July 23, 2024 Project No. US0030747.9191

Aaron Darling
Michigan Department of Environment, Great Lakes, and Energy
27700 Donald Court
Warren, Michigan 48092-2793

SECOND QUARTER 2024 ENVIRONMENTAL MONITORING REPORT
SMITHS CREEK LANDFILL, WDS #452546
ST. CLAIR COUNTY, MICHIGAN

Dear Mr. Darling:

WSP USA Inc., (WSP) is providing this report to summarize monitoring efforts from the above referenced sampling event. This report is submitted on behalf of St. Clair County, Michigan under the direction of Mr. Matt Williams.

1.0 INTRODUCTION

The Smiths Creek Landfill (SCL) is a Type II landfill located at 6779 Smiths Creek Road in Kimball Township, St. Clair County, Michigan. The SCL occupies approximately 264.5 acres and is bordered on the north by residential and agricultural properties, on the south by undeveloped private and county owned property, on the east by the Wolvin Drain, and on the west by Smiths Creek and undeveloped and residential properties.

Groundwater monitoring and reporting were performed in accordance with the Michigan Department of Environmental Quality (MDEQ, now Environment, Great Lakes and Energy [EGLE]) approved Hydrogeologic Monitoring Plan (HMP) dated December 2014, which included a reduction in sampling frequency from quarterly to semiannually (during the second and fourth quarters of each calendar year). Leachate and surface water continue to be sampled on a quarterly basis. **Table 1, Monitoring Well Network Summary**, includes a summary of the monitoring well network. Designated sampling parameters, test methods, reporting limits, and corresponding containers, preservatives, and holding times are summarized in the HMP. Water level measurement procedures, groundwater and surface water sample collection methods, decontamination procedures, and leachate sample collection procedures were performed in accordance with the HMP and applicable Public Act 451, Part 115 Rules.

2.0 MONITORING RESULTS

Samples were collected by WSP personnel from fifteen monitoring wells, three surface water locations, and one leachate sampling location between May 8 and 10, 2024. Surface water location SW-D2 was dry at the time of sampling. Copies of the field data forms are included in **Appendix A, Field Data Sheets**. Table 1 identifies the monitoring wells included in the monitoring program. Copies of laboratory reports are included in **Appendix B, Laboratory Results**.

The analytical data for the one leachate sample and the three surface water samples is included in **Appendix B, Laboratory Analytical Report**. A review of the report indicates that the leachate and surface water results are similar to historical results. In addition, upstream and downstream surface water locations were compared and were found to be generally similar, as well as consistent with historically reported results. As such, there is no evidence of surface water impact as a result of the landfill.

3.0 GROUNDWATER SEEPAGE CHARACTERISTICS

Prior to well purging, WSP field personnel collected depth to groundwater measurements from each of the monitoring wells sampled, and groundwater elevations were calculated. The elevations are presented on **Table 2, Historical Groundwater Elevations** and **Figure 1, Groundwater Elevation Contour Map – May 2024**. Review of the map indicates that groundwater flow is toward the east, which is consistent with past determinations.

In accordance with Rule 299.4907(5), the groundwater seepage velocity was determined based on groundwater elevations. As presented in the HMP, Darcy's equation was used to calculate the horizontal seepage velocity, as shown below:

$$V = K\frac{i}{n}$$

Where,

V = seepage velocity
K = hydraulic conductivity
i = hydraulic gradient
n = effective porosity

Table 3, Groundwater Seepage Velocity Calculations, presents values taken from the HMP and used in the calculations, the calculated flow gradients, and the velocity across the site. As shown on Table 3, the calculated average groundwater seepage velocity was 0.0051 feet per day (ft/day) (1.9 feet per year (ft/year)), which is consistent with historical determinations.

4.0 STATISTICAL ANALYSIS RESULTS

WSP completed statistical analyses in accordance with the approved statistical analysis plan, entitled, "Statistical Analysis of Background Groundwater Monitoring Data (SABGMD)", that was prepared in accordance with R299.4908, and last updated in August 2014. **Table 4, Fourth Quarter 2024 Monitoring Results**, includes the comparisons of the current and previous semiannual event with the tolerance limits.

As discussed in a report from Golder (now known as WSP) to EGLE dated October 4, 2021, monitoring well MW-203B was installed on April 29, 2021 as a replacement well for monitoring well MW-203. Like monitoring well MW-203 before it, monitoring well MW-203B purges dry, and was thus only subject to limited well development following installation. As described in Golder's October 4, 2021 letter, additional purging of monitoring well MW-203B during continued sampling events may result in additional decreases in the concentrations of chloride, sodium, and potassium. As also proposed in the October 4, 2021 letter, if concentrations did not decrease with time, the limits would be recalculated once a minimum of eight new background values are available from the replacement well. Monitoring well MW-203B was installed immediately prior to the second quarter 2021 monitoring event, producing eight sampling events since the well was installed. Therefore, statistical limits for chloride, potassium, sodium, total inorganic nitrogen (TIN), and total organic carbon (TOC) at this well can be recalculated using the background for this well. Constituents arsenic, barium, and zinc do not have eight

background values to recalculate the tolerance limit for MW-203B. The procedure used for recalculating the statistical limits for a replacement well is described in Section 6.5 of the HMP. Below are the previous tolerance limits for monitoring well MW-203 and the updated tolerance limits for monitoring well MW-203B. No statistical exceedances were observed during the second quarter 2024 monitoring event with the updated tolerance limits for MW-203B.

Inorganic Indicators - Semiannual		MW-203 Tolerance Limit	MW-203B Updated Tolerance Limit	Second Quarter 2024 Results
Chloride	mg/L	39.9	42.2	40.2
Potassium	mg/L	1.5	9.29	4.57
Sodium	mg/L	87.5	104.9	89.1
Total Inorganic Nitrogen	mg/L	1.05	0.376	0.242
Total Organic Carbon	mg/L	5.1	3.42	1.68

4.1 Exceedances

Based on a review of Table 4, three (3) confirmed exceedances were reported during the second quarter 2024 monitoring event:

- Total Organic Carbon in monitoring well MW-207A – Verified
- Sodium in monitoring well MW-210 – Verified
- Arsenic in monitoring well MW-303A - Verified

4.2 Statistically Significant Increases

As shown in **Table 5, Summary of Statistical Exceedances** (required by MDEQ RMD-115-29), three (3) total exceedances (all verified) were reported during the second quarter 2024 monitoring event. An ASD is provided below for each of the exceedances.

4.2.1 Sodium in Monitoring Well MW-210

A verified statistically significant increase (SSI) for sodium in monitoring well MW-210 is shown on Table 4. It is WSP's opinion that the SSI reported for sodium in monitoring well MW-210 is not a result of landfill influence on the groundwater, but is rather a result of natural geochemical variability. As shown in **Appendix C, Time Series Plots MW-210**, the current concentration of sodium is within the range of historical values reported in monitoring well MW-210. Further, the concentration of sodium in monitoring well MW-210 is within the range of historical sodium concentrations in upgradient monitoring wells at the SCL, particularly upgradient monitoring well MW-303A. Because the concentration in downgradient monitoring well MW-210 is similar to that in upgradient monitoring wells, it is likely that the concentration in the downgradient well is a result of natural geochemical variability in the uppermost aquifer.

Finally, none of the other leachate indicator parameters in monitoring well MW-210 are showing exceedances or trends (as shown in Appendix C) and the reported concentrations for indicator parameters are within the range of historical concentrations for other monitoring wells at the SCL. Based on these observations, no additional response is necessary with respect to the recent exceedances for sodium in monitoring well MW-210. Continued detection monitoring is appropriate.

4.2.2 Total Organic Carbon in Monitoring Well MW-207A

A verified exceedance for total organic carbon (TOC) was identified in downgradient monitoring well MW-207A. As shown in **Appendix D**, **Time Series Plots MW-207A**, the current concentration of TOC is elevated with respect to TOC concentrations in upgradient monitoring wells at SCL. However, the concentrations of other indicator constituents, particularly chloride, potassium, sodium, and total inorganic nitrogen, decreased or stayed the same at the same time that TOC concentrations increased. If the increased concentration for TOC was a result of landfill influence on the landfill, it would be expected that the landfill indicator parameters would all increase simultaneously. Because only TOC showed an increase in concentration during recent sampling events, it is WSP's opinion that the recent change in TOC is not a result of landfill influence on the groundwater, but is a result of natural geochemical variability.

4.2.3 Arsenic in Monitoring Well MW-303A

An exceedance was identified for arsenic in upgradient monitoring well MW-303A during the second quarter 2024 monitoring period. Arsenic in monitoring well MW-303A has been variable over the last several years, with reported concentrations ranging between <1 and 4.4 micrograms per liter (ug/L), but not exceeding the Part 201 DWC of 10 ug/L (see TSP in Appendix D). Because monitoring well MW-303A is an upgradient well, it is WSP's opinion that the reported concentration is a result of natural geochemical variability in the uppermost aquifer. Based on these results, it is WSP's opinion that continued detection monitoring is appropriate, and no additional response is necessary. The statistical limit for dissolved arsenic in monitoring well MW-303A (1 ug/L) is the lowest limit for the monitoring network at SCL and is equivalent to the detection limit for arsenic. Because the arsenic limit is so low and the location is upgradient relative to the landfill, it is WSP's opinion that the arsenic concentrations in monitoring well MW-303A are representative of background conditions, and thus the statistical limit should be reevaluated to incorporate additional data.

4.2.4 Statistical Summary

Rule 299.4440(9) of Part 115 allows a site 30 days to prepare an ASD which asserts that an SSI indicated by groundwater monitoring data is the result of a source other than a release from the site. As indicated above, a total of five exceedances (all verified) were reported for the second quarter 2024 monitoring event. However, none of the exceedances reported during the second quarter 2024 monitoring period are attributable to landfill influence on the groundwater; thus, other than the proposed actions described above, no additional response is necessary and continued detection monitoring is appropriate. Due to the relatively low seepage velocity for the SCL (1.9 feet per year), it is WSP's opinion that, where applicable, confirmation sampling during the next semiannual monitoring event is appropriate.

