General Chemistry

Analysis Batch: 591249

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-193602-6	EB-01	Total/NA	Water	SM 2540C	
MB 240-591249/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-591249/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 591417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-193602-1	MW-16-01	Total/NA	Water	SM 2540C	
240-193602-2	MW-16-02	Total/NA	Water	SM 2540C	
240-193602-3	MW-16-03	Total/NA	Water	SM 2540C	
240-193602-4	MW-16-04	Total/NA	Water	SM 2540C	
240-193602-5	DUP-01	Total/NA	Water	SM 2540C	
MB 240-591417/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-591417/2	Lab Control Sample	Total/NA	Water	SM 2540C	
240-193602-1 DU	MW-16-01	Total/NA	Water	SM 2540C	

Analysis Batch: 591640

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-193602-1	MW-16-01	Total/NA	Water	9056A	
240-193602-1	MW-16-01	Total/NA	Water	9056A	
240-193602-2	MW-16-02	Total/NA	Water	9056A	
240-193602-2	MW-16-02	Total/NA	Water	9056A	
240-193602-3	MW-16-03	Total/NA	Water	9056A	
240-193602-3	MW-16-03	Total/NA	Water	9056A	
240-193602-4	MW-16-04	Total/NA	Water	9056A	
240-193602-4	MW-16-04	Total/NA	Water	9056A	
240-193602-5	DUP-01	Total/NA	Water	9056A	
240-193602-5	DUP-01	Total/NA	Water	9056A	
240-193602-6	EB-01	Total/NA	Water	9056A	
MB 240-591640/3	Method Blank	Total/NA	Water	9056A	
LCS 240-591640/4	Lab Control Sample	Total/NA	Water	9056A	

Lab Chronicle

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-1

Client Sample ID: MW-16-01
Date Collected: 10/12/23 10:00
Date Received: 10/14/23 08:00

Lab Sample ID: 240-193602-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			590931	S4FJ	EET CLE	10/16/23 14:00
Total Recoverable	Analysis	6010D		1	591127	KLC	EET CLE	10/18/23 05:54
Total Recoverable	Prep	3005A			590931	S4FJ	EET CLE	10/16/23 14:00
Total Recoverable	Analysis	6020B		1	591382	RKT	EET CLE	10/18/23 16:44
Total/NA	Prep	7470A			590935	S4FJ	EET CLE	10/16/23 14:00
Total/NA	Analysis	7470A		1	591320	GK	EET CLE	10/18/23 14:19
Total/NA	Analysis	9056A		2	591640	JWW	EET CLE	10/21/23 12:06
Total/NA	Analysis	9056A		10	591640	JWW	EET CLE	10/21/23 12:26
Total/NA	Analysis	SM 2540C		1	591417	QUY8	EET CLE	10/19/23 09:19

Client Sample ID: MW-16-02
Date Collected: 10/12/23 09:04
Date Received: 10/14/23 08:00

Lab Sample ID: 240-193602-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			590931	S4FJ	EET CLE	10/16/23 14:00
Total Recoverable	Analysis	6010D		1	591127	KLC	EET CLE	10/18/23 05:59
Total Recoverable	Prep	3005A			590931	S4FJ	EET CLE	10/16/23 14:00
Total Recoverable	Analysis	6020B		1	591382	RKT	EET CLE	10/18/23 16:46
Total/NA	Prep	7470A			590935	S4FJ	EET CLE	10/16/23 14:00
Total/NA	Analysis	7470A		1	591320	GK	EET CLE	10/18/23 14:21
Total/NA	Analysis	9056A		2	591640	JWW	EET CLE	10/21/23 03:43
Total/NA	Analysis	9056A		20	591640	JWW	EET CLE	10/21/23 04:03
Total/NA	Analysis	SM 2540C		1	591417	QUY8	EET CLE	10/19/23 09:19

Client Sample ID: MW-16-03
Date Collected: 10/12/23 11:49
Date Received: 10/14/23 08:00

Lab Sample ID: 240-193602-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			590931	S4FJ	EET CLE	10/16/23 14:00
Total Recoverable	Analysis	6010D		1	591127	KLC	EET CLE	10/18/23 06:03
Total Recoverable	Prep	3005A			590931	S4FJ	EET CLE	10/16/23 14:00
Total Recoverable	Analysis	6020B		1	591382	RKT	EET CLE	10/18/23 16:49
Total/NA	Prep	7470A			590935	S4FJ	EET CLE	10/16/23 14:00
Total/NA	Analysis	7470A		1	591320	GK	EET CLE	10/18/23 14:23
Total/NA	Analysis	9056A		5	591640	JWW	EET CLE	10/21/23 07:04
Total/NA	Analysis	9056A		25	591640	JWW	EET CLE	10/21/23 07:24
Total/NA	Analysis	SM 2540C		1	591417	QUY8	EET CLE	10/19/23 09:19

Lab Chronicle

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-1

Client Sample ID: MW-16-04

Lab Sample ID: 240-193602-4

Date Collected: 10/12/23 12:57

Matrix: Water

Date Received: 10/14/23 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			590931	S4FJ	EET CLE	10/16/23 14:00
Total Recoverable	Analysis	6010D		1	591127	KLC	EET CLE	10/18/23 06:08
Total Recoverable	Prep	3005A			590931	S4FJ	EET CLE	10/16/23 14:00
Total Recoverable	Analysis	6020B		1	591382	RKT	EET CLE	10/18/23 16:51
Total/NA	Prep	7470A			590935	S4FJ	EET CLE	10/16/23 14:00
Total/NA	Analysis	7470A		1	591320	GK	EET CLE	10/18/23 14:25
Total/NA	Analysis	9056A		5	591640	JWW	EET CLE	10/21/23 06:24
Total/NA	Analysis	9056A		25	591640	JWW	EET CLE	10/21/23 06:44
Total/NA	Analysis	SM 2540C		1	591417	QUY8	EET CLE	10/19/23 09:19

Client Sample ID: DUP-01

Lab Sample ID: 240-193602-5

Date Collected: 10/12/23 00:00

Matrix: Water

Date Received: 10/14/23 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			590931	S4FJ	EET CLE	10/16/23 14:00
Total Recoverable	Analysis	6010D		1	591127	KLC	EET CLE	10/18/23 06:12
Total Recoverable	Prep	3005A			590931	S4FJ	EET CLE	10/16/23 14:00
Total Recoverable	Analysis	6020B		1	591382	RKT	EET CLE	10/18/23 16:54
Total/NA	Prep	7470A			590935	S4FJ	EET CLE	10/16/23 14:00
Total/NA	Analysis	7470A		1	591320	GK	EET CLE	10/18/23 14:31
Total/NA	Analysis	9056A		2	591640	JWW	EET CLE	10/21/23 03:02
Total/NA	Analysis	9056A		20	591640	JWW	EET CLE	10/21/23 03:23
Total/NA	Analysis	SM 2540C		1	591417	QUY8	EET CLE	10/19/23 09:19

Client Sample ID: EB-01

Lab Sample ID: 240-193602-6

Date Collected: 10/11/23 10:40

Matrix: Water

Date Received: 10/14/23 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			590931	S4FJ	EET CLE	10/16/23 14:00
Total Recoverable	Analysis	6010D		1	591127	KLC	EET CLE	10/18/23 06:17
Total Recoverable	Prep	3005A			590931	S4FJ	EET CLE	10/16/23 14:00
Total Recoverable	Analysis	6020B		1	591382	RKT	EET CLE	10/18/23 16:56
Total/NA	Prep	7470A			590935	S4FJ	EET CLE	10/16/23 14:00
Total/NA	Analysis	7470A		1	591320	GK	EET CLE	10/18/23 14:33
Total/NA	Analysis	9056A		1	591640	JWW	EET CLE	10/21/23 05:44
Total/NA	Analysis	SM 2540C		1	591249	QUY8	EET CLE	10/18/23 09:19

Laboratory References:

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

Accreditation/Certification Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-1

Laboratory: Eurofins Cleveland

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	02-27-24
Georgia	State	4062	02-27-24
Illinois	NELAP	200004	07-31-24
Iowa	State	421	06-01-25
Kentucky (UST)	State	112225	02-28-24
Kentucky (WW)	State	KY98016	12-31-23
Michigan	State	9135	02-27-24
Minnesota	NELAP	039-999-348	12-28-23
New Jersey	NELAP	OH001	07-01-24
New York	NELAP	10975	01-04-24
Ohio	State	8303	02-27-24
Ohio VAP	State	ORELAP 4062	02-27-24
Oregon	NELAP	4062	11-27-23
Pennsylvania	NELAP	68-00340	01-01-24
Texas	NELAP	T104704517-22-19	08-31-24
Virginia	NELAP	460175	09-14-24
West Virginia DEP	State	210	12-19-23

Client Information Client Contact: Jacob Krenz Company: TRC Environmental Corporation. Address: 1540 Eisenhower Place City: Ann Arbor State: MI, Zip: 48108-7080 Phone: 313-971-7080(Tel) 313-971-9022(Fax) Email: JKrenz@trccompanies.com Project Name: CCR DTE St. Clair Power Site: Michigan		Lab PM: Brooks, Kris M E-Mail: Kris.Brooks@eurofins.com Camer Tracking No(s): State of Origin:		COC No: 240-112841-38006.1 Page: Page 1 of 1 Job #:	
Due Date Requested: TAT Requested (days): Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No PO #: 199490 - 2023 WO #: 518728.0004 Project #: 24016804 SSOW#:		Analysis Requested Total Number of Containers: 5 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 Other: 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)			
Sample Identification Sample Date: 10/10/23 Sample Time: 10:20 Sample Type (C=Comp, G=grab): G Matrix (W=water, S=solid, O=wastoil, BI=tissue, A=air): Water Field Filtered Sample (Yes or No): <input checked="" type="checkbox"/> No MS/MSD (Yes or No): <input checked="" type="checkbox"/> No 2540C_Calcd - TDS 6010B_Ba, 6020 Ca, Fe, Sb, As, Ba, Ba, Ba, Cd, Da, Cr, Co, Cu, Pb, Li, Mo, Ni, Se, Ag, Tl, V, Zn, 7470 Hg 9056A_28D - Chloride, Fluoride and Sulfate 9315_Ra226 - Radium-226 9320_Ra228 - Radium-228		Special Instructions/Note: 240-193602 Chain of Custody			
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input checked="" type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)					
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
Special Instructions/QC Requirements:					
Empty Kit Relinquished by _____ Date: _____ Method of Shipment: _____					
Relinquished by _____ Date/Time: 10/10/23 1532 Company: TRC		Received by _____ Date/Time: 10/10/23 1532 Company: TRC			
Relinquished by _____ Date/Time: 10/13/23 1254 Company: EETA		Received by _____ Date/Time: 10/13/23 1254 Company: EETA			
Relinquished by _____ Date/Time: 10/13/23 1254 Company: EETA		Received by _____ Date/Time: 10/14/23 800a Company: EETA			
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal No: _____ Cooler/temperature(s) °C and Other Remarks:					



Eurofins - Cleveland Sample Receipt Form/Narrative

Login # : _____

Barberton Facility

Client Tec Corporation Site Name _____

Cooler unpacked by:

Cooler Received on 10/13/23 Opened on 10/14/23

L Osborne

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

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

Eurofins Cooler # EC 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 # 22 (CF -0.1 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity _____ 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# HC316719

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

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

Concerning _____

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

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: _____

Temperature readings: _____

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container</u>		<u>Preservative</u>	
			<u>pH</u>	<u>Temp</u>	<u>Added (mls)</u>	<u>Lot #</u>
MW-16-01	240-193602-C-1	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____
MW-16-01	240-193602-D-1	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW-16-01	240-193602-E-1	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW-16-02	240-193602-C-2	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____
MW-16-02	240-193602-D-2	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW-16-02	240-193602-E-2	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW-16-03	240-193602-C-3	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____
MW-16-03	240-193602-D-3	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW-16-03	240-193602-E-3	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW-16-04	240-193602-C-4	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____
MW-16-04	240-193602-D-4	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW-16-04	240-193602-E-4	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
DUP-01	240-193602-C-5	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____
DUP-01	240-193602-D-5	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
DUP-01	240-193602-E-5	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
EB-01	240-193602-C-6	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____
EB-01	240-193602-D-6	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
EB-01	240-193602-E-6	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____

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 **ANALYTICAL REPORT****PREPARED FOR**

Attn: Mr. Vincent Buening
TRC Environmental Corporation.
1540 Eisenhower Place
Ann Arbor, Michigan 48108-7080

Generated 12/22/2023 1:03:04 PM

JOB DESCRIPTION

CCR DTE St. Clair Power

JOB NUMBER

240-196742-1

Eurofins Cleveland

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization



Generated
12/22/2023 1:03:04 PM

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



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Definitions/Glossary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-196742-1

Qualifiers

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.
α	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: CCR DTE St. Clair Power

Job ID: 240-196742-1

Job ID: 240-196742-1

Eurofins Cleveland

Job Narrative 240-196742-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 12/9/2023 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 time was 3.2°C

General Chemistry

Method 9056A_28D: The following samples were diluted due to the nature of the sample matrix: MW-16-01 (240-196742-2) and DUP-01 (240-196742-3). 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.

Eurofins Cleveland

Method Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-196742-1

Method	Method Description	Protocol	Laboratory
9056A	Anions, Ion Chromatography	SW846	EET CLE

Protocol References:

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

Laboratory References:

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



Sample Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-196742-1

<u>Lab Sample ID</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Collected</u>	<u>Received</u>
240-196742-1	EB-01	Water	12/06/23 10:10	12/09/23 08:00
240-196742-2	MW-16-01	Water	12/07/23 08:58	12/09/23 08:00
240-196742-3	DUP-01	Water	12/07/23 00:00	12/09/23 08:00

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Detection Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-196742-1

Client Sample ID: EB-01

Lab Sample ID: 240-196742-1

No Detections.

Client Sample ID: MW-16-01

Lab Sample ID: 240-196742-2

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1200		10	mg/L	10		9056A	Total/NA
Fluoride	1.5		0.10	mg/L	2		9056A	Total/NA

Client Sample ID: DUP-01

Lab Sample ID: 240-196742-3

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Chloride	1200		20	mg/L	20		9056A	Total/NA
Fluoride	1.6		0.10	mg/L	2		9056A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cleveland

Client Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-196742-1

Client Sample ID: EB-01

Lab Sample ID: 240-196742-1

Date Collected: 12/06/23 10:10

Matrix: Water

Date Received: 12/09/23 08:00

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (SW846 9056A)	1.0	U	1.0	mg/L			12/22/23 04:44	1
Fluoride (SW846 9056A)	0.050	U	0.050	mg/L			12/22/23 04:44	1
Sulfate (SW846 9056A)	1.0	U	1.0	mg/L			12/22/23 04:44	1

Client Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-196742-1

Client Sample ID: MW-16-01

Lab Sample ID: 240-196742-2

Date Collected: 12/07/23 08:58

Matrix: Water

Date Received: 12/09/23 08:00

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (SW846 9056A)	1200		10	mg/L			12/22/23 06:11	10
Fluoride (SW846 9056A)	1.5		0.10	mg/L			12/22/23 05:49	2
Sulfate (SW846 9056A)	2.0	U	2.0	mg/L			12/22/23 05:49	2

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Client Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-196742-1

Client Sample ID: DUP-01

Lab Sample ID: 240-196742-3

Date Collected: 12/07/23 00:00

Matrix: Water

Date Received: 12/09/23 08:00

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (SW846 9056A)	1200		20	mg/L			12/22/23 06:54	20
Fluoride (SW846 9056A)	1.6		0.10	mg/L			12/22/23 06:33	2
Sulfate (SW846 9056A)	2.0	U	2.0	mg/L			12/22/23 06:33	2

QC Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-196742-1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 240-598444/3
Matrix: Water
Analysis Batch: 598444

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

Analyte	MB MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Chloride	1.0	U	1.0	mg/L			12/21/23 20:47	1
Fluoride	0.050	U	0.050	mg/L			12/21/23 20:47	1
Sulfate	1.0	U	1.0	mg/L			12/21/23 20:47	1

Lab Sample ID: LCS 240-598444/4
Matrix: Water
Analysis Batch: 598444

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	2.50	2.44		mg/L		97	90 - 110
Sulfate	50.0	49.9		mg/L		100	90 - 110

Lab Sample ID: 240-196742-1 MS
Matrix: Water
Analysis Batch: 598444

Client Sample ID: EB-01
Prep Type: Total/NA

Analyte	Sample Sample		Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
	Result	Qualifier							
Chloride	1.0	U	50.0	46.1		mg/L		92	80 - 120
Fluoride	0.050	U	2.50	2.18		mg/L		87	80 - 120
Sulfate	1.0	U	50.0	46.6		mg/L		93	80 - 120

Lab Sample ID: 240-196742-1 MSD
Matrix: Water
Analysis Batch: 598444

Client Sample ID: EB-01
Prep Type: Total/NA

Analyte	Sample Sample		Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
	Result	Qualifier									
Chloride	1.0	U	50.0	47.7		mg/L		95	80 - 120	4	15
Fluoride	0.050	U	2.50	2.29		mg/L		91	80 - 120	5	15
Sulfate	1.0	U	50.0	48.5		mg/L		97	80 - 120	4	15

QC Association Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-196742-1

General Chemistry

Analysis Batch: 598444

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-196742-1	EB-01	Total/NA	Water	9056A	
240-196742-2	MW-16-01	Total/NA	Water	9056A	
240-196742-2	MW-16-01	Total/NA	Water	9056A	
240-196742-3	DUP-01	Total/NA	Water	9056A	
240-196742-3	DUP-01	Total/NA	Water	9056A	
MB 240-598444/3	Method Blank	Total/NA	Water	9056A	
LCS 240-598444/4	Lab Control Sample	Total/NA	Water	9056A	
240-196742-1 MS	EB-01	Total/NA	Water	9056A	
240-196742-1 MSD	EB-01	Total/NA	Water	9056A	

Lab Chronicle

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-196742-1

Client Sample ID: EB-01

Lab Sample ID: 240-196742-1

Date Collected: 12/06/23 10:10

Matrix: Water

Date Received: 12/09/23 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		1	598444	JWW	EET CLE	12/22/23 04:44

Client Sample ID: MW-16-01

Lab Sample ID: 240-196742-2

Date Collected: 12/07/23 08:58

Matrix: Water

Date Received: 12/09/23 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		2	598444	JWW	EET CLE	12/22/23 05:49
Total/NA	Analysis	9056A		10	598444	JWW	EET CLE	12/22/23 06:11

Client Sample ID: DUP-01

Lab Sample ID: 240-196742-3

Date Collected: 12/07/23 00:00

Matrix: Water

Date Received: 12/09/23 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056A		2	598444	JWW	EET CLE	12/22/23 06:33
Total/NA	Analysis	9056A		20	598444	JWW	EET CLE	12/22/23 06:54

Laboratory References:

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

Accreditation/Certification Summary

Client: TRC Environmental Corporation.
 Project/Site: CCR DTE St. Clair Power

Job ID: 240-196742-1

Laboratory: Eurofins Cleveland

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	02-27-24
Georgia	State	4062	02-27-24
Illinois	NELAP	200004	07-31-24
Iowa	State	421	06-01-25
Kentucky (UST)	State	112225	02-28-24
Kentucky (WW)	State	KY98016	12-31-23
Michigan	State	9135	02-27-24
Minnesota	NELAP	039-999-348	12-31-23
Minnesota (Petrofund)	State	3506	08-01-23 *
New Jersey	NELAP	OH001	07-01-24
New York	NELAP	10975	04-02-24
Ohio	State	8303	02-27-24
Ohio VAP	State	ORELAP 4062	02-27-24
Oregon	NELAP	4062	02-27-24
Pennsylvania	NELAP	68-00340	08-31-24
Texas	NELAP	T104704517-22-19	08-31-24
Virginia	NELAP	460175	09-14-24
West Virginia DEP	State	210	12-31-23

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



Eurofins - Cleveland Sample Receipt Form/Narrative
Barberton Facility

Login # : _____

Client TRC Site Name _____ Cooler unpacked by: M. Lou
Cooler Received on 12.9.23 Opened on 12.9.23
FedEx: 1st Grd Exp UPS FAS Waypoint Client Drop Off Eurofins Courier Other

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

Eurofins Cooler # 22 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 # 22 (CF) 1 °C Observed Cooler Temp. 21 °C Corrected Cooler Temp. 32 °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity _____ 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# HC316719
 14. Were VOAs on the COC? Yes No NA
 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: _____

Appendix B

Data Quality Reviews

**Laboratory Data Quality Review
Groundwater Monitoring Event April 2023
DTE Electric Company St. Clair Power Plant (DTE SCPP)**

Groundwater samples were collected by TRC for the April 2023 sampling event. Samples were analyzed for anions, total metals, and total dissolved solids by Eurofins-Test America Laboratories, Inc. (Eurofins-TA), located in Barberton, Ohio. The laboratory analytical results are reported in laboratory reports 240-184669-1 (Revision 1) and 240-184674-1 (Revision 1).

During the April 2023 sampling event, a groundwater sample was collected from each of the following wells:

- MW-16-01
- MW-16-02
- MW-16-03
- MW-16-04

Each sample was analyzed for the following constituents:

Analyte Group	Method
Anions (Chloride, Fluoride, Sulfate)	SW846 9056A
Total Boron	SW846 3005A/6010D
Total Metals	SW846 3005A/6020B/7470A
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. 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), where applicable. 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, where applicable. 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, IV, and additional Part 115 constituents as well as copper, iron, magnesium, nickel, vanadium, silver, and zinc 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

- There was one equipment blank submitted with this dataset (EB-01). No target analytes were detected in the equipment blank.
- No target analytes were detected in the method blanks.
- LCS recoveries for all target analytes were within laboratory control limits.
- MS/MSD analyses were performed on sample EB-01 for anions. The percent recoveries (%Rs) and relative percent differences (RPDs) for the MS/MSD analyses met the method acceptance criteria.
- A laboratory duplicate analysis was not performed on a sample from this data set.
- DUP-01 corresponds with MW-16-03; RPDs between the parent and duplicate sample were within the QC limits with the following exception:
 - The RPD for TDS (42.9%) was >30. Therefore, the positive results for TDS should be considered estimated in all groundwater samples in this data set, as summarized in the attached table, Attachment A.
- The nondetect RL (2.0 mg/L) for sulfate in sample MW-16-01 was above the QAPP-specified RL (1.0 mg/L) due to a 2-fold dilution likely performed due to the elevated concentration of chloride.
- The nondetect RL (5.0 mg/L) for sulfate in samples MW-16-02, MW-16-03, MW-16-03, MW-16-04, and DUP-01 was above the QAPP-specified RL (1.0 mg/L) due to a 5-fold dilution likely performed due to elevated concentrations of chloride.
- The nondetect RL for chromium (5.0 µg/L) was above the QAPP requested RL (2 µg/L) in all groundwater samples.
- The laboratory reported results for fluoride in both in laboratory reports 240-184669-1 and 240-184674-1; the highest detected fluoride concentrations between the two reports should be used for project objectives in order to remain conservative.

**Laboratory Data Quality Review
Groundwater Verification Event June 2023
DTE Electric Company St. Clair Power Plant (DTE SCPP)**

A groundwater sample was collected by TRC for the June 2023 sampling event. The sample was analyzed for total dissolved solids by Eurofins-Test America Laboratories, Inc. (Eurofins-TA), located in Barberton, Ohio. The laboratory analytical results are reported in laboratory report 240-187144-1.

During the June 2023 sampling event, a groundwater sample was collected from the following well:

- MW-16-03

The sample was analyzed for the following constituent:

Analyte Group	Method
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. 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), where applicable. 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, where applicable. 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.

- The reviewed Appendix III constituent 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

- There was one equipment blank submitted with this dataset (EB-01). TDS was not detected in the equipment blank.
- TDS was not detected in the method blank.
- The LCS recovery for TDS was within laboratory control limits.
- MS/MSD analyses were not performed on a sample from this data set.
- Laboratory duplicate analysis was performed on sample EB-01 for TDS; all criteria were met.
- DUP-01 corresponds with MW-16-03; the relative percent difference between the parent and duplicate sample was within the QC limit.

**Laboratory Data Quality Review
Groundwater Monitoring Event October 2023
DTE Electric Company St. Clair Power Plant (DTE SCPP)**

Groundwater samples were collected by TRC for the October 2023 sampling event. Samples were analyzed for anions, total metals, and total dissolved solids by Eurofins Environment Testing, located in Barberton, Ohio. Samples were analyzed for radium by Eurofins Environment Testing, located in Earth City, Missouri. The laboratory analytical results are reported in laboratory reports 240-193602-1, 240-193602-2, and 240-193602-3.

During the October 2023 sampling event, a groundwater sample was collected from each of the following wells:

- MW-16-01
- MW-16-02
- MW-16-03
- MW-16-04

Each sample was analyzed for the following constituents:

Analyte Group	Method
Anions (Chloride, Fluoride, Sulfate)	SW846 9056A
Total Boron	SW846 3005A/6010D
Total Metals	SW846 3005A/6020B/7470A
Total Dissolved Solids	SM 2540C
Radium (Radium-226, Radium-228, Combined Radium)	SW846 9315/9320

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) and the Department of Energy Evaluation of Radiochemical Data Usability (USDOE, 1997). 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. 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), where applicable. 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, where applicable. The laboratory duplicates are used to assess the precision of the analytical method using a sample from the dataset;
- Percent recoveries for carriers, where applicable, for radiochemistry only. Carriers are used to assess the chemical yield for the preparation and/or instrument efficiency;
- 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, IV, and additional Part 115 constituents as well as copper, iron, nickel, vanadium, silver, and zinc 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

- TDS was analyzed slightly after the 7th day of collection for sample MW-16-02. However, there is no impact on data usability since the sample was analyzed for TDS on the 7th day after collection.
- There was one equipment blank submitted with this dataset (EB-01). Sulfate (1.0 ug/L) was detected in the equipment blank. There is no impact on the data usability since sulfate was nondetect in the associated samples.
- No target analytes were detected in the method blanks with the following exception.
 - Radium-228 was detected in method blank 160-632483/1-A at 0.6466 +/- 0.334 pCi/L. The detected radium-228 results for samples MW-16-01, MW16-04, and DUP-01 associated with this method blank are potentially false positives, as summarized in the attached table, Attachment A.
- LCS recoveries for all target analytes were within laboratory control limits.
- Laboratory duplicate analyses were performed on sample MW-16-01 for TDS, radium-226, and radium-228; all criteria were met.
- Samples DUP-01 and MW-16-01 were submitted as the field duplicate pair with this data set; all criteria were met.
- The nondetect RL (2.0 mg/L) for sulfate in samples MW-16-01, MW-16-02, and DUP-01 was above the QAPP-specified RL (1.0 mg/L) due to 2-fold dilutions likely performed due to the elevated concentrations of chloride.

- The nondetect RL (5.0 mg/L) for sulfate in samples MW-16-03 and MW-16-04 was above the QAPP-specified RL (1.0 mg/L) due to 5-fold dilutions likely performed due to elevated concentrations of chloride.
- The nondetect RL for chromium (5.0 µg/L) was above the QAPP requested RL (2.0 µg/L) in all groundwater samples.
- The nondetect RL (50 mg/L) for TDS in sample EB-01 was above the QAPP-specified RL (10 mg/L); there is no adverse impact on the data usability due to this issue since TDS was detected >10x the elevated RL for EB-01 in the associated groundwater samples.
- Carrier recoveries were within 40-110%.

Field Parameter Data Quality Review Groundwater Sampling Event October 2023 Verification Resampling DTE Electric Company St. Clair Power Plant Former Bottom Ash Basins (DTE SSCP BABs)

On October 27, 2023, TRC Environmental Corporation (TRC) collected groundwater parameters at monitoring well MW-16-02 to verify initial pH (field measured) results that were outside of prediction limits during the October 2023 detection monitoring event. Prior to field parameter collection, the well was evacuated to the top of the well screen and at least one total volume of the pump system of groundwater were purged and stabilized in accordance with the *Hydrogeological Monitoring Plan for the DTE Electric Company St. Clair Power Plant Bottom Ash Basins Coal Combustion Residual Unit* (TRC, December 2020).

TRC routinely reviews the field parameter data to assess data usability. The following sections summarize the data review procedure and the results of this review.

Data Quality Review Procedure

The following items were included in the evaluation of the field parameter data:

- Review of sonde calibration data;
- Confirm field parameter stabilization criteria were met;
- Compare field parameters to historical data;
- Compare field parameters to prediction limits, and;
- Overall usability of data based on these items.

Findings

The data quality objectives for the project were met and the data are usable. The discussion that follows describes the QA/QC results and evaluation.

- Sonde calibration readings were within the calibration range for all field parameters.
- Field parameters met stabilization criteria for three successive readings.
- Field parameter readings were comparable to historical data.
- Field parameter readings were within prediction limits.
- Data are usable for purposes of verification resampling.

Attachment A

Summary of Data Non-Conformances for Groundwater Monitoring Event Analytical Data
DTE St. Clair Power Plant
East China Township, Michigan

Samples	Collection Date	Analyte	Non-Conformance/Issue
MW-16-01	10/12/2023	Radium-228	Method blank contamination; potential false positive.
MW-16-04	10/12/2023		
DUP-01	10/12/2023		

Laboratory Data Quality Review

Groundwater Monitoring Verification Event December 2023

DTE Electric Company St. Clair Power Plant (DTE SCPP)

Groundwater samples were collected by TRC for the December 2023 verification sampling event. Samples were analyzed for anions by Eurofins Environment Testing, located in Barberton, Ohio. The laboratory analytical results are reported in laboratory report 240-196742-1.

During the December 2023 sampling event, a groundwater sample was collected from the following well:

- MW-16-01

The sample was analyzed for the following constituents:

Analyte Group	Method
Anions (Chloride, Fluoride, Sulfate)	SW846 9056A

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. 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), where applicable. 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, where applicable. 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.

- The reviewed 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.
- 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

- There was one equipment blank submitted with this dataset (EB-01). No target analytes were detected in the equipment blank.
- No target analytes were detected in the method blank.
- LCS recoveries for all target analytes were within laboratory control limits.
- Laboratory duplicate analyses were not performed on a sample from this data set.
- MS/MSD analyses were performed on sample EB-01 for anions; all criteria were met.
- Samples DUP-01 and MW-16-01 were submitted as the field duplicate pair with this data set; all criteria were met.
- The nondetect RL (2.0 mg/L) for sulfate in samples DUP-01 and MW-16-01 was above the QAPP-specified RL (1.0 mg/L) due to 2-fold dilutions likely performed due to the elevated concentrations of chloride.

Appendix C

Groundwater Protection Standards Calculation and Comparison

Technical Memorandum

Date: January 31, 2024

To: Chris Scieszka, DTE Electric Company

From: Sarah Holmstrom, TRC
Kristin Lowery, TRC
Alex Eklund, TRC

Project No.: 518728.0004.0000

Subject: Groundwater Protection Standard Calculation and Comparison – DTE Electric Company, St Clair Power Plant Bottom Ash Basins CCR Unit

DTE Electric Company (DTE Electric) is pursuing closure by removal for the St. Clair Power Plant (SCPP) Bottom Ash Basins (BABs) CCR unit. Closure by removal activities related to the BABs began on August 15, 2022. DTE Electric completed the removal of CCR from the BABs, including from the concrete-lined canal connecting the East and West BABs, in February 2023. The BABs were backfilled following CCR removal, and topsoil, seed and mulch blanket placement atop the BABs was complete by May 19, 2023.

While the BABs have remained in detection monitoring throughout its operation, the closure must demonstrate that groundwater concentrations do not exceed the Appendix IV constituent GWPS established under §257.95(h) after the closure of the CCR impoundment pursuant to 257.102(c). TRC calculated background statistical limits and developed GWPS for the Appendix IV parameters for the BABs in accordance with §257.95(h) as presented in this memorandum. Two consecutive post-CCR removal groundwater sampling events for Appendix IV constituents have been completed to demonstrate that the GWPS are met for closure of the SCPP BABs CCR unit in accordance with §257.102(c). These two semiannual closure monitoring events were conducted on April 28, 2023 and October 12, 2023.

Per the CCR Rule §257.95(h)¹, the EPA maximum contaminant levels (MCLs) will be the GWPSs for those Appendix IV constituents that have established MCLs. For Appendix IV constituents that do not have established MCLs, the GWPSs are based upon the EPA Regional Screening Levels (RSLs). For constituents that have statistically derived background levels higher than the MCL and/or RSL, the GWPS becomes equal to the background level.

This memorandum presents the background statistical limits and GWPS derived for the Appendix IV parameters for the SCPP BABs CCR unit using the aforementioned approach pursuant to §257.95(h). In addition, the April 2023 and October 2023 Appendix IV groundwater data are presented in this

¹ As amended per Phase One, Part One of the CCR Rule (83 FR 36435).

Technical Memorandum

memorandum and show that all results are below their respective GWPS.

Background Data

Per 40 CFR §257.94(b), a minimum of eight rounds of background sampling for the Appendix IV constituents were completed at the SCPP BABs CCR unit from August 2016 through September 2017, as part of the baseline monitoring period for existing CCR surface impoundments. The Appendix IV constituents consist of the following:

Antimony	Beryllium	Cobalt	Lithium	Radium-226/228
Arsenic	Cadmium	Fluoride	Mercury	Selenium
Barium	Chromium	Lead	Molybdenum	Thallium

The background Appendix IV data used in this analysis were provided in the *Annual Groundwater Monitoring Report (2017 Annual Report)* (TRC, January 2018). The background data for the SCPP BABs were evaluated in accordance with the *Groundwater Statistical Evaluation Plan (Stats Plan)* (TRC, October 2017, revised December 2020). Per the Stats Plan, the SCPP BABs CCR unit uses an intrawell statistical approach. For intrawell methods, the background data set is comprised of the historical data established at each individual monitoring well, which accounts for natural spatial variability that occurs in background encountered across the site. Background data were evaluated utilizing ChemStat™ statistical software. ChemStat™ is a software tool that is commercially available for performing statistical evaluation consistent with procedures outlined in U.S. EPA's *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities* (Unified Guidance; UG). Within the ChemStat™ statistical program (and the UG), tolerance limits were selected to perform the statistical calculation for background limits. Use of tolerance limits is a streamlined approach that offers adequate statistical power and is an acceptable approach under the CCR Rule. As such, upper tolerance limits (UTLs) were calculated for each of the CCR Appendix IV parameters at each monitoring well and used to compare to the respective MCL or RSL. The following narrative describes the methods employed and the results obtained for the UTL calculations and the resulting GWPSs. The ChemStat™ output files are included as an attachment.

The set of wells utilized for the SCPP BABs CCR Unit includes MW-16-01, MW-16-02, MW-16-03, and MW-16-04. As noted above, the SCPP BABs uses an intrawell statistical approach wherein each well serves as both the background and compliance well. The background data evaluation included the following steps:

- Review of data quality checklists for the baseline/background data sets for CCR Appendix IV constituents;
- Graphical representation of the baseline data as time versus concentration (T v. C) by well/constituent pair;
- Outlier testing of individual data points that appear from the graphical representations as potential outliers;
- Evaluation of percentage of non-detects for each baseline/background well-constituent (w/c) pair;
- Distribution of the data;

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- Calculation of the UTLs for each cumulative baseline/background data set; and
- Establishment of GWPS as the higher of the MCL/RSL or the UTL for each Appendix IV constituent at each monitoring well.

The results of these evaluations are presented and discussed below.

Data Quality

Data from each sampling round were evaluated for completeness, overall quality and usability, method-specified sample holding times, precision and accuracy, and potential sample contamination. The review was completed using the following quality control (QC) information which at a minimum included chain-of-custody forms, investigative sample results including blind field duplicates, and as provided by the laboratory, method blanks, laboratory control spikes, laboratory duplicates. Data were found to be complete and usable for the purposes of the CCR monitoring program.

Time versus Concentration Graphs

The time versus concentration (T v. C) graphs (Attachment A) indicated potential or suspect outliers for antimony, beryllium, cadmium, chromium, cobalt, lead, and molybdenum due to singular detections and anomalously high values.

While variations in results are present, the graphs show consistent baseline data and do not suggest that data sets, as a whole, likely have overall trending or seasonality. However, due to limitations on CCR Rule implementation timelines, the data sets are of relatively short duration for making such observations regarding overall trending or seasonality.

Outlier Testing

The outliers identified in the T v. C graphs were tested using Dixon's Test for Outliers at the 95% confidence level.² Therefore, these data were removed from the background data set. Outlier removal from the background data set is summarized in Table 1.

Distribution of the Data Sets

ChemStat™ was utilized to evaluate each data set for normality. If the skewness coefficient was calculated to be between negative one and one, then the data were assumed to be approximately normally distributed. If the skewness coefficient was calculated as greater than one (or less than negative one) then the calculation was performed on the natural log (Ln) of the data. If the Ln of the data still determined that the data appeared to be skewed, then the Shapiro-Wilk test of normality (Shapiro-Wilk) was performed. The Shapiro-Wilk statistic was calculated on both non-transformed data and the Ln-transformed data. If the Shapiro-Wilk statistic indicated that normal distributional assumptions were not valid, then the parameter was considered a candidate for non-parametric statistical evaluation. Data sets that contained greater than 50% non-detects utilized non-parametric statistical evaluations, as described in the Stats Plan. The data distributions are summarized in Table 2.

² Dixon's test is not appropriate for data sets that are non-normal or primarily non-detect. Therefore, single detections above the reporting limit were excluded as outliers without the use of Dixon's test.

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Tolerance Limits

Table 2 presents the calculated UTLs for the background/baseline data sets. As discussed above, the SCPP BABs CCR unit uses intrawell statistical methods; therefore, UTLs were calculated for each individual monitoring well. For normal and lognormal distributions, UTLs are calculated for 95 percent confidence using parametric methods. For non-normal background datasets, a non-parametric UTL is utilized, resulting in the highest value from the background dataset as the UTL. The achieved confidence levels for non-parametric tolerance limits depend entirely on the number of background data points, which are shown in the ChemStat™ outputs.

Groundwater Protection Standards

The resulting GWPSs were established as the higher of the MCL/RSL or the UTL for each Appendix IV constituent at each monitoring well. The GWPSs are summarized in Table 3.