5.0 CHAIN OF CUSTODY INFORMATION & FIELD FORMS

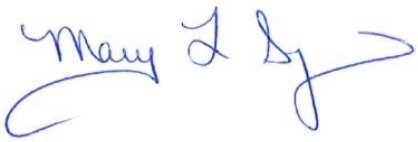
All samples were submitted under standard chain-of custody protocol. Copies of the chains of custody for this event are included with the laboratory results in Appendix A. Field forms are prepared at each sampling location. Copies of the field forms are included in Appendix B.

CLOSING

This report is submitted as required by the site's approved HMP by the undersigned professionals. Please do not hesitate to contact either of us at 248-295-0135, if you have any questions.

Sincerely,

WSP USA INC.



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CC: Matt Williams, St. Clair County/Smiths Creek Landfill

https://wsponlinenam.sharepoint.com/sites/global-smithscreekthomasrd/shared documents/200 reports/scl/2q24/final/fn rp-scl 2q2024_7-19-2024.docx

Tables

TABLE 1.
MONITORING WELL NETWORK SUMMARY
Smiths Creek Landfill

Well ID	Gradient Direction	Northing	Easting	Top of Casing Elevation (ft msl)	Bottom of Screen Elevation (ft msl)	Total Well Depth (ft)	Well Screen and Riser Materials
MW-101	Up	18374.3	14719.3	634.76	557.9	76.9	PVC
MW-106A	Down	14643.2	17132.0	633.43	558.2	75.2	PVC
MW-201	Up	18488.1	15529.3	634.57	559.2	75.4	PVC
MW-202	Up	17786.6	14714.4	635.22	570.6	64.6	PVC
MW-203	Down	14644.5	16028.9	632.05	558.9	73.2	PVC
MW-203B	Down	14546.9	16027.9	633.00	631.3	72	PVC
MW-207A	Down	15225.7	17099.4	634.29	551.4	82.9	PVC
MW-208B	Down	15533.4	17136.7	633.91	NA	NA	PVC
MW-209	Down	16102.6	17180.1	630.58	551.4	79.2	PVC
MW-210	Down	16937.0	17218.1	628.38	556.5	71.9	PVC
MW-212	Down	17719.0	16985.5	628.16	563.0	65.2	PVC
MW-301	Down	15814.4	17134.8	635.10	550.8	84.3	PVC
MW-302	Down	16545.2	17191.4	626.75	546.4	80.4	PVC
MW-303A	Up	15709.1	14987.9	633.41	557.7	75.7	PVC
MW-304	Up	16769.8	14812.1	635.12	559.4	75.7	PVC
MW-305	Down	17269.0	17204.0	628.93	553.1	75.8	PVC

Notes:

NA - Not available

Information from CTI, 2010

MSL - Mean Sea Level

PVC - Polyvinyl Chloride

TABLE 2.
HISTORICAL GROUNDWATER ELEVATIONS
Smiths Creek Landfill

Well ID	Top of Casing Elevation	2019		2020		2021		2022		2023		2024
		5/14/2019	11/5/2019	5/29/2020	12/1/2020	5/4/2021	10/19/2021	6/15/2022	10/24/2022	5/2/2023	11/7/2023	5/8/2024
MW-101	634.76	611.30	611.73	611.38	611.08	611.79	612.03	611.57	610.46	610.39	611.14	611.45
MW-106A	633.43	602.14	602.48	602.41	602.14	602.06	602.39	602.11	601.53	599.99	598.61	600.64
MW-201	634.57	610.68	611.13	611.39	610.73	611.38	611.49	611.34	610.20	610.43	602.01	611.69
MW-202	635.22	610.81	611.18	610.92	610.57	611.24	611.65	611.19	610.09	609.80	606.81	610.83
MW-203	632.05	606.02	607.28	607.66	607.62	n/a	n/a	n/a	n/a	n/a	n/a	n/a
MW-203B	633.00	n/a	n/a	n/a	n/a	609.02	608.77	608.45	608.18	603.61	607.71	607.65
MW-207A	634.29	597.78	598.38	598.59	598.11	598.45	598.92	598.47	597.42	598.19	594.69	597.80
MW-208B	633.91	598.96	599.58	599.87	599.41	599.80	600.21	599.80	598.76	598.44	598.91	598.94
MW-209	630.58	601.83	602.41	602.78	602.44	602.72	603.00	602.73	601.73	601.27	601.12	600.73
MW-210	628.38	599.70	600.39	600.83	600.62	600.84	601.02	600.85	599.89	599.39	602.75	599.76
MW-212	628.16	599.07	599.64	600.23	600.11	600.42	600.46	600.26	599.21	598.80	599.22	599.34
MW-301	635.10	600.49	601.20	601.40	601.01	601.36	601.74	601.38	600.39	598.97	600.48	601.67
MW-302	626.75	600.73	601.34	601.86	601.63	601.92	602.04	601.81	600.82	600.58	599.30	601.05
MW-303A	633.41	610.20	610.91	608.91	610.30	610.88	611.22	610.93	609.89	610.00	604.50	611.21
MW-304	635.12	609.42	609.89	612.34	609.27	609.93	610.21	609.86	608.81	609.12	609.70	610.22
MW-305	628.93	598.28	590.80	599.45	599.15	599.49	599.75	599.45	598.39	596.63	599.13	598.43

TABLE 3.
GROUNDWATER SEEPAGE VELOCITY CALCULATIONS
Smiths Creek Landfill

Flow Paths	Δ h (feet)[2]	Δ l (feet)[3]	Hydraulic Gradient (Δ h/Δ l)	Average Permeability, K (feet per day)[1]	Assumed Effective Porosity (n_e)	Average Linear Groundwater Velocity (feet per day)[4]
A (MW-101/MW-212)	12.11	2356	0.0051	0.283	0.30	0.0048
B (MW-303A/MW-207A)	13.41	2168	0.0062			0.0058
C (MW-304/MW-305)	11.79	2443	0.0048			0.0046

Notes:

1. Average K values from CTI (2012).
2. Δ h = Change in groundwater elevation.
3. Δ l = Distance along flow paths.
4. Velocity = (Δ h /Δ l x K) / n_e.

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TABLE 4.
SECOND QUARTER 2024 MONITORING RESULTS
Smiths Creek Landfill

Constituent Name	Units	Prediction Limits	Previous Quarterly Results	Current Quarterly Results
MW-101			**11/7/2023**	**5/4/2024**
Inorganic Indicators - Semiannual				
Chloride	mg/L	30.1	24.6	28.5
Potassium	mg/L	2.4	1.6	1.68
Sodium	mg/L	75.3	69.9	67.7
Total Inorganic Nitrogen	mg/L	0.72	0.122	0.095
Total Organic Carbon	mg/L	9.1	1.65	1.23
Metals - Annual				
Arsenic	ug/L	4.2	n/a	1.9
Barium	ug/L	48	n/a	47.1
Zinc	ug/L	110	n/a	<10
MW-106A			**11/8/2023**	**5/4/2024**
Inorganic Indicators - Semiannual				
Chloride	mg/L	39.8	37	38.6
Potassium	mg/L	3.7	1.16	1.2
Sodium	mg/L	89.1	77.9	79.4
Total Organic Carbon	mg/L	5.1	2.02	1.69
Total Inorganic Nitrogen	mg/L	0.48	0.16	0.088
Metals - Annual				
Arsenic	ug/L	12.5	n/a	5.5
Barium	ug/L	106	n/a	60.2
Zinc	ug/L	5.3	n/a	<10
MW-201			**11/7/2023**	**5/4/2024**
Inorganic Indicators - Semiannual				
Chloride	mg/L	30.2	15.9	18.1
Potassium	mg/L	2.6	1.3	1.41
Sodium	mg/L	75.2	66.1	68.5
Total Inorganic Nitrogen	mg/L	5.07	0.0843	0.0821
Total Organic Carbon	mg/L	7.2	<2	1.1
Metals - Annual				
Arsenic	ug/L	6.2	n/a	3.8
Barium	ug/L	50	n/a	41.8
Zinc	ug/L	40	n/a	<10
MW-202			**11/7/2023**	**5/4/2024**
Inorganic Indicators - Semiannual				
Chloride	mg/L	40	29.2	32.3
Potassium	mg/L	2.1	1.18	1.27
Sodium	mg/L	79	68.4	71.8
Total Organic Carbon	mg/L	8.2	1.57	1.22
Total Inorganic Nitrogen	mg/L	0.64	0.0815	0.0574
Metals - Annual				
Arsenic	ug/L	2.0	n/a	3.8
Barium	ug/L	110	n/a	71.5
Zinc	ug/L	60	n/a	<10

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TABLE 4.
SECOND QUARTER 2024 MONITORING RESULTS
Smiths Creek Landfill

Constituent Name	Units	Prediction Limits	Previous Quarterly Results	Current Quarterly Results
MW-203B			**11/8/2023**	**5/4/2024**
Inorganic Indicators - Semiannual				
Chloride	mg/L	42.2	36.9	40.2
Potassium	mg/L	9.29	4.61	4.57
Sodium	mg/L	104.9	88.4	89.1
Total Inorganic Nitrogen	mg/L	0.376	0.335	0.242
Total Organic Carbon	mg/L	3.42	2.1	1.68
Metals - Annual				
Arsenic	ug/L	18.2*	n/a	6.7
Barium	ug/L	87*	n/a	69.3
Zinc	ug/L	60*	n/a	<10
MW-207A			**11/8/2023**	**5/4/2024**
Inorganic Indicators - Semiannual				
Chloride	mg/L	33.5	7.82	11.3
Potassium	mg/L	3.5	0.591	0.726
Sodium	mg/L	94.2	28.4	20.4
Total Inorganic Nitrogen	mg/L	1.62	<0.02	<0.04
Total Organic Carbon	mg/L	4.2	13.3	8.45
Metals - Annual				
Arsenic	ug/L	14.3	n/a	<1
Barium	ug/L	125.7	n/a	53.4
Zinc	ug/L	30	n/a	<10
MW-208B			**11/8/2023**	**5/4/2024**
Inorganic Indicators - Semiannual				
Chloride	mg/L	36.8	31.2	34.7
Potassium	mg/L	2.4	1.16	1.15
Sodium	mg/L	117.3	85.7	86.7
Total Inorganic Nitrogen	mg/L	4.4	0.38	0.28
Total Organic Carbon	mg/L	6.2	1.23	1.34
Metals - Annual				
Arsenic	ug/L	17.0	n/a	8.3
Barium	ug/L	80.6	n/a	55.2
Zinc	ug/L	9.7	n/a	<10
MW-209			**11/8/2023**	**5/4/2024**
Inorganic Indicators - Semiannual				
Chloride	mg/L	44.5	33.3	37.1
Potassium	mg/L	1.5	1.04	1.09
Sodium	mg/L	99.8	90	92.9
Total Organic Carbon	mg/L	7.8	1.81	1.19
Total Inorganic Nitrogen	mg/L	5.72	0.114	0.0683
Metals - Annual				
Arsenic	ug/L	3.0	n/a	2.4
Barium	ug/L	55	n/a	47.3
Zinc	ug/L	39	n/a	<10

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TABLE 4.
SECOND QUARTER 2024 MONITORING RESULTS
Smiths Creek Landfill

Constituent Name	Units	Prediction Limits	Previous Quarterly Results	Current Quarterly Results
MW-210			**11/8/2023**	**5/4/2024**
Inorganic Indicators - Semiannual				
Chloride	mg/L	40.1	29.9	30.6
Potassium	mg/L	2.45	1.29	2.15
Sodium	mg/L	90.6	92.9	135
Total Inorganic Nitrogen	mg/L	1.71	0.0269	0.147
Total Organic Carbon	mg/L	10.6	1.46	1.74
Metals - Annual				
Arsenic	ug/L	16	n/a	6.7
Barium	ug/L	480	n/a	53.5
Zinc	ug/L	50	n/a	12.5
MW-212			**11/8/2023**	**5/4/2024**
Inorganic Indicators - Semiannual				
Chloride	mg/L	41.4	30.5	33.3
Potassium	mg/L	1.8	0.959	0.992
Sodium	mg/L	101.2	88.3	90.8
Total Inorganic Nitrogen	mg/L	0.72	0.0371	0.119
Total Organic Carbon	mg/L	7.1	1.59	1.6
Metals - Annual				
Arsenic	ug/L	60	n/a	6.0
Barium	ug/L	362.1	n/a	66.2
Zinc	ug/L	20	n/a	<10
MW-301			**11/9/2023**	**5/4/2024**
Inorganic Indicators - Semiannual				
Chloride	mg/L	54.3	39.2	42.6
Potassium	mg/L	11.8	1.19	1.21
Sodium	mg/L	110.4	98.1	99.9
Total Inorganic Nitrogen	mg/L	1.13	0.235	0.181
Total Organic Carbon	mg/L	12.3	1.13	1.08
Metals - Annual				
Arsenic	ug/L	7.1	n/a	3.1
Barium	ug/L	60	n/a	33.4
Zinc	ug/L	21	n/a	<10
MW-302			**11/8/2023**	**5/4/2024**
Inorganic Indicators - Semiannual				
Chloride	mg/L	67	36.1	39.4
Potassium	mg/L	7.9	1.63	1.67
Sodium	mg/L	111.9	93.3	96.1
Total Organic Carbon	mg/L	11.9	1.16	1.10
Total Inorganic Nitrogen	mg/L	0.92	0.077	0.041
Metals - Annual				
Arsenic	ug/L	6.0	n/a	<1
Barium	ug/L	40	n/a	32.3
Zinc	ug/L	29	n/a	<10

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TABLE 4.
SECOND QUARTER 2024 MONITORING RESULTS
Smiths Creek Landfill

Constituent Name	Units	Prediction Limits	Previous Quarterly Results	Current Quarterly Results
MW-303A			**11/8/2023**	**5/4/2024**
Inorganic Indicators - Semiannual				
Chloride	mg/L	48.6	40.5	44.8
Potassium	mg/L	2.2	0.985	1.09
Sodium	mg/L	157.6	103	107
Total Organic Carbon	mg/L	1.89	1.17	1.2
Total Inorganic Nitrogen	mg/L	0.21	0.0812	0.0748
Metals - Annual				
Arsenic	ug/L	1.0	n/a	4.4
Barium	ug/L	24.25	n/a	6.6
Zinc	ug/L	10	n/a	<10
MW-304			**11/8/2023**	**5/4/2024**
Inorganic Indicators - Semiannual				
Chloride	mg/L	40.2	30.5	34.1
Potassium	mg/L	4.2	1.48	1.46
Sodium	mg/L	90	78.6	78.5
Total Inorganic Nitrogen	mg/L	1.3	0.154	0.149
Total Organic Carbon	mg/L	3.1	1.05	1.0
Metals - Annual				
Arsenic	ug/L	2.0	n/a	1.4
Barium	ug/L	43	n/a	24.9
Zinc	ug/L	30	n/a	<10
MW-305			**11/8/2023**	**5/4/2024**
Inorganic Indicators - Semiannual				
Chloride	mg/L	49.2	33.4	36.4
Potassium	mg/L	11.1	1.72	1.79
Sodium	mg/L	96.1	92.3	94.6
Total Organic Carbon	mg/L	11.9	1.83	1.51
Total Inorganic Nitrogen	mg/L	2.16	0.727	0.38
Metals - Annual				
Arsenic	ug/L	6.4	n/a	2.8
Barium	ug/L	60	n/a	39.2
Zinc	ug/L	40	n/a	<10

Notes:

Shaded values represent exceedance of statistical prediction limit

mg/L = milligrams per liter; ug/L = micrograms per liter.

* = limits shown are from MW-203; additional data being gathered to determine whether revised limits are required for MW-203B

TABLE 5.
SUMMARY OF STATISTICAL EXCEEDANCES
Second Quarter 2024 Monitoring Event
Smiths Creek Landfill

Parameter	Well #	Location (U/D/S)	Part 201 GRCC DWC	Statistical Limit	2Q2024 (bold>201)	4Q2023 (bold>201)	2Q2023 (bold>201)	4Q2022 (bold>201)
Potassium (mg/l)	MW-203B	S	n/a	1.5	4.57	4.61*	4.57*	5.05*
Sodium (mg/L)		S	230	87.5	89.1	88.4*	89.2*	97.7*
Total Organic Carbon (mg/L)	MW-207A	D	NC	4.2	8.45	13.3	9.56	2.41
Sodium (mg/L)	MW-210	D	230	90.6	135	92.9	93.7	101
Arsenic (ug/L)	MW-303A	U	10	1.0	4.4	n/a	3	n/a
Sodium (mg/L)	MW-305	D	230	96.1	94.6	92.3	93.9	97.6

COMMENTS:

Shaded values exceed the statistical limit.