Data Comparison to Groundwater Protection Standards

Concurrent with the April and October 2023 semiannual detection monitoring events, two post-CCR removal semiannual groundwater sampling events for Appendix IV parameters were conducted to demonstrate that the GWPS are met for closure by removal in accordance with §257.102(c). Groundwater samples were collected in accordance with the *CCR Groundwater Monitoring and Quality Assurance Project Plan – DTE Electric Company St. Clair Power Plant Bottom Ash Basins (QAPP)* (TRC, July 2016; revised August 2017) from all four monitoring wells and submitted to Eurofins Environment Testing (Eurofins) for analysis of the aforementioned Appendix IV metals and inorganic indicator constituents. Groundwater analytical results from the April 2023 and October 2023 post-CCR removal monitoring events are summarized on Tables 4 and 5, respectively. The laboratory analytical reports are included in Attachment B. The data were found to be complete and usable for the purposes of the CCR monitoring program. Data quality reviews are summarized in Attachment C.

The Appendix IV groundwater data were compared to the calculated GWPSs for each individual well (i.e., monitoring data from MW-16-01 is compared to the GWPS developed using the background dataset from MW-16-01, and so forth). Comparison of the April 2023 and October 2023 Appendix IV results to the GWPS is also shown on Tables 4 and 5. The Appendix IV groundwater results were all below their respective GWPS.

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Attachments

Table 1	Summary of Outlier Evaluation
Table 2	Summary of Descriptive Statistics and Tolerance Limit Calculations
Table 3	Summary of Groundwater Protection Standards
Table 4	Summary of April 2023 Data Compared to Groundwater Protection Standards
Table 5	Summary of October 2023 Data Compared to Groundwater Protection Standards

Attachment A	ChemStat™ Outputs
Attachment B	Appendix IV Laboratory Reports
Attachment C	Appendix IV Data Quality Reviews

Tables

Table 1
 Summary of Outlier Evaluation
 DTE Electric Company – St. Clair Power Plant

Parameter	Units	Monitoring Well	Sample Date	Data Outlier	Basis for Removal of Outlier
Antimony	ug/L	MW-16-01	1/13/2017	2.5	Single detection
	ug/L	MW-16-02	8/3/2016	2.1	Single detection
Beryllium	ug/L	MW-16-02	8/3/2016	1.2	Single detection
	ug/L	MW-16-04	9/21/2016	1.5	Single detection
Cadmium	ug/L	MW-16-01	7/27/2017	1.1	Single detection
	ug/L	MW-16-02	7/27/2017	1.9	Single detection
Chromium	ug/L	MW-16-02	8/3/2016	48	Anomalously high value; failed Dixon's Test for Outliers at 95%
	ug/L	MW-16-04	9/21/2016	31	Anomalously high value; failed Dixon's Test for Outliers at 95%
Cobalt	ug/L	MW-16-02	8/3/2016	13	Anomalously high value; failed Dixon's Test for Outliers at 95%
	ug/L	MW-16-04	9/21/2016	11	Anomalously high value; failed Dixon's Test for Outliers at 95%
Lead	ug/L	MW-16-02	8/3/2016	10	Anomalously high value; failed Dixon's Test for Outliers at 95%
	ug/L	MW-16-04	9/21/2016	8.8	Anomalously high value; failed Dixon's Test for Outliers at 95%
Molybdenum	ug/L	MW-16-02	11/11/2016	69	Anomalously high value; failed Dixon's Test for Outliers at 95%

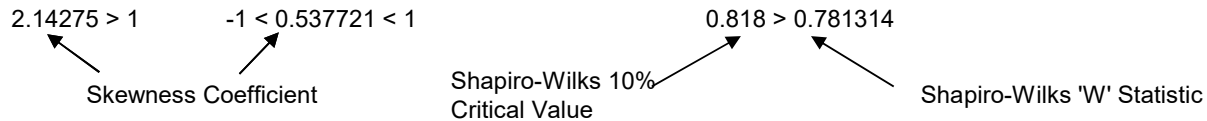
Notes:

ug/L = micrograms per liter

Table 2
 Summary of Descriptive Statistics and Tolerance Limit Calculations
 DTE Electric Company – St. Clair Power Plant

Monitoring Well	Skewness Test		Shapiro-Wilks Test (10% Critical Value)		Outliers Removed	Tolerance Limit Test	95% Tolerance Limit
	Un-Transformed Data	Natural Log Transformed Data	Un-Transformed Data	Natural Log Transformed Data			
Antimony (ug/L)							
MW-16-01	100% Non-Detect				Y	PQL	2.0
MW-16-02	100% Non-Detect				Y	PQL	2.0
MW-16-03	100% Non-Detect				N	PQL	2.0
MW-16-04	100% Non-Detect				N	PQL	2.0
Arsenic (ug/L)							
MW-16-01	100% Non-Detect				N	PQL	5.0
MW-16-02	> 50% Non-Detect				N	Non-Parametric	12
MW-16-03	100% Non-Detect				N	PQL	5.0
MW-16-04	> 50% Non-Detect				N	Non-Parametric	10
Barium (ug/L)							
MW-16-01	-1 < 0.480305 < 1	--	--	--	N	Parametric	240
MW-16-02	1.19803 > 1	1.0391 > 1	0.859 > 0.768255	0.859 < 0.869548	N	Parametric	600
MW-16-03	1.60952 > 1	1.46674 > 1	0.859 > 0.768255	0.859 > 0.802253	N	Non-Parametric	590
MW-16-04	1.08667 > 1	1.01782 > 1	0.859 > 0.797215	0.859 > 0.817932	N	Non-Parametric	890
Beryllium (ug/L)							
MW-16-01	100% Non-Detect				N	PQL	1.0
MW-16-02	100% Non-Detect				Y	PQL	1.0
MW-16-03	100% Non-Detect				N	PQL	1.0
MW-16-04	100% Non-Detect				Y	PQL	1.0

Notes:

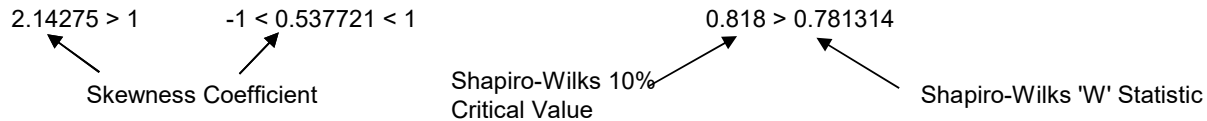


PQL = Practical Quantitation Limit
 ug/L = micrograms per liter
 mg/L = milligrams per liter
 pCi/L = picocuries per liter

Table 2
Summary of Descriptive Statistics and Tolerance Limit Calculations
DTE Electric Company – St. Clair Power Plant

Monitoring Well	Skewness Test		Shapiro-Wilks Test (10% Critical Value)		Outliers Removed	Tolerance Limit Test	95% Tolerance Limit
	Un-Transformed Data	Natural Log Transformed Data	Un-Transformed Data	Natural Log Transformed Data			
Cadmium (ug/L)							
MW-16-01	100% Non-Detect				Y	PQL	1.0
MW-16-02	100% Non-Detect				Y	PQL	1.0
MW-16-03	100% Non-Detect				N	PQL	1.0
MW-16-04	100% Non-Detect				N	PQL	1.0
Chromium (ug/L)							
MW-16-01	1.36084 > 1	-1 < 0.686325 < 1	--	--	N	Parametric	36
MW-16-02	1.27568 > 1	-1 < 0.571595 < 1	--	--	Y	Parametric	79
MW-16-03	> 50% Non-Detect				N	Non-Parametric	14
MW-16-04	-1 < 0.76241 < 1	--	--	--	Y	Parametric	21
Cobalt (ug/L)							
MW-16-01	> 50% Non-Detect				N	Non-Parametric	3.4
MW-16-02	1.11306 > 1	-1 < 0.85828 < 1	--	--	Y	Parametric	9.5
MW-16-03	> 50% Non-Detect				N	Non-Parametric	3.3
MW-16-04	1.09667 > 1	-1 < 0.465141 < 1	--	--	Y	Parametric	16
Fluoride (mg/L)							
MW-16-01	-1 < -0.031618 < 1	--	--	--	N	Parametric	2.2
MW-16-02	-1 < 0.294764 < 1	--	--	--	N	Parametric	1.8
MW-16-03	-1 < -0.64941 < 1	--	--	--	N	Parametric	1.9
MW-16-04	-1 < 0.802603 < 1	--	--	--	N	Parametric	1.9

Notes:

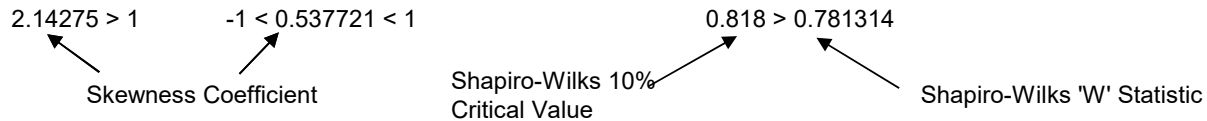


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Table 2
 Summary of Descriptive Statistics and Tolerance Limit Calculations
 DTE Electric Company – St. Clair Power Plant

Monitoring Well	Skewness Test		Shapiro-Wilks Test (10% Critical Value)		Outliers Removed	Tolerance Limit Test	95% Tolerance Limit
	Un-Transformed Data	Natural Log Transformed Data	Un-Transformed Data	Natural Log Transformed Data			
Lead (ug/L)							
MW-16-01	> 50% Non-Detect				N	Non-Parametric	2.4
MW-16-02	1.03423 > 1	-1 < 0.763902 < 1	--	--	Y	Parametric	10
MW-16-03	> 50% Non-Detect				N	Non-Parametric	4.6
MW-16-04	1.1812 > 1	-1 < 0.623367 < 1	--	--	Y	Parametric	13
Lithium (ug/L)							
MW-16-01	-1 < 0.0978567 < 1	--	--	--	N	Parametric	66
MW-16-02	-1 < 0.745231 < 1	--	--	--	N	Parametric	92
MW-16-03	-1 < 0.814384 < 1	--	--	--	N	Parametric	77
MW-16-04	-1 < 0.439377 < 1	--	--	--	N	Parametric	150
Mercury (ug/L)							
MW-16-01	100% Non-Detect				N	PQL	0.20
MW-16-02	100% Non-Detect				N	PQL	0.20
MW-16-03	100% Non-Detect				N	PQL	0.20
MW-16-04	100% Non-Detect				N	PQL	0.20
Molybdenum (ug/L)							
MW-16-01	1.00724 > 1	-1 < 0.58368 < 1	--	--	N	Parametric	62
MW-16-02	-1 < 0.616111 < 1	--	--	--	Y	Parametric	55
MW-16-03	-1 < -0.514296 < 1	--	--	--	N	Parametric	40
MW-16-04	-1 < 0.771545 < 1	--	--	--	N	Parametric	36

Notes:

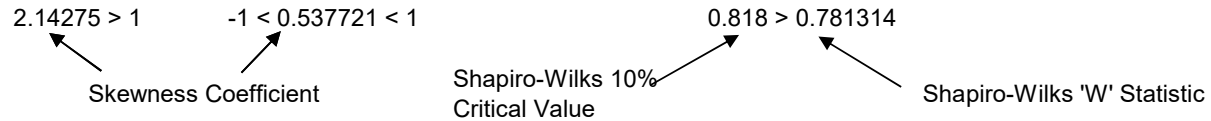


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Table 2
 Summary of Descriptive Statistics and Tolerance Limit Calculations
 DTE Electric Company – St. Clair Power Plant

Monitoring Well	Skewness Test		Shapiro-Wilks Test (10% Critical Value)		Outliers Removed	Tolerance Limit Test	95% Tolerance Limit
	Un-Transformed Data	Natural Log Transformed Data	Un-Transformed Data	Natural Log Transformed Data			
Radium 226/228 (pCi/L)							
MW-16-01	-1 < 0.69254 < 1	--	--	--	N	Parametric	1.88
MW-16-02	-1 < -0.109897 < 1	--	--	--	N	Parametric	3.72
MW-16-03	-1 < 0.365312 < 1	--	--	--	N	Parametric	2.92
MW-16-04	-1 < 0.817435 < 1	--	--	--	N	Parametric	6.97
Selenium (ug/L)							
MW-16-01	100% Non-Detect				N	PQL	5.0
MW-16-02	100% Non-Detect				N	PQL	5.0
MW-16-03	100% Non-Detect				N	PQL	5.0
MW-16-04	100% Non-Detect				N	PQL	5.0
Thallium (ug/L)							
MW-16-01	100% Non-Detect				N	PQL	1.0
MW-16-02	100% Non-Detect				N	PQL	1.0
MW-16-03	100% Non-Detect				N	PQL	1.0
MW-16-04	100% Non-Detect				N	PQL	1.0

Notes:



PQL = Practical Quantitation Limit
 ug/L = micrograms per liter
 mg/L = milligrams per liter
 pCi/L = picocuries per liter

Table 3
 Summary of Groundwater Protection Standards
 DTE Electric Company – St. Clair Power Plant

Constituent	Unit	GWPS Selection	MCL/RSL	MW-16-01		MW-16-02		MW-16-03		MW-16-04	
				UTL	GWPS	UTL	GWPS	UTL	GWPS	UTL	GWPS
Antimony	ug/L	MCL	6	2.0	6.0	2.0	6.0	2.0	6.0	2.0	6.0
Arsenic	ug/L	Background or MCL	10	5.0	10	12	12	5.0	10	10	10
Barium	ug/L	MCL	2,000	240	2,000	600	2,000	590	2,000	890	2,000
Beryllium	ug/L	MCL	4	1.0	4.0	1.0	4.0	1.0	4.0	1.0	4.0
Cadmium	ug/L	MCL	5	1.0	5.0	1.0	5.0	1.0	5.0	1.0	5.0
Chromium	ug/L	MCL	100	36	100	79	100	14	100	21	100
Cobalt	ug/L	Background or RSL	6	3.4	6.0	9.5	9.5	3.3	6.0	16	16
Fluoride	mg/L	MCL	4	2.2	4.0	1.8	4.0	1.9	4.0	1.9	4.0
Lead	ug/L	RSL	15	2.4	15	10	15	4.6	15	13	15
Lithium	ug/L	Background or RSL	40	66	66	92	92	77	77	150	150
Mercury	ug/L	MCL	2	0.20	2.0	0.20	2.0	0.20	2.0	0.20	2.0
Molybdenum	ug/L	RSL	100	62	100	55	100	40	100	36	100
Radium-226/228	pCi/L	Background or MCL	5	1.88	5.00	3.72	5.00	2.92	5.00	6.97	6.97
Selenium	ug/L	MCL	50	5.0	50	5.0	50	5.0	50	5.0	50
Thallium	ug/L	MCL	2	1.0	2.0	1.0	2.0	1.0	2.0	1.0	2.0

Notes:

MCL - Maximum Contaminant Level, EPA Drinking Water Standards and Health Advisories, April 2012.

RSL - Regional Screening Level from 83 FR 36435.

UTL - Upper Tolerance Limit (95%) of the background data set.

GWPS - Groundwater Protection Standard. Appendix IV GWPS is the higher of the MCL/RSL and UTL.

ug/L = micrograms per liter

mg/L = milligrams per liter

pCi/L = picocuries per liter

Table 4
 Summary of April 2023 Data Compared to Groundwater Protection Standards
 DTE Electric Company – St. Clair Power Plant

Constituent	Unit	Intrawell							
		MW-16-01		MW-16-02		MW-16-03		MW-16-04	
		GWPS	4/28/2023	GWPS	4/28/2023	GWPS	4/28/2023	GWPS	4/28/2023
Antimony	ug/L	6.0	< 2	6.0	< 2	6.0	< 2	6.0	< 2
Arsenic	ug/L	10	< 5	12	< 5	10	< 5	10	< 5
Barium	ug/L	2,000	220	2,000	400	2,000	450	2,000	670
Beryllium	ug/L	4.0	< 1	4.0	< 1	4.0	< 1	4.0	< 1
Cadmium	ug/L	5.0	< 1	5.0	< 1	5.0	< 1	5.0	< 1
Chromium	ug/L	100	< 2	100	2.3	100	2.1	100	< 2
Cobalt	ug/L	6.0	1.0	9.5	< 1	6.0	< 1	16	< 1
Fluoride	mg/L	4.0	1.9	4.0	1.5	4.0	1.3	4.0	1.5
Lead	ug/L	15	< 1	15	< 1	15	< 1	15	< 1
Lithium	ug/L	66	53	92	66	77	68	150	98
Mercury	ug/L	2.0	< 0.2	2.0	< 0.2	2.0	< 0.2	2.0	< 0.2
Molybdenum	ug/L	100	25	100	25	100	22	100	17
Radium-226/228	pCi/L	5.00	1.43	5.00	2.31	5.00	2.96	6.97	4.83
Selenium	ug/L	50	< 5	50	< 5	50	< 5	50	< 5
Thallium	ug/L	2.0	< 1	2.0	< 1	2.0	< 1	2.0	< 1

Notes:

MCL - Maximum Contaminant Level, EPA Drinking Water Standards and Health Advisories, April 2012.

RSL - Regional Screening Level from 83 FR 36435.

UTL - Upper Tolerance Limit (95%) of the background data set.

GWPS - Groundwater Protection Standard. Appendix IV GWPS is the higher of the MCL/RSL and UTL.

ug/L = micrograms per liter

mg/L = milligrams per liter

pCi/L = picocuries per liter

Table 5
 Summary of October 2023 Data Compared to Groundwater Protection Standards
 DTE Electric Company – St. Clair Power Plant

Constituent	Unit	Intrawell							
		MW-16-01		MW-16-02		MW-16-03		MW-16-04	
		GWPS	10/12/2023	GWPS	10/12/2023	GWPS	10/12/2023	GWPS	10/12/2023
Antimony	ug/L	6.0	< 2	6.0	< 2	6.0	< 2	6.0	< 2
Arsenic	ug/L	10	< 5	12	< 5	10	< 5	10	< 5
Barium	ug/L	2,000	220	2,000	410	2,000	450	2,000	650
Beryllium	ug/L	4.0	< 1	4.0	< 1	4.0	< 1	4.0	< 1
Cadmium	ug/L	5.0	< 1	5.0	< 1	5.0	< 1	5.0	< 1
Chromium	ug/L	100	< 2	100	2.0	100	< 2	100	3.1
Cobalt	ug/L	6.0	< 1	9.5	< 1	6.0	< 1	16	1.3
Fluoride	mg/L	4.0	2.0	4.0	1.6	4.0	1.4	4.0	1.7
Lead	ug/L	15	< 1	15	< 1	15	< 1	15	1.8
Lithium	ug/L	66	52	92	62	77	64	150	96
Mercury	ug/L	2.0	< 0.2	2.0	< 0.2	2.0	< 0.2	2.0	< 0.2
Molybdenum	ug/L	100	25	100	25	100	22	100	17
Radium-226/228	pci/L	5.00	1.60	5.00	4.73	5.00	4.95	6.97	5.40
Selenium	ug/L	50	< 5	50	< 5	50	< 5	50	< 5
Thallium	ug/L	2.0	< 1	2.0	< 1	2.0	< 1	2.0	< 1

Notes:

MCL - Maximum Contaminant Level, EPA Drinking Water Standards and Health Advisories, April 2012.

RSL - Regional Screening Level from 83 FR 36435.

UTL - Upper Tolerance Limit (95%) of the background data set.

GWPS - Groundwater Protection Standard. Appendix IV GWPS is the higher of the MCL/RSL and UTL.

ug/L = micrograms per liter

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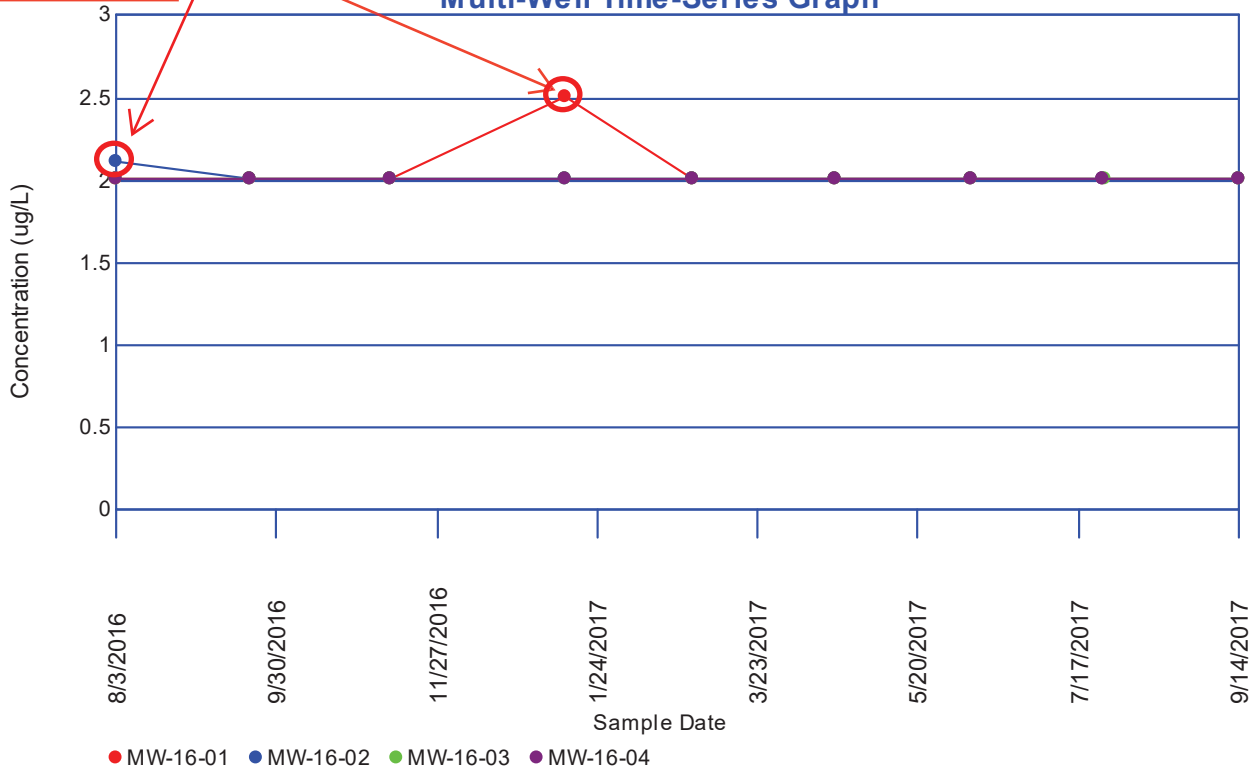
pCi/L = picocuries per liter