n/a = not applicable, not required during specified sampling event

n/s = not sampled, recently installed replacement well

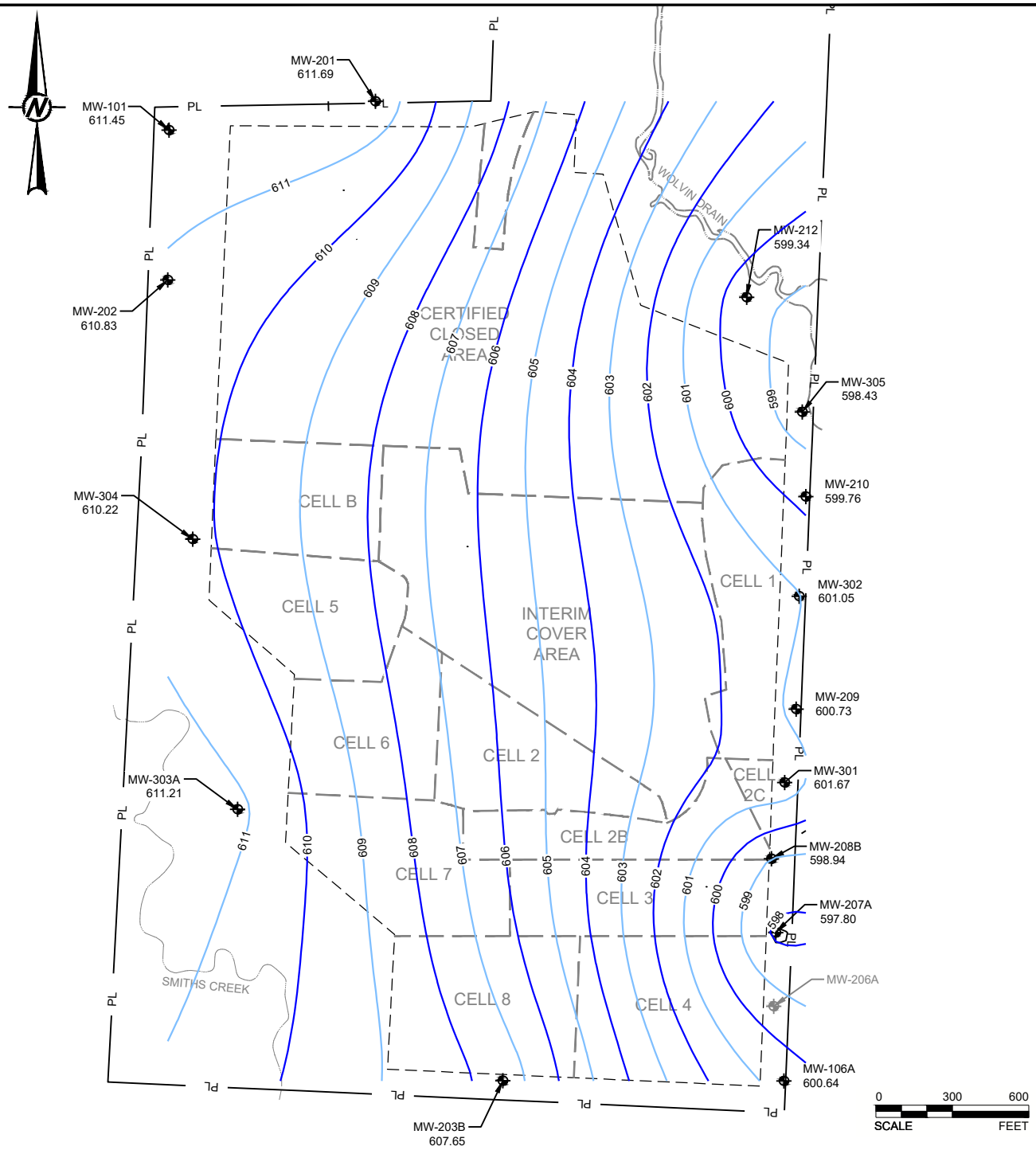
NL=No Limit, NC=Not Calculated

U=upgradient, D=downgradient, S=sidegradient

GRCC = generic residential cleanup criteria; DWC = drinking water criteria

*These sampling events used MW-203 Statistical Limits and were considered exceedances

Figure



LEGEND

- PROPERTY BOUNDARY
- SOLID WASTE BOUNDARY
- CELL BOUNDARY
- 600 GROUNDWATER ELEVATION CONTOUR
- MW-XXX XXX.XX MONITORING WELL LOCATION AND GROUNDWATER ELEVATION
- MW-XXX WELL ABANDONED

CLIENT
SMITHS CREEK LANDFILL
6779 SMITHS CREEK ROAD
SMITHS CREEK, MICHIGAN

PROJECT
2024 GROUNDWATER MONITORING

TITLE
GROUNDWATER ELEVATION CONTOUR MAP
May 2024

CONSULTANT
wsp

YYYY-MM-DD	2024-07-08
PREPARED	CAG
DESIGN	RR
REVIEW	RR
APPROVED	MLS

PROJECT No.	CONTROL	Rev.	FIGURE
US0030747.9191	31405076.000B005.dwg	0	1

APPENDIX A

Laboratory Results

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

May 28, 2024

Mary Siegan
WSP - Novi, MI
46850 Magellan Drive
Suite 190
Novi, MI 48377

RE: Project: Smith's Creek LF Leachate Q2
Pace Project No.: 50372913

Dear Mary Siegan:

Enclosed are the analytical results for sample(s) received by the laboratory on May 11, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Brian Hall
brian.hall@pacelabs.com
(616)975-4500
Project Manager

Enclosures

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

CERTIFICATIONS

Project: Smith's Creek LF Leachate Q2
Pace Project No.: 50372913

Pace Analytical Services Indianapolis

7726 Moller Road, Indianapolis, IN 46268
Illinois Accreditation #: 200074
Indiana Drinking Water Laboratory #: C-49-06
Kansas/TNI Certification #: E-10177
Kentucky UST Agency Interest #: 80226
Kentucky WW Laboratory ID #: 98019
Michigan Drinking Water Laboratory #9050
Ohio VAP Certified Laboratory #: CL0065
Oklahoma Laboratory #: 9204
Texas Certification #: T104704355
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

SAMPLE SUMMARY

Project: Smith's Creek LF Leachate Q2
Pace Project No.: 50372913

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50372913001	**Leachate**	Water	05/10/24 09:40	05/11/24 09:35

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

SAMPLE ANALYTE COUNT

Project: Smith's Creek LF Leachate Q2
Pace Project No.: 50372913

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50372913001	**Leachate**	EPA 6010	ELK, NWB	9	PASI-I
		EPA 6020	DMT	13	PASI-I
		EPA 5030B/8260	TAY	51	PASI-I
		SM 2320B	DAW	3	PASI-I
		SM 2540C	SL	1	PASI-I
		EPA 410.4	AEL	1	PASI-I
		EPA 9038	STS	1	PASI-I
		NO2+NO3+NH3 Calculation	MMS	1	PASI-I
		EPA 353.2	ZM	1	PASI-I
		EPA 420.4	ZM	1	PASI-I
		SM 4500-Cl-E	ZM	1	PASI-I
		SM 4500-NH3 G	OAS	1	PASI-I
		SM 5310C	YAM	1	PASI-I
		EPA 9012	ATS	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

ANALYTICAL RESULTS

Project: Smith's Creek LF Leachate Q2
Pace Project No.: 50372913

Sample: Leachate **Lab ID: 50372913001** Collected: 05/10/24 09:40 Received: 05/11/24 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis							
Calcium	**152000**	ug/L	5000	1	05/20/24 16:10	05/21/24 12:05	7440-70-2	
Chromium	**288**	ug/L	100	1	05/20/24 16:10	05/21/24 12:05	7440-47-3	
Cobalt	**<75.0**	ug/L	75.0	1	05/20/24 16:10	05/21/24 12:05	7440-48-4	
Copper	**<50.0**	ug/L	50.0	1	05/20/24 16:10	05/21/24 12:05	7440-50-8	
Iron	**34900**	ug/L	500	1	05/20/24 16:10	05/21/24 12:05	7439-89-6	
Lead	**<250**	ug/L	250	1	05/20/24 16:10	05/21/24 12:05	7439-92-1	
Magnesium	**142000**	ug/L	5000	1	05/20/24 16:10	05/21/24 12:05	7439-95-4	
Potassium	**431000**	ug/L	2500	1	05/20/24 16:10	05/21/24 12:05	7440-09-7	
Sodium	**3950000**	ug/L	25000	5	05/20/24 16:10	05/21/24 17:51	7440-23-5	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis							
Antimony	**14.6**	ug/L	5.0	1	05/17/24 09:45	05/20/24 17:33	7440-36-0	
Arsenic	**153**	ug/L	5.0	1	05/17/24 09:45	05/20/24 17:33	7440-38-2	
Barium	**821**	ug/L	25.0	1	05/17/24 09:45	05/20/24 17:33	7440-39-3	
Beryllium	**<5.0**	ug/L	5.0	1	05/17/24 09:45	05/21/24 09:00	7440-41-7	
Boron	**12300**	ug/L	5000	50	05/17/24 09:45	05/21/24 08:26	7440-42-8	N2
Cadmium	**<1.0**	ug/L	1.0	1	05/17/24 09:45	05/20/24 17:33	7440-43-9	
Manganese	**238**	ug/L	25.0	1	05/17/24 09:45	05/20/24 17:33	7439-96-5	
Nickel	**98.4**	ug/L	10.0	1	05/17/24 09:45	05/20/24 17:33	7440-02-0	
Selenium	**<5.0**	ug/L	5.0	1	05/17/24 09:45	05/20/24 17:33	7782-49-2	
Silver	**<1.0**	ug/L	1.0	1	05/17/24 09:45	05/20/24 17:33	7440-22-4	
Thallium	**<10.0**	ug/L	10.0	1	05/17/24 09:45	05/20/24 17:33	7440-28-0	
Vanadium	**71.0**	ug/L	10.0	1	05/17/24 09:45	05/21/24 09:00	7440-62-2	
Zinc	**372**	ug/L	50.0	1	05/17/24 09:45	05/21/24 09:00	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Indianapolis							
Acetone	**<20.0**	ug/L	20.0	1		05/18/24 05:27	67-64-1	
Acrylonitrile	**<5.0**	ug/L	5.0	1		05/18/24 05:27	107-13-1	
Benzene	**<1.0**	ug/L	1.0	1		05/18/24 05:27	71-43-2	
Bromochloromethane	**<1.0**	ug/L	1.0	1		05/18/24 05:27	74-97-5	
Bromodichloromethane	**<1.0**	ug/L	1.0	1		05/18/24 05:27	75-27-4	
Bromoform	**<1.0**	ug/L	1.0	1		05/18/24 05:27	75-25-2	
Bromomethane	**<5.0**	ug/L	5.0	1		05/18/24 05:27	74-83-9	
2-Butanone (MEK)	**<5.0**	ug/L	5.0	1		05/18/24 05:27	78-93-3	
Carbon disulfide	**<1.0**	ug/L	1.0	1		05/18/24 05:27	75-15-0	
Carbon tetrachloride	**<1.0**	ug/L	1.0	1		05/18/24 05:27	56-23-5	
Chlorobenzene	**<1.0**	ug/L	1.0	1		05/18/24 05:27	108-90-7	
Chloroethane	**<5.0**	ug/L	5.0	1		05/18/24 05:27	75-00-3	
Chloroform	**<1.0**	ug/L	1.0	1		05/18/24 05:27	67-66-3	
Chloromethane	**<5.0**	ug/L	5.0	1		05/18/24 05:27	74-87-3	
1,2-Dibromo-3-chloropropane	**<5.0**	ug/L	5.0	1		05/18/24 05:27	96-12-8	
Dibromochloromethane	**<1.0**	ug/L	1.0	1		05/18/24 05:27	124-48-1	
1,2-Dibromoethane (EDB)	**<1.0**	ug/L	1.0	1		05/18/24 05:27	106-93-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