Attachment A

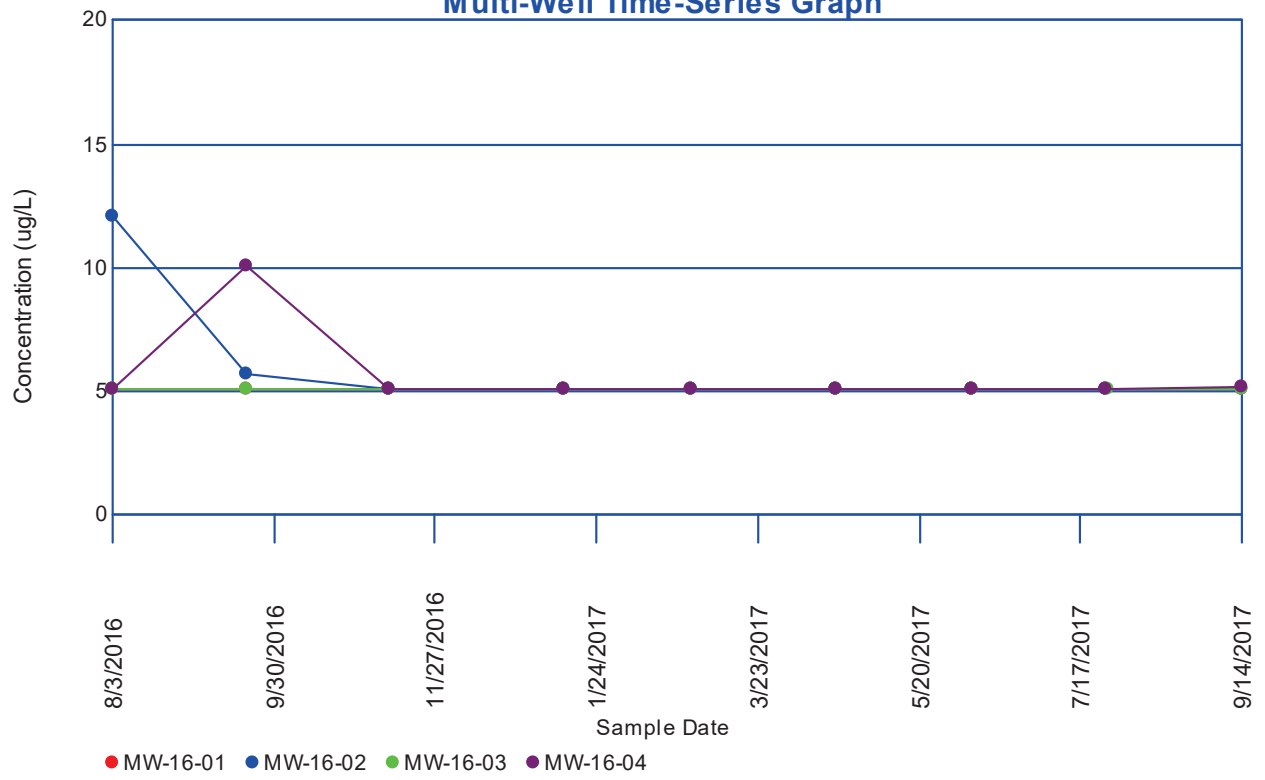
ChemStat™ Outputs

Data Point Removed
As An Outlier

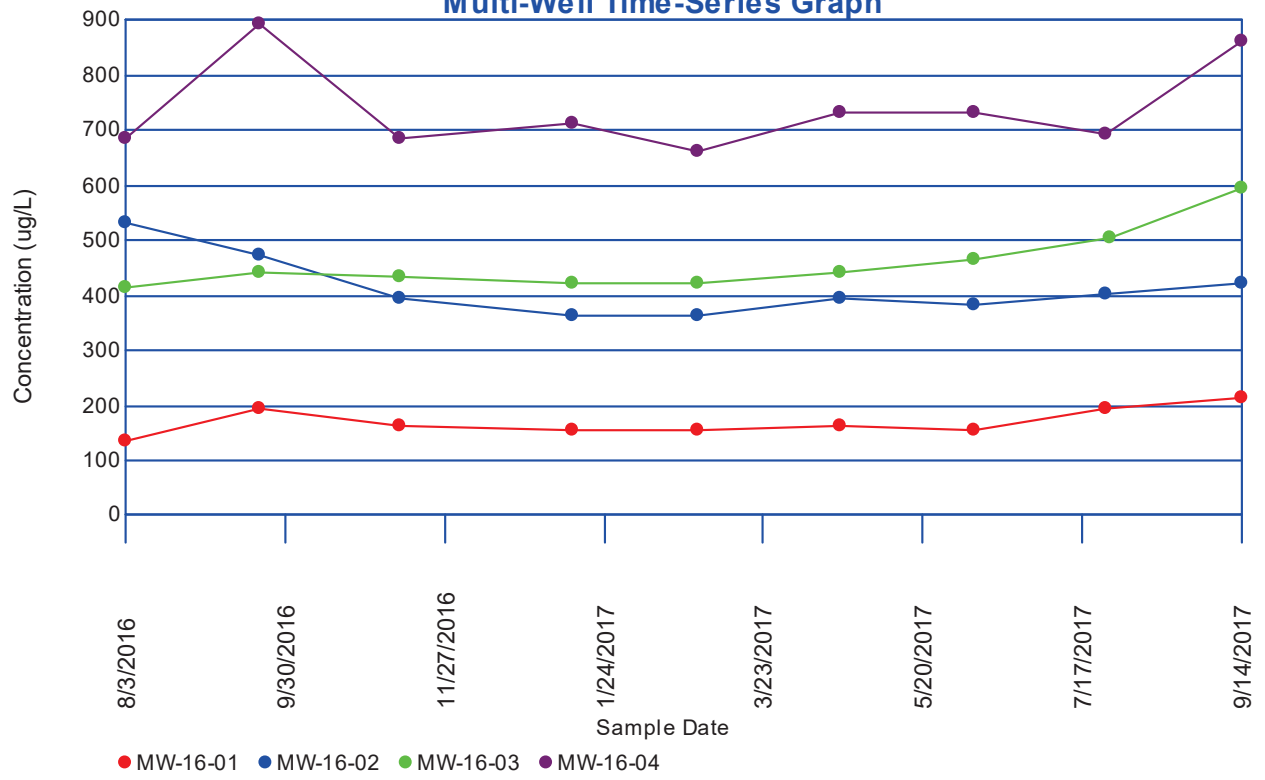
Antimony Multi-Well Time-Series Graph



Arsenic Multi-Well Time-Series Graph

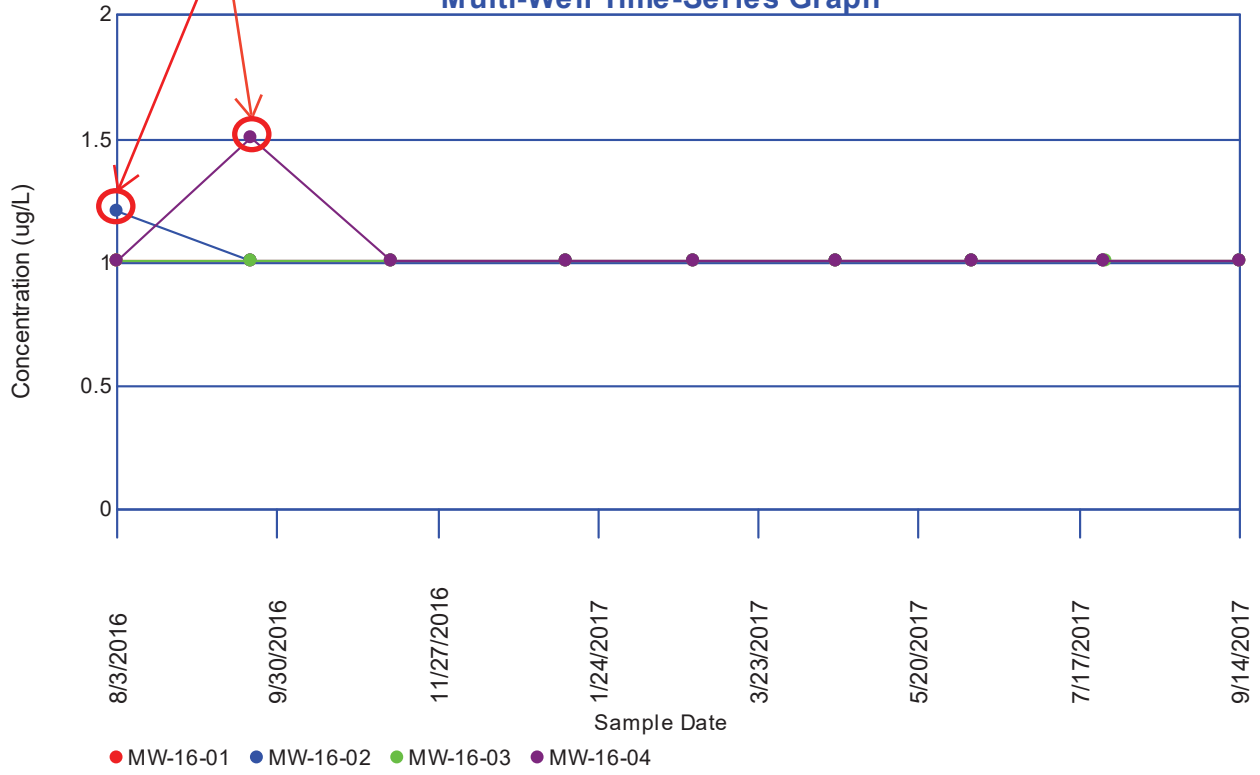


Barium Multi-Well Time-Series Graph

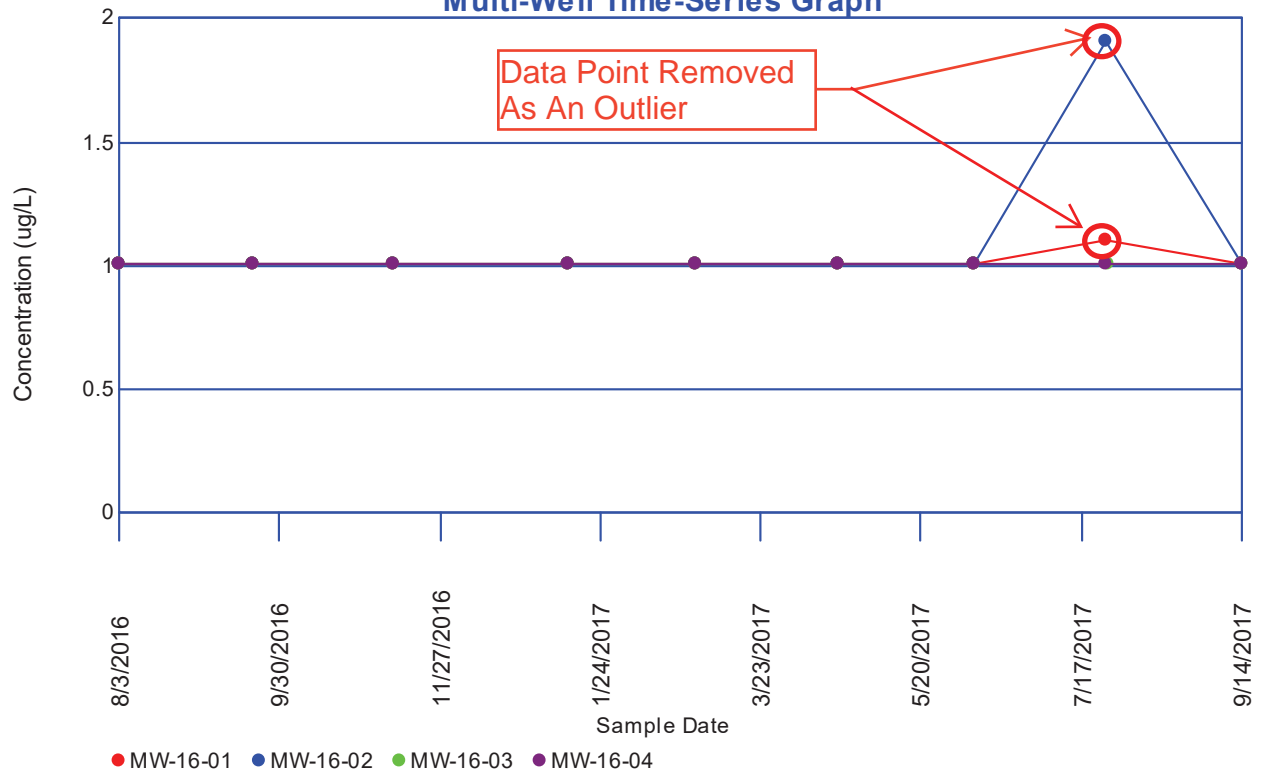


Data Point Removed
As An Outlier

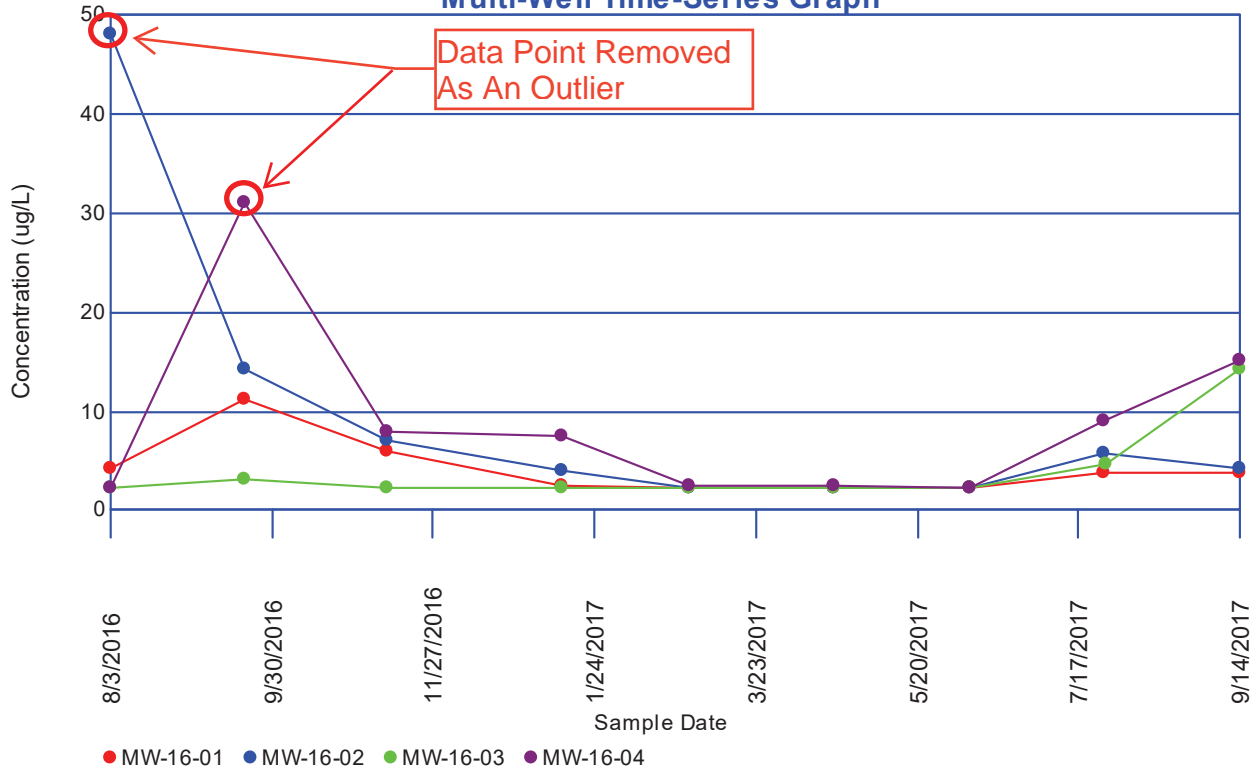
Beryllium Multi-Well Time-Series Graph



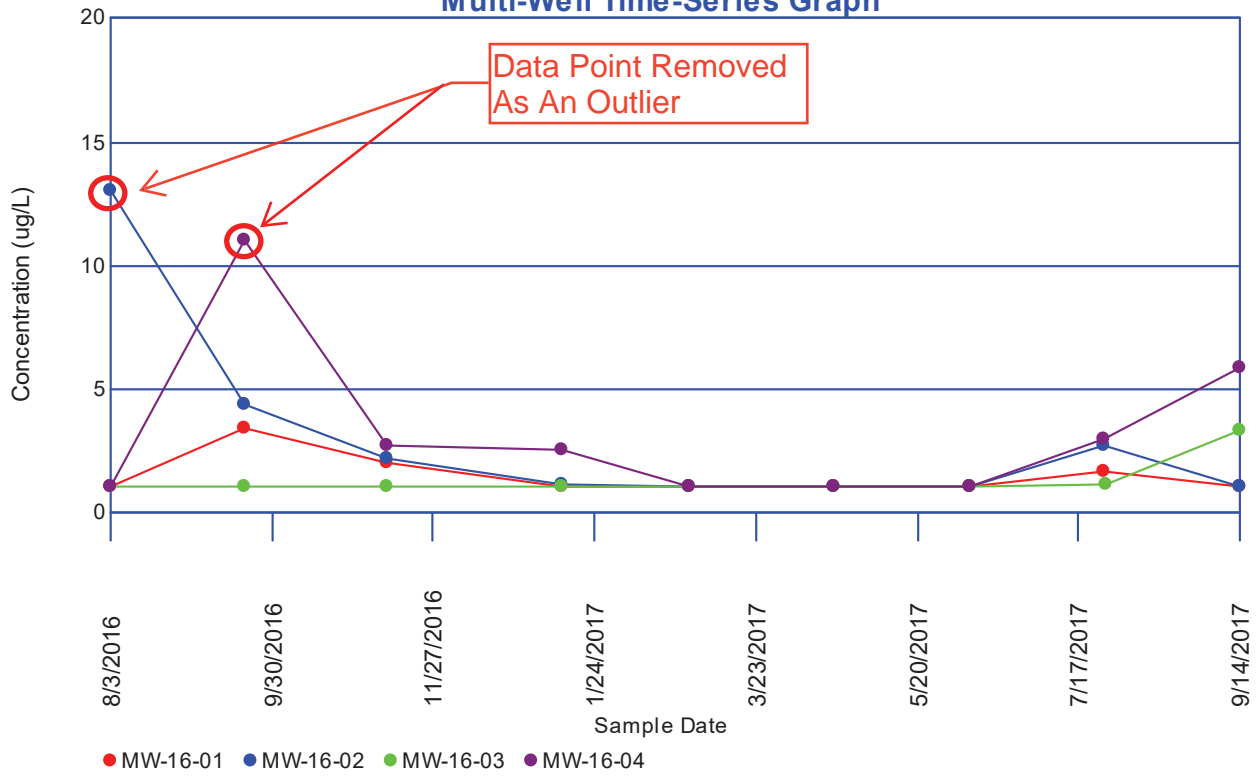
Cadmium Multi-Well Time-Series Graph



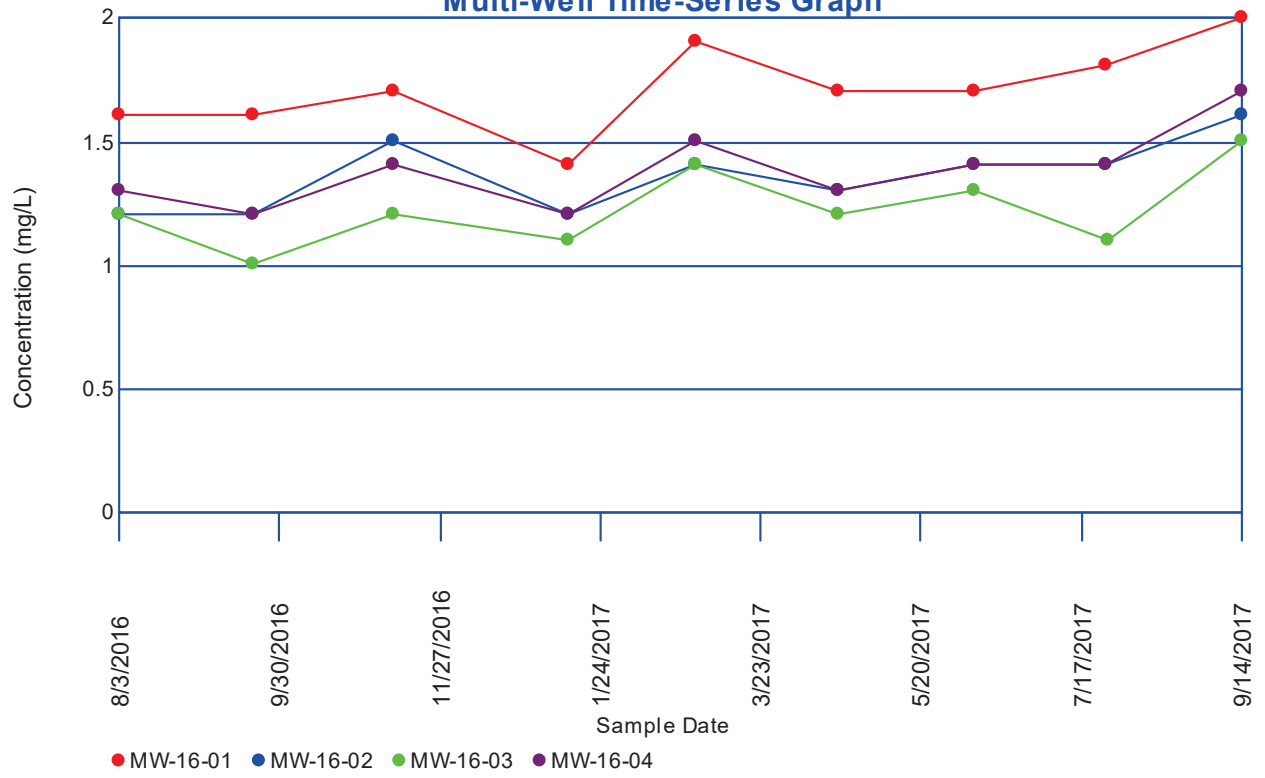
Chromium Multi-Well Time-Series Graph



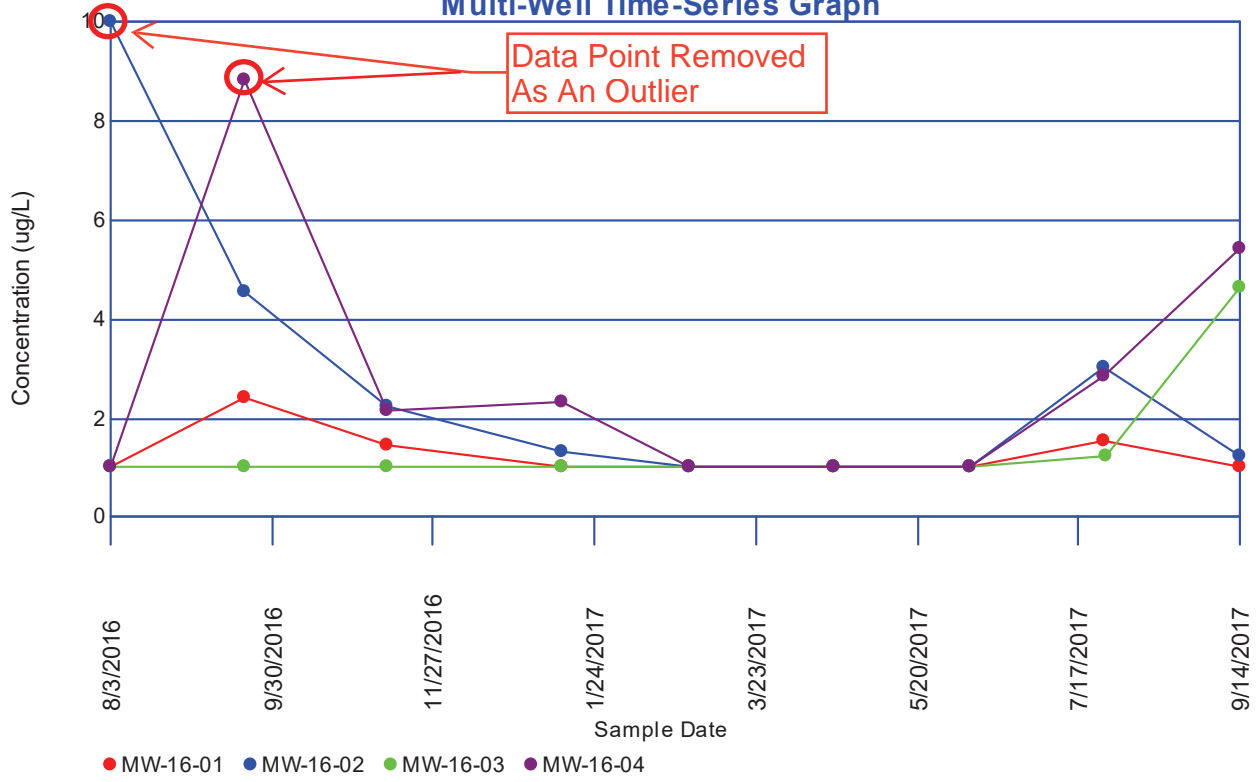
Cobalt Multi-Well Time-Series Graph



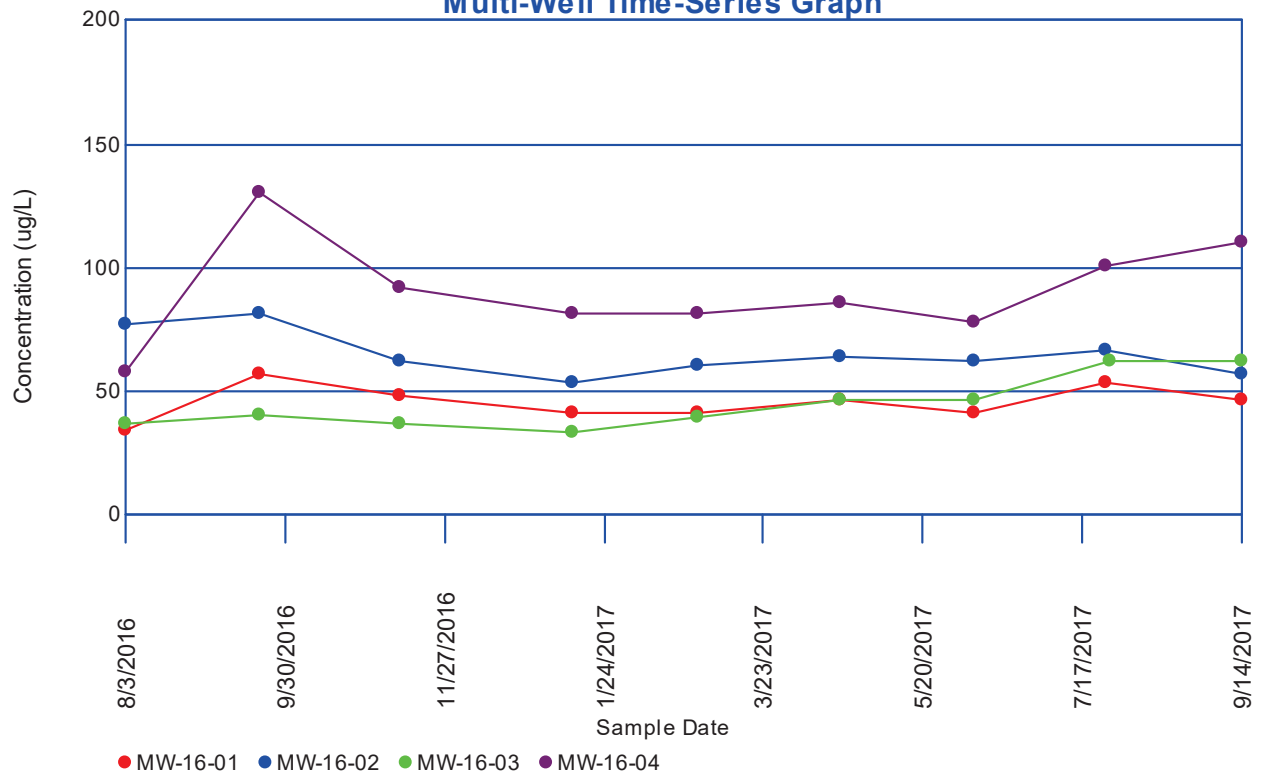
Fluoride Multi-Well Time-Series Graph



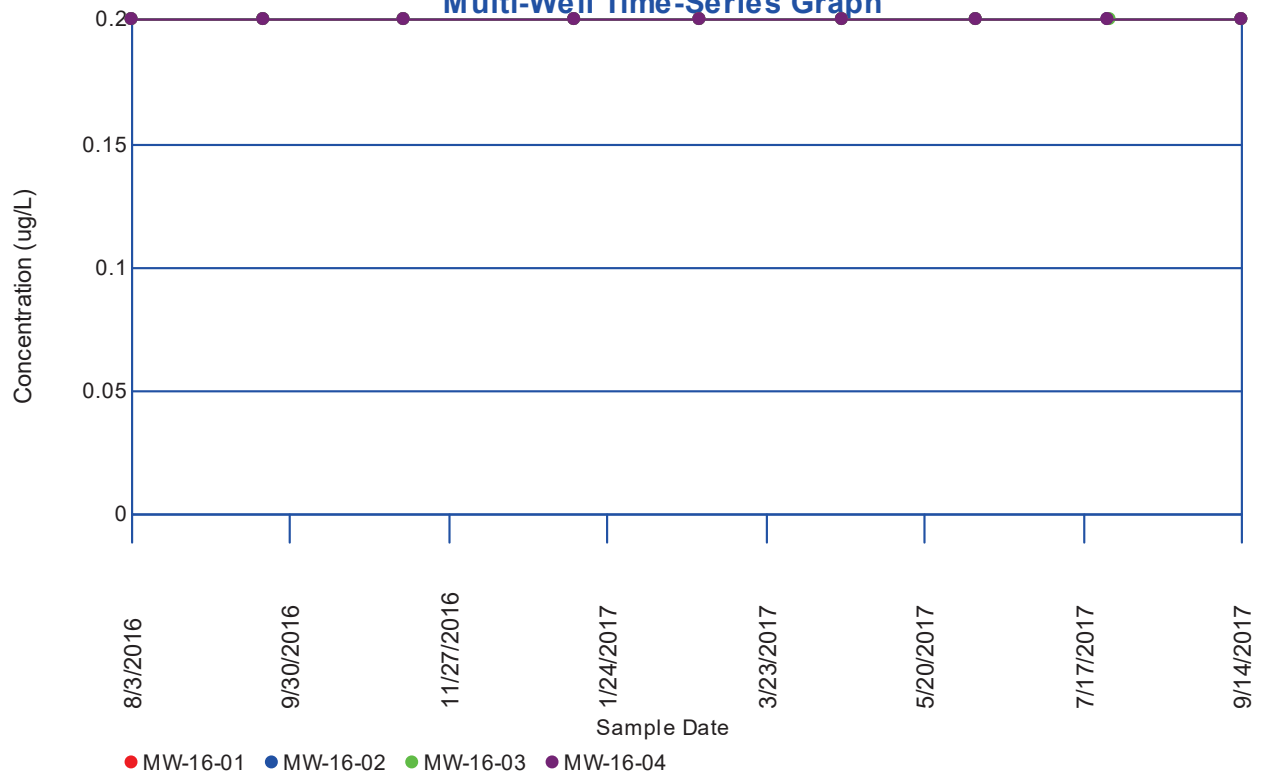
Lead Multi-Well Time-Series Graph



Lithium Multi-Well Time-Series Graph

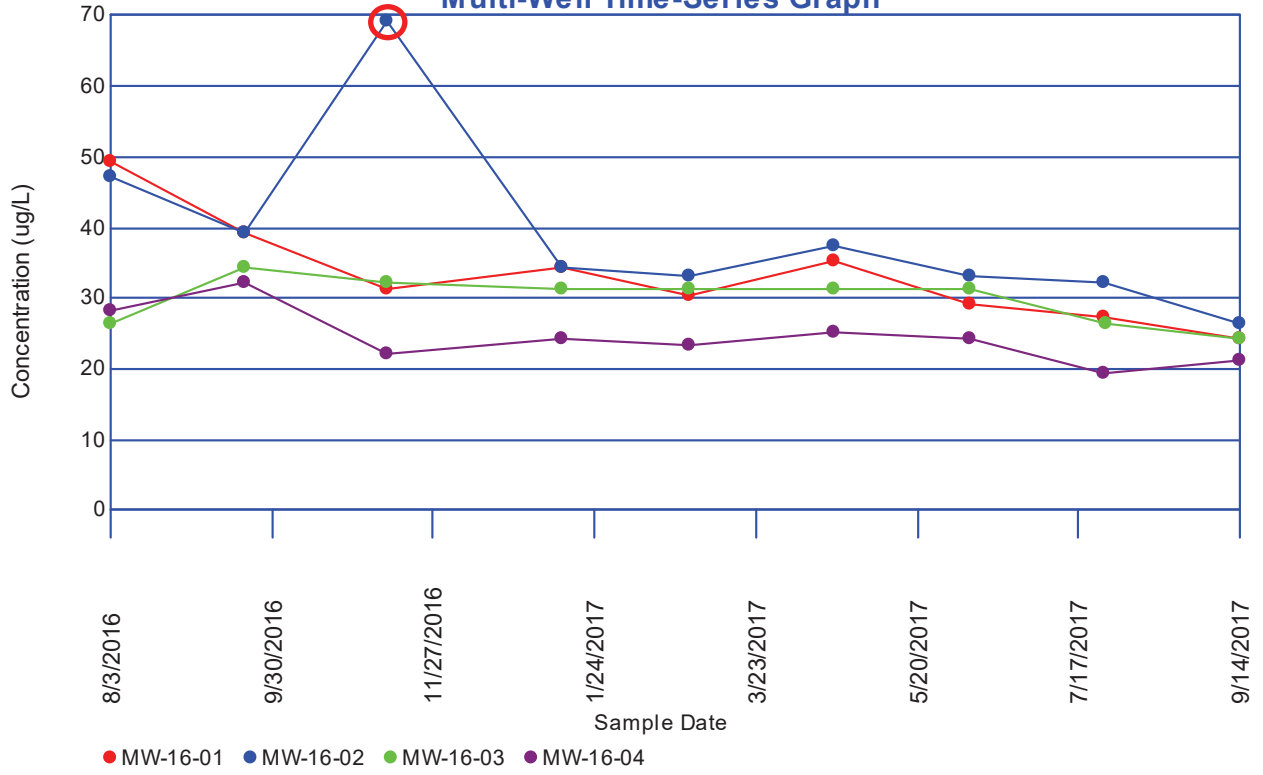


Mercury Multi-Well Time-Series Graph

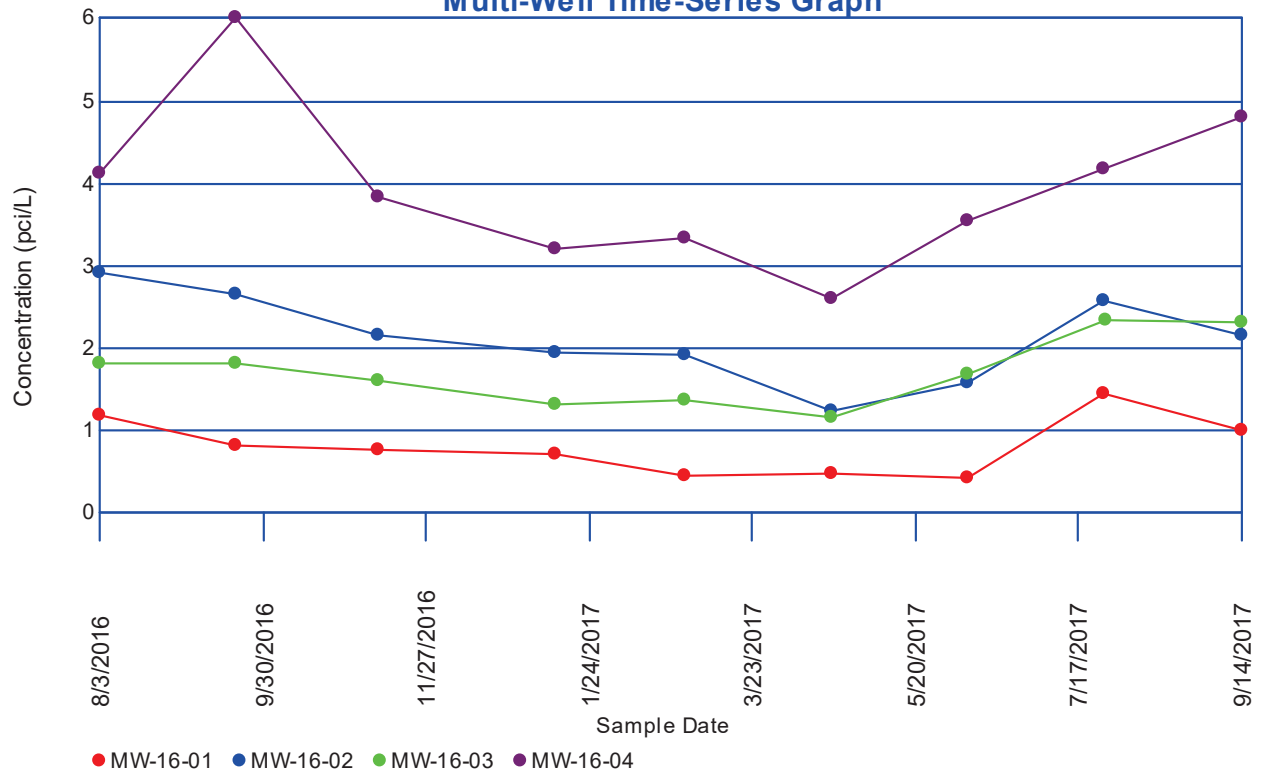


Data Point Removed
As An Outlier

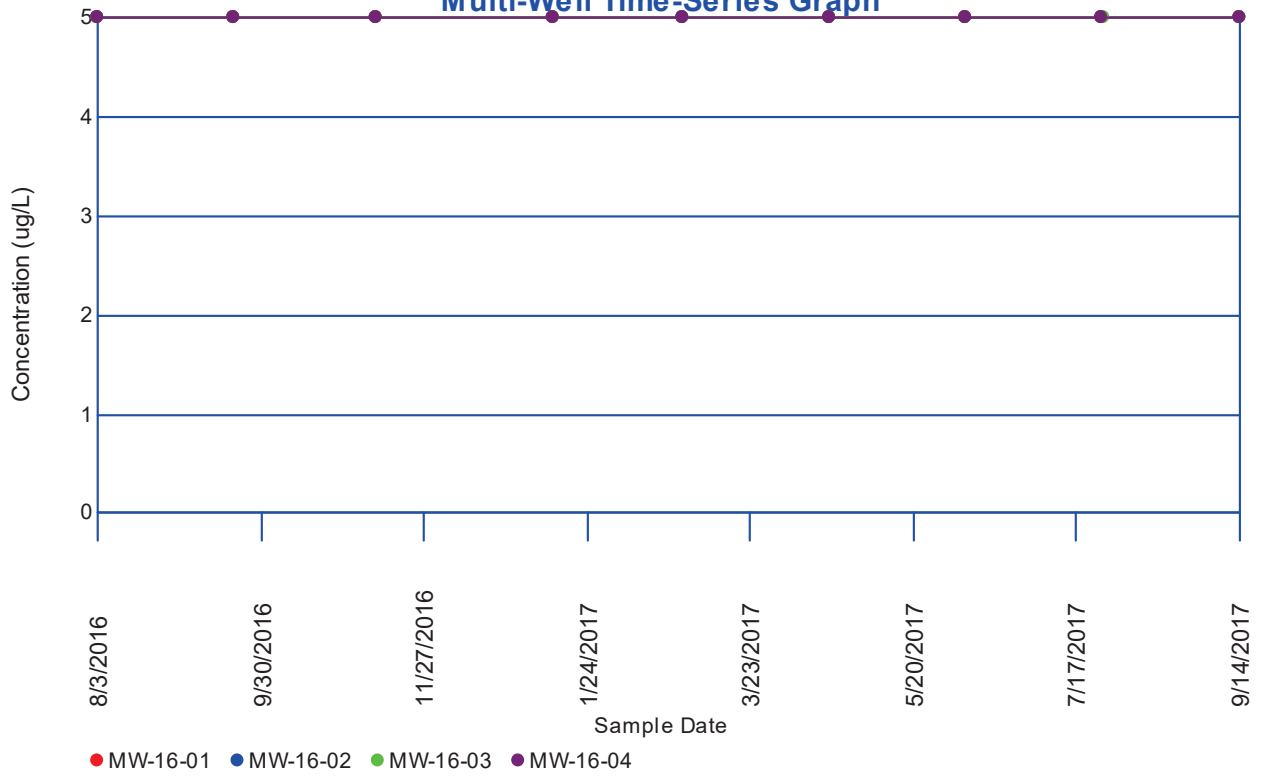
Molybdenum Multi-Well Time-Series Graph



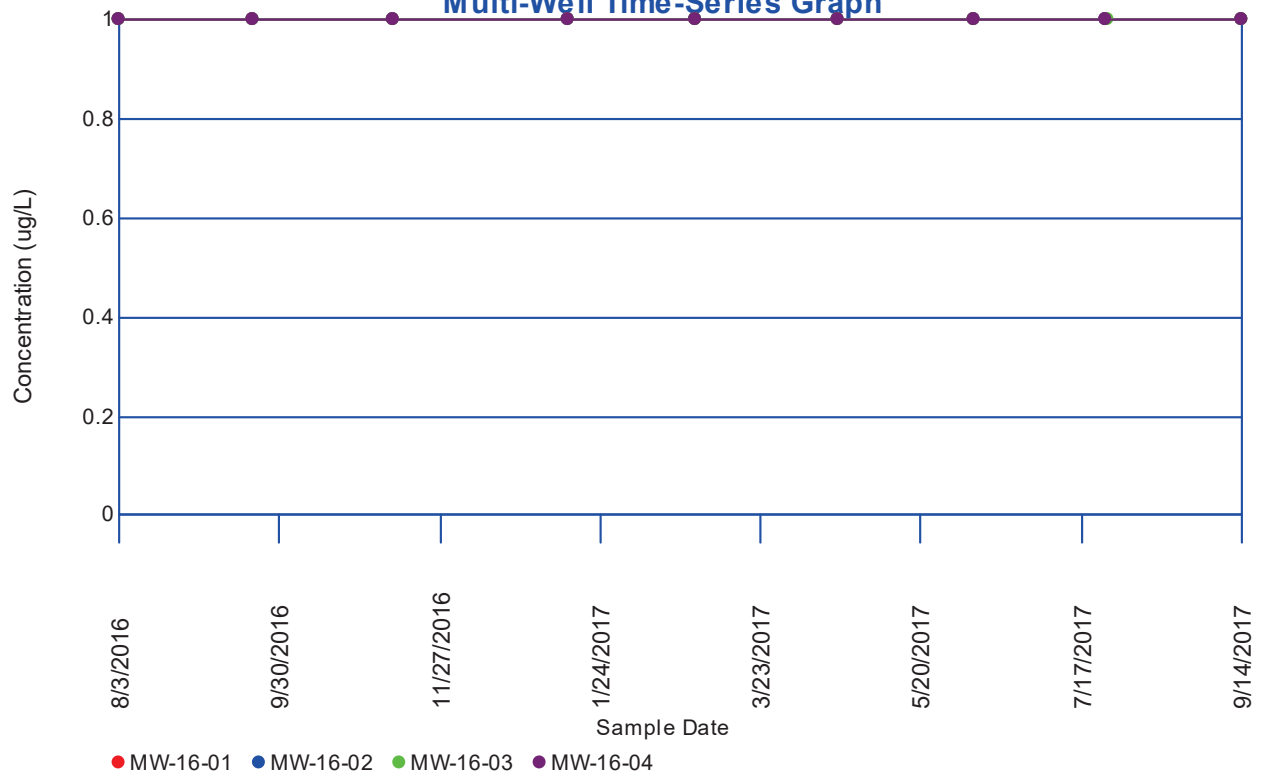
Radium-226/228 Multi-Well Time-Series Graph



Selenium Multi-Well Time-Series Graph



Thallium Multi-Well Time-Series Graph



Dixon's Test for Outliers

Parameter: Cobalt

All Locations

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

For 18 Measurements...

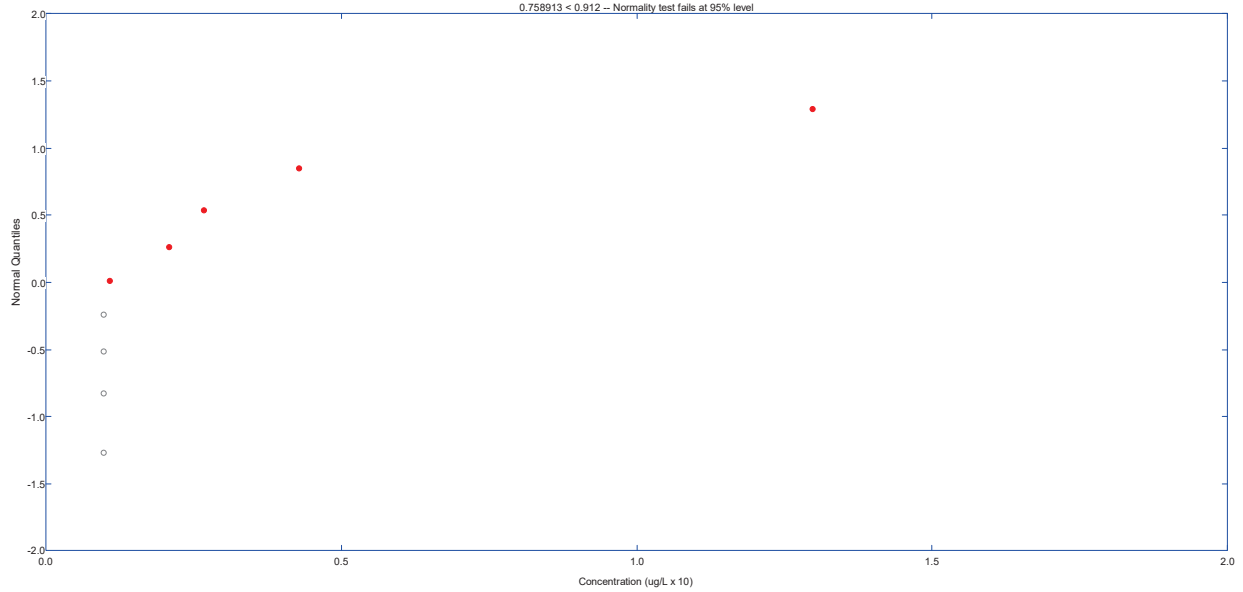
5% Level of Significance

Iteration	Highest	Lowest	Critical	Outlier
1	0.6	0	0.475	13
2	0.67	0	0.49	11
3	0.604167	0	0.507	5.8
4	0.484848	0	0.525	None

Loc.	Date	Conc.	Outlier
MW-16-04	8/3/2016	ND<1 U	FALSE
	9/21/2016	11	TRUE
	11/11/2016	2.7	FALSE
	1/13/2017	2.5	FALSE
	2/28/2017	ND<1 U	FALSE
	4/21/2017	ND<1 U	FALSE
	6/9/2017	ND<1 U	FALSE
	7/27/2017	2.9	FALSE
9/14/2017	5.8	TRUE	
MW-16-02	8/3/2016	13	TRUE
	9/21/2016	4.3	FALSE
	11/11/2016	2.1	FALSE
	1/13/2017	1.1	FALSE
	2/28/2017	ND<1 U	FALSE
	4/21/2017	ND<1 U	FALSE
	6/9/2017	ND<1 U	FALSE
	7/27/2017	2.7	FALSE
	9/14/2017	ND<1 U	FALSE

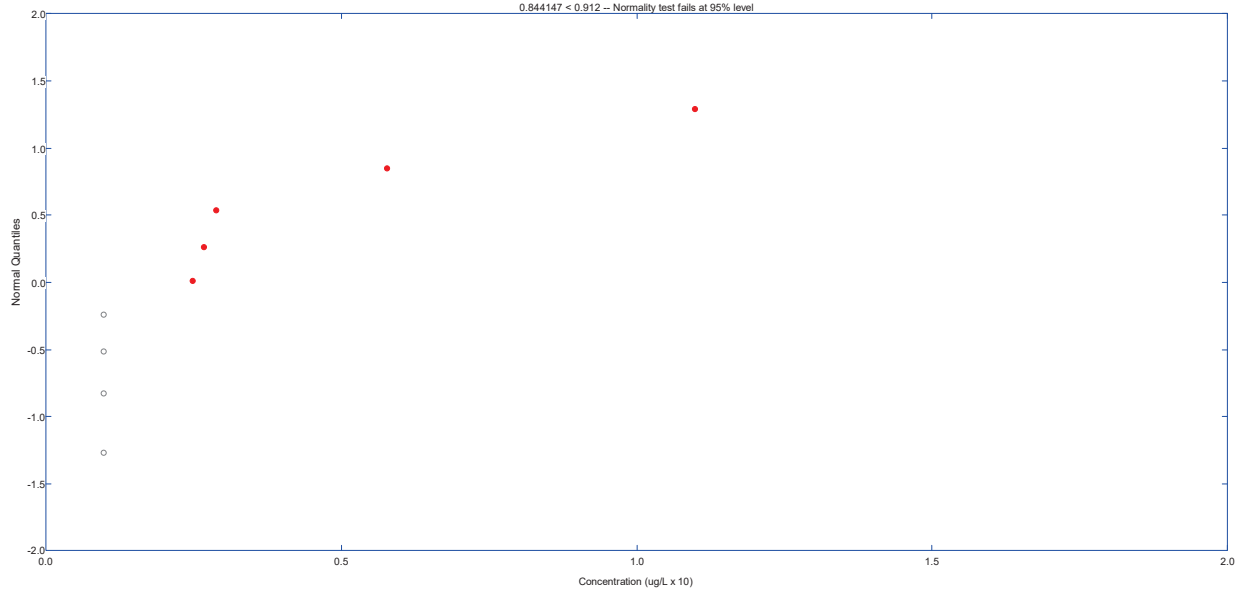
Cobalt
Probability Plot of Measured Values for MW-16-02

Correlation Coefficient = 0.758913
0.758913 < 0.912 -- Normally test fails at 95% level



Cobalt
Probability Plot of Measured Values for MW-16-04

Correlation Coefficient = 0.844147
0.844147 < 0.912 -- Normally test fails at 95% level



Dixon's Test for Outliers

Parameter: Chromium

All Locations

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

For 18 Measurements...

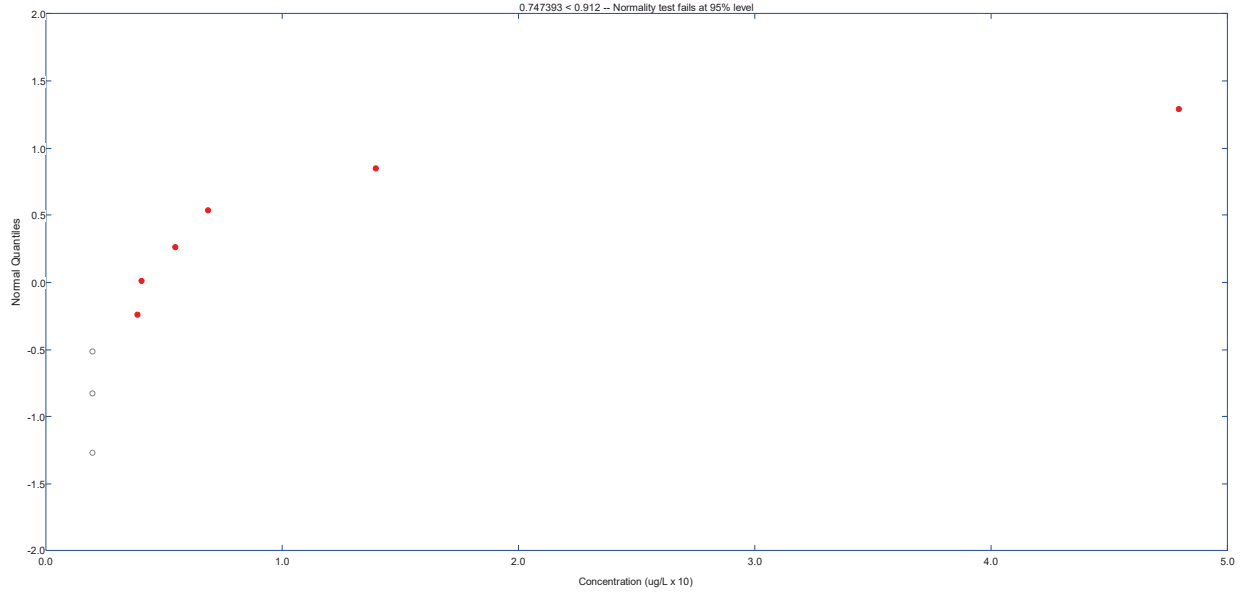
5% Level of Significance

Iteration	Highest	Lowest	Critical	Outlier
1	0.717391	0	0.475	48
2	0.586207	0	0.49	31
3	0.469231	0	0.507	None

Loc.	Date	Conc.	Outlier
MW-16-04	8/3/2016	2.1	FALSE
	9/21/2016	31	TRUE
	11/11/2016	7.7	FALSE
	1/13/2017	7.4	FALSE
	2/28/2017	2.2	FALSE
	4/21/2017	2.4	FALSE
	6/9/2017	ND<2 U	FALSE
	7/27/2017	8.9	FALSE
9/14/2017	15	FALSE	
MW-16-02	8/3/2016	48	TRUE
	9/21/2016	14	FALSE
	11/11/2016	6.9	FALSE
	1/13/2017	3.9	FALSE
	2/28/2017	ND<2 U	FALSE
	4/21/2017	ND<2 U	FALSE
	6/9/2017	ND<2 U	FALSE
	7/27/2017	5.5	FALSE
9/14/2017	4.1	FALSE	

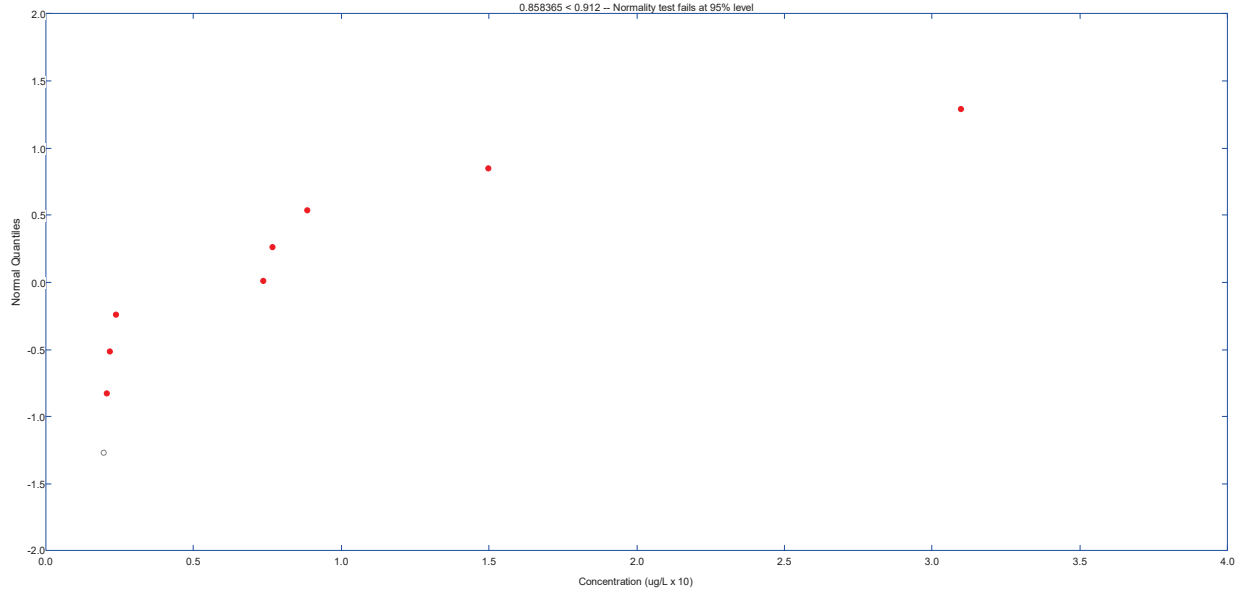
Chromium
Probability Plot of Measured Values for MW-16-02

Correlation Coefficient = 0.747393
0.747393 < 0.912 -- Normally test fails at 95% level



Chromium
Probability Plot of Measured Values for MW-16-04

Correlation Coefficient = 0.858365
0.858365 < 0.912 -- Normally test fails at 95% level



Dixon's Test for Outliers

Parameter: Lead

All Locations

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

For 18 Measurements...

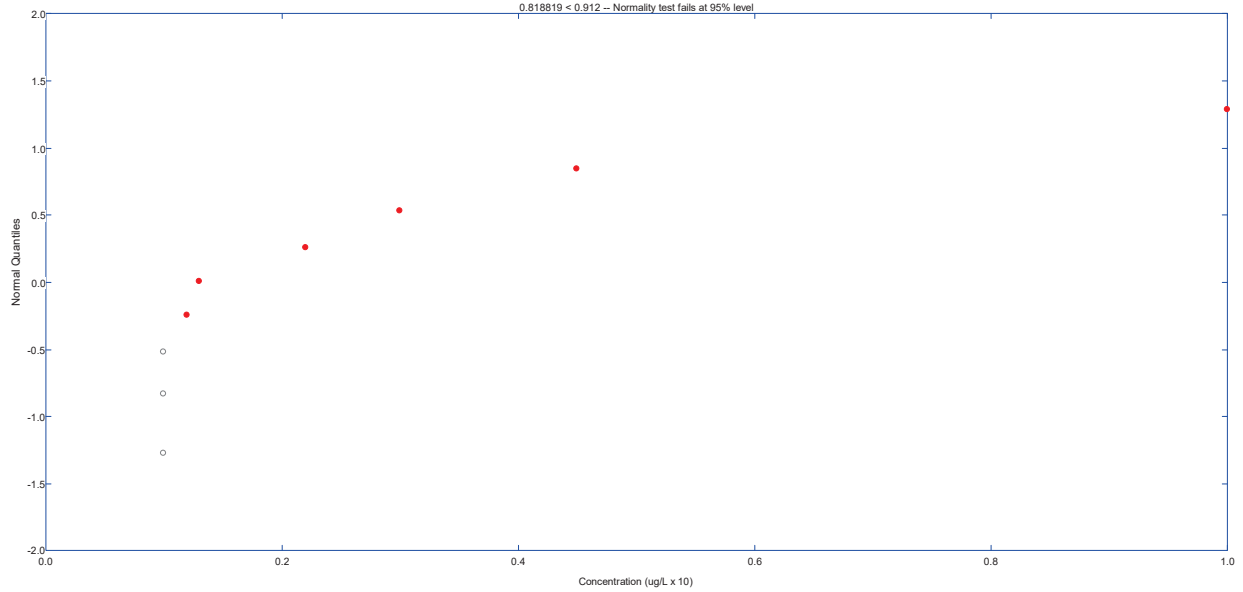
5% Level of Significance

Iteration	Highest	Lowest	Critical	Outlier
1	0.511111	0	0.475	10
2	0.551282	0	0.49	8.8
3	0.545455	0	0.507	5.4
4	0.485714	0	0.525	None

Loc.	Date	Conc.	Outlier
MW-16-04	8/3/2016	ND<1 U	FALSE
	9/21/2016	8.8	TRUE
	11/11/2016	2.1	FALSE
	1/13/2017	2.3	FALSE
	2/28/2017	ND<1 U	FALSE
	4/21/2017	1	FALSE
	6/9/2017	ND<1 U	FALSE
	7/27/2017	2.8	FALSE
9/14/2017	5.4	TRUE	
MW-16-02	8/3/2016	10	TRUE
	9/21/2016	4.5	FALSE
	11/11/2016	2.2	FALSE
	1/13/2017	1.3	FALSE
	2/28/2017	ND<1 U	FALSE
	4/21/2017	ND<1 U	FALSE
	6/9/2017	ND<1 U	FALSE
	7/27/2017	3	FALSE
	9/14/2017	1.2	FALSE

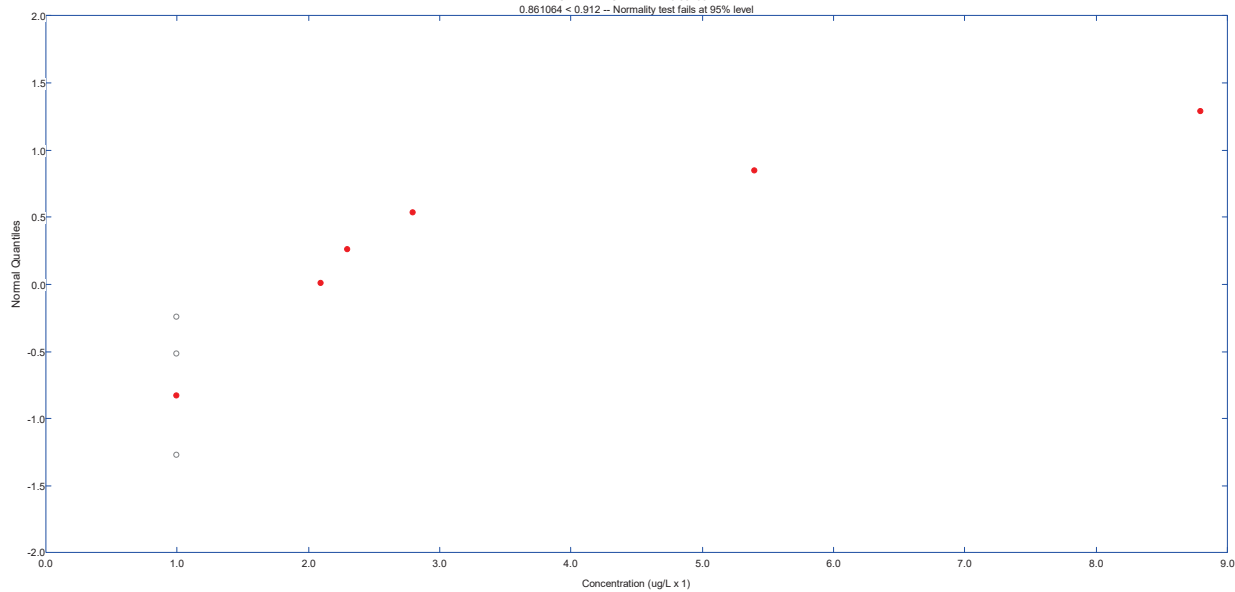
Lead
Probability Plot of Measured Values for MW-16-02

Correlation Coefficient = 0.818819
0.818819 < 0.912 -- Normally test fails at 95% level



Lead
Probability Plot of Measured Values for MW-16-04

Correlation Coefficient = 0.861064
0.861064 < 0.912 -- Normally test fails at 95% level



Dixon's Test for Outliers

Parameter: Molybdenum

Location: MW-16-02

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

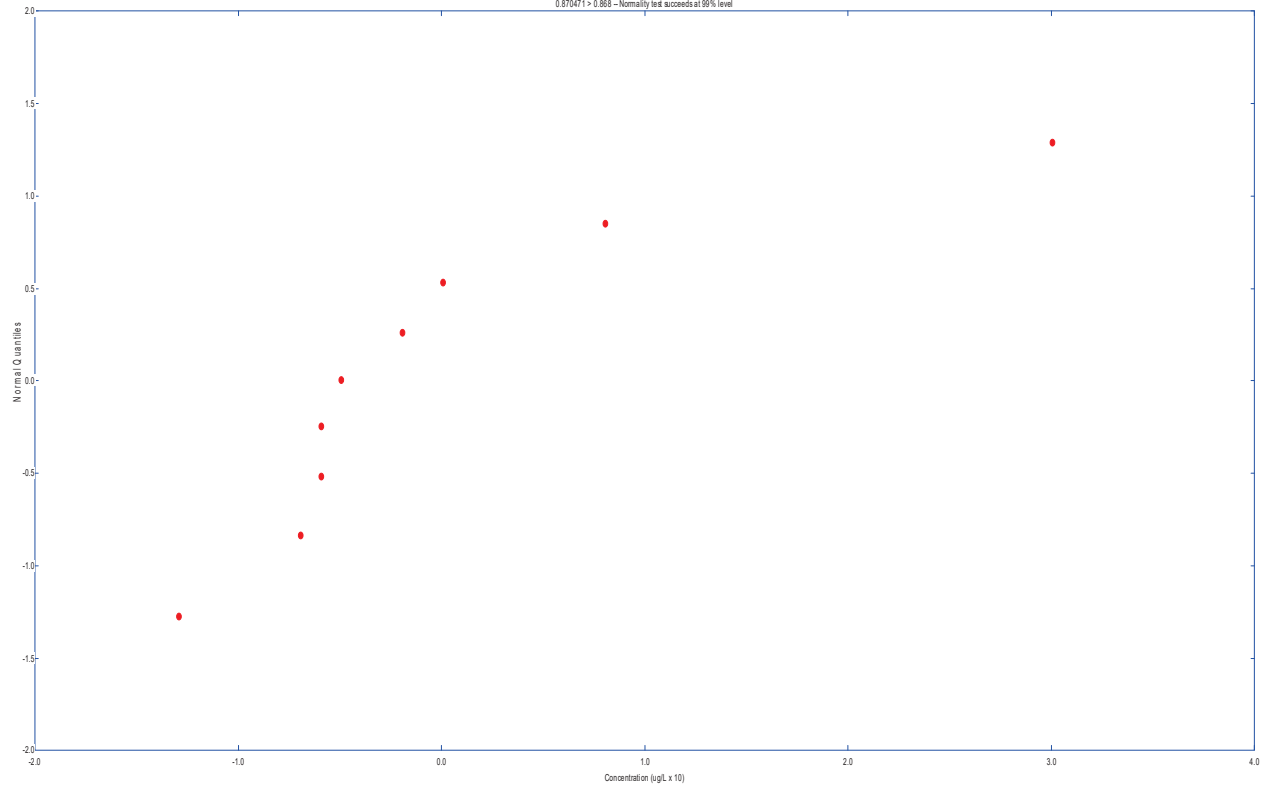
For 9 Measurements...

5% Level of Significance

Iteration	Highest	Lowest	Critical	Outlier
1	0.594595	0.285714	0.512	69
2	0.533333	0.461538	0.554	None

Loc.	Date	Conc.	Outlier
MW-16-02	8/3/2016	47	FALSE
	9/21/2016	39	FALSE
	11/11/2016	69	TRUE
	1/13/2017	34	FALSE
	2/28/2017	33	FALSE
	4/21/2017	37	FALSE
	6/9/2017	33	FALSE
	7/27/2017	32	FALSE
	9/14/2017	26	FALSE

Molybdenum
Probability Plot of Residuals for MW-16-02
Correlation Coefficient = 0.870471
0.870471 > 0.868 - Normality test succeeds at 99% level



Concentrations (ug/L)

Parameter: Antimony

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 34

Total Non-Detect: 34

Percent Non-Detects: 100%

Total Background Measurements: 0

There are 0 background locations

Loc.	Meas.	ND	Date	Conc.	Original
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There are 4 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
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MW-16-01	8	8 (100%)	8/3/2016	ND<2 U	ND<2 U
			9/21/2016	ND<2 U	ND<2 U
			11/11/2016	ND<2 U	ND<2 U
			2/28/2017	ND<2 U	ND<2 U
			4/21/2017	ND<2 U	ND<2 U
			6/9/2017	ND<2 U	ND<2 U
			7/27/2017	ND<2 U	ND<2 U
			9/14/2017	ND<2 U	ND<2 U
			1/13/2017	2.5	2.5

MW-16-02	8	8 (100%)	9/21/2016	ND<2 U	ND<2 U
			11/11/2016	ND<2 U	ND<2 U
			1/13/2017	ND<2 U	ND<2 U
			2/28/2017	ND<2 U	ND<2 U
			4/21/2017	ND<2 U	ND<2 U
			6/9/2017	ND<2 U	ND<2 U
			7/27/2017	ND<2 U	ND<2 U
			9/14/2017	ND<2 U	ND<2 U
			8/3/2016	2.1	2.1

MW-16-03	9	9 (100%)	8/3/2016	ND<2 U	ND<2 U
			9/21/2016	ND<2 U	ND<2 U
			11/11/2016	ND<2 U	ND<2 U
			1/13/2017	ND<2 U	ND<2 U
			2/28/2017	ND<2 U	ND<2 U
			4/21/2017	ND<2 U	ND<2 U
			6/9/2017	ND<2 U	ND<2 U
			7/28/2017	ND<2 U	ND<2 U
			9/14/2017	ND<2 U	ND<2 U

MW-16-04	9	9 (100%)	8/3/2016	ND<2 U	ND<2 U
			9/21/2016	ND<2 U	ND<2 U
			11/11/2016	ND<2 U	ND<2 U
			1/13/2017	ND<2 U	ND<2 U
			2/28/2017	ND<2 U	ND<2 U
			4/21/2017	ND<2 U	ND<2 U
			6/9/2017	ND<2 U	ND<2 U
			7/27/2017	ND<2 U	ND<2 U
			9/14/2017	ND<2 U	ND<2 U

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original
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Concentrations (ug/L)

Parameter: Arsenic

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 36

Total Non-Detect: 32

Percent Non-Detects: 88.8889%

Total Background Measurements: 0

There are 0 background locations

Loc.	Meas.	ND	Date	Conc.	Original
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There are 4 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
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MW-16-01	9	9 (100%)	8/3/2016	ND<5 U	ND<5 U
			9/21/2016	ND<5 U	ND<5 U
			11/11/2016	ND<5 U	ND<5 U
			1/13/2017	ND<5 U	ND<5 U
			2/28/2017	ND<5 U	ND<5 U
			4/21/2017	ND<5 U	ND<5 U
			6/9/2017	ND<5 U	ND<5 U
			7/27/2017	ND<5 U	ND<5 U
			9/14/2017	ND<5 U	ND<5 U

MW-16-02	9	7 (77.7778%)	8/3/2016	12	12
			9/21/2016	5.6	5.6
			11/11/2016	ND<5 U	ND<5 U
			1/13/2017	ND<5 U	ND<5 U
			2/28/2017	ND<5 U	ND<5 U
			4/21/2017	ND<5 U	ND<5 U
			6/9/2017	ND<5 U	ND<5 U
			7/27/2017	ND<5 U	ND<5 U
			9/14/2017	ND<5 U	ND<5 U

MW-16-03	9	9 (100%)	8/3/2016	ND<5 U	ND<5 U
			9/21/2016	ND<5 U	ND<5 U
			11/11/2016	ND<5 U	ND<5 U
			1/13/2017	ND<5 U	ND<5 U
			2/28/2017	ND<5 U	ND<5 U
			4/21/2017	ND<5 U	ND<5 U
			6/9/2017	ND<5 U	ND<5 U
			7/28/2017	ND<5 U	ND<5 U
			9/14/2017	ND<5 U	ND<5 U

MW-16-04	9	7 (77.7778%)	8/3/2016	ND<5 U	ND<5 U
			9/21/2016	10	10
			11/11/2016	ND<5 U	ND<5 U
			1/13/2017	ND<5 U	ND<5 U
			2/28/2017	ND<5 U	ND<5 U
			4/21/2017	ND<5 U	ND<5 U
			6/9/2017	ND<5 U	ND<5 U
			7/27/2017	ND<5 U	ND<5 U
			9/14/2017	5.1	5.1

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original
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Concentrations (ug/L)

Parameter: Barium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 36

Total Non-Detect: 0

Percent Non-Detects: 0%

Total Background Measurements: 0

There are 0 background locations

Loc.	Meas.	ND	Date	Conc.	Original
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There are 4 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
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MW-16-01	9	0 (0%)	8/3/2016	130	130
			9/21/2016	190	190
			11/11/2016	160	160
			1/13/2017	150	150
			2/28/2017	150	150
			4/21/2017	160	160
			6/9/2017	150	150
			7/27/2017	190	190
			9/14/2017	210	210

MW-16-02	9	0 (0%)	8/3/2016	530	530
			9/21/2016	470	470
			11/11/2016	390	390
			1/13/2017	360	360
			2/28/2017	360	360
			4/21/2017	390	390
			6/9/2017	380	380
			7/27/2017	400	400
			9/14/2017	420	420

MW-16-03	9	0 (0%)	8/3/2016	410	410
			9/21/2016	440	440
			11/11/2016	430	430
			1/13/2017	420	420
			2/28/2017	420	420
			4/21/2017	440	440
			6/9/2017	460	460
			7/28/2017	500	500
			9/14/2017	590	590

MW-16-04	9	0 (0%)	8/3/2016	680	680
			9/21/2016	890	890
			11/11/2016	680	680
			1/13/2017	710	710
			2/28/2017	660	660
			4/21/2017	730	730
			6/9/2017	730	730
			7/27/2017	690	690
			9/14/2017	860	860

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original
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Concentrations (ug/L)

Parameter: Beryllium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 34

Total Non-Detect: 34

Percent Non-Detects: 100%

Total Background Measurements: 0

There are 0 background locations

Loc.	Meas.	ND	Date	Conc.	Original
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There are 4 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
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MW-16-01	9	9 (100%)	8/3/2016	ND<1 U	ND<1 U
			9/21/2016	ND<1 U	ND<1 U
			11/11/2016	ND<1 U	ND<1 U
			1/13/2017	ND<1 U	ND<1 U
			2/28/2017	ND<1 U	ND<1 U
			4/21/2017	ND<1 U	ND<1 U
			6/9/2017	ND<1 U	ND<1 U
			7/27/2017	ND<1 U	ND<1 U
			9/14/2017	ND<1 U	ND<1 U

MW-16-02	8	8 (100%)	9/21/2016	ND<1 U	ND<1 U
			11/11/2016	ND<1 U	ND<1 U
			1/13/2017	ND<1 U	ND<1 U
			2/28/2017	ND<1 U	ND<1 U
			4/21/2017	ND<1 U [^]	ND<1 U [^]
			6/9/2017	ND<1 U	ND<1 U
			7/27/2017	ND<1 U	ND<1 U
			9/14/2017	ND<1 U	ND<1 U
			8/3/2016	1.2	1.2

MW-16-03	9	9 (100%)	8/3/2016	ND<1 U	ND<1 U
			9/21/2016	ND<1 U	ND<1 U
			11/11/2016	ND<1 U	ND<1 U
			1/13/2017	ND<1 U	ND<1 U
			2/28/2017	ND<1 U	ND<1 U
			4/21/2017	ND<1 U [^]	ND<1 U [^]
			6/9/2017	ND<1 U	ND<1 U
			7/28/2017	ND<1 U	ND<1 U
			9/14/2017	ND<1 U	ND<1 U

MW-16-04	8	8 (100%)	8/3/2016	ND<1 U	ND<1 U
			11/11/2016	ND<1 U	ND<1 U
			1/13/2017	ND<1 U	ND<1 U
			2/28/2017	ND<1 U	ND<1 U
			4/21/2017	ND<1 U [^]	ND<1 U [^]
			6/9/2017	ND<1 U	ND<1 U
			7/27/2017	ND<1 U	ND<1 U
			9/14/2017	ND<1 U	ND<1 U
			9/21/2016	1.5	1.5

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original
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Concentrations (ug/L)

Parameter: Cadmium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 34

Total Non-Detect: 34

Percent Non-Detects: 100%

Total Background Measurements: 0

There are 0 background locations

Loc.	Meas.	ND	Date	Conc.	Original
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There are 4 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
MW-16-01	8	8 (100%)	8/3/2016	ND<1 U	ND<1 U
			9/21/2016	ND<1 U	ND<1 U
			11/11/2016	ND<1 U	ND<1 U
			1/13/2017	ND<1 U	ND<1 U
			2/28/2017	ND<1 U	ND<1 U
			4/21/2017	ND<1 U	ND<1 U
			6/9/2017	ND<1 U	ND<1 U
			9/14/2017	ND<1 U	ND<1 U
			7/27/2017	1.1	1.1
MW-16-02	8	8 (100%)	8/3/2016	ND<1 U	ND<1 U
			9/21/2016	ND<1 U	ND<1 U
			11/11/2016	ND<1 U	ND<1 U
			1/13/2017	ND<1 U	ND<1 U
			2/28/2017	ND<1 U	ND<1 U
			4/21/2017	ND<1 U	ND<1 U
			6/9/2017	ND<1 U	ND<1 U
			9/14/2017	ND<1 U	ND<1 U
			7/27/2017	1.9	1.9
MW-16-03	9	9 (100%)	8/3/2016	ND<1 U	ND<1 U
			9/21/2016	ND<1 U	ND<1 U
			11/11/2016	ND<1 U	ND<1 U
			1/13/2017	ND<1 U	ND<1 U
			2/28/2017	ND<1 U	ND<1 U
			4/21/2017	ND<1 U	ND<1 U
			6/9/2017	ND<1 U	ND<1 U
			7/28/2017	ND<1 U	ND<1 U
			9/14/2017	ND<1 U	ND<1 U
MW-16-04	9	9 (100%)	8/3/2016	ND<1 U	ND<1 U
			9/21/2016	ND<1 U	ND<1 U
			11/11/2016	ND<1 U	ND<1 U
			1/13/2017	ND<1 U	ND<1 U
			2/28/2017	ND<1 U	ND<1 U
			4/21/2017	ND<1 U	ND<1 U
			6/9/2017	ND<1 U	ND<1 U
			7/27/2017	ND<1 U	ND<1 U
			9/14/2017	ND<1 U	ND<1 U

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original
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Concentrations (ug/L)

Parameter: Chromium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 34

Total Non-Detect: 13

Percent Non-Detects: 38.2353%

Total Background Measurements: 0

There are 0 background locations

Loc.	Meas.	ND	Date	Conc.	Original
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There are 4 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
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MW-16-01	9	3 (33.3333%)	8/3/2016	4	4
			9/21/2016	11	11
			11/11/2016	5.8	5.8
			1/13/2017	2.4	2.4
			2/28/2017	ND<2 U	ND<2 U
			4/21/2017	ND<2 U	ND<2 U
			6/9/2017	ND<2 U	ND<2 U
			7/27/2017	3.6	3.6
			9/14/2017	3.5	3.5

MW-16-02	8	3 (37.5%)	9/21/2016	14	14
			11/11/2016	6.9	6.9
			1/13/2017	3.9	3.9
			2/28/2017	ND<2 U	ND<2 U
			4/21/2017	ND<2 U	ND<2 U
			6/9/2017	ND<2 U	ND<2 U
			7/27/2017	5.5	5.5
			9/14/2017	4.1	4.1
			8/3/2016	48	48

MW-16-03	9	6 (66.6667%)	8/3/2016	ND<2 U	ND<2 U
			9/21/2016	3	3
			11/11/2016	ND<2 U	ND<2 U
			1/13/2017	ND<2 U	ND<2 U
			2/28/2017	ND<2 U	ND<2 U
			4/21/2017	ND<2 U	ND<2 U
			6/9/2017	ND<2 U	ND<2 U
			7/28/2017	4.4	4.4
			9/14/2017	14	14

MW-16-04	8	1 (12.5%)	8/3/2016	2.1	2.1
			11/11/2016	7.7	7.7
			1/13/2017	7.4	7.4
			2/28/2017	2.2	2.2
			4/21/2017	2.4	2.4
			6/9/2017	ND<2 U	ND<2 U
			7/27/2017	8.9	8.9
			9/14/2017	15	15
			9/21/2016	31	31

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original
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Concentrations (ug/L)

Parameter: Cobalt

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 34

Total Non-Detect: 21

Percent Non-Detects: 61.7647%

Total Background Measurements: 0

There are 0 background locations

Loc.	Meas.	ND	Date	Conc.	Original
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There are 4 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
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MW-16-01	9	6 (66.6667%)	8/3/2016	ND<1 U	ND<1 U
			9/21/2016	3.4	3.4
			11/11/2016	2	2
			1/13/2017	ND<1 U	ND<1 U
			2/28/2017	ND<1 U	ND<1 U
			4/21/2017	ND<1 U	ND<1 U
			6/9/2017	ND<1 U	ND<1 U
			7/27/2017	1.6	1.6
			9/14/2017	ND<1 U	ND<1 U

MW-16-02	8	4 (50%)	9/21/2016	4.3	4.3
			11/11/2016	2.1	2.1
			1/13/2017	1.1	1.1
			2/28/2017	ND<1 U	ND<1 U
			4/21/2017	ND<1 U	ND<1 U
			6/9/2017	ND<1 U	ND<1 U
			7/27/2017	2.7	2.7
			9/14/2017	ND<1 U	ND<1 U
			8/3/2016	13	13

MW-16-03	9	7 (77.7778%)	8/3/2016	ND<1 U	ND<1 U
			9/21/2016	ND<1 U	ND<1 U
			11/11/2016	ND<1 U	ND<1 U
			1/13/2017	ND<1 U	ND<1 U
			2/28/2017	ND<1 U	ND<1 U
			4/21/2017	ND<1 U	ND<1 U
			6/9/2017	ND<1 U	ND<1 U
			7/28/2017	1.1	1.1
			9/14/2017	3.3	3.3

MW-16-04	8	4 (50%)	8/3/2016	ND<1 U	ND<1 U
			11/11/2016	2.7	2.7
			1/13/2017	2.5	2.5
			2/28/2017	ND<1 U	ND<1 U
			4/21/2017	ND<1 U	ND<1 U
			6/9/2017	ND<1 U	ND<1 U
			7/27/2017	2.9	2.9
			9/14/2017	5.8	5.8
			9/21/2016	11	11

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original
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Concentrations (mg/L)

Parameter: Fluoride

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 36

Total Non-Detect: 1

Percent Non-Detects: 2.77778%

Total Background Measurements: 0

There are 0 background locations

Loc.	Meas.	ND	Date	Conc.	Original
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There are 4 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
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MW-16-01	9	0 (0%)	8/3/2016	1.6	1.6
			9/21/2016	1.6	1.6
			11/11/2016	1.7	1.7
			1/13/2017	1.4	1.4
			2/28/2017	1.9	1.9
			4/21/2017	1.7	1.7
			6/9/2017	1.7	1.7
			7/27/2017	1.8	1.8
			9/14/2017	2	2

MW-16-02	9	0 (0%)	8/3/2016	1.2	1.2
			9/21/2016	1.2	1.2
			11/11/2016	1.5	1.5
			1/13/2017	1.2	1.2
			2/28/2017	1.4	1.4
			4/21/2017	1.3	1.3
			6/9/2017	1.4	1.4
			7/27/2017	1.4	1.4
			9/14/2017	1.6	1.6

MW-16-03	9	1 (11.1111%)	8/3/2016	1.2	1.2
			9/21/2016	1	1
			11/11/2016	1.2	1.2
			1/13/2017	1.1	1.1
			2/28/2017	1.4	1.4
			4/21/2017	1.2	1.2
			6/9/2017	ND<1.3 U	ND<1.3 U
			7/28/2017	1.1	1.1
			9/14/2017	1.5	1.5

MW-16-04	9	0 (0%)	8/3/2016	1.3	1.3
			9/21/2016	1.2	1.2
			11/11/2016	1.4	1.4
			1/13/2017	1.2	1.2
			2/28/2017	1.5	1.5
			4/21/2017	1.3	1.3
			6/9/2017	1.4	1.4
			7/27/2017	1.4	1.4
			9/14/2017	1.7	1.7

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original
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Concentrations (ug/L)

Parameter: Lead

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 34

Total Non-Detect: 19

Percent Non-Detects: 55.8824%

Total Background Measurements: 0

There are 0 background locations

Loc.	Meas.	ND	Date	Conc.	Original
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There are 4 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
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MW-16-01	9	6 (66.6667%)	8/3/2016	ND<1 U	ND<1 U
			9/21/2016	2.4	2.4
			11/11/2016	1.4	1.4
			1/13/2017	ND<1 U	ND<1 U
			2/28/2017	ND<1 U	ND<1 U
			4/21/2017	ND<1 U	ND<1 U
			6/9/2017	ND<1 U	ND<1 U
			7/27/2017	1.5	1.5
			9/14/2017	ND<1 U	ND<1 U

MW-16-02	8	3 (37.5%)	9/21/2016	4.5	4.5
			11/11/2016	2.2	2.2
			1/13/2017	1.3	1.3
			2/28/2017	ND<1 U	ND<1 U
			4/21/2017	ND<1 U	ND<1 U
			6/9/2017	ND<1 U	ND<1 U
			7/27/2017	3	3
			9/14/2017	1.2	1.2
			8/3/2016	10	10

MW-16-03	9	7 (77.7778%)	8/3/2016	ND<1 U	ND<1 U
			9/21/2016	ND<1 U	ND<1 U
			11/11/2016	ND<1 U	ND<1 U
			1/13/2017	ND<1 U	ND<1 U
			2/28/2017	ND<1 U	ND<1 U
			4/21/2017	ND<1 U	ND<1 U
			6/9/2017	ND<1 U	ND<1 U
			7/28/2017	1.2	1.2
			9/14/2017	4.6	4.6

MW-16-04	8	3 (37.5%)	8/3/2016	ND<1 U	ND<1 U
			11/11/2016	2.1	2.1
			1/13/2017	2.3	2.3
			2/28/2017	ND<1 U	ND<1 U
			4/21/2017	1	1
			6/9/2017	ND<1 U	ND<1 U
			7/27/2017	2.8	2.8
			9/14/2017	5.4	5.4
			9/21/2016	8.8	8.8

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original
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Concentrations (ug/L)

Parameter: Lithium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 36

Total Non-Detect: 0

Percent Non-Detects: 0%

Total Background Measurements: 0

There are 0 background locations

Loc.	Meas.	ND	Date	Conc.	Original
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There are 4 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
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MW-16-01	9	0 (0%)	8/3/2016	34	34
			9/21/2016	56	56
			11/11/2016	48	48
			1/13/2017	41	41
			2/28/2017	41	41
			4/21/2017	46 F1	46 F1
			6/9/2017	41	41
			7/27/2017	53	53
			9/14/2017	46	46

MW-16-02	9	0 (0%)	8/3/2016	76	76
			9/21/2016	81	81
			11/11/2016	62	62
			1/13/2017	53	53
			2/28/2017	60	60
			4/21/2017	63	63
			6/9/2017	62	62
			7/27/2017	66	66
			9/14/2017	56	56

MW-16-03	9	0 (0%)	8/3/2016	36	36
			9/21/2016	40	40
			11/11/2016	36	36
			1/13/2017	33	33
			2/28/2017	39	39
			4/21/2017	46	46
			6/9/2017	46	46
			7/28/2017	62	62
			9/14/2017	62	62

MW-16-04	9	0 (0%)	8/3/2016	57	57
			9/21/2016	130	130
			11/11/2016	91	91
			1/13/2017	81	81
			2/28/2017	81	81
			4/21/2017	85	85
			6/9/2017	77	77
			7/27/2017	100	100
			9/14/2017	110	110

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original
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Concentrations (ug/L)

Parameter: Mercury

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 36

Total Non-Detect: 36

Percent Non-Detects: 100%

Total Background Measurements: 0

There are 0 background locations

Loc.	Meas.	ND	Date	Conc.	Original
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There are 4 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
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MW-16-01	9	9 (100%)	8/3/2016	ND<0.2 U	ND<0.2 U
			9/21/2016	ND<0.2 U	ND<0.2 U
			11/11/2016	ND<0.2 U	ND<0.2 U
			1/13/2017	ND<0.2 U	ND<0.2 U
			2/28/2017	ND<0.2 U	ND<0.2 U
			4/21/2017	ND<0.2 U	ND<0.2 U
			6/9/2017	ND<0.2 U	ND<0.2 U
			7/27/2017	ND<0.2 U	ND<0.2 U
			9/14/2017	ND<0.2 U	ND<0.2 U

MW-16-02	9	9 (100%)	8/3/2016	ND<0.2 U	ND<0.2 U
			9/21/2016	ND<0.2 U	ND<0.2 U
			11/11/2016	ND<0.2 U	ND<0.2 U
			1/13/2017	ND<0.2 U	ND<0.2 U
			2/28/2017	ND<0.2 U	ND<0.2 U
			4/21/2017	ND<0.2 U	ND<0.2 U
			6/9/2017	ND<0.2 U	ND<0.2 U
			7/27/2017	ND<0.2 U	ND<0.2 U
			9/14/2017	ND<0.2 U	ND<0.2 U

MW-16-03	9	9 (100%)	8/3/2016	ND<0.2 U	ND<0.2 U
			9/21/2016	ND<0.2 U	ND<0.2 U
			11/11/2016	ND<0.2 U	ND<0.2 U
			1/13/2017	ND<0.2 U	ND<0.2 U
			2/28/2017	ND<0.2 U	ND<0.2 U
			4/21/2017	ND<0.2 U	ND<0.2 U
			6/9/2017	ND<0.2 U	ND<0.2 U
			7/28/2017	ND<0.2 U	ND<0.2 U
			9/14/2017	ND<0.2 U	ND<0.2 U

MW-16-04	9	9 (100%)	8/3/2016	ND<0.2 U	ND<0.2 U
			9/21/2016	ND<0.2 U	ND<0.2 U
			11/11/2016	ND<0.2 U	ND<0.2 U
			1/13/2017	ND<0.2 U	ND<0.2 U
			2/28/2017	ND<0.2 U	ND<0.2 U
			4/21/2017	ND<0.2 U	ND<0.2 U
			6/9/2017	ND<0.2 U	ND<0.2 U
			7/27/2017	ND<0.2 U	ND<0.2 U
			9/14/2017	ND<0.2 U	ND<0.2 U

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original
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Concentrations (ug/L)

Parameter: Molybdenum

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 35

Total Non-Detect: 0

Percent Non-Detects: 0%

Total Background Measurements: 0

There are 0 background locations

Loc.	Meas.	ND	Date	Conc.	Original
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There are 4 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
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MW-16-01	9	0 (0%)	8/3/2016	49	49
			9/21/2016	39	39
			11/11/2016	31	31
			1/13/2017	34	34
			2/28/2017	30	30
			4/21/2017	35	35
			6/9/2017	29	29
			7/27/2017	27	27
			9/14/2017	24	24

MW-16-02	8	0 (0%)	8/3/2016	47	47
			9/21/2016	39	39
			1/13/2017	34	34
			2/28/2017	33	33
			4/21/2017	37	37
			6/9/2017	33	33
			7/27/2017	32	32
			9/14/2017	26	26
			11/11/2016	69	69

MW-16-03	9	0 (0%)	8/3/2016	26	26
			9/21/2016	34	34
			11/11/2016	32	32
			1/13/2017	31	31
			2/28/2017	31	31
			4/21/2017	31	31
			6/9/2017	31	31
			7/28/2017	26	26
			9/14/2017	24	24

MW-16-04	9	0 (0%)	8/3/2016	28	28
			9/21/2016	32	32
			11/11/2016	22	22
			1/13/2017	24	24
			2/28/2017	23	23
			4/21/2017	25	25
			6/9/2017	24	24
			7/27/2017	19	19
			9/14/2017	21	21

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original
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Concentrations (pci/L)

Parameter: Radium-226/228

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 36

Total Non-Detect: 1

Percent Non-Detects: 2.77778%

Total Background Measurements: 0

There are 0 background locations

Loc.	Meas.	ND	Date	Conc.	Original
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There are 4 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
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MW-16-01	9	1 (11.1111%)	8/3/2016	1.16	1.16
			9/21/2016	ND<0.79 U	ND<0.79 U
			11/11/2016	0.736	0.736
			1/13/2017	0.693	0.693
			2/28/2017	0.443	0.443
			4/21/2017	0.457	0.457
			6/9/2017	0.41	0.41
			7/27/2017	1.43	1.43
			9/14/2017	0.993	0.993