ANALYTICAL RESULTS

Project: Smith's Creek LF Leachate Q2
Pace Project No.: 50372913

Sample: Leachate **Lab ID: 50372913001** Collected: 05/10/24 09:40 Received: 05/11/24 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 5030B/8260							
	Pace Analytical Services - Indianapolis							
Dibromomethane	**<1.0**	ug/L	1.0	1		05/18/24 05:27	74-95-3	
1,2-Dichlorobenzene	**<1.0**	ug/L	1.0	1		05/18/24 05:27	95-50-1	
1,4-Dichlorobenzene	**<1.0**	ug/L	1.0	1		05/18/24 05:27	106-46-7	
trans-1,4-Dichloro-2-butene	**<5.0**	ug/L	5.0	1		05/18/24 05:27	110-57-6	
1,1-Dichloroethane	**<1.0**	ug/L	1.0	1		05/18/24 05:27	75-34-3	
1,2-Dichloroethane	**<1.0**	ug/L	1.0	1		05/18/24 05:27	107-06-2	
1,1-Dichloroethene	**<1.0**	ug/L	1.0	1		05/18/24 05:27	75-35-4	
cis-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		05/18/24 05:27	156-59-2	
trans-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		05/18/24 05:27	156-60-5	
1,2-Dichloropropane	**<1.0**	ug/L	1.0	1		05/18/24 05:27	78-87-5	
cis-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		05/18/24 05:27	10061-01-5	
trans-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		05/18/24 05:27	10061-02-6	
Ethylbenzene	**1.3**	ug/L	1.0	1		05/18/24 05:27	100-41-4	
2-Hexanone	**<5.0**	ug/L	5.0	1		05/18/24 05:27	591-78-6	
Iodomethane	**<1.0**	ug/L	1.0	1		05/18/24 05:27	74-88-4	
Methylene Chloride	**<5.0**	ug/L	5.0	1		05/18/24 05:27	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<5.0**	ug/L	5.0	1		05/18/24 05:27	108-10-1	
Styrene	**<1.0**	ug/L	1.0	1		05/18/24 05:27	100-42-5	
1,1,1,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		05/18/24 05:27	630-20-6	
1,1,2,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		05/18/24 05:27	79-34-5	
Tetrachloroethene	**<1.0**	ug/L	1.0	1		05/18/24 05:27	127-18-4	
Toluene	**1.3**	ug/L	1.0	1		05/18/24 05:27	108-88-3	
1,1,1-Trichloroethane	**<1.0**	ug/L	1.0	1		05/18/24 05:27	71-55-6	
1,1,2-Trichloroethane	**<1.0**	ug/L	1.0	1		05/18/24 05:27	79-00-5	
Trichloroethene	**<1.0**	ug/L	1.0	1		05/18/24 05:27	79-01-6	
Trichlorofluoromethane	**<1.0**	ug/L	1.0	1		05/18/24 05:27	75-69-4	
1,2,3-Trichloropropane	**<1.0**	ug/L	1.0	1		05/18/24 05:27	96-18-4	
Vinyl chloride	**<1.0**	ug/L	1.0	1		05/18/24 05:27	75-01-4	
Xylene (Total)	**<2.0**	ug/L	2.0	1		05/18/24 05:27	1330-20-7	
m&p-Xylene	**<2.0**	ug/L	2.0	1		05/18/24 05:27	179601-23-1	
o-Xylene	**<1.0**	ug/L	1.0	1		05/18/24 05:27	95-47-6	
Surrogates								
4-Bromofluorobenzene (S)	104	%.	79-124	1		05/18/24 05:27	460-00-4	F1,H1, HS,pH
Dibromofluoromethane (S)	113	%.	82-128	1		05/18/24 05:27	1868-53-7	
Toluene-d8 (S)	97	%.	73-122	1		05/18/24 05:27	2037-26-5	
2320B Alkalinity	Analytical Method: SM 2320B							
	Pace Analytical Services - Indianapolis							
Alkalinity, Total as CaCO3	**4580000**	ug/L	10000	1		05/15/24 22:47		
Alkalinity,Bicarbonate (CaCO3)	**4580000**	ug/L	10000	1		05/15/24 22:47		
Alkalinity,Carbonate (CaCO3)	**<10000**	ug/L	10000	1		05/15/24 22:47		
2540C Total Dissolved Solids	Analytical Method: SM 2540C							
	Pace Analytical Services - Indianapolis							
Total Dissolved Solids	**13600000**	ug/L	667000	1		05/15/24 12:17		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

ANALYTICAL RESULTS

Project: Smith's Creek LF Leachate Q2
Pace Project No.: 50372913

Sample: Leachate **Lab ID: 50372913001** Collected: 05/10/24 09:40 Received: 05/11/24 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
410.4 COD	Analytical Method: EPA 410.4 Preparation Method: EPA 410.4 Pace Analytical Services - Indianapolis							
Chemical Oxygen Demand	**2200000**	ug/L	50000	1	05/18/24 13:31	05/18/24 16:20		P4
9038 Sulfate Water	Analytical Method: EPA 9038 Pace Analytical Services - Indianapolis							
Sulfate	**79300**	ug/L	50000	5		05/14/24 16:29	14808-79-8	
Total Inorganic Nitrogen	Analytical Method: NO2+NO3+NH3 Calculation Pace Analytical Services - Indianapolis							
Total Inorganic Nitrogen	**903000**	ug/L	20.0	1		05/28/24 14:58		
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis							
Nitrogen, NO2 plus NO3	**<1000**	ug/L	1000	50		05/20/24 14:57		D3,P4
420.4 Phenolics, Total	Analytical Method: EPA 420.4 Preparation Method: EPA 420.4 Pace Analytical Services - Indianapolis							
Phenolics, Total Recoverable	**<250**	ug/L	250	1	05/21/24 10:15	05/21/24 15:38	64743-03-9	D3,P4
4500 Chloride	Analytical Method: SM 4500-Cl-E Pace Analytical Services - Indianapolis							
Chloride	**7350000**	ug/L	200000	200		05/19/24 14:40	16887-00-6	
4500 Ammonia Water	Analytical Method: SM 4500-NH3 G Pace Analytical Services - Indianapolis							
Nitrogen, Ammonia	**903000**	ug/L	10000	100		05/17/24 13:43	7664-41-7	P4
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis							
Total Organic Carbon	**437000**	ug/L	50000	100		05/17/24 09:06	7440-44-0	
9012 Cyanide, Total	Analytical Method: EPA 9012 Preparation Method: EPA 9012 Pace Analytical Services - Indianapolis							
Cyanide	**22.2**	ug/L	5.0	1	05/23/24 09:23	05/23/24 20:20	57-12-5	P4

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

QUALITY CONTROL DATA

Project: Smith's Creek LF Leachate Q2
Pace Project No.: 50372913

QC Batch: 789980
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372913001

METHOD BLANK: 3614583 Matrix: Water
Associated Lab Samples: 50372913001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Calcium	ug/L	<1000	1000	05/21/24 11:14	
Chromium	ug/L	<20.0	20.0	05/21/24 11:14	
Cobalt	ug/L	<15.0	15.0	05/21/24 11:14	
Copper	ug/L	<10.0	10.0	05/21/24 11:14	
Iron	ug/L	<100	100	05/21/24 11:14	
Lead	ug/L	<50.0	50.0	05/21/24 11:14	
Magnesium	ug/L	<1000	1000	05/21/24 11:14	
Potassium	ug/L	<500	500	05/21/24 11:14	
Sodium	ug/L	<1000	1000	05/21/24 11:14	

LABORATORY CONTROL SAMPLE: 3614584

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	ug/L	10000	9890	99	80-120	
Chromium	ug/L	1000	973	97	80-120	
Cobalt	ug/L	1000	958	96	80-120	
Copper	ug/L	1000	948	95	80-120	
Iron	ug/L	10000	9470	95	80-120	
Lead	ug/L	1000	940	94	80-120	
Magnesium	ug/L	10000	9480	95	80-120	
Potassium	ug/L	10000	9680	97	80-120	
Sodium	ug/L	10000	9620	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3614585 3614586

Parameter	Units	50372909024 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	ug/L	719000	10000	10000	689000	717000	-300	-25	75-125	4	20	E,P6
Chromium	ug/L	ND	1000	1000	969	989	97	99	75-125	2	20	
Cobalt	ug/L	ND	1000	1000	926	948	92	95	75-125	2	20	
Copper	ug/L	ND	1000	1000	945	977	94	98	75-125	3	20	
Iron	ug/L	1170	10000	10000	10400	10600	92	95	75-125	2	20	
Lead	ug/L	ND	1000	1000	874	894	87	89	75-125	2	20	
Magnesium	ug/L	292000	10000	10000	285000	296000	-71	35	75-125	4	20	P6
Potassium	ug/L	16300	10000	10000	25700	26900	94	106	75-125	4	20	
Sodium	ug/L	1450000	10000	10000	1390000	1450000	-657	-33	75-125	4	20	E,P6

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

QUALITY CONTROL DATA

Project: Smith's Creek LF Leachate Q2
Pace Project No.: 50372913

QC Batch: 790470
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372913001

METHOD BLANK: 3617124 Matrix: Water
Associated Lab Samples: 50372913001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	<1.0	1.0	05/20/24 15:45	
Arsenic	ug/L	<1.0	1.0	05/20/24 15:45	
Barium	ug/L	<5.0	5.0	05/20/24 15:45	
Beryllium	ug/L	<1.0	1.0	05/20/24 15:45	
Boron	ug/L	<20.0	20.0	05/21/24 07:49	N2
Cadmium	ug/L	<0.20	0.20	05/20/24 15:45	
Manganese	ug/L	<5.0	5.0	05/20/24 15:45	
Nickel	ug/L	<2.0	2.0	05/20/24 15:45	
Selenium	ug/L	<1.0	1.0	05/20/24 15:45	
Silver	ug/L	<0.20	0.20	05/20/24 15:45	
Thallium	ug/L	<2.0	2.0	05/20/24 15:45	
Vanadium	ug/L	<2.0	2.0	05/20/24 15:45	
Zinc	ug/L	<10.0	10.0	05/21/24 07:49	