MW-16-02	9	0 (0%)	8/3/2016	2.9	2.9
			9/21/2016	2.63	2.63
			11/11/2016	2.13	2.13
			1/13/2017	1.92	1.92
			2/28/2017	1.89	1.89
			4/21/2017	1.22	1.22
			6/9/2017	1.57	1.57
			7/27/2017	2.56	2.56
			9/14/2017	2.13	2.13

MW-16-03	9	0 (0%)	8/3/2016	1.79	1.79
			9/21/2016	1.79	1.79
			11/11/2016	1.58	1.58
			1/13/2017	1.31	1.31
			2/28/2017	1.35	1.35
			4/21/2017	1.15	1.15
			6/9/2017	1.67	1.67
			7/28/2017	2.31	2.31
			9/14/2017	2.28	2.28

MW-16-04	9	0 (0%)	8/3/2016	4.11	4.11
			9/21/2016	6	6
			11/11/2016	3.81	3.81
			1/13/2017	3.18	3.18
			2/28/2017	3.31	3.31
			4/21/2017	2.59	2.59
			6/9/2017	3.52	3.52
			7/27/2017	4.14	4.14
			9/14/2017	4.78	4.78

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original
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Concentrations (ug/L)

Parameter: Selenium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 36

Total Non-Detect: 36

Percent Non-Detects: 100%

Total Background Measurements: 0

There are 0 background locations

Loc.	Meas.	ND	Date	Conc.	Original
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There are 4 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
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MW-16-01	9	9 (100%)	8/3/2016	ND<5 U	ND<5 U
			9/21/2016	ND<5 U	ND<5 U
			11/11/2016	ND<5 U	ND<5 U
			1/13/2017	ND<5 UF1	ND<5 UF1
			2/28/2017	ND<5 U	ND<5 U
			4/21/2017	ND<5 U	ND<5 U
			6/9/2017	ND<5 U	ND<5 U
			7/27/2017	ND<5 U	ND<5 U
			9/14/2017	ND<5 U	ND<5 U

MW-16-02	9	9 (100%)	8/3/2016	ND<5 U	ND<5 U
			9/21/2016	ND<5 U	ND<5 U
			11/11/2016	ND<5 U	ND<5 U
			1/13/2017	ND<5 U	ND<5 U
			2/28/2017	ND<5 U	ND<5 U
			4/21/2017	ND<5 U	ND<5 U
			6/9/2017	ND<5 U	ND<5 U
			7/27/2017	ND<5 U	ND<5 U
			9/14/2017	ND<5 U	ND<5 U

MW-16-03	9	9 (100%)	8/3/2016	ND<5 U	ND<5 U
			9/21/2016	ND<5 U	ND<5 U
			11/11/2016	ND<5 U	ND<5 U
			1/13/2017	ND<5 U	ND<5 U
			2/28/2017	ND<5 U	ND<5 U
			4/21/2017	ND<5 U	ND<5 U
			6/9/2017	ND<5 U	ND<5 U
			7/28/2017	ND<5 U	ND<5 U
			9/14/2017	ND<5 U	ND<5 U

MW-16-04	9	9 (100%)	8/3/2016	ND<5 U	ND<5 U
			9/21/2016	ND<5 U	ND<5 U
			11/11/2016	ND<5 U	ND<5 U
			1/13/2017	ND<5 U	ND<5 U
			2/28/2017	ND<5 U	ND<5 U
			4/21/2017	ND<5 U	ND<5 U
			6/9/2017	ND<5 U	ND<5 U
			7/27/2017	ND<5 U	ND<5 U
			9/14/2017	ND<5 U	ND<5 U

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original
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Concentrations (ug/L)

Parameter: Thallium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Total Measurements: 36

Total Non-Detect: 36

Percent Non-Detects: 100%

Total Background Measurements: 0

There are 0 background locations

Loc.	Meas.	ND	Date	Conc.	Original
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There are 4 compliance locations

Loc.	Meas.	ND	Date	Conc.	Original
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MW-16-01	9	9 (100%)	8/3/2016	ND<1 U	ND<1 U
			9/21/2016	ND<1 U	ND<1 U
			11/11/2016	ND<1 U	ND<1 U
			1/13/2017	ND<1 U	ND<1 U
			2/28/2017	ND<1 U	ND<1 U
			4/21/2017	ND<1 U	ND<1 U
			6/9/2017	ND<1 U	ND<1 U
			7/27/2017	ND<1 U	ND<1 U
			9/14/2017	ND<1 U	ND<1 U

MW-16-02	9	9 (100%)	8/3/2016	ND<1 U	ND<1 U
			9/21/2016	ND<1 U	ND<1 U
			11/11/2016	ND<1 U	ND<1 U
			1/13/2017	ND<1 U	ND<1 U
			2/28/2017	ND<1 U	ND<1 U
			4/21/2017	ND<1 U	ND<1 U
			6/9/2017	ND<1 U	ND<1 U
			7/27/2017	ND<1 U	ND<1 U
			9/14/2017	ND<1 U	ND<1 U

MW-16-03	9	9 (100%)	8/3/2016	ND<1 U	ND<1 U
			9/21/2016	ND<1 U	ND<1 U
			11/11/2016	ND<1 U	ND<1 U
			1/13/2017	ND<1 U	ND<1 U
			2/28/2017	ND<1 U	ND<1 U
			4/21/2017	ND<1 U	ND<1 U
			6/9/2017	ND<1 U	ND<1 U
			7/28/2017	ND<1 U	ND<1 U
			9/14/2017	ND<1 U	ND<1 U

MW-16-04	9	9 (100%)	8/3/2016	ND<1 U	ND<1 U
			9/21/2016	ND<1 U	ND<1 U
			11/11/2016	ND<1 U	ND<1 U
			1/13/2017	ND<1 U	ND<1 U
			2/28/2017	ND<1 U	ND<1 U
			4/21/2017	ND<1 U	ND<1 U
			6/9/2017	ND<1 U	ND<1 U
			7/27/2017	ND<1 U	ND<1 U
			9/14/2017	ND<1 U	ND<1 U

There are 0 unused locations

Loc.	Meas.	ND	Date	Conc.	Original
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Skewness Coefficient

Parameter: Barium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Skewness > 1 indicates positively skewed data

Skewness < -1 indicates negatively skewed data

Compliance Locations

Location	Obs.	Mean	Std. Dev.	Skewness
MW-16-01	9	165.556	25.5495	0.480305
MW-16-02	9	411.111	55.7773	1.19803
MW-16-03	9	456.667	56.7891	1.60952
MW-16-04	9	736.667	82.1584	1.08667

All Locations

Obs.	Mean	Std. Dev.	Skewness
36	442.5	213.118	0.263858

Skewness Coefficient

Parameter: Barium

Natural Logarithm Transformation

Non-Detects Replaced with Detection Limit

Skewness > 1 indicates positively skewed data

Skewness < -1 indicates negatively skewed data

Compliance Locations

Location	Obs.	Mean	Std. Dev.	Skewness
MW-16-01	9	5.09899	0.151458	0.277232
MW-16-02	9	6.01133	0.127545	1.0391
MW-16-03	9	6.11777	0.114873	1.46674
MW-16-04	9	6.59696	0.106168	1.01782

All Locations

Obs.	Mean	Std. Dev.	Skewness
36	5.95626	0.562649	-0.559673

Shapiro-Wilks Test of Normality

Parameter: Barium

Location: MW-16-02

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

K = 4 for 9 measurements

i	x(i)	x(n-i+1)	x(n-1+1)-x(i)	a(n-i+1)	b(i)
1	360	530	170	0.5888	100.096
2	360	470	110	0.3244	35.684
3	380	420	40	0.1976	7.904
4	390	400	10	0.0947	0.947
5	390	390	0		
6	400	390	-10		
7	420	380	-40		
8	470	360	-110		
9	530	360	-170		

Sum of b values = 144.631

Sample Standard Deviation = 55.7773

W Statistic = 0.84046

5% Critical value of 0.829 is less than 0.84046
Data is normally distributed at 95% level of significance

1% Critical value of 0.764 is less than 0.84046
Data is normally distributed at 99% level of significance

10% Critical value of 0.859 is greater than 0.84046
Evidence of non-normality at 90% level of significance

Shapiro-Wilks Test of Normality

Parameter: Barium

Location: MW-16-02

Normality Test of Parameter Concentrations

Natural Logarithm Transformation

Non-Detects Replaced with Detection Limit

K = 4 for 9 measurements

i	x(i)	x(n-i+1)	x(n-1+1)-x(i)	a(n-i+1)	b(i)
1	5.8861	6.27288	0.386773	0.5888	0.227732
2	5.8861	6.15273	0.266629	0.3244	0.0864943
3	5.94017	6.04025	0.100083	0.1976	0.0197765
4	5.96615	5.99146	0.0253178	0.0947	0.0023976
5	5.96615	5.96615	0		
6	5.99146	5.96615	-0.0253178		
7	6.04025	5.94017	-0.100083		
8	6.15273	5.8861	-0.266629		
9	6.27288	5.8861	-0.386773		

Sum of b values = 0.3364

Sample Standard Deviation = 0.127545

W Statistic = 0.869548

5% Critical value of 0.829 is less than 0.869548
Data is normally distributed at 95% level of significance

1% Critical value of 0.764 is less than 0.869548
Data is normally distributed at 99% level of significance

10% Critical value of 0.859 is less than 0.869548
Data is normally distributed at 90% level of significance

Shapiro-Wilks Test of Normality

Parameter: Barium

Location: MW-16-03

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

K = 4 for 9 measurements

i	x(i)	x(n-i+1)	x(n-1+1)-x(i)	a(n-i+1)	b(i)
1	410	590	180	0.5888	105.984
2	420	500	80	0.3244	25.952
3	420	460	40	0.1976	7.904
4	430	440	10	0.0947	0.947
5	440	440	0		
6	440	430	-10		
7	460	420	-40		
8	500	420	-80		
9	590	410	-180		

Sum of b values = 140.787

Sample Standard Deviation = 56.7891

W Statistic = 0.768255

5% Critical value of 0.829 exceeds 0.768255
Evidence of non-normality at 95% level of significance

1% Critical value of 0.764 is less than 0.768255
Data is normally distributed at 99% level of significance

10% Critical value of 0.859 is greater than 0.768255
Evidence of non-normality at 90% level of significance

Shapiro-Wilks Test of Normality

Parameter: Barium

Location: MW-16-04

Normality Test of Parameter Concentrations

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

K = 4 for 9 measurements

i	x(i)	x(n-i+1)	x(n-1+1)-x(i)	a(n-i+1)	b(i)
1	660	890	230	0.5888	135.424
2	680	860	180	0.3244	58.392
3	680	730	50	0.1976	9.88
4	690	730	40	0.0947	3.788
5	710	710	0		
6	730	690	-40		
7	730	680	-50		
8	860	680	-180		
9	890	660	-230		

Sum of b values = 207.484

Sample Standard Deviation = 82.1584

W Statistic = 0.797215

5% Critical value of 0.829 exceeds 0.797215
Evidence of non-normality at 95% level of significance

1% Critical value of 0.764 is less than 0.797215
Data is normally distributed at 99% level of significance

10% Critical value of 0.859 is greater than 0.797215
Evidence of non-normality at 90% level of significance

Shapiro-Wilks Test of Normality

Parameter: Barium

Location: MW-16-03

Normality Test of Parameter Concentrations

Natural Logarithm Transformation

Non-Detects Replaced with Detection Limit

K = 4 for 9 measurements

i	x(i)	x(n-i+1)	x(n-1+1)-x(i)	a(n-i+1)	b(i)
1	6.01616	6.38012	0.363965	0.5888	0.214303
2	6.04025	6.21461	0.174353	0.3244	0.0565602
3	6.04025	6.13123	0.0909718	0.1976	0.017976
4	6.06379	6.08677	0.0229895	0.0947	0.00217711
5	6.08677	6.08677	0		
6	6.08677	6.06379	-0.0229895		
7	6.13123	6.04025	-0.0909718		
8	6.21461	6.04025	-0.174353		
9	6.38012	6.01616	-0.363965		

Sum of b values = 0.291016

Sample Standard Deviation = 0.114873

W Statistic = 0.802253

5% Critical value of 0.829 exceeds 0.802253
Evidence of non-normality at 95% level of significance

1% Critical value of 0.764 is less than 0.802253
Data is normally distributed at 99% level of significance

10% Critical value of 0.859 is greater than 0.802253
Evidence of non-normality at 90% level of significance

Shapiro-Wilks Test of Normality

Parameter: Barium

Location: MW-16-04

Normality Test of Parameter Concentrations

Natural Logarithm Transformation

Non-Detects Replaced with Detection Limit

K = 4 for 9 measurements

i	x(i)	x(n-i+1)	x(n-1+1)-x(i)	a(n-i+1)	b(i)
1	6.49224	6.79122	0.298982	0.5888	0.17604
2	6.52209	6.75693	0.23484	0.3244	0.076182
3	6.52209	6.59304	0.0709517	0.1976	0.0140201
4	6.53669	6.59304	0.0563529	0.0947	0.00533662
5	6.56526	6.56526	0		
6	6.59304	6.53669	-0.0563529		
7	6.59304	6.52209	-0.0709517		
8	6.75693	6.52209	-0.23484		
9	6.79122	6.49224	-0.298982		

Sum of b values = 0.271579

Sample Standard Deviation = 0.106168

W Statistic = 0.817932

5% Critical value of 0.829 exceeds 0.817932
Evidence of non-normality at 95% level of significance

1% Critical value of 0.764 is less than 0.817932
Data is normally distributed at 99% level of significance

10% Critical value of 0.859 is greater than 0.817932
Evidence of non-normality at 90% level of significance

Skewness Coefficient

Parameter: Chromium

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

Skewness > 1 indicates positively skewed data

Skewness < -1 indicates negatively skewed data

Compliance Locations

Location	Obs.	Mean	Std. Dev.	Skewness
MW-16-01	9	3.7	3.18983	1.37683
MW-16-02	8	4.675	4.37583	1.22647
MW-16-03	9	3.04444	4.28576	2.13249
MW-16-04	8	5.8375	4.80563	0.76241

All Locations

Obs.	Mean	Std. Dev.	Skewness
34	4.25882	4.12473	1.36124

Skewness Coefficient

Parameter: Chromium

Original Data (Not Transformed)

Aitchison's Adjustment

Skewness > 1 indicates positively skewed data

Skewness < -1 indicates negatively skewed data

Compliance Locations

Location	Obs.	Mean	Std. Dev.	Skewness
MW-16-01	9	3.36667	3.52846	1.36084
MW-16-02	8	4.3	4.75034	1.27568
MW-16-03	9	2.37778	4.65666	2.072
MW-16-04	8	5.7125	4.95996	0.836269

All Locations

Obs.	Mean	Std. Dev.	Skewness
34	3.87647	4.45245	1.38522

Skewness Coefficient

Parameter: Chromium

Natural Logarithm Transformation

Aitchison's Adjustment

Skewness > 1 indicates positively skewed data

Skewness < -1 indicates negatively skewed data

Compliance Locations

Location	Obs.	Mean	Std. Dev.	Skewness
MW-16-01	9	0.994579	0.854089	0.686325
MW-16-02	8	1.13091	1.0151	0.571595
MW-16-03	9	0.579919	0.95786	1.45012
MW-16-04	8	1.41783	0.936668	0.361276

All Locations

Obs.	Mean	Std. Dev.	Skewness
34	1.01648	0.947775	0.757235

Skewness Coefficient

Parameter: Cobalt

Original Data (Not Transformed)

Aitchison's Adjustment

Skewness > 1 indicates positively skewed data

Skewness < -1 indicates negatively skewed data

Compliance Locations

Location	Obs.	Mean	Std. Dev.	Skewness
MW-16-01	9	0.777778	1.25875	1.36132
MW-16-02	8	1.275	1.62107	1.11306
MW-16-03	9	0.488889	1.11517	2.23487
MW-16-04	8	1.7375	2.11926	1.09667

All Locations

Obs.	Mean	Std. Dev.	Skewness
34	1.04412	1.5584	1.52318

Skewness Coefficient

Parameter: Cobalt

Natural Logarithm Transformation

Aitchison's Adjustment

Skewness > 1 indicates positively skewed data

Skewness < -1 indicates negatively skewed data

Compliance Locations

Location	Obs.	Mean	Std. Dev.	Skewness
MW-16-01	9	0.265214	0.442427	1.31017
MW-16-02	8	0.411139	0.575869	0.85828
MW-16-03	9	0.143248	0.395262	2.4458
MW-16-04	8	0.591514	0.681459	0.465141

All Locations

Obs.	Mean	Std. Dev.	Skewness
34	0.344041	0.531796	1.19356

Skewness Coefficient

Parameter: Fluoride

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Skewness > 1 indicates positively skewed data

Skewness < -1 indicates negatively skewed data

Compliance Locations

Location	Obs.	Mean	Std. Dev.	Skewness
MW-16-01	9	1.71111	0.176383	-0.031618
MW-16-02	9	1.35556	0.1424	0.294764
MW-16-03	9	1.22222	0.156347	0.446271
MW-16-04	9	1.37778	0.156347	0.802603

All Locations

Obs.	Mean	Std. Dev.	Skewness
36	1.41667	0.237246	0.554063

Skewness Coefficient

Parameter: Fluoride

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

Skewness > 1 indicates positively skewed data

Skewness < -1 indicates negatively skewed data

Compliance Locations

Location	Obs.	Mean	Std. Dev.	Skewness
MW-16-01	9	1.71111	0.176383	-0.031618
MW-16-02	9	1.35556	0.1424	0.294764
MW-16-03	9	1.15	0.242384	-0.64941
MW-16-04	9	1.37778	0.156347	0.802603

All Locations

Obs.	Mean	Std. Dev.	Skewness
36	1.39861	0.268989	-0.0838555

Skewness Coefficient

Parameter: Lead

Original Data (Not Transformed)

Aitchison's Adjustment

Skewness > 1 indicates positively skewed data

Skewness < -1 indicates negatively skewed data

Compliance Locations

Location	Obs.	Mean	Std. Dev.	Skewness
MW-16-01	9	0.588889	0.925263	1.28001
MW-16-02	8	1.525	1.63073	1.03423
MW-16-03	9	0.644444	1.53551	2.2843
MW-16-04	8	1.7	1.87388	1.1812

All Locations

Obs.	Mean	Std. Dev.	Skewness
34	1.08529	1.53191	1.55905

Skewness Coefficient

Parameter: Lead

Natural Logarithm Transformation

Aitchison's Adjustment

Skewness > 1 indicates positively skewed data

Skewness < -1 indicates negatively skewed data

Compliance Locations

Location	Obs.	Mean	Std. Dev.	Skewness
MW-16-01	9	0.179712	0.306878	1.45581
MW-16-02	8	0.479479	0.579869	0.763902
MW-16-03	9	0.18982	0.504704	2.41115
MW-16-04	8	0.536358	0.637722	0.623367

All Locations

Obs.	Mean	Std. Dev.	Skewness
34	0.336838	0.519024	1.35731

Skewness Coefficient

Parameter: Lithium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Skewness > 1 indicates positively skewed data

Skewness < -1 indicates negatively skewed data

Compliance Locations

Location	Obs.	Mean	Std. Dev.	Skewness
MW-16-01	9	45.1111	6.7536	0.0978567
MW-16-02	9	64.3333	8.9861	0.745231
MW-16-03	9	44.4444	10.8641	0.814384
MW-16-04	9	90.2222	21.0522	0.439377

All Locations

Obs.	Mean	Std. Dev.	Skewness
36	61.0278	22.6936	1.09731

Skewness Coefficient

Parameter: Molybdenum

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Skewness > 1 indicates positively skewed data

Skewness < -1 indicates negatively skewed data

Compliance Locations

Location	Obs.	Mean	Std. Dev.	Skewness
MW-16-01	9	33.1111	7.4405	1.00724
MW-16-02	8	35.125	6.1281	0.616111
MW-16-03	9	29.5556	3.35824	-0.514296
MW-16-04	9	24.2222	3.8658	0.771545

All Locations

Obs.	Mean	Std. Dev.	Skewness
35	30.3714	6.66459	0.822234

Skewness Coefficient

Parameter: Molybdenum

Natural Logarithm Transformation

Non-Detects Replaced with Detection Limit

Skewness > 1 indicates positively skewed data

Skewness < -1 indicates negatively skewed data

Compliance Locations

Location	Obs.	Mean	Std. Dev.	Skewness
MW-16-01	9	3.47927	0.211314	0.58368
MW-16-02	8	3.54598	0.171196	0.164837
MW-16-03	9	3.38025	0.117757	-0.612924
MW-16-04	9	3.17649	0.154093	0.45526

All Locations

Obs.	Mean	Std. Dev.	Skewness
35	3.3912	0.212874	0.192845

Skewness Coefficient

Parameter: Radium-226/228

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

Skewness > 1 indicates positively skewed data

Skewness < -1 indicates negatively skewed data

Compliance Locations

Location	Obs.	Mean	Std. Dev.	Skewness
MW-16-01	9	0.790222	0.349237	0.578517
MW-16-02	9	2.10556	0.532191	-0.109897
MW-16-03	9	1.69222	0.405672	0.365312
MW-16-04	9	3.93778	1.00052	0.817435

All Locations

Obs.	Mean	Std. Dev.	Skewness
36	2.13144	1.30782	0.965681

Skewness Coefficient

Parameter: Radium-226/228

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

Skewness > 1 indicates positively skewed data

Skewness < -1 indicates negatively skewed data

Compliance Locations

Location	Obs.	Mean	Std. Dev.	Skewness
MW-16-01	9	0.746333	0.373262	0.69254
MW-16-02	9	2.10556	0.532191	-0.109897
MW-16-03	9	1.69222	0.405672	0.365312
MW-16-04	9	3.93778	1.00052	0.817435

All Locations

Obs.	Mean	Std. Dev.	Skewness
36	2.12047	1.32099	0.926892

Parametric Tolerance Interval Analysis

Parameter: Barium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

MW-16-01

USEPA 1989 Guidance Tolerance Limit Formula (One-Tailed)

Background observations = 9

Background mean = 165.556

Background standard deviation = 25.5495

One-sided normal tolerance factor (K) at 95% confidence = 3.031

Upper tolerance limit = 242.996

Location	Date	Value	Significant
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Parametric Tolerance Interval Analysis

Parameter: Chromium

Natural Logarithm Transformation

Aitchison's Adjustment

MW-16-01

USEPA 1989 Guidance Tolerance Limit Formula (One-Tailed)

Background observations = 9

Background mean = 0.994579

Background standard deviation = 0.854089

One-sided normal tolerance factor (K) at 95% confidence = 3.031

Upper tolerance limit = 3.58332

Location	Date	Value	Significant
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Non-Parametric Tolerance Interval

Parameter: Cobalt

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

MW-16-01

Total Percent Non-Detects = 66.6667%

Background measurements (n) = 9

Maximum Background Concentration = 3.4

Minimum Coverage = 71.7%

Average Coverage = 90%

Location	Date	Value	Significant
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Parametric Tolerance Interval Analysis

Parameter: Fluoride

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

MW-16-01

USEPA 1989 Guidance Tolerance Limit Formula (One-Tailed)

Background observations = 9

Background mean = 1.71111

Background standard deviation = 0.176383

One-sided normal tolerance factor (K) at 95% confidence = 3.031

Upper tolerance limit = 2.24573

Location	Date	Value	Significant
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Non-Parametric Tolerance Interval

Parameter: Lead

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

MW-16-01

Total Percent Non-Detects = 66.6667%

Background measurements (n) = 9

Maximum Background Concentration = 2.4

Minimum Coverage = 71.7%

Average Coverage = 90%

Location	Date	Value	Significant
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Parametric Tolerance Interval Analysis

Parameter: Lithium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

MW-16-01

USEPA 1989 Guidance Tolerance Limit Formula (One-Tailed)

Background observations = 9

Background mean = 45.1111

Background standard deviation = 6.7536

One-sided normal tolerance factor (K) at 95% confidence = 3.031

Upper tolerance limit = 65.5813

Location	Date	Value	Significant
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Parametric Tolerance Interval Analysis

Parameter: Molybdenum

Natural Logarithm Transformation

Non-Detects Replaced with Detection Limit

MW-16-01

USEPA 1989 Guidance Tolerance Limit Formula (One-Tailed)

Background observations = 9

Background mean = 3.47927

Background standard deviation = 0.211314

One-sided normal tolerance factor (K) at 95% confidence = 3.031

Upper tolerance limit = 4.11977

Location	Date	Value	Significant
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Parametric Tolerance Interval Analysis

Parameter: Radium-226/228

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

MW-16-01

USEPA 1989 Guidance Tolerance Limit Formula (One-Tailed)

Background observations = 9

Background mean = 0.746333

Background standard deviation = 0.373262

One-sided normal tolerance factor (K) at 95% confidence = 3.031

Upper tolerance limit = 1.87769

Location	Date	Value	Significant
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Non-Parametric Tolerance Interval

Parameter: Arsenic

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

MW-16-02

Total Percent Non-Detects = 77.7778%

Background measurements (n) = 9

Maximum Background Concentration = 12

Minimum Coverage = 71.7%

Average Coverage = 90%

Location	Date	Value	Significant
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Parametric Tolerance Interval Analysis

Parameter: Barium

Natural Logarithm Transformation

Non-Detects Replaced with Detection Limit

MW-16-02

USEPA 1989 Guidance Tolerance Limit Formula (One-Tailed)

Background observations = 9

Background mean = 6.01133

Background standard deviation = 0.127545

One-sided normal tolerance factor (K) at 95% confidence = 3.031

Upper tolerance limit = 6.39792

Location	Date	Value	Significant
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Parametric Tolerance Interval Analysis

Parameter: Chromium

Natural Logarithm Transformation

Aitchison's Adjustment

MW-16-02

USEPA 1989 Guidance Tolerance Limit Formula (One-Tailed)

Background observations = 8

Background mean = 1.13091

Background standard deviation = 1.0151

One-sided normal tolerance factor (K) at 95% confidence = 3.188

Upper tolerance limit = 4.36706

Location	Date	Value	Significant
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Parametric Tolerance Interval Analysis

Parameter: Cobalt

Natural Logarithm Transformation

Aitchison's Adjustment

MW-16-02

USEPA 1989 Guidance Tolerance Limit Formula (One-Tailed)

Background observations = 8

Background mean = 0.411139

Background standard deviation = 0.575869

One-sided normal tolerance factor (K) at 95% confidence = 3.188

Upper tolerance limit = 2.24701

Location	Date	Value	Significant
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Parametric Tolerance Interval Analysis

Parameter: Fluoride

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

MW-16-02

USEPA 1989 Guidance Tolerance Limit Formula (One-Tailed)

Background observations = 9

Background mean = 1.35556

Background standard deviation = 0.1424

One-sided normal tolerance factor (K) at 95% confidence = 3.031

Upper tolerance limit = 1.78717

Location	Date	Value	Significant
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Parametric Tolerance Interval Analysis

Parameter: Lead

Natural Logarithm Transformation

Aitchison's Adjustment

MW-16-02

USEPA 1989 Guidance Tolerance Limit Formula (One-Tailed)

Background observations = 8

Background mean = 0.479479

Background standard deviation = 0.579869

One-sided normal tolerance factor (K) at 95% confidence = 3.188

Upper tolerance limit = 2.3281

Location	Date	Value	Significant
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Parametric Tolerance Interval Analysis

Parameter: Lithium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

MW-16-02

USEPA 1989 Guidance Tolerance Limit Formula (One-Tailed)

Background observations = 9

Background mean = 64.3333

Background standard deviation = 8.9861

One-sided normal tolerance factor (K) at 95% confidence = 3.031

Upper tolerance limit = 91.5702

Location	Date	Value	Significant
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Parametric Tolerance Interval Analysis

Parameter: Molybdenum

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

MW-16-02

USEPA 1989 Guidance Tolerance Limit Formula (One-Tailed)

Background observations = 8

Background mean = 35.125

Background standard deviation = 6.1281

One-sided normal tolerance factor (K) at 95% confidence = 3.188

Upper tolerance limit = 54.6614

Location	Date	Value	Significant
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Parametric Tolerance Interval Analysis

Parameter: Radium-226/228

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

MW-16-02

USEPA 1989 Guidance Tolerance Limit Formula (One-Tailed)

Background observations = 9

Background mean = 2.10556

Background standard deviation = 0.532191

One-sided normal tolerance factor (K) at 95% confidence = 3.031

Upper tolerance limit = 3.71863

Location	Date	Value	Significant
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Non-Parametric Tolerance Interval

Parameter: Barium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

MW-16-03

Total Percent Non-Detects = 0%

Background measurements (n) = 9

Maximum Background Concentration = 590

Minimum Coverage = 71.7%

Average Coverage = 90%

Location	Date	Value	Significant
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Non-Parametric Tolerance Interval

Parameter: Chromium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

MW-16-03

Total Percent Non-Detects = 66.6667%

Background measurements (n) = 9

Maximum Background Concentration = 14

Minimum Coverage = 71.7%

Average Coverage = 90%

Location	Date	Value	Significant
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Non-Parametric Tolerance Interval

Parameter: Cobalt

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

MW-16-03

Total Percent Non-Detects = 77.7778%

Background measurements (n) = 9

Maximum Background Concentration = 3.3

Minimum Coverage = 71.7%

Average Coverage = 90%

Location	Date	Value	Significant
----------	------	-------	-------------

Parametric Tolerance Interval Analysis

Parameter: Fluoride

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

MW-16-03

USEPA 1989 Guidance Tolerance Limit Formula (One-Tailed)

Background observations = 9

Background mean = 1.15

Background standard deviation = 0.242384

One-sided normal tolerance factor (K) at 95% confidence = 3.031

Upper tolerance limit = 1.88467

Location	Date	Value	Significant
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Non-Parametric Tolerance Interval

Parameter: Lead

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

MW-16-03

Total Percent Non-Detects = 77.7778%

Background measurements (n) = 9

Maximum Background Concentration = 4.6

Minimum Coverage = 71.7%

Average Coverage = 90%

Location	Date	Value	Significant
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Parametric Tolerance Interval Analysis

Parameter: Lithium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

MW-16-03

USEPA 1989 Guidance Tolerance Limit Formula (One-Tailed)

Background observations = 9

Background mean = 44.4444

Background standard deviation = 10.8641

One-sided normal tolerance factor (K) at 95% confidence = 3.031

Upper tolerance limit = 77.3734

Location	Date	Value	Significant
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Parametric Tolerance Interval Analysis

Parameter: Molybdenum

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

MW-16-03

USEPA 1989 Guidance Tolerance Limit Formula (One-Tailed)

Background observations = 9

Background mean = 29.5556

Background standard deviation = 3.35824

One-sided normal tolerance factor (K) at 95% confidence = 3.031

Upper tolerance limit = 39.7344

Location	Date	Value	Significant
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Parametric Tolerance Interval Analysis

Parameter: Radium-226/228

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

MW-16-03

USEPA 1989 Guidance Tolerance Limit Formula (One-Tailed)

Background observations = 9

Background mean = 1.69222

Background standard deviation = 0.405672

One-sided normal tolerance factor (K) at 95% confidence = 3.031

Upper tolerance limit = 2.92181

Location	Date	Value	Significant
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Non-Parametric Tolerance Interval

Parameter: Arsenic

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

MW-16-04

Total Percent Non-Detects = 77.7778%

Background measurements (n) = 9

Maximum Background Concentration = 10

Minimum Coverage = 71.7%

Average Coverage = 90%

Location	Date	Value	Significant
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Non-Parametric Tolerance Interval

Parameter: Barium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

MW-16-04

Total Percent Non-Detects = 0%

Background measurements (n) = 9

Maximum Background Concentration = 890

Minimum Coverage = 71.7%

Average Coverage = 90%

Location	Date	Value	Significant
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Parametric Tolerance Interval Analysis

Parameter: Chromium

Original Data (Not Transformed)

Non-Detects Replaced with 1/2 DL

MW-16-04

USEPA 1989 Guidance Tolerance Limit Formula (One-Tailed)

Background observations = 8

Background mean = 5.8375

Background standard deviation = 4.80563

One-sided normal tolerance factor (K) at 95% confidence = 3.188

Upper tolerance limit = 21.1579

Location	Date	Value	Significant
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Parametric Tolerance Interval Analysis

Parameter: Cobalt

Natural Logarithm Transformation

Aitchison's Adjustment

MW-16-04

USEPA 1989 Guidance Tolerance Limit Formula (One-Tailed)

Background observations = 8

Background mean = 0.591514

Background standard deviation = 0.681459

One-sided normal tolerance factor (K) at 95% confidence = 3.188

Upper tolerance limit = 2.764

Location	Date	Value	Significant
----------	------	-------	-------------

Parametric Tolerance Interval Analysis

Parameter: Fluoride

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

MW-16-04

USEPA 1989 Guidance Tolerance Limit Formula (One-Tailed)

Background observations = 9

Background mean = 1.37778

Background standard deviation = 0.156347

One-sided normal tolerance factor (K) at 95% confidence = 3.031

Upper tolerance limit = 1.85167

Location	Date	Value	Significant
----------	------	-------	-------------

Parametric Tolerance Interval Analysis

Parameter: Lead

Natural Logarithm Transformation

Aitchison's Adjustment

MW-16-04

USEPA 1989 Guidance Tolerance Limit Formula (One-Tailed)

Background observations = 8

Background mean = 0.536358

Background standard deviation = 0.637722

One-sided normal tolerance factor (K) at 95% confidence = 3.188

Upper tolerance limit = 2.56942

Location	Date	Value	Significant
----------	------	-------	-------------

Parametric Tolerance Interval Analysis

Parameter: Lithium

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

MW-16-04

USEPA 1989 Guidance Tolerance Limit Formula (One-Tailed)

Background observations = 9

Background mean = 90.2222

Background standard deviation = 21.0522

One-sided normal tolerance factor (K) at 95% confidence = 3.031

Upper tolerance limit = 154.031

Location	Date	Value	Significant
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Parametric Tolerance Interval Analysis

Parameter: Molybdenum

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

MW-16-04

USEPA 1989 Guidance Tolerance Limit Formula (One-Tailed)

Background observations = 9

Background mean = 24.2222

Background standard deviation = 3.8658

One-sided normal tolerance factor (K) at 95% confidence = 3.031

Upper tolerance limit = 35.9395

Location	Date	Value	Significant
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Parametric Tolerance Interval Analysis

Parameter: Radium-226/228

Original Data (Not Transformed)

Non-Detects Replaced with Detection Limit

MW-16-04

USEPA 1989 Guidance Tolerance Limit Formula (One-Tailed)

Background observations = 9

Background mean = 3.93778

Background standard deviation = 1.00052

One-sided normal tolerance factor (K) at 95% confidence = 3.031

Upper tolerance limit = 6.97036

Location	Date	Value	Significant
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Attachment B

Appendix IV Laboratory Reports



ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Vincent Buening
TRC Environmental Corporation.
1540 Eisenhower Place
Ann Arbor, Michigan 48108-7080

Generated 1/18/2024 4:52:34 PM Revision 2

JOB DESCRIPTION

CCR DTE St. Clair Power

JOB NUMBER

240-184674-1

Eurofins Cleveland

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization



Authorized for release by
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(330)966-9790

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Revision 2



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Definitions/Glossary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-1

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: CCR DTE St. Clair Power

Job ID: 240-184674-1

Job ID: 240-184674-1

Eurofins Cleveland

Job Narrative 240-184674-1

REVISION

The report being provided is a revision of the original report sent on 5/19/2023. The report (revision 2) is being revised due to lower the reporting limit for chromium.

Report revision history

Revision 1 - 6/7/2023 - Reason - Client would like the results reported to the RL only..

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 5/4/2023 8:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 1.4°C, 1.8°C, 2.4°C and 2.6°C

Metals

Method 6020B: Some requested practical quantitation limits (PQLs) on the following samples fall below the laboratory's verified standard quantitation limit: MW-16-01 (240-184674-1), MW-16-02 (240-184674-2), MW-16-03 (240-184674-3), MW-16-04 (240-184674-4), DUP-01 (240-184674-5) and EB-01 (240-184674-6). The continuing calibration blanks and method blanks may not support the lower PQL.

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

General Chemistry

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

Eurofins Cleveland

Method Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-1

Method	Method Description	Protocol	Laboratory
6020B	Metals (ICP/MS)	SW846	EET CLE
7470A	Mercury (CVAA)	SW846	EET CLE
9056A	Anions, Ion Chromatography	SW846	EET CLE
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CLE
7470A	Preparation, Mercury	SW846	EET CLE

Protocol References:

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

Laboratory References:

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



Sample Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-184674-1	MW-16-01	Ground Water	04/28/23 14:53	05/04/23 08:00
240-184674-2	MW-16-02	Ground Water	04/28/23 13:01	05/04/23 08:00
240-184674-3	MW-16-03	Ground Water	04/28/23 11:35	05/04/23 08:00
240-184674-4	MW-16-04	Ground Water	04/28/23 10:15	05/04/23 08:00
240-184674-5	DUP-01	Ground Water	04/28/23 00:00	05/04/23 08:00
240-184674-6	EB-01	Water	04/28/23 15:00	05/04/23 08:00

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Detection Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-1

Client Sample ID: MW-16-01

Lab Sample ID: 240-184674-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Barium	220		5.0	ug/L	1		6020B	Total Recoverable
Molybdenum	25		5.0	ug/L	1		6020B	Total Recoverable
Lithium	53		8.0	ug/L	1		6020B	Total Recoverable
Fluoride	1.9		0.25	mg/L	5		9056A	Total/NA

Client Sample ID: MW-16-02

Lab Sample ID: 240-184674-2

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Barium	400		5.0	ug/L	1		6020B	Total Recoverable
Chromium	2.3		2.0	ug/L	1		6020B	Total Recoverable
Molybdenum	25		5.0	ug/L	1		6020B	Total Recoverable
Lithium	66		8.0	ug/L	1		6020B	Total Recoverable
Fluoride	1.5		0.25	mg/L	5		9056A	Total/NA

Client Sample ID: MW-16-03

Lab Sample ID: 240-184674-3

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Barium	450		5.0	ug/L	1		6020B	Total Recoverable
Chromium	2.1		2.0	ug/L	1		6020B	Total Recoverable
Molybdenum	22		5.0	ug/L	1		6020B	Total Recoverable
Lithium	68		8.0	ug/L	1		6020B	Total Recoverable
Fluoride	1.3		0.25	mg/L	5		9056A	Total/NA

Client Sample ID: MW-16-04

Lab Sample ID: 240-184674-4

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Barium	670		5.0	ug/L	1		6020B	Total Recoverable
Molybdenum	17		5.0	ug/L	1		6020B	Total Recoverable
Lithium	98		8.0	ug/L	1		6020B	Total Recoverable
Fluoride	1.5		0.25	mg/L	5		9056A	Total/NA

Client Sample ID: DUP-01

Lab Sample ID: 240-184674-5

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Barium	470		5.0	ug/L	1		6020B	Total Recoverable
Chromium	2.6		2.0	ug/L	1		6020B	Total Recoverable
Molybdenum	23		5.0	ug/L	1		6020B	Total Recoverable
Lithium	70		8.0	ug/L	1		6020B	Total Recoverable
Fluoride	1.3		0.25	mg/L	5		9056A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cleveland

Detection Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-1

Client Sample ID: EB-01

Lab Sample ID: 240-184674-6

No Detections.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

This Detection Summary does not include radiochemical test results.

Eurofins Cleveland

Client Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-1

Client Sample ID: MW-16-01

Lab Sample ID: 240-184674-1

Date Collected: 04/28/23 14:53

Matrix: Ground Water

Date Received: 05/04/23 08:00

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	ug/L		05/05/23 14:00	05/08/23 21:43	1
Arsenic	5.0	U	5.0	ug/L		05/05/23 14:00	05/08/23 21:43	1
Barium	220		5.0	ug/L		05/05/23 14:00	05/08/23 21:43	1
Beryllium	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:43	1
Cadmium	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:43	1
Cobalt	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:43	1
Chromium	2.0	U	2.0	ug/L		05/05/23 14:00	05/08/23 21:43	1
Molybdenum	25		5.0	ug/L		05/05/23 14:00	05/08/23 21:43	1
Lead	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:43	1
Selenium	5.0	U	5.0	ug/L		05/05/23 14:00	05/08/23 21:43	1
Thallium	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:43	1
Lithium	53		8.0	ug/L		05/05/23 14:00	05/08/23 21:43	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	ug/L		05/05/23 14:00	05/08/23 19:03	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride (SW846 9056A)	1.9		0.25	mg/L			05/18/23 08:30	5

Client Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-1

Client Sample ID: MW-16-02

Lab Sample ID: 240-184674-2

Date Collected: 04/28/23 13:01

Matrix: Ground Water

Date Received: 05/04/23 08:00

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	ug/L		05/05/23 14:00	05/08/23 21:45	1
Arsenic	5.0	U	5.0	ug/L		05/05/23 14:00	05/08/23 21:45	1
Barium	400		5.0	ug/L		05/05/23 14:00	05/08/23 21:45	1
Beryllium	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:45	1
Cadmium	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:45	1
Cobalt	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:45	1
Chromium	2.3		2.0	ug/L		05/05/23 14:00	05/08/23 21:45	1
Molybdenum	25		5.0	ug/L		05/05/23 14:00	05/08/23 21:45	1
Lead	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:45	1
Selenium	5.0	U	5.0	ug/L		05/05/23 14:00	05/08/23 21:45	1
Thallium	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:45	1
Lithium	66		8.0	ug/L		05/05/23 14:00	05/08/23 21:45	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	ug/L		05/05/23 14:00	05/08/23 19:10	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride (SW846 9056A)	1.5		0.25	mg/L			05/18/23 08:50	5

Client Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-1

Client Sample ID: MW-16-03

Lab Sample ID: 240-184674-3

Date Collected: 04/28/23 11:35

Matrix: Ground Water

Date Received: 05/04/23 08:00

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	ug/L		05/05/23 14:00	05/08/23 21:53	1
Arsenic	5.0	U	5.0	ug/L		05/05/23 14:00	05/08/23 21:53	1
Barium	450		5.0	ug/L		05/05/23 14:00	05/08/23 21:53	1
Beryllium	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:53	1
Cadmium	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:53	1
Cobalt	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:53	1
Chromium	2.1		2.0	ug/L		05/05/23 14:00	05/08/23 21:53	1
Molybdenum	22		5.0	ug/L		05/05/23 14:00	05/08/23 21:53	1
Lead	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:53	1
Selenium	5.0	U	5.0	ug/L		05/05/23 14:00	05/08/23 21:53	1
Thallium	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:53	1
Lithium	68		8.0	ug/L		05/05/23 14:00	05/08/23 21:53	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	ug/L		05/05/23 14:00	05/08/23 19:12	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride (SW846 9056A)	1.3		0.25	mg/L			05/18/23 09:10	5

Client Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-1

Client Sample ID: MW-16-04

Lab Sample ID: 240-184674-4

Date Collected: 04/28/23 10:15

Matrix: Ground Water

Date Received: 05/04/23 08:00

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	ug/L		05/05/23 14:00	05/08/23 21:56	1
Arsenic	5.0	U	5.0	ug/L		05/05/23 14:00	05/08/23 21:56	1
Barium	670		5.0	ug/L		05/05/23 14:00	05/08/23 21:56	1
Beryllium	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:56	1
Cadmium	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:56	1
Cobalt	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:56	1
Chromium	2.0	U	2.0	ug/L		05/05/23 14:00	05/08/23 21:56	1
Molybdenum	17		5.0	ug/L		05/05/23 14:00	05/08/23 21:56	1
Lead	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:56	1
Selenium	5.0	U	5.0	ug/L		05/05/23 14:00	05/08/23 21:56	1
Thallium	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:56	1
Lithium	98		8.0	ug/L		05/05/23 14:00	05/08/23 21:56	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	ug/L		05/05/23 14:00	05/08/23 19:14	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride (SW846 9056A)	1.5		0.25	mg/L			05/18/23 09:30	5

Client Sample Results

Client: TRC Environmental Corporation.
 Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-1

Client Sample ID: DUP-01
Date Collected: 04/28/23 00:00
Date Received: 05/04/23 08:00

Lab Sample ID: 240-184674-5
Matrix: Ground Water

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	ug/L		05/05/23 14:00	05/08/23 21:59	1
Arsenic	5.0	U	5.0	ug/L		05/05/23 14:00	05/08/23 21:59	1
Barium	470		5.0	ug/L		05/05/23 14:00	05/08/23 21:59	1
Beryllium	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:59	1
Cadmium	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:59	1
Cobalt	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:59	1
Chromium	2.6		2.0	ug/L		05/05/23 14:00	05/08/23 21:59	1
Molybdenum	23		5.0	ug/L		05/05/23 14:00	05/08/23 21:59	1
Lead	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:59	1
Selenium	5.0	U	5.0	ug/L		05/05/23 14:00	05/08/23 21:59	1
Thallium	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 21:59	1
Lithium	70		8.0	ug/L		05/05/23 14:00	05/08/23 21:59	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	ug/L		05/05/23 14:00	05/08/23 19:16	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride (SW846 9056A)	1.3		0.25	mg/L			05/18/23 10:31	5

Client Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-1

Client Sample ID: EB-01

Lab Sample ID: 240-184674-6

Date Collected: 04/28/23 15:00

Matrix: Water

Date Received: 05/04/23 08:00

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	ug/L		05/05/23 14:00	05/08/23 22:01	1
Arsenic	5.0	U	5.0	ug/L		05/05/23 14:00	05/08/23 22:01	1
Barium	5.0	U	5.0	ug/L		05/05/23 14:00	05/08/23 22:01	1
Beryllium	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 22:01	1
Cadmium	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 22:01	1
Cobalt	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 22:01	1
Chromium	2.0	U	2.0	ug/L		05/05/23 14:00	05/08/23 22:01	1
Molybdenum	5.0	U	5.0	ug/L		05/05/23 14:00	05/08/23 22:01	1
Lead	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 22:01	1
Selenium	5.0	U	5.0	ug/L		05/05/23 14:00	05/08/23 22:01	1
Thallium	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 22:01	1
Lithium	8.0	U	8.0	ug/L		05/05/23 14:00	05/08/23 22:01	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	ug/L		05/05/23 14:00	05/08/23 19:19	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride (SW846 9056A)	0.050	U	0.050	mg/L			05/18/23 07:09	1

QC Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-1

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-572237/1-A
Matrix: Water
Analysis Batch: 572569

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 572237

Analyte	MB MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Antimony	2.0	U	2.0	ug/L		05/05/23 14:00	05/08/23 20:39	1
Arsenic	5.0	U	5.0	ug/L		05/05/23 14:00	05/08/23 20:39	1
Barium	5.0	U	5.0	ug/L		05/05/23 14:00	05/08/23 20:39	1
Beryllium	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 20:39	1
Cadmium	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 20:39	1
Cobalt	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 20:39	1
Chromium	2.0	U	2.0	ug/L		05/05/23 14:00	05/08/23 20:39	1
Molybdenum	5.0	U	5.0	ug/L		05/05/23 14:00	05/08/23 20:39	1
Lead	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 20:39	1
Selenium	5.0	U	5.0	ug/L		05/05/23 14:00	05/08/23 20:39	1
Thallium	1.0	U	1.0	ug/L		05/05/23 14:00	05/08/23 20:39	1
Lithium	8.0	U	8.0	ug/L		05/05/23 14:00	05/08/23 20:39	1

Lab Sample ID: LCS 240-572237/2-A
Matrix: Water
Analysis Batch: 572569

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 572237

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	1000	947		ug/L		95	80 - 120
Barium	1000	964		ug/L		96	80 - 120
Beryllium	500	441		ug/L		88	80 - 120
Cadmium	500	478		ug/L		96	80 - 120
Cobalt	500	483		ug/L		97	80 - 120
Chromium	500	482		ug/L		96	80 - 120
Molybdenum	500	470		ug/L		94	80 - 120
Lead	500	446		ug/L		89	80 - 120
Selenium	1000	944		ug/L		94	80 - 120
Thallium	1000	916		ug/L		92	80 - 120
Lithium	500	490		ug/L		98	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-572242/1-A
Matrix: Water
Analysis Batch: 572543

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 572242

Analyte	MB MB		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Mercury	0.20	U	0.20	ug/L		05/05/23 14:00	05/08/23 18:20	1

Lab Sample ID: LCS 240-572242/2-A
Matrix: Water
Analysis Batch: 572543

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 572242

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits

Eurofins Cleveland

QC Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-1

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 240-573780/3
Matrix: Water
Analysis Batch: 573780

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoride	0.050	U	0.050	mg/L			05/18/23 06:29	1

Lab Sample ID: LCS 240-573780/4
Matrix: Water
Analysis Batch: 573780

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	2.50	2.67		mg/L		107	90 - 110

Lab Sample ID: 240-184674-6 MS
Matrix: Water
Analysis Batch: 573780

Client Sample ID: EB-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Fluoride	0.050	U	2.50	2.81		mg/L		112	80 - 120

Lab Sample ID: 240-184674-6 MSD
Matrix: Water
Analysis Batch: 573780

Client Sample ID: EB-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Fluoride	0.050	U	2.50	2.69		mg/L		108	80 - 120	4	15

QC Association Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-1

Metals

Prep Batch: 572237

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-184674-1	MW-16-01	Total Recoverable	Ground Water	3005A	
240-184674-2	MW-16-02	Total Recoverable	Ground Water	3005A	
240-184674-3	MW-16-03	Total Recoverable	Ground Water	3005A	
240-184674-4	MW-16-04	Total Recoverable	Ground Water	3005A	
240-184674-5	DUP-01	Total Recoverable	Ground Water	3005A	
240-184674-6	EB-01	Total Recoverable	Water	3005A	
MB 240-572237/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-572237/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 572242

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-184674-1	MW-16-01	Total/NA	Ground Water	7470A	
240-184674-2	MW-16-02	Total/NA	Ground Water	7470A	
240-184674-3	MW-16-03	Total/NA	Ground Water	7470A	
240-184674-4	MW-16-04	Total/NA	Ground Water	7470A	
240-184674-5	DUP-01	Total/NA	Ground Water	7470A	
240-184674-6	EB-01	Total/NA	Water	7470A	
MB 240-572242/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-572242/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 572543

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-184674-1	MW-16-01	Total/NA	Ground Water	7470A	572242
240-184674-2	MW-16-02	Total/NA	Ground Water	7470A	572242
240-184674-3	MW-16-03	Total/NA	Ground Water	7470A	572242
240-184674-4	MW-16-04	Total/NA	Ground Water	7470A	572242
240-184674-5	DUP-01	Total/NA	Ground Water	7470A	572242
240-184674-6	EB-01	Total/NA	Water	7470A	572242
MB 240-572242/1-A	Method Blank	Total/NA	Water	7470A	572242
LCS 240-572242/2-A	Lab Control Sample	Total/NA	Water	7470A	572242

Analysis Batch: 572569

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-184674-1	MW-16-01	Total Recoverable	Ground Water	6020B	572237
240-184674-2	MW-16-02	Total Recoverable	Ground Water	6020B	572237
240-184674-3	MW-16-03	Total Recoverable	Ground Water	6020B	572237
240-184674-4	MW-16-04	Total Recoverable	Ground Water	6020B	572237
240-184674-5	DUP-01	Total Recoverable	Ground Water	6020B	572237
240-184674-6	EB-01	Total Recoverable	Water	6020B	572237
MB 240-572237/1-A	Method Blank	Total Recoverable	Water	6020B	572237
LCS 240-572237/2-A	Lab Control Sample	Total Recoverable	Water	6020B	572237

General Chemistry

Analysis Batch: 573780

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-184674-1	MW-16-01	Total/NA	Ground Water	9056A	
240-184674-2	MW-16-02	Total/NA	Ground Water	9056A	
240-184674-3	MW-16-03	Total/NA	Ground Water	9056A	
240-184674-4	MW-16-04	Total/NA	Ground Water	9056A	
240-184674-5	DUP-01	Total/NA	Ground Water	9056A	

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QC Association Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-1

General Chemistry (Continued)

Analysis Batch: 573780 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-184674-6	EB-01	Total/NA	Water	9056A	
MB 240-573780/3	Method Blank	Total/NA	Water	9056A	
LCS 240-573780/4	Lab Control Sample	Total/NA	Water	9056A	
240-184674-6 MS	EB-01	Total/NA	Water	9056A	
240-184674-6 MSD	EB-01	Total/NA	Water	9056A	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Lab Chronicle

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-1

Client Sample ID: MW-16-01
Date Collected: 04/28/23 14:53
Date Received: 05/04/23 08:00

Lab Sample ID: 240-184674-1
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			572237	MRL	EET CLE	05/05/23 14:00
Total Recoverable	Analysis	6020B		1	572569	DSH	EET CLE	05/08/23 21:43
Total/NA	Prep	7470A			572242	MRL	EET CLE	05/05/23 14:00
Total/NA	Analysis	7470A		1	572543	AJC	EET CLE	05/08/23 19:03
Total/NA	Analysis	9056A		5	573780	JWW	EET CLE	05/18/23 08:30

Client Sample ID: MW-16-02
Date Collected: 04/28/23 13:01
Date Received: 05/04/23 08:00

Lab Sample ID: 240-184674-2
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			572237	MRL	EET CLE	05/05/23 14:00
Total Recoverable	Analysis	6020B		1	572569	DSH	EET CLE	05/08/23 21:45
Total/NA	Prep	7470A			572242	MRL	EET CLE	05/05/23 14:00
Total/NA	Analysis	7470A		1	572543	AJC	EET CLE	05/08/23 19:10
Total/NA	Analysis	9056A		5	573780	JWW	EET CLE	05/18/23 08:50

Client Sample ID: MW-16-03
Date Collected: 04/28/23 11:35
Date Received: 05/04/23 08:00

Lab Sample ID: 240-184674-3
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			572237	MRL	EET CLE	05/05/23 14:00
Total Recoverable	Analysis	6020B		1	572569	DSH	EET CLE	05/08/23 21:53
Total/NA	Prep	7470A			572242	MRL	EET CLE	05/05/23 14:00
Total/NA	Analysis	7470A		1	572543	AJC	EET CLE	05/08/23 19:12
Total/NA	Analysis	9056A		5	573780	JWW	EET CLE	05/18/23 09:10

Client Sample ID: MW-16-04
Date Collected: 04/28/23 10:15
Date Received: 05/04/23 08:00

Lab Sample ID: 240-184674-4
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			572237	MRL	EET CLE	05/05/23 14:00
Total Recoverable	Analysis	6020B		1	572569	DSH	EET CLE	05/08/23 21:56
Total/NA	Prep	7470A			572242	MRL	EET CLE	05/05/23 14:00
Total/NA	Analysis	7470A		1	572543	AJC	EET CLE	05/08/23 19:14
Total/NA	Analysis	9056A		5	573780	JWW	EET CLE	05/18/23 09:30

Lab Chronicle

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-1

Client Sample ID: DUP-01

Date Collected: 04/28/23 00:00

Date Received: 05/04/23 08:00

Lab Sample ID: 240-184674-5

Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			572237	MRL	EET CLE	05/05/23 14:00
Total Recoverable	Analysis	6020B		1	572569	DSH	EET CLE	05/08/23 21:59
Total/NA	Prep	7470A			572242	MRL	EET CLE	05/05/23 14:00
Total/NA	Analysis	7470A		1	572543	AJC	EET CLE	05/08/23 19:16
Total/NA	Analysis	9056A		5	573780	JWW	EET CLE	05/18/23 10:31

Client Sample ID: EB-01

Date Collected: 04/28/23 15:00

Date Received: 05/04/23 08:00

Lab Sample ID: 240-184674-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			572237	MRL	EET CLE	05/05/23 14:00
Total Recoverable	Analysis	6020B		1	572569	DSH	EET CLE	05/08/23 22:01
Total/NA	Prep	7470A			572242	MRL	EET CLE	05/05/23 14:00
Total/NA	Analysis	7470A		1	572543	AJC	EET CLE	05/08/23 19:19
Total/NA	Analysis	9056A		1	573780	JWW	EET CLE	05/18/23 07:09

Laboratory References:

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

Accreditation/Certification Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-1

Laboratory: Eurofins Cleveland

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	07-05-23
Connecticut	State	PH-0590	06-29-23
Florida	NELAP	E87225	05-24-23
Georgia	State	4062	06-27-23
Illinois	NELAP	200004	07-24-23
Iowa	State	421	05-31-23
Kentucky (UST)	State	112225	02-28-24
Kentucky (WW)	State	KY98016	12-31-23
Michigan	State	9135	07-17-23
Minnesota	NELAP	039-999-348	12-28-23
Minnesota (Petrofund)	State	3506	08-01-23
New Jersey	NELAP	OH001	06-30-23
New York	NELAP	10975	06-12-23
Ohio	State	8303	06-27-23
Ohio VAP	State	ORELAP 4062	06-27-23
Oregon	NELAP	4062	05-24-23
Pennsylvania	NELAP	68-00340	06-13-23
Texas	NELAP	T104704517-22-19	08-31-23
Virginia	NELAP	460175	08-03-23
West Virginia DEP	State	210	12-19-23

Client Information
 Company: TRC Environmental Corporation.
 Address: 1540 Eisenhower Place
 City: Ann Arbor
 State, Zip: MI, 48108-7080
 Phone: 313-971-7080 (Tel) 313-971-9022 (Fax)
 Email: JKrenz@trccompanies.com
 Project Name: CCR DTE St. Clair Power
 Site: Michigan

Lab PM Brooks, Kris M
Lab PM H. Schwartz
Phone Kris.Brooks@et.eurofins.com
E-Mail Kris.Brooks@et.eurofins.com
Carrier Tracking No(s) 240-106149-38006.1
Page Page 1 of 1
Job #

Due Date Requested:
TAT Requested (days): Standard
Compliance Project: Δ Yes Δ No
PO # 179972 - 2022
WO # 370029.0004 P1 T2
Project # 24016804
SSOW#

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix (Water, Soil, etc.)	Preservation Code	Analysis Requested	Special Instructions/Note
MW-16-01	4/28/23	1453	G	Water		9320_Ra226 - Standard Target List	No calcium or iron
MW-16-02		1301		Water		9316_Ra226 - Standard Target List	
MW-16-03		1135		Water		9304_Pb210 - Standard Target List	
MW-16-04		1015		Water		9304_Pb210 - Standard Target List	
DUP-01				Water		9304_Pb210 - Standard Target List	
EB-01		1500		Water		9304_Pb210 - Standard Target List	App IV only

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological
Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by: Henry Schwartz
Relinquished by: Henry Schwartz
Relinquished by: Kelly Min
Custody Seals Intact: Δ Yes Δ No
Seal No.:

Received by	Date/Time	Company
Tracy Stover	4/28/23 1800	TRC
Wally Mc	5/3/23 1:44p	TRC
Seal M Smith	5/3/23	TRC

Client TBC Environmental Corporation Site Name _____ Cooler unpacked by: Leah M. Smith
 Cooler Received on 05-04-23 Opened on 05-04-23
 FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off Eurofins Courier Other _____

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

Eurofins Cooler # EC 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 # 22 (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 _____ 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 NA
 -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)? Yes No
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
13. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC208070
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: _____
None of the 250 ml p's have labels

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: _____

Temperature readings: _____

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container</u>		<u>Preservative</u>	
			<u>pH</u>	<u>Temp</u>	<u>Added (mls)</u>	<u>Lot #</u>
MW-16-01	240-184674-B-1	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
MW-16-01	240-184674-C-1	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW-16-01	240-184674-D-1	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW-16-02	240-184674-B-2	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
MW-16-02	240-184674-C-2	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW-16-02	240-184674-D-2	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW-16-03	240-184674-B-3	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
MW-16-03	240-184674-C-3	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW-16-03	240-184674-D-3	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW-16-04	240-184674-B-4	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
MW-16-04	240-184674-C-4	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW-16-04	240-184674-D-4	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
DUP-01	240-184674-B-5	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
DUP-01	240-184674-C-5	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
DUP-01	240-184674-D-5	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
EB-01	240-184674-B-6	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
EB-01	240-184674-C-6	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
EB-01	240-184674-D-6	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____

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ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Vincent Buening
TRC Environmental Corporation.
1540 Eisenhower Place
Ann Arbor, Michigan 48108-7080

Generated 6/5/2023 5:08:13 PM

JOB DESCRIPTION

CCR DTE St. Clair Power

JOB NUMBER

240-184674-2

Eurofins Cleveland

Job Notes

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The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization



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Authorized for release by
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Definitions/Glossary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-2

Qualifiers

Rad

Qualifier	Qualifier Description
G	The Sample MDC is greater than the requested RL.
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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 St. Clair Power

Job ID: 240-184674-2

Job ID: 240-184674-2

Laboratory: Eurofins Cleveland

Narrative

Job Narrative 240-184674-2

Receipt

The samples were received on 5/4/2023 8:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 1.4°C, 1.8°C, 2.4°C and 2.6°C

Gas Flow Proportional Counter

Method 9315_Ra226: Radium-226 batch 611032 Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. MW-16-01 (240-184674-1), MW-16-02 (240-184674-2), MW-16-03 (240-184674-3), MW-16-04 (240-184674-4), DUP-01 (240-184674-5), EB-01 (240-184674-6), (LCS 160-611032/2-A), (MB 160-611032/1-A), (310-254620-D-17-A), (310-254620-D-17-B MS) and (310-254620-E-17-A MSD)

Method 9320_Ra228: Radium-228 batch 611041 The detection goal was not met for the following sample(s). Sample was prepped at a reduced volume due to the presence of matrix interferences: MW-16-01 (240-184674-1). Analytical results are reported with the detection limit achieved.

Method 9320_Ra228: Radium-228 batch 611041 Any minimum detectable concentration (MDC), critical value (DLC), or Safe Drinking Water Act detection limit (SDWA DL) is sample-specific unless otherwise stated elsewhere in this narrative. Radiochemistry sample results are reported with the count date/time applied as the Activity Reference Date. MW-16-01 (240-184674-1), MW-16-02 (240-184674-2), MW-16-03 (240-184674-3), MW-16-04 (240-184674-4), DUP-01 (240-184674-5), EB-01 (240-184674-6), (LCS 160-611041/2-A), (MB 160-611041/1-A), (310-254620-D-17-C), (310-254620-D-17-D MS) and (310-254620-E-17-B MSD)

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

Rad

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 St. Clair Power

Job ID: 240-184674-2

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	EET SL
9320	Radium-228 (GFPC)	SW846	EET SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	EET SL
PrecSep_0	Preparation, Precipitate Separation	None	EET SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	EET SL

Protocol References:

None = None

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

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566



Sample Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-184674-1	MW-16-01	Ground Water	04/28/23 14:53	05/04/23 08:00
240-184674-2	MW-16-02	Ground Water	04/28/23 13:01	05/04/23 08:00
240-184674-3	MW-16-03	Ground Water	04/28/23 11:35	05/04/23 08:00
240-184674-4	MW-16-04	Ground Water	04/28/23 10:15	05/04/23 08:00
240-184674-5	DUP-01	Ground Water	04/28/23 00:00	05/04/23 08:00
240-184674-6	EB-01	Water	04/28/23 15:00	05/04/23 08:00

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Detection Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-2

Client Sample ID: MW-16-01

Lab Sample ID: 240-184674-1

No Detections.

Client Sample ID: MW-16-02

Lab Sample ID: 240-184674-2

No Detections.

Client Sample ID: MW-16-03

Lab Sample ID: 240-184674-3

No Detections.

Client Sample ID: MW-16-04

Lab Sample ID: 240-184674-4

No Detections.

Client Sample ID: DUP-01

Lab Sample ID: 240-184674-5

No Detections.

Client Sample ID: EB-01

Lab Sample ID: 240-184674-6

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Cleveland



Client Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-2

Client Sample ID: MW-16-01

Lab Sample ID: 240-184674-1

Date Collected: 04/28/23 14:53

Matrix: Ground Water

Date Received: 05/04/23 08:00

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.527	U	0.379	0.382	1.00	0.552	pCi/L	05/10/23 18:58	06/02/23 08:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	63.0		30 - 110					05/10/23 18:58	06/02/23 08:10	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.905	U G	0.694	0.699	1.00	1.07	pCi/L	05/11/23 08:46	06/01/23 12:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	63.0		30 - 110					05/11/23 08:46	06/01/23 12:25	1
Y Carrier	81.7		30 - 110					05/11/23 08:46	06/01/23 12:25	1

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.43		0.791	0.797	5.00	1.07	pCi/L		06/05/23 17:55	1

Client Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-2

Client Sample ID: MW-16-02

Lab Sample ID: 240-184674-2

Date Collected: 04/28/23 13:01

Matrix: Ground Water

Date Received: 05/04/23 08:00

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.41		0.346	0.368	1.00	0.281	pCi/L	05/10/23 18:58	06/02/23 08:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.1		30 - 110					05/10/23 18:58	06/02/23 08:10	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.898		0.429	0.437	1.00	0.587	pCi/L	05/11/23 08:46	06/01/23 12:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	87.1		30 - 110					05/11/23 08:46	06/01/23 12:25	1
Y Carrier	80.6		30 - 110					05/11/23 08:46	06/01/23 12:25	1

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.31		0.551	0.571	5.00	0.587	pCi/L		06/05/23 17:55	1

Client Sample Results

Client: TRC Environmental Corporation.
 Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-2

Client Sample ID: MW-16-03

Lab Sample ID: 240-184674-3

Date Collected: 04/28/23 11:35

Matrix: Ground Water

Date Received: 05/04/23 08:00

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.55		0.430	0.452	1.00	0.374	pCi/L	05/10/23 18:58	06/02/23 08:10	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	61.1		30 - 110					05/10/23 18:58	06/02/23 08:10	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.41		0.682	0.695	1.00	0.951	pCi/L	05/11/23 08:46	06/01/23 12:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	61.1		30 - 110					05/11/23 08:46	06/01/23 12:25	1
Y Carrier	78.7		30 - 110					05/11/23 08:46	06/01/23 12:25	1

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.96		0.806	0.829	5.00	0.951	pCi/L		06/05/23 17:55	1

Client Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-2

Client Sample ID: MW-16-04

Lab Sample ID: 240-184674-4

Date Collected: 04/28/23 10:15

Matrix: Ground Water

Date Received: 05/04/23 08:00

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	2.91		0.466	0.534	1.00	0.269	pCi/L	05/10/23 18:58	06/02/23 08:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		30 - 110					05/10/23 18:58	06/02/23 08:11	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.92		0.465	0.497	1.00	0.466	pCi/L	05/11/23 08:46	06/01/23 12:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	93.2		30 - 110					05/11/23 08:46	06/01/23 12:25	1
Y Carrier	90.2		30 - 110					05/11/23 08:46	06/01/23 12:25	1

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	4.83		0.658	0.729	5.00	0.466	pCi/L		06/05/23 17:55	1

Client Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-2

Client Sample ID: DUP-01

Lab Sample ID: 240-184674-5

Date Collected: 04/28/23 00:00

Matrix: Ground Water

Date Received: 05/04/23 08:00

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.01		0.313	0.326	1.00	0.301	pCi/L	05/10/23 18:58	06/02/23 08:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.9		30 - 110					05/10/23 18:58	06/02/23 08:11	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.21		0.467	0.480	1.00	0.574	pCi/L	05/11/23 08:46	06/01/23 12:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	83.9		30 - 110					05/11/23 08:46	06/01/23 12:25	1
Y Carrier	77.5		30 - 110					05/11/23 08:46	06/01/23 12:25	1

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	2.22		0.562	0.580	5.00	0.574	pCi/L		06/05/23 17:55	1

Client Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-2

Client Sample ID: EB-01

Lab Sample ID: 240-184674-6

Date Collected: 04/28/23 15:00

Matrix: Water

Date Received: 05/04/23 08:00

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	-0.0203	U	0.129	0.129	1.00	0.276	pCi/L	05/10/23 18:58	06/02/23 08:11	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.6		30 - 110					05/10/23 18:58	06/02/23 08:11	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.00988	U	0.297	0.297	1.00	0.561	pCi/L	05/11/23 08:46	06/01/23 12:25	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.6		30 - 110					05/11/23 08:46	06/01/23 12:25	1
Y Carrier	79.8		30 - 110					05/11/23 08:46	06/01/23 12:25	1

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	-0.0104	U	0.324	0.324	5.00	0.561	pCi/L		06/05/23 17:55	1

Tracer/Carrier Summary

Client: TRC Environmental Corporation.
 Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-2

Method: 9315 - Radium-226 (GFPC)

Matrix: Ground Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (30-110)	
240-184674-1	MW-16-01	63.0	
240-184674-2	MW-16-02	87.1	
240-184674-3	MW-16-03	61.1	
240-184674-4	MW-16-04	93.2	
240-184674-5	DUP-01	83.9	
Tracer/Carrier Legend			
Ba = Ba Carrier			

Method: 9315 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (30-110)	
240-184674-6	EB-01	85.6	
LCS 160-611032/2-A	Lab Control Sample	92.7	
MB 160-611032/1-A	Method Blank	80.3	
Tracer/Carrier Legend			
Ba = Ba Carrier			

Method: 9320 - Radium-228 (GFPC)

Matrix: Ground Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (30-110)	Y (30-110)
240-184674-1	MW-16-01	63.0	81.7
240-184674-2	MW-16-02	87.1	80.6
240-184674-3	MW-16-03	61.1	78.7
240-184674-4	MW-16-04	93.2	90.2
240-184674-5	DUP-01	83.9	77.5
Tracer/Carrier Legend			
Ba = Ba Carrier			
Y = Y Carrier			

Method: 9320 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (30-110)	Y (30-110)
240-184674-6	EB-01	85.6	79.8
LCS 160-611041/2-A	Lab Control Sample	92.7	83.4
MB 160-611041/1-A	Method Blank	80.3	83.4
Tracer/Carrier Legend			
Ba = Ba Carrier			
Y = Y Carrier			

QC Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-2

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-611032/1-A
Matrix: Water
Analysis Batch: 614273

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 611032

Analyte	MB	MB	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.09226	U	0.149	0.149	1.00	0.261	pCi/L	05/10/23 18:58	06/02/23 08:06	1
Carrier	MB %Yield	MB Qualifier	Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	80.3		30 - 110		05/10/23 18:58	06/02/23 08:06	1			

Lab Sample ID: LCS 160-611032/2-A
Matrix: Water
Analysis Batch: 614273

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 611032

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec Limits
				Uncert. (2σ+/-)					
Radium-226	11.3	9.327		1.18	1.00	0.247	pCi/L	82	75 - 113
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	92.7		30 - 110						

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-611041/1-A
Matrix: Water
Analysis Batch: 614157

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 611041

Analyte	MB	MB	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.4222	U	0.337	0.340	1.00	0.514	pCi/L	05/11/23 08:46	06/01/23 12:21	1
Carrier	MB %Yield	MB Qualifier	Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	80.3		30 - 110		05/11/23 08:46	06/01/23 12:21	1			
Y Carrier	83.4		30 - 110		05/11/23 08:46	06/01/23 12:21	1			

Lab Sample ID: LCS 160-611041/2-A
Matrix: Water
Analysis Batch: 614157

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 611041

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec Limits
				Uncert. (2σ+/-)					
Radium-228	8.15	10.07		1.34	1.00	0.452	pCi/L	124	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	92.7		30 - 110						
Y Carrier	83.4		30 - 110						

QC Association Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-2

Rad

Prep Batch: 611032

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-184674-1	MW-16-01	Total/NA	Ground Water	PrecSep-21	
240-184674-2	MW-16-02	Total/NA	Ground Water	PrecSep-21	
240-184674-3	MW-16-03	Total/NA	Ground Water	PrecSep-21	
240-184674-4	MW-16-04	Total/NA	Ground Water	PrecSep-21	
240-184674-5	DUP-01	Total/NA	Ground Water	PrecSep-21	
240-184674-6	EB-01	Total/NA	Water	PrecSep-21	
MB 160-611032/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-611032/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	

Prep Batch: 611041

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-184674-1	MW-16-01	Total/NA	Ground Water	PrecSep_0	
240-184674-2	MW-16-02	Total/NA	Ground Water	PrecSep_0	
240-184674-3	MW-16-03	Total/NA	Ground Water	PrecSep_0	
240-184674-4	MW-16-04	Total/NA	Ground Water	PrecSep_0	
240-184674-5	DUP-01	Total/NA	Ground Water	PrecSep_0	
240-184674-6	EB-01	Total/NA	Water	PrecSep_0	
MB 160-611041/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-611041/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-2

Client Sample ID: MW-16-01

Lab Sample ID: 240-184674-1

Date Collected: 04/28/23 14:53

Matrix: Ground Water

Date Received: 05/04/23 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			611032	REV	EET SL	05/10/23 18:58
Total/NA	Analysis	9315		1	614272	SCB	EET SL	06/02/23 08:10
Total/NA	Prep	PrecSep_0			611041	BMP	EET SL	05/11/23 08:46
Total/NA	Analysis	9320		1	614158	FLC	EET SL	06/01/23 12:25
Total/NA	Analysis	Ra226_Ra228		1	614505	SCB	EET SL	06/05/23 17:55

Client Sample ID: MW-16-02

Lab Sample ID: 240-184674-2

Date Collected: 04/28/23 13:01

Matrix: Ground Water

Date Received: 05/04/23 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			611032	REV	EET SL	05/10/23 18:58
Total/NA	Analysis	9315		1	614272	SCB	EET SL	06/02/23 08:10
Total/NA	Prep	PrecSep_0			611041	BMP	EET SL	05/11/23 08:46
Total/NA	Analysis	9320		1	614158	FLC	EET SL	06/01/23 12:25
Total/NA	Analysis	Ra226_Ra228		1	614505	SCB	EET SL	06/05/23 17:55

Client Sample ID: MW-16-03

Lab Sample ID: 240-184674-3

Date Collected: 04/28/23 11:35

Matrix: Ground Water

Date Received: 05/04/23 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			611032	REV	EET SL	05/10/23 18:58
Total/NA	Analysis	9315		1	614272	SCB	EET SL	06/02/23 08:10
Total/NA	Prep	PrecSep_0			611041	BMP	EET SL	05/11/23 08:46
Total/NA	Analysis	9320		1	614158	FLC	EET SL	06/01/23 12:25
Total/NA	Analysis	Ra226_Ra228		1	614505	SCB	EET SL	06/05/23 17:55

Client Sample ID: MW-16-04

Lab Sample ID: 240-184674-4

Date Collected: 04/28/23 10:15

Matrix: Ground Water

Date Received: 05/04/23 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			611032	REV	EET SL	05/10/23 18:58
Total/NA	Analysis	9315		1	614272	SCB	EET SL	06/02/23 08:11
Total/NA	Prep	PrecSep_0			611041	BMP	EET SL	05/11/23 08:46
Total/NA	Analysis	9320		1	614158	FLC	EET SL	06/01/23 12:25
Total/NA	Analysis	Ra226_Ra228		1	614505	SCB	EET SL	06/05/23 17:55

Lab Chronicle

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-2

Client Sample ID: DUP-01

Lab Sample ID: 240-184674-5

Date Collected: 04/28/23 00:00

Matrix: Ground Water

Date Received: 05/04/23 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			611032	REV	EET SL	05/10/23 18:58
Total/NA	Analysis	9315		1	614272	SCB	EET SL	06/02/23 08:11
Total/NA	Prep	PrecSep_0			611041	BMP	EET SL	05/11/23 08:46
Total/NA	Analysis	9320		1	614158	FLC	EET SL	06/01/23 12:25
Total/NA	Analysis	Ra226_Ra228		1	614505	SCB	EET SL	06/05/23 17:55

Client Sample ID: EB-01

Lab Sample ID: 240-184674-6

Date Collected: 04/28/23 15:00

Matrix: Water

Date Received: 05/04/23 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			611032	REV	EET SL	05/10/23 18:58
Total/NA	Analysis	9315		1	614272	SCB	EET SL	06/02/23 08:11
Total/NA	Prep	PrecSep_0			611041	BMP	EET SL	05/11/23 08:46
Total/NA	Analysis	9320		1	614158	FLC	EET SL	06/01/23 12:25
Total/NA	Analysis	Ra226_Ra228		1	614505	SCB	EET SL	06/05/23 17:55