LABORATORY CONTROL SAMPLE: 3617125

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	40	41.3	103	80-120	
Arsenic	ug/L	40	38.7	97	80-120	
Barium	ug/L	40	37.5	94	80-120	
Beryllium	ug/L	40	38.1	95	80-120	
Boron	ug/L	40	41.8	104	80-120	N2
Cadmium	ug/L	40	40.7	102	80-120	
Manganese	ug/L	40	40.9	102	80-120	
Nickel	ug/L	40	37.8	94	80-120	
Selenium	ug/L	40	39.7	99	80-120	
Silver	ug/L	40	41.0	102	80-120	
Thallium	ug/L	40	41.0	102	80-120	
Vanadium	ug/L	40	37.1	93	80-120	
Zinc	ug/L	40	41.2	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3617126 3617127

Parameter	Units	50372871008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	40	40	41.9	42.9	105	107	75-125	2	20	
Arsenic	ug/L	1.4	40	40	39.5	39.8	95	96	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

QUALITY CONTROL DATA

Project: Smith's Creek LF Leachate Q2
Pace Project No.: 50372913

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3617126 3617127

Parameter	Units	50372871008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	ug/L	66.4	40	40	106	107	99	101	75-125	1	20	
Beryllium	ug/L	ND	40	40	39.2	39.3	98	98	75-125	0	20	
Boron	ug/L	156	40	40	196	196	99	100	75-125	0	20	N2
Cadmium	ug/L	ND	40	40	38.0	36.9	95	92	75-125	3	20	
Manganese	ug/L	97.8	40	40	134	136	90	96	75-125	2	20	
Nickel	ug/L	2.0	40	40	34.9	35.5	82	84	75-125	2	20	
Selenium	ug/L	ND	40	40	38.3	39.3	96	98	75-125	3	20	
Silver	ug/L	ND	40	40	39.2	40.0	98	100	75-125	2	20	
Thallium	ug/L	ND	40	40	41.7	42.3	104	106	75-125	1	20	
Vanadium	ug/L	ND	40	40	38.1	38.2	95	95	75-125	0	20	
Zinc	ug/L	ND	40	40	38.2	38.2	93	93	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

QUALITY CONTROL DATA

Project: Smith's Creek LF Leachate Q2
Pace Project No.: 50372913

QC Batch: 790618
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Low Level
Laboratory: Pace Analytical Services - Indianapolis

Associated Lab Samples: 50372913001

METHOD BLANK: 3617910 Matrix: Water
Associated Lab Samples: 50372913001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<1.0	1.0	05/17/24 21:32	
1,1,1-Trichloroethane	ug/L	<1.0	1.0	05/17/24 21:32	
1,1,2,2-Tetrachloroethane	ug/L	<1.0	1.0	05/17/24 21:32	
1,1,2-Trichloroethane	ug/L	<1.0	1.0	05/17/24 21:32	
1,1-Dichloroethane	ug/L	<1.0	1.0	05/17/24 21:32	
1,1-Dichloroethene	ug/L	<1.0	1.0	05/17/24 21:32	
1,2,3-Trichloropropane	ug/L	<1.0	1.0	05/17/24 21:32	
1,2-Dibromo-3-chloropropane	ug/L	<5.0	5.0	05/17/24 21:32	
1,2-Dibromoethane (EDB)	ug/L	<1.0	1.0	05/17/24 21:32	
1,2-Dichlorobenzene	ug/L	<1.0	1.0	05/17/24 21:32	
1,2-Dichloroethane	ug/L	<1.0	1.0	05/17/24 21:32	
1,2-Dichloropropane	ug/L	<1.0	1.0	05/17/24 21:32	
1,4-Dichlorobenzene	ug/L	<1.0	1.0	05/17/24 21:32	
2-Butanone (MEK)	ug/L	<5.0	5.0	05/17/24 21:32	
2-Hexanone	ug/L	<5.0	5.0	05/17/24 21:32	
4-Methyl-2-pentanone (MIBK)	ug/L	<5.0	5.0	05/17/24 21:32	
Acetone	ug/L	<20.0	20.0	05/17/24 21:32	
Acrylonitrile	ug/L	<5.0	5.0	05/17/24 21:32	
Benzene	ug/L	<1.0	1.0	05/17/24 21:32	
Bromochloromethane	ug/L	<1.0	1.0	05/17/24 21:32	
Bromodichloromethane	ug/L	<1.0	1.0	05/17/24 21:32	
Bromoform	ug/L	<1.0	1.0	05/17/24 21:32	
Bromomethane	ug/L	<5.0	5.0	05/17/24 21:32	
Carbon disulfide	ug/L	<1.0	1.0	05/17/24 21:32	
Carbon tetrachloride	ug/L	<1.0	1.0	05/17/24 21:32	
Chlorobenzene	ug/L	<1.0	1.0	05/17/24 21:32	
Chloroethane	ug/L	<5.0	5.0	05/17/24 21:32	
Chloroform	ug/L	<1.0	1.0	05/17/24 21:32	
Chloromethane	ug/L	<5.0	5.0	05/17/24 21:32	
cis-1,2-Dichloroethene	ug/L	<1.0	1.0	05/17/24 21:32	
cis-1,3-Dichloropropene	ug/L	<1.0	1.0	05/17/24 21:32	
Dibromochloromethane	ug/L	<1.0	1.0	05/17/24 21:32	
Dibromomethane	ug/L	<1.0	1.0	05/17/24 21:32	
Ethylbenzene	ug/L	<1.0	1.0	05/17/24 21:32	
Iodomethane	ug/L	<1.0	1.0	05/17/24 21:32	
m&p-Xylene	ug/L	<2.0	2.0	05/17/24 21:32	
Methylene Chloride	ug/L	<5.0	5.0	05/17/24 21:32	
o-Xylene	ug/L	<1.0	1.0	05/17/24 21:32	
Styrene	ug/L	<1.0	1.0	05/17/24 21:32	
Tetrachloroethene	ug/L	<1.0	1.0	05/17/24 21:32	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

QUALITY CONTROL DATA

Project: Smith's Creek LF Leachate Q2
Pace Project No.: 50372913

METHOD BLANK: 3617910 Matrix: Water
Associated Lab Samples: 50372913001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Toluene	ug/L	<1.0	1.0	05/17/24 21:32	
trans-1,2-Dichloroethene	ug/L	<1.0	1.0	05/17/24 21:32	
trans-1,3-Dichloropropene	ug/L	<1.0	1.0	05/17/24 21:32	
trans-1,4-Dichloro-2-butene	ug/L	<5.0	5.0	05/17/24 21:32	
Trichloroethene	ug/L	<1.0	1.0	05/17/24 21:32	
Trichlorofluoromethane	ug/L	<1.0	1.0	05/17/24 21:32	
Vinyl chloride	ug/L	<1.0	1.0	05/17/24 21:32	
Xylene (Total)	ug/L	<2.0	2.0	05/17/24 21:32	
4-Bromofluorobenzene (S)	%.	104	79-124	05/17/24 21:32	
Dibromofluoromethane (S)	%.	113	82-128	05/17/24 21:32	
Toluene-d8 (S)	%.	99	73-122	05/17/24 21:32	

LABORATORY CONTROL SAMPLE: 3617911

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	57.0	114	81-130	
1,1,1-Trichloroethane	ug/L	50	60.4	121	71-126	
1,1,2,2-Tetrachloroethane	ug/L	50	43.1	86	70-126	
1,1,2-Trichloroethane	ug/L	50	51.1	102	79-125	
1,1-Dichloroethane	ug/L	50	48.9	98	79-120	
1,1-Dichloroethene	ug/L	50	54.4	109	71-130	
1,2,3-Trichloropropane	ug/L	50	55.4	111	74-127	
1,2-Dibromo-3-chloropropane	ug/L	50	54.7	109	80-132	
1,2-Dibromoethane (EDB)	ug/L	50	52.6	105	80-120	
1,2-Dichlorobenzene	ug/L	50	44.9	90	79-123	
1,2-Dichloroethane	ug/L	50	60.8	122	72-123	
1,2-Dichloropropane	ug/L	50	45.6	91	76-125	
1,4-Dichlorobenzene	ug/L	50	46.4	93	79-116	
2-Butanone (MEK)	ug/L	250	259	103	67-135	
2-Hexanone	ug/L	250	246	99	65-135	
4-Methyl-2-pentanone (MIBK)	ug/L	250	245	98	69-136	
Acetone	ug/L	250	304	121	34-156	
Acrylonitrile	ug/L	250	241	96	67-146	
Benzene	ug/L	50	46.2	92	76-122	
Bromochloromethane	ug/L	50	45.0	90	73-119	
Bromodichloromethane	ug/L	50	59.3	119	80-126	
Bromoform	ug/L	50	55.0	110	77-124	
Bromomethane	ug/L	50	13.4	27	10-175	
Carbon disulfide	ug/L	50	44.1	88	69-121	
Carbon tetrachloride	ug/L	50	63.1	126	73-127	
Chlorobenzene	ug/L	50	48.1	96	76-118	
Chloroethane	ug/L	50	51.7	103	36-162	
Chloroform	ug/L	50	55.7	111	78-121	
Chloromethane	ug/L	50	32.6	65	37-143	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