Laboratory References:

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Accreditation/Certification Summary

Client: TRC Environmental Corporation.
 Project/Site: CCR DTE St. Clair Power

Job ID: 240-184674-2

Laboratory: Eurofins St. Louis

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

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-25
ANAB	Dept. of Defense ELAP	L2305	04-06-25
ANAB	Dept. of Energy	L2305.01	04-06-25
ANAB	ISO/IEC 17025	L2305	04-06-25
Arizona	State	AZ0813	12-08-23
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	06-30-23
Florida	NELAP	E87689	06-30-23
HI - RadChem Recognition	State	n/a	06-30-23
Illinois	NELAP	200023	11-30-23
Iowa	State	373	12-01-24
Kansas	NELAP	E-10236	10-31-23
Kentucky (DW)	State	KY90125	12-31-23
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-23
Louisiana (All)	NELAP	04080	06-30-23
Louisiana (DW)	State	LA011	12-31-23
Maryland	State	310	09-30-23
MI - RadChem Recognition	State	9005	06-30-23
Missouri	State	780	06-30-25
Nevada	State	MO000542020-1	07-31-23
New Jersey	NELAP	MO002	06-30-23
New York	NELAP	11616	03-31-24
North Carolina (DW)	State	29700	07-31-23
North Dakota	State	R-207	06-30-23
Oklahoma	NELAP	9997	08-31-23
Oregon	NELAP	4157	09-01-23
Pennsylvania	NELAP	68-00540	02-28-24
South Carolina	State	85002001	06-30-23
Texas	NELAP	T104704193	07-31-23
US Fish & Wildlife	US Federal Programs	058448	07-31-23
USDA	US Federal Programs	P330-17-00028	05-18-26
Utah	NELAP	MO000542021-14	07-31-23
Virginia	NELAP	10310	06-14-23
Washington	State	C592	08-30-23
West Virginia DEP	State	381	10-31-23

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

Client Information		Sampler: <i>H. Schwartz</i>	Lab PM: Brooks, Kris M	Carrier Tracking No(s): 240-106149-38006.1																																
Company: TRC Environmental Corporation.		Phone: <i>313-971-7080</i>	E-Mail: <i>Kris.Brooks@et.eurofins.com</i>	Page: Page 1 of 1																																
Address: 1540 Eisenhower Place		Job #: <i>313-971-7080</i>																																		
City: Ann Arbor		State of Origin: <i>MI</i>																																		
State, Zip: MI, 48108-7080		Analysis Requested:																																		
Phone: 313-971-7080 (Tel) 313-971-9022 (Fax)		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>9056A-28D Fluoride</td> <td>9320_Ra226 - Standard Target List</td> <td>9316_Ra226 - Standard Target List</td> <td>9056A-28D Fluoride</td> </tr> <tr> <td>9056A-28D Fluoride</td> <td>9320_Ra226 - Standard Target List</td> <td>9316_Ra226 - Standard Target List</td> <td>9056A-28D Fluoride</td> </tr> </table>			9056A-28D Fluoride	9320_Ra226 - Standard Target List	9316_Ra226 - Standard Target List	9056A-28D Fluoride	9056A-28D Fluoride	9320_Ra226 - Standard Target List	9316_Ra226 - Standard Target List	9056A-28D Fluoride																								
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Site: Michigan		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>Special Instructions/Note:</td> </tr> <tr> <td>No calcium or boron</td> </tr> <tr> <td>App IV only</td> </tr> </table>			Special Instructions/Note:	No calcium or boron	App IV only																													
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<p>Empty Kit Relinquished by:</p> <p>Relinquished by: <i>Henry Schwartz</i></p> <p>Relinquished by: <i>[Signature]</i></p> <p>Relinquished by: <i>Willy Min</i></p> <p>Custody Seals Intact: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>		<p>Empty Kit Relinquished by:</p> <p>Relinquished by: <i>Henry Schwartz</i></p> <p>Relinquished by: <i>[Signature]</i></p> <p>Relinquished by: <i>Willy Min</i></p> <p>Custody Seals Intact: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>																																		
<p>Chain of Custody</p> <p>Received by: <i>Willy Min</i> Date/Time: 4/28/23 1800</p> <p>Received by: <i>Willy Min</i> Date/Time: 5/3/23 1:44p</p> <p>Received by: <i>Sean P. Smith</i> Date/Time: 5/3/23</p> <p>Company: TRC Company: TRC Company: TRC</p>		<p>Chain of Custody</p> <p>Received by: <i>Willy Min</i> Date/Time: 4/28/23 1800</p> <p>Received by: <i>Willy Min</i> Date/Time: 5/3/23 1:44p</p> <p>Received by: <i>Sean P. Smith</i> Date/Time: 5/3/23</p> <p>Company: TRC Company: TRC Company: TRC</p>																																		
<p>Special Instructions/Requirements:</p> <p>are retained longer than 1 month) <input type="checkbox"/> Archive For _____ Months</p> <p>Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/></p>		<p>Special Instructions/Requirements:</p> <p>are retained longer than 1 month) <input type="checkbox"/> Archive For _____ Months</p> <p>Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/></p>																																		



Eurofins - Canton Sample Receipt Form/Narrative Login #: 184674
Barberton Facility

Client TBC Environmental Corporation Site Name _____ Cooler unpacked by: Leah M. Smith
Cooler Received on 05-04-23 Opened on 05-04-23

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

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

Eurofins Cooler # EC 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 # 22 (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 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 NA
-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)? Yes No
- 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# HC208070
- 14. Were VOAs on the COC? Yes No NA
- 15. Were air bubbles >6 mm in any VOA vials? Yes No NA ● ← Larger than this.
- 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: _____
None of the 250 ml p's have labels

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: _____

Temperature readings: _____

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container</u>		<u>Preservative</u>	
			<u>pH</u>	<u>Temp</u>	<u>Added (mls)</u>	<u>Lot #</u>
MW-16-01	240-184674-B-1	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
MW-16-01	240-184674-C-1	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW-16-01	240-184674-D-1	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW-16-02	240-184674-B-2	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
MW-16-02	240-184674-C-2	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW-16-02	240-184674-D-2	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW-16-03	240-184674-B-3	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
MW-16-03	240-184674-C-3	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW-16-03	240-184674-D-3	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW-16-04	240-184674-B-4	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
MW-16-04	240-184674-C-4	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW-16-04	240-184674-D-4	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
DUP-01	240-184674-B-5	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
DUP-01	240-184674-C-5	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
DUP-01	240-184674-D-5	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
EB-01	240-184674-B-6	Plastic 250ml - with Nitric Acid	<2	_____	_____	_____
EB-01	240-184674-C-6	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
EB-01	240-184674-D-6	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____

Chain of Custody Record



Client Information (Sub Contract Lab)		Sampler: Lab PM: Brooks, Kris M		Carrier Tracking No(s): COC No: 240-184674-1					
Client Contact: Shipping/Receiving		Phone: E-Mail: Kris.Brooks@et.eurofins.com		State of Origin: Michigan					
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note):		Page: 1 of 1					
Address: 13715 Rider Trail North, City: Earth City, State, Zip: MO, 63045		Due Date Requested: 5/17/2023		Job #: 240-184674-1					
Phone: 314-298-8566(Tel) 314-298-8757(Fax)		TAT Requested (days):		Preservation Codes: 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:					
Project Name: CCR DTE St. Clair Power		Project #: 24016804		Analysis Requested:					
Site: TRC CCR DTE St. Clair Power		SSOW#:		Total Number of containers					
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=organic, B=biological, A=Ab)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9315_Ra228/PreSep_21 Standard Target List	9320_Ra228/PreSep_0 Standard Target List	Ra228Ra228_GFPc
MW-16-01 (240-184674-1)	4/28/23	14:53 Eastern	Water	Water	X	X	X	X	X
MW-16-02 (240-184674-2)	4/28/23	13:01 Eastern	Water	Water	X	X	X	X	X
MW-16-03 (240-184674-3)	4/28/23	11:35 Eastern	Water	Water	X	X	X	X	X
MW-16-04 (240-184674-4)	4/28/23	10:15 Eastern	Water	Water	X	X	X	X	X
DUP-01 (240-184674-5)	4/28/23	Eastern	Water	Water	X	X	X	X	X
EB-01 (240-184674-6)	4/28/23	15:00 Eastern	Water	Water	X	X	X	X	X
Special Instructions/Note: 123									
Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.									
Possible Hazard Identification Unconfirmed Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 Empty Kit Relinquished by: Date: 5/5/23 10:18 Relinquished by: <i>fedex</i> Company: <i>FEDEX</i> Relinquished by: Date/Time: 5/18/23 09:10 Company: <i>ESTATL</i> Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Cooler Temperature(s) °C and Other Remarks:									



Login Sample Receipt Checklist

Client: TRC Environmental Corporation.

Job Number: 240-184674-2

Login Number: 184674

List Number: 2

Creator: Sharkey-Gonzalez, Briana L

List Source: Eurofins St. Louis

List Creation: 05/08/23 02:13 PM

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Vincent Buening
TRC Environmental Corporation.
1540 Eisenhower Place
Ann Arbor, Michigan 48108-7080

Generated 1/18/2024 4:52:48 PM Revision 1

JOB DESCRIPTION

CCR DTE St. Clair Power

JOB NUMBER

240-193602-1

Eurofins Cleveland

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization



Authorized for release by
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Revision 1



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Definitions/Glossary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-1

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: CCR DTE St. Clair Power

Job ID: 240-193602-1

Job ID: 240-193602-1

Eurofins Cleveland

Job Narrative 240-193602-1

REVISION

The report being provided is a revision of the original report sent on 10/27/2023. The report (revision 1) is being revised due to lower the reporting limit for chromium.

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 10/14/2023 8:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 0.1°C and 0.3°C

Metals

Method 6020B: Some requested practical quantitation limits (PQLs) on the following samples fall below the laboratory's verified standard quantitation limit: MW-16-01 (240-193602-1), MW-16-02 (240-193602-2), MW-16-03 (240-193602-3), MW-16-04 (240-193602-4), DUP-01 (240-193602-5) and EB-01 (240-193602-6). The continuing calibration blanks and method blanks may not support the lower PQL.

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-16-01 (240-193602-1), MW-16-02 (240-193602-2), MW-16-03 (240-193602-3), MW-16-04 (240-193602-4) and DUP-01 (240-193602-5). 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.

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Method Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-1

Method	Method Description	Protocol	Laboratory
6010D	Metals (ICP)	SW846	EET CLE
6020B	Metals (ICP/MS)	SW846	EET CLE
7470A	Mercury (CVAA)	SW846	EET CLE
9056A	Anions, Ion Chromatography	SW846	EET CLE
SM 2540C	Solids, Total Dissolved (TDS)	SM	EET CLE
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	EET CLE
7470A	Preparation, Mercury	SW846	EET CLE

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 CLE = Eurofins Cleveland, 180 S. Van Buren Avenue, Barberton, OH 44203, TEL (330)497-9396



Sample Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-193602-1	MW-16-01	Water	10/12/23 10:00	10/14/23 08:00
240-193602-2	MW-16-02	Water	10/12/23 09:04	10/14/23 08:00
240-193602-3	MW-16-03	Water	10/12/23 11:49	10/14/23 08:00
240-193602-4	MW-16-04	Water	10/12/23 12:57	10/14/23 08:00
240-193602-5	DUP-01	Water	10/12/23 00:00	10/14/23 08:00
240-193602-6	EB-01	Water	10/11/23 10:40	10/14/23 08:00

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Detection Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-1

Client Sample ID: MW-16-01

Lab Sample ID: 240-193602-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Boron	2200		100	ug/L	1		6010D	Total Recoverable
Barium	220		5.0	ug/L	1		6020B	Total Recoverable
Calcium	20000		1000	ug/L	1		6020B	Total Recoverable
Iron	570		100	ug/L	1		6020B	Total Recoverable
Lithium	52		8.0	ug/L	1		6020B	Total Recoverable
Molybdenum	25		5.0	ug/L	1		6020B	Total Recoverable
Chloride	1500		10	mg/L	10		9056A	Total/NA
Fluoride	2.0		0.10	mg/L	2		9056A	Total/NA
Total Dissolved Solids	2000		40	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW-16-02

Lab Sample ID: 240-193602-2

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Boron	2100		100	ug/L	1		6010D	Total Recoverable
Barium	410		5.0	ug/L	1		6020B	Total Recoverable
Calcium	38000		1000	ug/L	1		6020B	Total Recoverable
Chromium	2.0		2.0	ug/L	1		6020B	Total Recoverable
Iron	1000		100	ug/L	1		6020B	Total Recoverable
Lithium	62		8.0	ug/L	1		6020B	Total Recoverable
Molybdenum	25		5.0	ug/L	1		6020B	Total Recoverable
Chloride	2100		20	mg/L	20		9056A	Total/NA
Fluoride	1.6		0.10	mg/L	2		9056A	Total/NA
Total Dissolved Solids	2900		50	mg/L	1		SM 2540C	Total/NA

Client Sample ID: MW-16-03

Lab Sample ID: 240-193602-3

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Boron	2100		100	ug/L	1		6010D	Total Recoverable
Barium	450		5.0	ug/L	1		6020B	Total Recoverable
Calcium	48000		1000	ug/L	1		6020B	Total Recoverable
Iron	930		100	ug/L	1		6020B	Total Recoverable
Lithium	64		8.0	ug/L	1		6020B	Total Recoverable
Molybdenum	22		5.0	ug/L	1		6020B	Total Recoverable
Chloride	2200		25	mg/L	25		9056A	Total/NA
Fluoride	1.4		0.25	mg/L	5		9056A	Total/NA
Total Dissolved Solids	3200		50	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

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Detection Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-1

Client Sample ID: MW-16-04

Lab Sample ID: 240-193602-4

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Boron	2500		100	ug/L	1		6010D	Total Recoverable
Barium	650		5.0	ug/L	1		6020B	Total Recoverable
Calcium	38000		1000	ug/L	1		6020B	Total Recoverable
Chromium	3.1		2.0	ug/L	1		6020B	Total Recoverable
Cobalt	1.3		1.0	ug/L	1		6020B	Total Recoverable
Iron	3200		100	ug/L	1		6020B	Total Recoverable
Lead	1.8		1.0	ug/L	1		6020B	Total Recoverable
Lithium	96		8.0	ug/L	1		6020B	Total Recoverable
Molybdenum	17		5.0	ug/L	1		6020B	Total Recoverable
Chloride	2700		25	mg/L	25		9056A	Total/NA
Fluoride	1.7		0.25	mg/L	5		9056A	Total/NA
Total Dissolved Solids	3800		50	mg/L	1		SM 2540C	Total/NA

Client Sample ID: DUP-01

Lab Sample ID: 240-193602-5

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Boron	2200		100	ug/L	1		6010D	Total Recoverable
Barium	210		5.0	ug/L	1		6020B	Total Recoverable
Calcium	19000		1000	ug/L	1		6020B	Total Recoverable
Iron	570		100	ug/L	1		6020B	Total Recoverable
Lithium	49		8.0	ug/L	1		6020B	Total Recoverable
Molybdenum	25		5.0	ug/L	1		6020B	Total Recoverable
Chloride	1300		20	mg/L	20		9056A	Total/NA
Fluoride	2.0		0.10	mg/L	2		9056A	Total/NA
Total Dissolved Solids	2100		40	mg/L	1		SM 2540C	Total/NA

Client Sample ID: EB-01

Lab Sample ID: 240-193602-6

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	1.0		1.0	mg/L	1		9056A	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Cleveland

Client Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-1

Client Sample ID: MW-16-01

Lab Sample ID: 240-193602-1

Date Collected: 10/12/23 10:00

Matrix: Water

Date Received: 10/14/23 08:00

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2200		100	ug/L		10/16/23 14:00	10/18/23 05:54	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	ug/L		10/16/23 14:00	10/18/23 16:44	1
Arsenic	5.0	U	5.0	ug/L		10/16/23 14:00	10/18/23 16:44	1
Barium	220		5.0	ug/L		10/16/23 14:00	10/18/23 16:44	1
Beryllium	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:44	1
Cadmium	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:44	1
Calcium	20000		1000	ug/L		10/16/23 14:00	10/18/23 16:44	1
Chromium	2.0	U	2.0	ug/L		10/16/23 14:00	10/18/23 16:44	1
Cobalt	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:44	1
Iron	570		100	ug/L		10/16/23 14:00	10/18/23 16:44	1
Lead	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:44	1
Lithium	52		8.0	ug/L		10/16/23 14:00	10/18/23 16:44	1
Molybdenum	25		5.0	ug/L		10/16/23 14:00	10/18/23 16:44	1
Selenium	5.0	U	5.0	ug/L		10/16/23 14:00	10/18/23 16:44	1
Thallium	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:44	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	ug/L		10/16/23 14:00	10/18/23 14:19	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (SW846 9056A)	1500		10	mg/L			10/21/23 12:26	10
Fluoride (SW846 9056A)	2.0		0.10	mg/L			10/21/23 12:06	2
Sulfate (SW846 9056A)	2.0	U	2.0	mg/L			10/21/23 12:06	2
Total Dissolved Solids (SM 2540C)	2000		40	mg/L			10/19/23 09:19	1

Client Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-1

Client Sample ID: MW-16-02

Lab Sample ID: 240-193602-2

Date Collected: 10/12/23 09:04

Matrix: Water

Date Received: 10/14/23 08:00

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2100		100	ug/L		10/16/23 14:00	10/18/23 05:59	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	ug/L		10/16/23 14:00	10/18/23 16:46	1
Arsenic	5.0	U	5.0	ug/L		10/16/23 14:00	10/18/23 16:46	1
Barium	410		5.0	ug/L		10/16/23 14:00	10/18/23 16:46	1
Beryllium	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:46	1
Cadmium	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:46	1
Calcium	38000		1000	ug/L		10/16/23 14:00	10/18/23 16:46	1
Chromium	2.0		2.0	ug/L		10/16/23 14:00	10/18/23 16:46	1
Cobalt	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:46	1
Iron	1000		100	ug/L		10/16/23 14:00	10/18/23 16:46	1
Lead	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:46	1
Lithium	62		8.0	ug/L		10/16/23 14:00	10/18/23 16:46	1
Molybdenum	25		5.0	ug/L		10/16/23 14:00	10/18/23 16:46	1
Selenium	5.0	U	5.0	ug/L		10/16/23 14:00	10/18/23 16:46	1
Thallium	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:46	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	ug/L		10/16/23 14:00	10/18/23 14:21	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (SW846 9056A)	2100		20	mg/L			10/21/23 04:03	20
Fluoride (SW846 9056A)	1.6		0.10	mg/L			10/21/23 03:43	2
Sulfate (SW846 9056A)	2.0	U	2.0	mg/L			10/21/23 03:43	2
Total Dissolved Solids (SM 2540C)	2900		50	mg/L			10/19/23 09:19	1

Client Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-1

Client Sample ID: MW-16-03

Lab Sample ID: 240-193602-3

Date Collected: 10/12/23 11:49

Matrix: Water

Date Received: 10/14/23 08:00

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2100		100	ug/L		10/16/23 14:00	10/18/23 06:03	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	ug/L		10/16/23 14:00	10/18/23 16:49	1
Arsenic	5.0	U	5.0	ug/L		10/16/23 14:00	10/18/23 16:49	1
Barium	450		5.0	ug/L		10/16/23 14:00	10/18/23 16:49	1
Beryllium	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:49	1
Cadmium	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:49	1
Calcium	48000		1000	ug/L		10/16/23 14:00	10/18/23 16:49	1
Chromium	2.0	U	2.0	ug/L		10/16/23 14:00	10/18/23 16:49	1
Cobalt	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:49	1
Iron	930		100	ug/L		10/16/23 14:00	10/18/23 16:49	1
Lead	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:49	1
Lithium	64		8.0	ug/L		10/16/23 14:00	10/18/23 16:49	1
Molybdenum	22		5.0	ug/L		10/16/23 14:00	10/18/23 16:49	1
Selenium	5.0	U	5.0	ug/L		10/16/23 14:00	10/18/23 16:49	1
Thallium	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:49	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	ug/L		10/16/23 14:00	10/18/23 14:23	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (SW846 9056A)	2200		25	mg/L			10/21/23 07:24	25
Fluoride (SW846 9056A)	1.4		0.25	mg/L			10/21/23 07:04	5
Sulfate (SW846 9056A)	5.0	U	5.0	mg/L			10/21/23 07:04	5
Total Dissolved Solids (SM 2540C)	3200		50	mg/L			10/19/23 09:19	1

Client Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-1

Client Sample ID: MW-16-04

Lab Sample ID: 240-193602-4

Date Collected: 10/12/23 12:57

Matrix: Water

Date Received: 10/14/23 08:00

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2500		100	ug/L		10/16/23 14:00	10/18/23 06:08	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	ug/L		10/16/23 14:00	10/18/23 16:51	1
Arsenic	5.0	U	5.0	ug/L		10/16/23 14:00	10/18/23 16:51	1
Barium	650		5.0	ug/L		10/16/23 14:00	10/18/23 16:51	1
Beryllium	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:51	1
Cadmium	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:51	1
Calcium	38000		1000	ug/L		10/16/23 14:00	10/18/23 16:51	1
Chromium	3.1		2.0	ug/L		10/16/23 14:00	10/18/23 16:51	1
Cobalt	1.3		1.0	ug/L		10/16/23 14:00	10/18/23 16:51	1
Iron	3200		100	ug/L		10/16/23 14:00	10/18/23 16:51	1
Lead	1.8		1.0	ug/L		10/16/23 14:00	10/18/23 16:51	1
Lithium	96		8.0	ug/L		10/16/23 14:00	10/18/23 16:51	1
Molybdenum	17		5.0	ug/L		10/16/23 14:00	10/18/23 16:51	1
Selenium	5.0	U	5.0	ug/L		10/16/23 14:00	10/18/23 16:51	1
Thallium	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:51	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	ug/L		10/16/23 14:00	10/18/23 14:25	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (SW846 9056A)	2700		25	mg/L			10/21/23 06:44	25
Fluoride (SW846 9056A)	1.7		0.25	mg/L			10/21/23 06:24	5
Sulfate (SW846 9056A)	5.0	U	5.0	mg/L			10/21/23 06:24	5
Total Dissolved Solids (SM 2540C)	3800		50	mg/L			10/19/23 09:19	1

Client Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-1

Client Sample ID: DUP-01

Lab Sample ID: 240-193602-5

Date Collected: 10/12/23 00:00

Matrix: Water

Date Received: 10/14/23 08:00

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2200		100	ug/L		10/16/23 14:00	10/18/23 06:12	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	ug/L		10/16/23 14:00	10/18/23 16:54	1
Arsenic	5.0	U	5.0	ug/L		10/16/23 14:00	10/18/23 16:54	1
Barium	210		5.0	ug/L		10/16/23 14:00	10/18/23 16:54	1
Beryllium	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:54	1
Cadmium	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:54	1
Calcium	19000		1000	ug/L		10/16/23 14:00	10/18/23 16:54	1
Chromium	2.0	U	2.0	ug/L		10/16/23 14:00	10/18/23 16:54	1
Cobalt	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:54	1
Iron	570		100	ug/L		10/16/23 14:00	10/18/23 16:54	1
Lead	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:54	1
Lithium	49		8.0	ug/L		10/16/23 14:00	10/18/23 16:54	1
Molybdenum	25		5.0	ug/L		10/16/23 14:00	10/18/23 16:54	1
Selenium	5.0	U	5.0	ug/L		10/16/23 14:00	10/18/23 16:54	1
Thallium	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:54	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	ug/L		10/16/23 14:00	10/18/23 14:31	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (SW846 9056A)	1300		20	mg/L			10/21/23 03:23	20
Fluoride (SW846 9056A)	2.0		0.10	mg/L			10/21/23 03:02	2
Sulfate (SW846 9056A)	2.0	U	2.0	mg/L			10/21/23 03:02	2
Total Dissolved Solids (SM 2540C)	2100		40	mg/L			10/19/23 09:19	1

Client Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-1

Client Sample ID: EB-01

Lab Sample ID: 240-193602-6

Date Collected: 10/11/23 10:40

Matrix: Water

Date Received: 10/14/23 08:00

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	ug/L		10/16/23 14:00	10/18/23 06:17	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	ug/L		10/16/23 14:00	10/18/23 16:56	1
Arsenic	5.0	U	5.0	ug/L		10/16/23 14:00	10/18/23 16:56	1
Barium	5.0	U	5.0	ug/L		10/16/23 14:00	10/18/23 16:56	1
Beryllium	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:56	1
Cadmium	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:56	1
Calcium	1000	U	1000	ug/L		10/16/23 14:00	10/18/23 16:56	1
Chromium	2.0	U	2.0	ug/L		10/16/23 14:00	10/18/23 16:56	1
Cobalt	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:56	1
Iron	100	U	100	ug/L		10/16/23 14:00	10/18/23 16:56	1
Lead	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:56	1
Lithium	8.0	U	8.0	ug/L		10/16/23 14:00	10/18/23 16:56	1
Molybdenum	5.0	U	5.0	ug/L		10/16/23 14:00	10/18/23 16:56	1
Selenium	5.0	U	5.0	ug/L		10/16/23 14:00	10/18/23 16:56	1
Thallium	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 16:56	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	ug/L		10/16/23 14:00	10/18/23 14:33	1

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride (SW846 9056A)	1.0	U	1.0	mg/L			10/21/23 05:44	1
Fluoride (SW846 9056A)	0.050	U	0.050	mg/L			10/21/23 05:44	1
Sulfate (SW846 9056A)	1.0		1.0	mg/L			10/21/23 05:44	1
Total Dissolved Solids (SM 2540C)	50	U	50	mg/L			10/18/23 09:19	1

QC Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-1

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 240-590931/1-A
Matrix: Water
Analysis Batch: 591127

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 590931

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	100	U	100	ug/L		10/16/23 14:00	10/18/23 04:31	1

Lab Sample ID: LCS 240-590931/2-A
Matrix: Water
Analysis Batch: 591127

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 590931

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Boron	1000	1000		ug/L		100	80 - 120

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 240-590931/1-A
Matrix: Water
Analysis Batch: 591382

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 590931

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	2.0	U	2.0	ug/L		10/16/23 14:00	10/18/23 15:59	1
Arsenic	5.0	U	5.0	ug/L		10/16/23 14:00	10/18/23 15:59	1
Barium	5.0	U	5.0	ug/L		10/16/23 14:00	10/18/23 15:59	1
Beryllium	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 15:59	1
Cadmium	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 15:59	1
Calcium	1000	U	1000	ug/L		10/16/23 14:00	10/18/23 15:59	1
Chromium	2.0	U	2.0	ug/L		10/16/23 14:00	10/18/23 15:59	1
Cobalt	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 15:59	1
Iron	100	U	100	ug/L		10/16/23 14:00	10/18/23 15:59	1
Lead	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 15:59	1
Lithium	8.0	U	8.0	ug/L		10/16/23 14:00	10/18/23 15:59	1
Molybdenum	5.0	U	5.0	ug/L		10/16/23 14:00	10/18/23 15:59	1
Selenium	5.0	U	5.0	ug/L		10/16/23 14:00	10/18/23 15:59	1
Thallium	1.0	U	1.0	ug/L		10/16/23 14:00	10/18/23 15:59	1

Lab Sample ID: LCS 240-590931/3-A
Matrix: Water
Analysis Batch: 591382

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 590931

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	100	101		ug/L		101	80 - 120
Arsenic	1000	941		ug/L		94	80 - 120
Barium	1000	940		ug/L		94	80 - 120
Beryllium	500	489		ug/L		98	80 - 120
Cadmium	500	482		ug/L		96	80 - 120
Calcium	25000	22000		ug/L		88	80 - 120
Chromium	500	494		ug/L		99	80 - 120
Cobalt	500	478		ug/L		96	80 - 120
Iron	5000	4530		ug/L		91	80 - 120
Lead	500	484		ug/L		97	80 - 120
Lithium	500	487		ug/L		97	80 - 120
Molybdenum	500	475		ug/L		95	80 - 120
Selenium	1000	955		ug/L		95	80 - 120

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QC Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-1

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

Lab Sample ID: LCS 240-590931/3-A
Matrix: Water
Analysis Batch: 591382

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 590931

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Thallium	1000	954		ug/L		95	80 - 120

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 240-590935/1-A
Matrix: Water
Analysis Batch: 591320

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 590935

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.20	U	0.20	ug/L		10/16/23 14:00	10/18/23 13:48	1

Lab Sample ID: LCS 240-590935/2-A
Matrix: Water
Analysis Batch: 591320

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 590935

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.87		ug/L		97	80 - 120

Method: 9056A - Anions, Ion Chromatography

Lab Sample ID: MB 240-591640/3
Matrix: Water
Analysis Batch: 591640

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	U	1.0	mg/L			10/21/23 01:22	1
Fluoride	0.050	U	0.050	mg/L			10/21/23 01:22	1
Sulfate	1.0	U	1.0	mg/L			10/21/23 01:22	1

Lab Sample ID: LCS 240-591640/4
Matrix: Water
Analysis Batch: 591640

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	51.7		mg/L		103	90 - 110
Fluoride	2.50	2.74		mg/L		110	90 - 110
Sulfate	50.0	54.2		mg/L		108	90 - 110

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

Lab Sample ID: MB 240-591249/1
Matrix: Water
Analysis Batch: 591249

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	10	U	10	mg/L			10/18/23 09:19	1

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QC Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-1

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

Lab Sample ID: LCS 240-591249/2
Matrix: Water
Analysis Batch: 591249

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	336	317		mg/L		94	80 - 120

Lab Sample ID: MB 240-591417/1
Matrix: Water
Analysis Batch: 591417

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	10	U	10	mg/L			10/19/23 09:19	1

Lab Sample ID: LCS 240-591417/2
Matrix: Water
Analysis Batch: 591417

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	336	316		mg/L		94	80 - 120

Lab Sample ID: 240-193602-1 DU
Matrix: Water
Analysis Batch: 591417

Client Sample ID: MW-16-01
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	2000		1920		mg/L		5	20

QC Association Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-1

Metals

Prep Batch: 590931

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-193602-1	MW-16-01	Total Recoverable	Water	3005A	
240-193602-2	MW-16-02	Total Recoverable	Water	3005A	
240-193602-3	MW-16-03	Total Recoverable	Water	3005A	
240-193602-4	MW-16-04	Total Recoverable	Water	3005A	
240-193602-5	DUP-01	Total Recoverable	Water	3005A	
240-193602-6	EB-01	Total Recoverable	Water	3005A	
MB 240-590931/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 240-590931/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
LCS 240-590931/3-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 590935

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-193602-1	MW-16-01	Total/NA	Water	7470A	
240-193602-2	MW-16-02	Total/NA	Water	7470A	
240-193602-3	MW-16-03	Total/NA	Water	7470A	
240-193602-4	MW-16-04	Total/NA	Water	7470A	
240-193602-5	DUP-01	Total/NA	Water	7470A	
240-193602-6	EB-01	Total/NA	Water	7470A	
MB 240-590935/1-A	Method Blank	Total/NA	Water	7470A	
LCS 240-590935/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 591127

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-193602-1	MW-16-01	Total Recoverable	Water	6010D	590931
240-193602-2	MW-16-02	Total Recoverable	Water	6010D	590931
240-193602-3	MW-16-03	Total Recoverable	Water	6010D	590931
240-193602-4	MW-16-04	Total Recoverable	Water	6010D	590931
240-193602-5	DUP-01	Total Recoverable	Water	6010D	590931
240-193602-6	EB-01	Total Recoverable	Water	6010D	590931
MB 240-590931/1-A	Method Blank	Total Recoverable	Water	6010D	590931
LCS 240-590931/2-A	Lab Control Sample	Total Recoverable	Water	6010D	590931

Analysis Batch: 591320

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-193602-1	MW-16-01	Total/NA	Water	7470A	590935
240-193602-2	MW-16-02	Total/NA	Water	7470A	590935
240-193602-3	MW-16-03	Total/NA	Water	7470A	590935
240-193602-4	MW-16-04	Total/NA	Water	7470A	590935
240-193602-5	DUP-01	Total/NA	Water	7470A	590935
240-193602-6	EB-01	Total/NA	Water	7470A	590935
MB 240-590935/1-A	Method Blank	Total/NA	Water	7470A	590935
LCS 240-590935/2-A	Lab Control Sample	Total/NA	Water	7470A	590935

Analysis Batch: 591382

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-193602-1	MW-16-01	Total Recoverable	Water	6020B	590931
240-193602-2	MW-16-02	Total Recoverable	Water	6020B	590931
240-193602-3	MW-16-03	Total Recoverable	Water	6020B	590931
240-193602-4	MW-16-04	Total Recoverable	Water	6020B	590931
240-193602-5	DUP-01	Total Recoverable	Water	6020B	590931
240-193602-6	EB-01	Total Recoverable	Water	6020B	590931

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QC Association Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-1

Metals (Continued)

Analysis Batch: 591382 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 240-590931/1-A	Method Blank	Total Recoverable	Water	6020B	590931
LCS 240-590931/3-A	Lab Control Sample	Total Recoverable	Water	6020B	590931

General Chemistry

Analysis Batch: 591249

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-193602-6	EB-01	Total/NA	Water	SM 2540C	
MB 240-591249/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-591249/2	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 591417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-193602-1	MW-16-01	Total/NA	Water	SM 2540C	
240-193602-2	MW-16-02	Total/NA	Water	SM 2540C	
240-193602-3	MW-16-03	Total/NA	Water	SM 2540C	
240-193602-4	MW-16-04	Total/NA	Water	SM 2540C	
240-193602-5	DUP-01	Total/NA	Water	SM 2540C	
MB 240-591417/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 240-591417/2	Lab Control Sample	Total/NA	Water	SM 2540C	
240-193602-1 DU	MW-16-01	Total/NA	Water	SM 2540C	

Analysis Batch: 591640

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-193602-1	MW-16-01	Total/NA	Water	9056A	
240-193602-1	MW-16-01	Total/NA	Water	9056A	
240-193602-2	MW-16-02	Total/NA	Water	9056A	
240-193602-2	MW-16-02	Total/NA	Water	9056A	
240-193602-3	MW-16-03	Total/NA	Water	9056A	
240-193602-3	MW-16-03	Total/NA	Water	9056A	
240-193602-4	MW-16-04	Total/NA	Water	9056A	
240-193602-4	MW-16-04	Total/NA	Water	9056A	
240-193602-5	DUP-01	Total/NA	Water	9056A	
240-193602-5	DUP-01	Total/NA	Water	9056A	
240-193602-6	EB-01	Total/NA	Water	9056A	
MB 240-591640/3	Method Blank	Total/NA	Water	9056A	
LCS 240-591640/4	Lab Control Sample	Total/NA	Water	9056A	

Lab Chronicle

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-1

Client Sample ID: MW-16-01

Lab Sample ID: 240-193602-1

Date Collected: 10/12/23 10:00

Matrix: Water

Date Received: 10/14/23 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			590931	S4FJ	EET CLE	10/16/23 14:00
Total Recoverable	Analysis	6010D		1	591127	KLC	EET CLE	10/18/23 05:54
Total Recoverable	Prep	3005A			590931	S4FJ	EET CLE	10/16/23 14:00
Total Recoverable	Analysis	6020B		1	591382	RKT	EET CLE	10/18/23 16:44
Total/NA	Prep	7470A			590935	S4FJ	EET CLE	10/16/23 14:00
Total/NA	Analysis	7470A		1	591320	GK	EET CLE	10/18/23 14:19
Total/NA	Analysis	9056A		2	591640	JWW	EET CLE	10/21/23 12:06
Total/NA	Analysis	9056A		10	591640	JWW	EET CLE	10/21/23 12:26
Total/NA	Analysis	SM 2540C		1	591417	QUY8	EET CLE	10/19/23 09:19

Client Sample ID: MW-16-02

Lab Sample ID: 240-193602-2

Date Collected: 10/12/23 09:04

Matrix: Water

Date Received: 10/14/23 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			590931	S4FJ	EET CLE	10/16/23 14:00
Total Recoverable	Analysis	6010D		1	591127	KLC	EET CLE	10/18/23 05:59
Total Recoverable	Prep	3005A			590931	S4FJ	EET CLE	10/16/23 14:00
Total Recoverable	Analysis	6020B		1	591382	RKT	EET CLE	10/18/23 16:46
Total/NA	Prep	7470A			590935	S4FJ	EET CLE	10/16/23 14:00
Total/NA	Analysis	7470A		1	591320	GK	EET CLE	10/18/23 14:21
Total/NA	Analysis	9056A		2	591640	JWW	EET CLE	10/21/23 03:43
Total/NA	Analysis	9056A		20	591640	JWW	EET CLE	10/21/23 04:03
Total/NA	Analysis	SM 2540C		1	591417	QUY8	EET CLE	10/19/23 09:19

Client Sample ID: MW-16-03

Lab Sample ID: 240-193602-3

Date Collected: 10/12/23 11:49

Matrix: Water

Date Received: 10/14/23 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			590931	S4FJ	EET CLE	10/16/23 14:00
Total Recoverable	Analysis	6010D		1	591127	KLC	EET CLE	10/18/23 06:03
Total Recoverable	Prep	3005A			590931	S4FJ	EET CLE	10/16/23 14:00
Total Recoverable	Analysis	6020B		1	591382	RKT	EET CLE	10/18/23 16:49
Total/NA	Prep	7470A			590935	S4FJ	EET CLE	10/16/23 14:00
Total/NA	Analysis	7470A		1	591320	GK	EET CLE	10/18/23 14:23
Total/NA	Analysis	9056A		5	591640	JWW	EET CLE	10/21/23 07:04
Total/NA	Analysis	9056A		25	591640	JWW	EET CLE	10/21/23 07:24
Total/NA	Analysis	SM 2540C		1	591417	QUY8	EET CLE	10/19/23 09:19

Lab Chronicle

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-1

Client Sample ID: MW-16-04

Lab Sample ID: 240-193602-4

Date Collected: 10/12/23 12:57

Matrix: Water

Date Received: 10/14/23 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			590931	S4FJ	EET CLE	10/16/23 14:00
Total Recoverable	Analysis	6010D		1	591127	KLC	EET CLE	10/18/23 06:08
Total Recoverable	Prep	3005A			590931	S4FJ	EET CLE	10/16/23 14:00
Total Recoverable	Analysis	6020B		1	591382	RKT	EET CLE	10/18/23 16:51
Total/NA	Prep	7470A			590935	S4FJ	EET CLE	10/16/23 14:00
Total/NA	Analysis	7470A		1	591320	GK	EET CLE	10/18/23 14:25
Total/NA	Analysis	9056A		5	591640	JWW	EET CLE	10/21/23 06:24
Total/NA	Analysis	9056A		25	591640	JWW	EET CLE	10/21/23 06:44
Total/NA	Analysis	SM 2540C		1	591417	QUY8	EET CLE	10/19/23 09:19

Client Sample ID: DUP-01

Lab Sample ID: 240-193602-5

Date Collected: 10/12/23 00:00

Matrix: Water

Date Received: 10/14/23 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			590931	S4FJ	EET CLE	10/16/23 14:00
Total Recoverable	Analysis	6010D		1	591127	KLC	EET CLE	10/18/23 06:12
Total Recoverable	Prep	3005A			590931	S4FJ	EET CLE	10/16/23 14:00
Total Recoverable	Analysis	6020B		1	591382	RKT	EET CLE	10/18/23 16:54
Total/NA	Prep	7470A			590935	S4FJ	EET CLE	10/16/23 14:00
Total/NA	Analysis	7470A		1	591320	GK	EET CLE	10/18/23 14:31
Total/NA	Analysis	9056A		2	591640	JWW	EET CLE	10/21/23 03:02
Total/NA	Analysis	9056A		20	591640	JWW	EET CLE	10/21/23 03:23
Total/NA	Analysis	SM 2540C		1	591417	QUY8	EET CLE	10/19/23 09:19

Client Sample ID: EB-01

Lab Sample ID: 240-193602-6

Date Collected: 10/11/23 10:40

Matrix: Water

Date Received: 10/14/23 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			590931	S4FJ	EET CLE	10/16/23 14:00
Total Recoverable	Analysis	6010D		1	591127	KLC	EET CLE	10/18/23 06:17
Total Recoverable	Prep	3005A			590931	S4FJ	EET CLE	10/16/23 14:00
Total Recoverable	Analysis	6020B		1	591382	RKT	EET CLE	10/18/23 16:56
Total/NA	Prep	7470A			590935	S4FJ	EET CLE	10/16/23 14:00
Total/NA	Analysis	7470A		1	591320	GK	EET CLE	10/18/23 14:33
Total/NA	Analysis	9056A		1	591640	JWW	EET CLE	10/21/23 05:44
Total/NA	Analysis	SM 2540C		1	591249	QUY8	EET CLE	10/18/23 09:19

Laboratory References:

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

Accreditation/Certification Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-1

Laboratory: Eurofins Cleveland

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	02-27-24
Georgia	State	4062	02-27-24
Illinois	NELAP	200004	07-31-24
Iowa	State	421	06-01-25
Kentucky (UST)	State	112225	02-28-24
Kentucky (WW)	State	KY98016	12-31-23
Michigan	State	9135	02-27-24
Minnesota	NELAP	039-999-348	12-28-23
New Jersey	NELAP	OH001	07-01-24
New York	NELAP	10975	01-04-24
Ohio	State	8303	02-27-24
Ohio VAP	State	ORELAP 4062	02-27-24
Oregon	NELAP	4062	11-27-23
Pennsylvania	NELAP	68-00340	01-01-24
Texas	NELAP	T104704517-22-19	08-31-24
Virginia	NELAP	460175	09-14-24
West Virginia DEP	State	210	12-19-23

Eurofins - Cleveland Sample Receipt Form/Narrative

Login # : _____

Barberton Facility

Client Tec Corporation Site Name _____

Cooler unpacked by:

Cooler Received on 10/13/23 Opened on 10/14/23

L Osborne

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

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

Eurofins Cooler # EC 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 # 22 (CF -0.1 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity _____ 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# HC316719

14. Were VOAs on the COC? Yes No

15. Were air bubbles >6 mm in any VOA vials? Yes No NA Larger than this.

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

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

Concerning _____

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

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: _____

Temperature readings: _____

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container</u>		<u>Preservative</u>	
			<u>pH</u>	<u>Temp</u>	<u>Added (mls)</u>	<u>Lot #</u>
MW-16-01	240-193602-C-1	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____
MW-16-01	240-193602-D-1	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW-16-01	240-193602-E-1	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW-16-02	240-193602-C-2	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____
MW-16-02	240-193602-D-2	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW-16-02	240-193602-E-2	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW-16-03	240-193602-C-3	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____
MW-16-03	240-193602-D-3	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW-16-03	240-193602-E-3	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW-16-04	240-193602-C-4	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____
MW-16-04	240-193602-D-4	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW-16-04	240-193602-E-4	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
DUP-01	240-193602-C-5	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____
DUP-01	240-193602-D-5	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
DUP-01	240-193602-E-5	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
EB-01	240-193602-C-6	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____
EB-01	240-193602-D-6	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
EB-01	240-193602-E-6	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____

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ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Vincent Buening
TRC Environmental Corporation.
1540 Eisenhower Place
Ann Arbor, Michigan 48108-7080

Generated 11/11/2023 12:18:23 PM

JOB DESCRIPTION

CCR DTE St. Clair Power

JOB NUMBER

240-193602-2

Eurofins Cleveland

Job Notes

This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing North Central, LLC Project Manager.