QUALITY CONTROL DATA

Project: Smith's Creek LF Leachate Q2
Pace Project No.: 50372913

LABORATORY CONTROL SAMPLE: 3617911

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/L	50	50.7	101	77-123	
cis-1,3-Dichloropropene	ug/L	50	48.7	97	76-132	
Dibromochloromethane	ug/L	50	59.9	120	79-130	
Dibromomethane	ug/L	50	56.8	114	79-124	
Ethylbenzene	ug/L	50	49.6	99	76-120	
Iodomethane	ug/L	50	14.8	30	10-148	
m&p-Xylene	ug/L	100	95.2	95	70-121	
Methylene Chloride	ug/L	50	44.6	89	71-121	
o-Xylene	ug/L	50	49.8	100	75-119	
Styrene	ug/L	50	51.9	104	80-121	
Tetrachloroethene	ug/L	50	53.7	107	71-122	
Toluene	ug/L	50	46.8	94	74-118	
trans-1,2-Dichloroethene	ug/L	50	50.9	102	75-122	
trans-1,3-Dichloropropene	ug/L	50	51.5	103	77-126	
trans-1,4-Dichloro-2-butene	ug/L	50	42.3	85	53-136	
Trichloroethene	ug/L	50	50.5	101	74-125	
Trichlorofluoromethane	ug/L	50	61.6	123	64-138	
Vinyl chloride	ug/L	50	44.4	89	55-139	
Xylene (Total)	ug/L	150	145	97	73-119	
4-Bromofluorobenzene (S)	%.			108	79-124	
Dibromofluoromethane (S)	%.			113	82-128	
Toluene-d8 (S)	%.			101	73-122	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3617912 3617913

Parameter	Units	50373017007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	<0.42	50	50	54.5	55.9	109	112	47-139	2	20	
1,1,1-Trichloroethane	ug/L	<0.45	50	50	64.7	64.7	129	129	47-145	0	20	
1,1,2,2-Tetrachloroethane	ug/L	<0.27	50	50	38.5	39.0	77	78	49-133	1	20	
1,1,2-Trichloroethane	ug/L	<0.31	50	50	45.5	46.1	91	92	52-136	1	20	
1,1-Dichloroethane	ug/L	<0.31	50	50	49.4	49.1	99	98	52-137	1	20	
1,1-Dichloroethene	ug/L	<0.37	50	50	55.2	56.2	110	112	53-144	2	20	
1,2,3-Trichloropropane	ug/L	<0.35	50	50	51.8	50.8	104	102	47-134	2	20	
1,2-Dibromo-3-chloropropane	ug/L	<1.6	50	50	51.3	49.8	103	100	39-148	3	20	
1,2-Dibromoethane (EDB)	ug/L	<0.28	50	50	47.4	49.2	95	98	55-133	4	20	
1,2-Dichlorobenzene	ug/L	<0.28	50	50	44.4	43.8	89	88	43-133	1	20	
1,2-Dichloroethane	ug/L	<0.24	50	50	61.7	61.9	123	124	50-138	0	20	
1,2-Dichloropropane	ug/L	<0.27	50	50	43.4	43.6	87	87	54-139	0	20	
1,4-Dichlorobenzene	ug/L	<0.28	50	50	43.1	43.9	86	88	41-131	2	20	
2-Butanone (MEK)	ug/L	<1.2	250	250	220	224	88	90	45-138	2	20	
2-Hexanone	ug/L	<1.7	250	250	208	213	83	85	45-135	2	20	
4-Methyl-2-pentanone (MIBK)	ug/L	<1.5	250	250	210	213	84	85	46-138	2	20	
Acetone	ug/L	<3.5	250	250	274	257	110	103	25-151	7	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

QUALITY CONTROL DATA

Project: Smith's Creek LF Leachate Q2
Pace Project No.: 50372913

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3617912 3617913

Parameter	Units	50373017007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Acrylonitrile	ug/L	<1.7	250	250	218	207	87	83	47-147	5	20	
Benzene	ug/L	<0.30	50	50	45.3	45.4	91	91	53-138	0	20	
Bromochloromethane	ug/L	<0.32	50	50	46.2	45.1	92	90	52-130	2	20	
Bromodichloromethane	ug/L	<0.36	50	50	59.7	59.5	119	119	50-146	0	20	
Bromoform	ug/L	<0.61	50	50	52.1	51.6	104	103	45-132	1	20	
Bromomethane	ug/L	<2.5	50	50	6.8	9.1	14	18	10-173	29	20	R1
Carbon disulfide	ug/L	<0.36	50	50	43.9	43.5	88	87	47-133	1	20	
Carbon tetrachloride	ug/L	<0.50	50	50	68.6	68.4	137	137	43-148	0	20	
Chlorobenzene	ug/L	<0.29	50	50	45.4	45.8	91	92	52-131	1	20	
Chloroethane	ug/L	<0.62	50	50	49.9	49.5	100	99	25-169	1	20	
Chloroform	ug/L	<0.27	50	50	56.9	56.7	114	113	54-138	0	20	
Chloromethane	ug/L	<0.51	50	50	26.8	28.3	54	57	33-137	6	20	
cis-1,2-Dichloroethene	ug/L	<0.30	50	50	49.2	49.6	98	99	50-141	1	20	
cis-1,3-Dichloropropene	ug/L	<0.44	50	50	42.8	44.2	86	88	47-135	3	20	
Dibromochloromethane	ug/L	<0.42	50	50	56.7	56.4	113	113	48-139	0	20	
Dibromomethane	ug/L	<0.36	50	50	53.2	53.6	106	107	51-141	1	20	
Ethylbenzene	ug/L	<0.34	50	50	47.1	49.3	94	99	50-136	5	20	
Iodomethane	ug/L	<0.76	50	50	6.7	11.4	13	23	10-145	52	20	R1
m&p-Xylene	ug/L	<0.39	100	100	91.6	94.3	92	94	42-138	3	20	
Methylene Chloride	ug/L	<1.6	50	50	42.2	41.4	84	83	48-131	2	20	
o-Xylene	ug/L	<0.30	50	50	47.8	49.1	96	98	50-133	3	20	
Styrene	ug/L	<0.27	50	50	48.9	50.2	98	100	46-136	3	20	
Tetrachloroethene	ug/L	<0.36	50	50	51.3	54.1	103	108	44-138	5	20	
Toluene	ug/L	<0.31	50	50	44.2	45.1	88	90	52-132	2	20	
trans-1,2-Dichloroethene	ug/L	<0.35	50	50	51.3	50.0	103	100	50-137	3	20	
trans-1,3-Dichloropropene	ug/L	<0.41	50	50	46.5	48.4	93	97	46-130	4	20	
trans-1,4-Dichloro-2-butene	ug/L	<0.41	50	50	38.1	35.5	76	71	24-134		20	
Trichloroethene	ug/L	<0.36	50	50	49.6	50.6	99	101	49-140	2	20	
Trichlorofluoromethane	ug/L	<0.41	50	50	66.9	64.9	134	130	44-153	3	20	
Vinyl chloride	ug/L	<0.47	50	50	42.1	40.8	84	82	41-147	3	20	
Xylene (Total)	ug/L	<0.39	150	150	139	143	93	96	44-138	3	20	
4-Bromofluorobenzene (S)	%.						108	109	79-124			
Dibromofluoromethane (S)	%.						113	112	82-128			
Toluene-d8 (S)	%.						96	99	73-122			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

QUALITY CONTROL DATA

Project: Smith's Creek LF Leachate Q2
Pace Project No.: 50372913

QC Batch: 790211
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372913001

METHOD BLANK: 3615532 Matrix: Water
Associated Lab Samples: 50372913001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	ug/L	<10000	10000	05/15/24 22:47	
Alkalinity,Bicarbonate (CaCO3)	ug/L	<10000	10000	05/15/24 22:47	
Alkalinity,Carbonate (CaCO3)	ug/L	<10000	10000	05/15/24 22:47	

LABORATORY CONTROL SAMPLE: 3615533

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	ug/L	50000	50300	101	90-110	

SAMPLE DUPLICATE: 3615534

Parameter	Units	50372995014 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	ug/L	1110 mg/L	1120000	0	20	
Alkalinity,Bicarbonate (CaCO3)	ug/L	1110 mg/L	1120000	0	20	
Alkalinity,Carbonate (CaCO3)	ug/L	ND	<10000		20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

QUALITY CONTROL DATA

Project: Smith's Creek LF Leachate Q2
Pace Project No.: 50372913

QC Batch: 790010
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372913001

METHOD BLANK: 3614682 Matrix: Water
Associated Lab Samples: 50372913001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	ug/L	<20000	20000	05/15/24 12:15	

LABORATORY CONTROL SAMPLE: 3614683

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	ug/L	300000	275000	92	80-120	

SAMPLE DUPLICATE: 3614684

Parameter	Units	50372871008 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	ug/L	414 mg/L	415000	0	10	

SAMPLE DUPLICATE: 3614685

Parameter	Units	50372949001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	ug/L	2640 mg/L	2550000	3	10	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

QUALITY CONTROL DATA

Project: Smith's Creek LF Leachate Q2
Pace Project No.: 50372913

QC Batch: 790759
QC Batch Method: EPA 410.4
Analysis Method: EPA 410.4
Analysis Description: 410.4 COD
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372913001

METHOD BLANK: 3618779 Matrix: Water
Associated Lab Samples: 50372913001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	ug/L	<10000	10000	05/18/24 16:20	

LABORATORY CONTROL SAMPLE: 3618780

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	ug/L	500000	508000	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3618781 3618782

Parameter	Units	50373310001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chemical Oxygen Demand	ug/L	630 mg/L	2500000	2500000	3180000	3150000	102	101	90-110	1	20	

MATRIX SPIKE SAMPLE: 3618818

Parameter	Units	50373114003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	ug/L	165 mg/L	1000000	1150000	99	90-110	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

QUALITY CONTROL DATA

Project: Smith's Creek LF Leachate Q2
Pace Project No.: 50372913

QC Batch: 789792
QC Batch Method: EPA 9038
Analysis Method: EPA 9038
Analysis Description: 9038 Sulfate Water
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372913001