Authorization



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11/11/2023 12:18:23 PM

Authorized for release by
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(330)966-9790



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Definitions/Glossary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-2

Qualifiers

Rad

Qualifier	Qualifier Description
G	The Sample MDC is greater than the requested RL.
U	Result is less than the sample detection limit.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	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 St. Clair Power

Job ID: 240-193602-2

Job ID: 240-193602-2

Laboratory: Eurofins Cleveland

Narrative

Job Narrative 240-193602-2

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method. Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 10/14/2023 8:00 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 0.1°C and 0.3°C

Gas Flow Proportional Counter

Method 9320_Ra228: Radium-228 prep batch 160-632483:

The following sample(s) did not meet the requested limit (RL) due to the reduced sample volume attributed to the presence of matrix interference. During preparation the analyst visually noted matrix effects. The data have been reported with this narrative. MW-16-04 (240-193602-4)

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

Rad

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 St. Clair Power

Job ID: 240-193602-2

Method	Method Description	Protocol	Laboratory
9315	Radium-226 (GFPC)	SW846	EET SL
9320	Radium-228 (GFPC)	SW846	EET SL
Ra226_Ra228	Combined Radium-226 and Radium-228	TAL-STL	EET SL
PrecSep_0	Preparation, Precipitate Separation	None	EET SL
PrecSep-21	Preparation, Precipitate Separation (21-Day In-Growth)	None	EET SL

Protocol References:

None = None

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

TAL-STL = TestAmerica Laboratories, St. Louis, Facility Standard Operating Procedure.

Laboratory References:

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566

Sample Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
240-193602-1	MW-16-01	Water	10/12/23 10:00	10/14/23 08:00
240-193602-2	MW-16-02	Water	10/12/23 09:04	10/14/23 08:00
240-193602-3	MW-16-03	Water	10/12/23 11:49	10/14/23 08:00
240-193602-4	MW-16-04	Water	10/12/23 12:57	10/14/23 08:00
240-193602-5	DUP-01	Water	10/12/23 00:00	10/14/23 08:00
240-193602-6	EB-01	Water	10/11/23 10:40	10/14/23 08:00

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Detection Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-2

Client Sample ID: MW-16-01

Lab Sample ID: 240-193602-1

No Detections.

Client Sample ID: MW-16-02

Lab Sample ID: 240-193602-2

No Detections.

Client Sample ID: MW-16-03

Lab Sample ID: 240-193602-3

No Detections.

Client Sample ID: MW-16-04

Lab Sample ID: 240-193602-4

No Detections.

Client Sample ID: DUP-01

Lab Sample ID: 240-193602-5

No Detections.

Client Sample ID: EB-01

Lab Sample ID: 240-193602-6

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins Cleveland



Client Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-2

Client Sample ID: MW-16-01

Lab Sample ID: 240-193602-1

Date Collected: 10/12/23 10:00

Matrix: Water

Date Received: 10/14/23 08:00

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.515		0.177	0.183	1.00	0.161	pCi/L	10/18/23 09:10	11/09/23 21:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.9		30 - 110					10/18/23 09:10	11/09/23 21:08	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	1.09		0.618	0.627	1.00	0.888	pCi/L	10/18/23 09:12	11/07/23 16:17	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.9		30 - 110					10/18/23 09:12	11/07/23 16:17	1
Y Carrier	86.4		30 - 110					10/18/23 09:12	11/07/23 16:17	1

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.60		0.643	0.653	5.00	0.888	pCi/L		11/10/23 17:32	1

Client Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-2

Client Sample ID: MW-16-02

Lab Sample ID: 240-193602-2

Date Collected: 10/12/23 09:04

Matrix: Water

Date Received: 10/14/23 08:00

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.10		0.319	0.334	1.00	0.328	pCi/L	10/18/23 09:10	11/09/23 21:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.2		30 - 110					10/18/23 09:10	11/09/23 21:09	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	3.63		0.716	0.791	1.00	0.630	pCi/L	10/18/23 09:12	11/07/23 11:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.2		30 - 110					10/18/23 09:12	11/07/23 11:16	1
Y Carrier	85.2		30 - 110					10/18/23 09:12	11/07/23 11:16	1

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	4.73		0.784	0.859	5.00	0.630	pCi/L		11/10/23 17:32	1

Client Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-2

Client Sample ID: MW-16-03

Lab Sample ID: 240-193602-3

Date Collected: 10/12/23 11:49

Matrix: Water

Date Received: 10/14/23 08:00

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	1.48		0.359	0.383	1.00	0.313	pCi/L	10/18/23 09:10	11/09/23 21:09	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.9		30 - 110					10/18/23 09:10	11/09/23 21:09	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	3.47		0.694	0.764	1.00	0.596	pCi/L	10/18/23 09:12	11/07/23 11:16	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	92.9		30 - 110					10/18/23 09:12	11/07/23 11:16	1
Y Carrier	84.5		30 - 110					10/18/23 09:12	11/07/23 11:16	1

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	4.95		0.781	0.855	5.00	0.596	pCi/L		11/10/23 17:32	1

Client Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-2

Client Sample ID: MW-16-04

Lab Sample ID: 240-193602-4

Date Collected: 10/12/23 12:57

Matrix: Water

Date Received: 10/14/23 08:00

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	3.31		0.610	0.679	1.00	0.427	pCi/L	10/18/23 09:10	11/09/23 21:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.1		30 - 110					10/18/23 09:10	11/09/23 21:08	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	2.10	G	0.833	0.855	1.00	1.07	pCi/L	10/18/23 09:12	11/07/23 11:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	85.1		30 - 110					10/18/23 09:12	11/07/23 11:19	1
Y Carrier	86.4		30 - 110					10/18/23 09:12	11/07/23 11:19	1

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	5.40		1.03	1.09	5.00	1.07	pCi/L		11/10/23 17:32	1

Client Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-2

Client Sample ID: DUP-01

Lab Sample ID: 240-193602-5

Date Collected: 10/12/23 00:00

Matrix: Water

Date Received: 10/14/23 08:00

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-226	0.524		0.191	0.197	1.00	0.211	pCi/L	10/18/23 09:10	11/09/23 21:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.7		30 - 110					10/18/23 09:10	11/09/23 21:08	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Radium-228	0.757		0.355	0.362	1.00	0.466	pCi/L	10/18/23 09:12	11/07/23 11:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	91.7		30 - 110					10/18/23 09:12	11/07/23 11:19	1
Y Carrier	82.2		30 - 110					10/18/23 09:12	11/07/23 11:19	1

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count Uncert. (2σ+/-)	Total Uncert. (2σ+/-)	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
Combined Radium 226 + 228	1.28		0.403	0.412	5.00	0.466	pCi/L		11/10/23 17:32	1

Client Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-2

Client Sample ID: EB-01

Lab Sample ID: 240-193602-6

Date Collected: 10/11/23 10:40

Matrix: Water

Date Received: 10/14/23 08:00

Method: SW846 9315 - Radium-226 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-226	-0.116	U	0.0795	0.0802	1.00	0.220	pCi/L	10/18/23 09:10	11/09/23 21:08	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.3		30 - 110					10/18/23 09:10	11/09/23 21:08	1

Method: SW846 9320 - Radium-228 (GFPC)

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Radium-228	0.213	U	0.330	0.331	1.00	0.562	pCi/L	10/18/23 09:12	11/07/23 11:19	1
Carrier	%Yield	Qualifier	Limits					Prepared	Analyzed	Dil Fac
Ba Carrier	86.3		30 - 110					10/18/23 09:12	11/07/23 11:19	1
Y Carrier	80.0		30 - 110					10/18/23 09:12	11/07/23 11:19	1

Method: TAL-STL Ra226_Ra228 - Combined Radium-226 and Radium-228

Analyte	Result	Qualifier	Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
			Uncert.	Uncert.						
			(2σ+/-)	(2σ+/-)						
Combined Radium 226 + 228	0.0972	U	0.339	0.341	5.00	0.562	pCi/L		11/10/23 17:32	1

Tracer/Carrier Summary

Client: TRC Environmental Corporation.
 Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-2

Method: 9315 - Radium-226 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (30-110)	
240-193602-1	MW-16-01	91.9	
240-193602-1 DU	MW-16-01	94.4	
240-193602-2	MW-16-02	92.2	
240-193602-3	MW-16-03	92.9	
240-193602-4	MW-16-04	85.1	
240-193602-5	DUP-01	91.7	
240-193602-6	EB-01	86.3	
LCS 160-632482/2-A	Lab Control Sample	88.0	
MB 160-632482/1-A	Method Blank	92.7	
Tracer/Carrier Legend			
Ba = Ba Carrier			

Method: 9320 - Radium-228 (GFPC)

Matrix: Water

Prep Type: Total/NA

		Percent Yield (Acceptance Limits)	
Lab Sample ID	Client Sample ID	Ba (30-110)	Y (30-110)
240-193602-1	MW-16-01	91.9	86.4
240-193602-1 DU	MW-16-01	94.4	86.4
240-193602-2	MW-16-02	92.2	85.2
240-193602-3	MW-16-03	92.9	84.5
240-193602-4	MW-16-04	85.1	86.4
240-193602-5	DUP-01	91.7	82.2
240-193602-6	EB-01	86.3	80.0
LCS 160-632483/2-A	Lab Control Sample	88.0	83.4
MB 160-632483/1-A	Method Blank	92.7	84.9
Tracer/Carrier Legend			
Ba = Ba Carrier			
Y = Y Carrier			

QC Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-2

Method: 9315 - Radium-226 (GFPC)

Lab Sample ID: MB 160-632482/1-A
Matrix: Water
Analysis Batch: 636166

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 632482

Analyte	MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	MB Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-226	0.06510	U	0.108	0.108	1.00	0.188	pCi/L	10/18/23 09:10	11/09/23 21:08	1
Carrier	MB %Yield	MB Qualifier	Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	92.7		30 - 110		10/18/23 09:10	11/09/23 21:08	1			

Lab Sample ID: LCS 160-632482/2-A
Matrix: Water
Analysis Batch: 636166

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 632482

Analyte	Spike Added	LCS Result	LCS Qual	Total	RL	MDC	Unit	%Rec	%Rec Limits
				Uncert. (2σ+/-)					
Radium-226	11.3	10.88		1.24	1.00	0.229	pCi/L	96	75 - 125
Carrier	LCS %Yield	LCS Qualifier	Limits						
Ba Carrier	88.0		30 - 110						

Lab Sample ID: 240-193602-1 DU
Matrix: Water
Analysis Batch: 636166

Client Sample ID: MW-16-01
Prep Type: Total/NA
Prep Batch: 632482

Analyte	Sample		DU		Total	RL	MDC	Unit	RER	RER Limit
	Result	Sample Qual	Result	DU Qual	Uncert. (2σ+/-)					
Radium-226	0.515		0.5255		0.191	1.00	0.191	pCi/L	0.03	1
Carrier	DU %Yield	DU Qualifier	Limits							
Ba Carrier	94.4		30 - 110							

Method: 9320 - Radium-228 (GFPC)

Lab Sample ID: MB 160-632483/1-A
Matrix: Water
Analysis Batch: 635681

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 632483

Analyte	MB		Count	Total	RL	MDC	Unit	Prepared	Analyzed	Dil Fac
	Result	MB Qualifier	Uncert. (2σ+/-)	Uncert. (2σ+/-)						
Radium-228	0.6466		0.328	0.334	1.00	0.446	pCi/L	10/18/23 09:12	11/07/23 11:15	1
Carrier	MB %Yield	MB Qualifier	Limits		Prepared	Analyzed	Dil Fac			
Ba Carrier	92.7		30 - 110		10/18/23 09:12	11/07/23 11:15	1			
Y Carrier	84.9		30 - 110		10/18/23 09:12	11/07/23 11:15	1			

QC Sample Results

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-2

Method: 9320 - Radium-228 (GFPC) (Continued)

Lab Sample ID: LCS 160-632483/2-A
Matrix: Water
Analysis Batch: 635681

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 632483

Analyte	Spike Added	LCS Result	LCS Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	%Rec	%Rec Limits
Radium-228	7.74	8.655		1.21	1.00	0.462	pCi/L	112	75 - 125
LCS LCS									
Carrier	%Yield	Qualifier	Limits						
Ba Carrier	88.0		30 - 110						
Y Carrier	83.4		30 - 110						

Lab Sample ID: 240-193602-1 DU
Matrix: Water
Analysis Batch: 635643

Client Sample ID: MW-16-01
Prep Type: Total/NA
Prep Batch: 632483

Analyte	Sample Result	Sample Qual	DU Result	DU Qual	Total Uncert. (2σ+/-)	RL	MDC	Unit	RER	RER Limit
Radium-228	1.09		0.3960	U	0.506	1.00	0.839	pCi/L	0.61	1
DU DU										
Carrier	%Yield	Qualifier	Limits							
Ba Carrier	94.4		30 - 110							
Y Carrier	86.4		30 - 110							

QC Association Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-2

Rad

Prep Batch: 632482

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-193602-1	MW-16-01	Total/NA	Water	PrecSep-21	
240-193602-2	MW-16-02	Total/NA	Water	PrecSep-21	
240-193602-3	MW-16-03	Total/NA	Water	PrecSep-21	
240-193602-4	MW-16-04	Total/NA	Water	PrecSep-21	
240-193602-5	DUP-01	Total/NA	Water	PrecSep-21	
240-193602-6	EB-01	Total/NA	Water	PrecSep-21	
MB 160-632482/1-A	Method Blank	Total/NA	Water	PrecSep-21	
LCS 160-632482/2-A	Lab Control Sample	Total/NA	Water	PrecSep-21	
240-193602-1 DU	MW-16-01	Total/NA	Water	PrecSep-21	

Prep Batch: 632483

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
240-193602-1	MW-16-01	Total/NA	Water	PrecSep_0	
240-193602-2	MW-16-02	Total/NA	Water	PrecSep_0	
240-193602-3	MW-16-03	Total/NA	Water	PrecSep_0	
240-193602-4	MW-16-04	Total/NA	Water	PrecSep_0	
240-193602-5	DUP-01	Total/NA	Water	PrecSep_0	
240-193602-6	EB-01	Total/NA	Water	PrecSep_0	
MB 160-632483/1-A	Method Blank	Total/NA	Water	PrecSep_0	
LCS 160-632483/2-A	Lab Control Sample	Total/NA	Water	PrecSep_0	
240-193602-1 DU	MW-16-01	Total/NA	Water	PrecSep_0	

Lab Chronicle

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-2

Client Sample ID: MW-16-01

Lab Sample ID: 240-193602-1

Date Collected: 10/12/23 10:00

Matrix: Water

Date Received: 10/14/23 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			632482	KAC	EET SL	10/18/23 09:10
Total/NA	Analysis	9315		1	636166	SCB	EET SL	11/09/23 21:08
Total/NA	Prep	PrecSep_0			632483	KAC	EET SL	10/18/23 09:12
Total/NA	Analysis	9320		1	635643	CMM	EET SL	11/07/23 16:17
Total/NA	Analysis	Ra226_Ra228		1	636395	EMH	EET SL	11/10/23 17:32

Client Sample ID: MW-16-02

Lab Sample ID: 240-193602-2

Date Collected: 10/12/23 09:04

Matrix: Water

Date Received: 10/14/23 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			632482	KAC	EET SL	10/18/23 09:10
Total/NA	Analysis	9315		1	636166	SCB	EET SL	11/09/23 21:09
Total/NA	Prep	PrecSep_0			632483	KAC	EET SL	10/18/23 09:12
Total/NA	Analysis	9320		1	635681	SCB	EET SL	11/07/23 11:16
Total/NA	Analysis	Ra226_Ra228		1	636395	EMH	EET SL	11/10/23 17:32

Client Sample ID: MW-16-03

Lab Sample ID: 240-193602-3

Date Collected: 10/12/23 11:49

Matrix: Water

Date Received: 10/14/23 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			632482	KAC	EET SL	10/18/23 09:10
Total/NA	Analysis	9315		1	636166	SCB	EET SL	11/09/23 21:09
Total/NA	Prep	PrecSep_0			632483	KAC	EET SL	10/18/23 09:12
Total/NA	Analysis	9320		1	635681	SCB	EET SL	11/07/23 11:16
Total/NA	Analysis	Ra226_Ra228		1	636395	EMH	EET SL	11/10/23 17:32

Client Sample ID: MW-16-04

Lab Sample ID: 240-193602-4

Date Collected: 10/12/23 12:57

Matrix: Water

Date Received: 10/14/23 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			632482	KAC	EET SL	10/18/23 09:10
Total/NA	Analysis	9315		1	636168	SCB	EET SL	11/09/23 21:08
Total/NA	Prep	PrecSep_0			632483	KAC	EET SL	10/18/23 09:12
Total/NA	Analysis	9320		1	635643	CMM	EET SL	11/07/23 11:19
Total/NA	Analysis	Ra226_Ra228		1	636395	EMH	EET SL	11/10/23 17:32

Lab Chronicle

Client: TRC Environmental Corporation.
 Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-2

Client Sample ID: DUP-01

Lab Sample ID: 240-193602-5

Date Collected: 10/12/23 00:00

Matrix: Water

Date Received: 10/14/23 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			632482	KAC	EET SL	10/18/23 09:10
Total/NA	Analysis	9315		1	636168	SCB	EET SL	11/09/23 21:08
Total/NA	Prep	PrecSep_0			632483	KAC	EET SL	10/18/23 09:12
Total/NA	Analysis	9320		1	635643	CMM	EET SL	11/07/23 11:19
Total/NA	Analysis	Ra226_Ra228		1	636395	EMH	EET SL	11/10/23 17:32

Client Sample ID: EB-01

Lab Sample ID: 240-193602-6

Date Collected: 10/11/23 10:40

Matrix: Water

Date Received: 10/14/23 08:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	PrecSep-21			632482	KAC	EET SL	10/18/23 09:10
Total/NA	Analysis	9315		1	636168	SCB	EET SL	11/09/23 21:08
Total/NA	Prep	PrecSep_0			632483	KAC	EET SL	10/18/23 09:12
Total/NA	Analysis	9320		1	635643	CMM	EET SL	11/07/23 11:19
Total/NA	Analysis	Ra226_Ra228		1	636395	EMH	EET SL	11/10/23 17:32

Laboratory References:

EET SL = Eurofins St. Louis, 13715 Rider Trail North, Earth City, MO 63045, TEL (314)298-8566



Accreditation/Certification Summary

Client: TRC Environmental Corporation.
Project/Site: CCR DTE St. Clair Power

Job ID: 240-193602-2

Laboratory: Eurofins St. Louis

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

Authority	Program	Identification Number	Expiration Date
Alaska (UST)	State	20-001	05-06-25
ANAB	Dept. of Defense ELAP	L2305	04-06-25
ANAB	Dept. of Energy	L2305.01	04-06-25
ANAB	ISO/IEC 17025	L2305	04-06-25
Arizona	State	AZ0813	12-08-23
California	Los Angeles County Sanitation Districts	10259	06-30-22 *
California	State	2886	06-30-24
Connecticut	State	PH-0241	03-31-25
Florida	NELAP	E87689	06-30-24
HI - RadChem Recognition	State	n/a	06-30-24
Illinois	NELAP	200023	11-30-23
Iowa	State	373	12-01-24
Kentucky (DW)	State	KY90125	12-31-23
Kentucky (WW)	State	KY90125 (Permit KY0004049)	12-31-23
Louisiana	NELAP	04080	06-30-22 *
Louisiana (All)	NELAP	04080	06-30-24
Louisiana (DW)	State	LA011	12-31-23
Maryland	State	310	09-30-24
Massachusetts	State	M-MO054	06-30-24
MI - RadChem Recognition	State	9005	06-30-24
Missouri	State	780	06-30-25
Nevada	State	MO000542020-1	07-31-24
New Jersey	NELAP	MO002	06-30-24
New Mexico	State	MO00054	06-30-24
New York	NELAP	11616	03-31-24
North Carolina (DW)	State	29700	07-31-24
North Dakota	State	R-207	06-30-24
Oklahoma	NELAP	9997	08-31-24
Oregon	NELAP	4157	09-01-24
Pennsylvania	NELAP	68-00540	02-28-24
South Carolina	State	85002001	06-30-24
Texas	NELAP	T104704193	07-31-24
US Fish & Wildlife	US Federal Programs	058448	07-31-24
USDA	US Federal Programs	P330-17-00028	05-18-26
Utah	NELAP	MO000542021-14	07-31-24
Virginia	NELAP	10310	06-15-25
Washington	State	C592	08-30-24
West Virginia DEP	State	381	12-31-23

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

Eurofins - Cleveland Sample Receipt Form/Narrative

Login # : _____

Barberton Facility

Client Tec Corporation Site Name _____

Cooler unpacked by:

Cooler Received on 10/13/23 Opened on 10/14/23

L Osborne

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

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

Eurofins Cooler # EC 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 # 22 (CF -0.1 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity _____ 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# HC316719

14. Were VOAs on the COC? Yes No

15. Were air bubbles >6 mm in any VOA vials? Yes 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

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: _____

Temperature readings: _____

<u>Client Sample ID</u>	<u>Lab ID</u>	<u>Container Type</u>	<u>Container</u>		<u>Preservative</u>	
			<u>pH</u>	<u>Temp</u>	<u>Added (mls)</u>	<u>Lot #</u>
MW-16-01	240-193602-C-1	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____
MW-16-01	240-193602-D-1	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW-16-01	240-193602-E-1	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW-16-02	240-193602-C-2	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____
MW-16-02	240-193602-D-2	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW-16-02	240-193602-E-2	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW-16-03	240-193602-C-3	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____
MW-16-03	240-193602-D-3	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW-16-03	240-193602-E-3	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW-16-04	240-193602-C-4	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____
MW-16-04	240-193602-D-4	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
MW-16-04	240-193602-E-4	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
DUP-01	240-193602-C-5	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____
DUP-01	240-193602-D-5	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
DUP-01	240-193602-E-5	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
EB-01	240-193602-C-6	Plastic 500ml - with Nitric Acid	<2	_____	_____	_____
EB-01	240-193602-D-6	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____
EB-01	240-193602-E-6	Plastic 1 liter - Nitric Acid	<2	_____	_____	_____

- 1
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- 14
- 15

Chain of Custody Record



Client Information (Sub Contract Lab)

Company: TestAmerica Laboratories, Inc.
 Address: 13715 Rider Trail North,
 City: Earth City
 State, Zip: MO, 63045
 Phone: 314-298-8566(Tel) 314-298-8757(Fax)
 Email:

Sampler: Brooks, Kris M

Phone: Kris.Brooks@et.eurofinsus.com

Carrier Tracking No(s): 240-175339.1

State of Origin: Michigan

Page: Page 1 of 1

Job #: 240-193602-2

Shipping/Receiving

Accreditations Required (See note)

Due Date Requested: 11/14/2023

TAT Requested (days):

PO #:

WO #:

Project #:

24016804

SSOW#:

Project Name: CCR DTE St. Clair Power

Site: TRC CCR DTE St. Clair Power

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Water, Solid, Overstabil, Biotissue, A+AK)	Field Filtered Sample (Yes or No)	Perform MSMSD (Yes or No)	9315 Ra228/PreSep_21 Standard Target List	9320 Ra228/PreSep_0 Standard Target List	Ra228Ra228_GPC	Total Number of Containers	Special Instructions/Note:
MW-16-01 (240-193602-1)	10/12/23	10:00 Eastern	Water	Water	X	X	X	X	X	2	
MW-16-02 (240-193602-2)	10/12/23	09:04 Eastern	Water	Water	X	X	X	X	X	2	
MW-16-03 (240-193602-3)	10/12/23	11:49 Eastern	Water	Water	X	X	X	X	X	2	
MW-16-04 (240-193602-4)	10/12/23	12:57 Eastern	Water	Water	X	X	X	X	X	2	
DUP-01 (240-193602-5)	10/12/23	Eastern	Water	Water	X	X	X	X	X	2	
EB-01 (240-193602-6)	10/11/23	10:40 Eastern	Water	Water	X	X	X	X	X	2	

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
- Other:
- M - Hexane
- N - None
- O - AsNaO2
- P - Naz2O4S
- Q - Naz2SO3
- R - Naz2SO3
- S - H2SO4
- T - TSP Dodecahydrate
- U - Acetone
- V - MCAA
- W - pH 4-5
- X - Trzma
- Z - other (specify)

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing North Central, LLC places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/test/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central, LLC.

Possible Hazard Identification

Unconfirmed

Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2

Relinquished by: *Rachel H. Currier*

Date/Time: 10/11/23 9:40
 Date/Time: *10/17/2023 08:45*

Relinquished by: *M. Parotto*

Date/Time: *10/17/2023 08:45*
 Date/Time: *10/17/2023 08:45*

Relinquished by:

Date/Time:

Relinquished by:

Date/Time:

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Return To Client Disposal By Lab Archive For _____ Months

Special Instructions/QC Requirements:

Method of Shipment:

Received by: *Fedex*

Date/Time: *10/17/2023 08:45*

Received by: *M. Parotto*

Date/Time: *10/17/2023 08:45*

Received by:

Date/Time:

Received by:

Date/Time:

Custody Seals Intact: Yes No

Cooler Temperature(s) °C and Other Remarks:



Login Sample Receipt Checklist

Client: TRC Environmental Corporation.

Job Number: 240-193602-2

Login Number: 193602

List Number: 2

Creator: Pinette, Meadow L

List Source: Eurofins St. Louis

List Creation: 10/17/23 02:51 PM

Question	Answer	Comment
Radioactivity wasn't checked or is <=/ background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Attachment C

Appendix IV Data Quality Reviews

Laboratory Data Quality Review Groundwater Monitoring Event April 2023 DTE Electric Company St. Clair Power Plant (DTE SCPP)

Groundwater samples were collected by TRC for the April 2023 sampling event. Samples were analyzed for total metals by Eurofins-Test America Laboratories, Inc. (Eurofins-TA), located in Barberton, Ohio. The laboratory analytical results are reported in laboratory reports 240-184669-1 (Revision 1) and 240-184674-1 (Revision 1).

During the April 2023 sampling event, a groundwater sample was collected from each of the following wells:

- MW-16-01
- MW-16-02
- MW-16-03
- MW-16-04

Each sample was analyzed for the following constituents:

Analyte Group	Method
Total Metals	SW846 3005A/6020B/7470A

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. 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), where applicable. 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, where applicable. 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 IV total metals will be utilized for the purposes of a closure monitoring program.
- Data are usable for the purposes of the closure monitoring program.

QA/QC Sample Summary

- There was one equipment blank submitted with this dataset (EB-01). No target analytes were detected in the equipment blank.
- No target analytes were detected in the method blanks.
- LCS recoveries for all target analytes were within laboratory control limits.
- MS/MSD analyses were performed on sample EB-01 for anions. The percent recoveries (%Rs) and relative percent differences (RPDs) for the MS/MSD analyses met the method acceptance criteria.
- A laboratory duplicate analysis was not performed on a sample from this data set.
- DUP-01 corresponds with MW-16-03; RPDs between the parent and duplicate sample were within the QC limits with the following exception:
- The nondetect RL for chromium (5.0 µg/L) was above the QAPP requested RL (2 µg/L) in all groundwater samples.

**Laboratory Data Quality Review
Groundwater Monitoring Event April 2023
DTE Electric Company St. Clair Power Plant (DTE SCPP)**

Groundwater samples were collected by TRC for the April 2023 sampling event. Samples were analyzed for radium by Eurofins located in St. Louis, Missouri (Eurofins – St. Louis). The laboratory analytical results are reported in laboratory report 240-184674-2.

During the April 2023 sampling event, a groundwater sample was collected from each of the following wells:

- MW-16-01
- MW-16-02
- MW-16-03
- MW-16-04

Each sample was analyzed for the following constituents:

Analyte Group	Method
Radium (Ra-226, Ra-228, Combined Ra-226 & Ra-228)	SW846 9315/9320

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 Department of Energy Evaluation of Radiochemical Data Usability (USDOE, 1997). 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. Method blanks are used to assess potential contamination arising from laboratory sample preparation and/or analytical procedures;
- Data for laboratory control samples (LCSs) and laboratory control sample duplicates (LCSDs), when performed. The LCS/LCSDs are used to assess the accuracy and precision 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;
- Percent recoveries for carriers, where applicable, for radiochemistry only. Carriers are used to assess the chemical yield for the preparation and/or instrument efficiency;
- 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;
- 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 radium results will be utilized for the purposes of an assessment monitoring program.
- Data are usable for the purposes of the detection 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

- Target analytes were not detected in the method blanks.
- No target analytes were detected in the equipment blank (EB-01).
- LCS recoveries for all target analytes were within laboratory control limits.
- MS/MSD analyses were not performed on a sample from this data set.
- The field duplicate pair samples were DUP-01/MW-16-03. The results between the parent and duplicate samples were within acceptance limits.
- Carrier recoveries were within 40-110%.
- The minimum detectable concentration (MDC) for radium 228 and combined radium (1.07 pCi/L) was above the QAPP requested RL (1.0 pCi/L) in sample MW-16-01. There is no adverse impact on data usability since combined radium was detected above the QAPP specified RL in this sample and radium 228 was reported with the detection limit achieved.

**Laboratory Data Quality Review
Groundwater Monitoring Event October 2023
DTE Electric Company St. Clair Power Plant (DTE SCPP)**

Groundwater samples were collected by TRC for the October 2023 sampling event. Samples were analyzed for anions, total metals, and total dissolved solids by Eurofins Environment Testing, located in Barberton, Ohio. Samples were analyzed for radium by Eurofins Environment Testing, located in Earth City, Missouri. The laboratory analytical results are reported in laboratory reports 240-193602-1, 240-193602-2, and 240-193602-3.

During the October 2023 sampling event, a groundwater sample was collected from each of the following wells:

- MW-16-01
- MW-16-02
- MW-16-03
- MW-16-04

Each sample was analyzed for the following constituents:

Analyte Group	Method
Anions (Chloride, Fluoride, Sulfate)	SW846 9056A
Total Boron	SW846 3005A/6010D
Total Metals	SW846 3005A/6020B/7470A
Total Dissolved Solids	SM 2540C
Radium (Radium-226, Radium-228, Combined Radium)	SW846 9315/9320

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) and the Department of Energy Evaluation of Radiochemical Data Usability (USDOE, 1997). 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. 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), where applicable. 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, where applicable. The laboratory duplicates are used to assess the precision of the analytical method using a sample from the dataset;
- Percent recoveries for carriers, where applicable, for radiochemistry only. Carriers are used to assess the chemical yield for the preparation and/or instrument efficiency;
- 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, IV, and additional Part 115 constituents as well as copper, iron, nickel, vanadium, silver, and zinc 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

- TDS was analyzed slightly after the 7th day of collection for sample MW-16-02. However, there is no impact on data usability since the sample was analyzed for TDS on the 7th day after collection.
- There was one equipment blank submitted with this dataset (EB-01). Sulfate (1.0 ug/L) was detected in the equipment blank. There is no impact on the data usability since sulfate was nondetect in the associated samples.
- No target analytes were detected in the method blanks with the following exception.
 - Radium-228 was detected in method blank 160-632483/1-A at 0.6466 +/- 0.334 pCi/L. The detected radium-228 results for samples MW-16-01, MW16-04, and DUP-01 associated with this method blank are potentially false positives, as summarized in the attached table, Attachment A.
- LCS recoveries for all target analytes were within laboratory control limits.
- Laboratory duplicate analyses were performed on sample MW-16-01 for TDS, radium-226, and radium-228; all criteria were met.
- Samples DUP-01 and MW-16-01 were submitted as the field duplicate pair with this data set; all criteria were met.
- The nondetect RL (2.0 mg/L) for sulfate in samples MW-16-01, MW-16-02, and DUP-01 was above the QAPP-specified RL (1.0 mg/L) due to 2-fold dilutions likely performed due to the elevated concentrations of chloride.

- The nondetect RL (5.0 mg/L) for sulfate in samples MW-16-03 and MW-16-04 was above the QAPP-specified RL (1.0 mg/L) due to 5-fold dilutions likely performed due to elevated concentrations of chloride.
- The nondetect RL for chromium (5.0 µg/L) was above the QAPP requested RL (2.0 µg/L) in all groundwater samples.
- The nondetect RL (50 mg/L) for TDS in sample EB-01 was above the QAPP-specified RL (10 mg/L); there is no adverse impact on the data usability due to this issue since TDS was detected >10x the elevated RL for EB-01 in the associated groundwater samples.
- Carrier recoveries were within 40-110%.

Attachment A

Summary of Data Non-Conformances for Groundwater Monitoring Event Analytical Data
CCR DTE ST. Clair Power
East China Township, Michigan

Samples	Collection Date	Analyte	Non-Conformance/Issue
MW-16-01	10/12/2023	Radium-228	Method blank contamination; potential false positive.
MW-16-04	10/12/2023		
DUP-01	10/12/2023		