METHOD BLANK: 3613621 Matrix: Water
Associated Lab Samples: 50372913001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	ug/L	<10000	10000	05/14/24 15:59	

LABORATORY CONTROL SAMPLE: 3613622

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	ug/L	20000	19900	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3613623 3613624

Parameter	Units	50372904024 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Sulfate	ug/L	119 mg/L	500000	500000	630000	623000	102	101	90-110	1	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

QUALITY CONTROL DATA

Project: Smith's Creek LF Leachate Q2
Pace Project No.: 50372913

QC Batch: 790873
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, preserved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372913001

METHOD BLANK: 3619105 Matrix: Water
Associated Lab Samples: 50372913001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	ug/L	<20.0	20.0	05/20/24 14:54	

LABORATORY CONTROL SAMPLE: 3619106

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	ug/L	2000	1890	94	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3619107 3619108

Parameter	Units	50372945003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	ug/L	<20.0	2000	2000	1900	1870	95	94	90-110	1	20	

MATRIX SPIKE SAMPLE: 3619109

Parameter	Units	50372945008 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	ug/L	<20.0	2000	2000	100	90-110	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

QUALITY CONTROL DATA

Project: Smith's Creek LF Leachate Q2
Pace Project No.: 50372913

QC Batch: 791053
QC Batch Method: EPA 420.4
Analysis Method: EPA 420.4
Analysis Description: 420.4 Phenolics
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372913001

METHOD BLANK: 3619747 Matrix: Water
Associated Lab Samples: 50372913001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Phenolics, Total Recoverable	ug/L	<10.0	10.0	05/21/24 15:30	

LABORATORY CONTROL SAMPLE: 3619748

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phenolics, Total Recoverable	ug/L	50	50.1	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3619749 3619750

Parameter	Units	50373031005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Phenolics, Total Recoverable	ug/L	ND	50	50	46.1	45.4	92	91	90-110	2	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

QUALITY CONTROL DATA

Project: Smith's Creek LF Leachate Q2
Pace Project No.: 50372913

QC Batch: 790785
QC Batch Method: SM 4500-Cl-E
Analysis Method: SM 4500-Cl-E
Analysis Description: 4500 Chloride
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372913001

METHOD BLANK: 3618854 Matrix: Water
Associated Lab Samples: 50372913001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	ug/L	<1000	1000	05/19/24 14:38	

LABORATORY CONTROL SAMPLE: 3618855

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	ug/L	20000	21800	109	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3618856 3618857

Parameter	Units	50372945003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	ug/L	39400	20000	20000	62800	61500	117	111	90-110	2	20	M3

MATRIX SPIKE SAMPLE: 3618858

Parameter	Units	50372945004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	ug/L	44800	20000	66400	108	90-110	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

QUALITY CONTROL DATA

Project: Smith's Creek LF Leachate Q2
Pace Project No.: 50372913

QC Batch: 790562
QC Batch Method: SM 4500-NH3 G
Analysis Method: SM 4500-NH3 G
Analysis Description: 4500 Ammonia
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372913001

METHOD BLANK: 3617608 Matrix: Water
Associated Lab Samples: 50372913001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	ug/L	<100	100	05/17/24 12:50	

LABORATORY CONTROL SAMPLE: 3617609

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	ug/L	5000	5280	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3617610 3617611

Parameter	Units	50373439001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Ammonia	ug/L	ND	5000	5000	5260	5270	103	103	90-110	0	20	

MATRIX SPIKE SAMPLE: 3617612

Parameter	Units	50372768003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	ug/L	1.1 mg/L	5000	6190	102	90-110	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

QUALITY CONTROL DATA

Project: Smith's Creek LF Leachate Q2
Pace Project No.: 50372913

QC Batch: 790140
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Total Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372913001

METHOD BLANK: 3615148 Matrix: Water
Associated Lab Samples: 50372913001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Carbon	ug/L	<500	500	05/17/24 03:16	

LABORATORY CONTROL SAMPLE: 3615149

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	ug/L	10000	9530	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3615150 3615151

Parameter	Units	50372770005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	ug/L	0.93J mg/L	10000	10000	10200	9700	93	88	80-120	5	20	

MATRIX SPIKE SAMPLE: 3615152

Parameter	Units	50372945005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	ug/L	1000	10000	9260	83	80-120	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

QUALITY CONTROL DATA

Project: Smith's Creek LF Leachate Q2
Pace Project No.: 50372913

QC Batch: 791567
QC Batch Method: EPA 9012
Analysis Method: EPA 9012
Analysis Description: 9012 Cyanide, Total
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372913001

METHOD BLANK: 3622155 Matrix: Water
Associated Lab Samples: 50372913001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cyanide	ug/L	<5.0	5.0	05/23/24 20:18	

LABORATORY CONTROL SAMPLE: 3622156

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide	ug/L	100	96.1	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3622157 3622158

Parameter	Units	50372995001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Cyanide	ug/L	ND	100	100	94.2	94.8	94	95	90-110	1	20	

MATRIX SPIKE SAMPLE: 3622159

Parameter	Units	50372995002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Cyanide	ug/L	ND	100	92.8	93	90-110	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

QUALIFIERS

Project: Smith's Creek LF Leachate Q2
Pace Project No.: 50372913

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
F1	The sample was analyzed at a dilution due to foaming of the sample in the purge vessel.
H1	Analysis conducted outside the recognized method holding time.
HS	Results are from sample aliquot taken from VOA vial with headspace (air bubble greater than 6 mm diameter).
M3	Matrix spike recovery was outside laboratory control limits due to matrix interferences.
N2	The lab does not hold NELAC/TNI accreditation for this parameter but other accreditations/certifications may apply. A complete list of accreditations/certifications is available upon request.
P4	Sample field preservation does not meet EPA or method recommendations for this analysis.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.
R1	RPD value was outside control limits.
pH	Post-analysis pH measurement indicates insufficient VOA sample preservation.

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Smith's Creek LF Leachate Q2
Pace Project No.: 50372913

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50372913001	**Leachate**	EPA 3010	789980	EPA 6010	791097
50372913001	**Leachate**	EPA 200.2	790470	EPA 6020	790699
50372913001	**Leachate**	EPA 5030B/8260	790618		
50372913001	**Leachate**	SM 2320B	790211		
50372913001	**Leachate**	SM 2540C	790010		
50372913001	**Leachate**	EPA 410.4	790759	EPA 410.4	790762
50372913001	**Leachate**	EPA 9038	789792		
50372913001	**Leachate**	NO2+NO3+NH3 Calculation	792327		
50372913001	**Leachate**	EPA 353.2	790873		
50372913001	**Leachate**	EPA 420.4	791053	EPA 420.4	791164
50372913001	**Leachate**	SM 4500-Cl-E	790785		
50372913001	**Leachate**	SM 4500-NH3 G	790562		
50372913001	**Leachate**	SM 5310C	790140		
50372913001	**Leachate**	EPA 9012	791567	EPA 9012	791816

Pace® Location Requested (City/State):
Pace Analytical Grand Rapids
4171 40th Street SE, Grand Rapids, MI 49512

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here

50372913

Scan QR Code for instructions

Company Name:	WSP - Novi, MI	Contact/Report To:	Mary Siegan
Street Address:	46850 Magellan Drive, Novi, MI 48377	Phone #:	(248)536-5435
		E-Mail:	mary.siegan@wsp.com
		Cc E-Mail:	
Customer Project #:			
Project Name:	Smith's Creek LF Leachate Q2	Invoice To:	Mary Siegan
		Invoice E-Mail:	mary.siegan@wsp.com
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	
		Quote #:	
Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [X] ET		County / State origin of sample(s):	Michigan
Data Deliverables: [ ] Level II [ ] Level III [ ] Level IV [ ] EQUIS [ ] Other		Regulatory Program (DW, RCRA, etc.) as applicable:	Reportable [ ] Yes [ ] No
		Rush (Pre-approval required): [ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other _____	DW PWSID # or WW Permit # as applicable:
		Date Results Requested:	Field Filtered (if applicable): [ ] Yes [X] No Analysis:

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW),Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	2320B Alkalinity; 4500 Chloride; 9038 Sulfate	2540C Total Dissolved Solids	353.2 N+N; 4500 NH3; TIN; 410.4 COD	420.4 Phenolics, Total	5310C TOC	8260 MSV LL VOC	9012 Cyanide, Total	Metals, Total - 6010/6020	Sample Comment	Preservation non-conformance identified for sample.
Leachate	OT	G	5/10/24	0940	5/10/24	0940	10			X	X	X	X	X	X	X	X		

Lab Use Only
Proj. Mgr: Brian Hall
AcctNum / Client ID:
Table #:
Profile / Template: 8219
Prelog / Bottle Ord. ID: EZ 3106489

Additional Instructions from Pace®:
Metals - Ca,Cr,Co,Cu,Fe,Pb,Mg,K,Na,Sb,As,Ba,Be,B,Cd,Mn,Ni,Se,Ag,Tl,V,Zn

Collected By:
(Printed Name) Ian Cisco
Signature:

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice:
1	8	+0.1	4.4	4.5	Y

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Tracking Number:
/WSP	5/10/24 1600	Fedex	5/10/24 1600	
Fedex	5/11/24 935	Mallen	5/11/24 935	Delivered by: [ ] In- Person [ ] Courier [✓] FedEX [ ] UPS [ ] Other
				Page: 1 of 1

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/

ENV-FRM-CORQ-0019_v02_110123 ©

F-IN-Q-290-rev.26, 30Apr2024

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: 5/11/24 1321 MW

1. **Courier:** ☑ FED EX | UPS ☐ CLIENT ☐ PACE ☐ NOW/JETT | OTHER _____
2. **Custody Seal on Cooler/Box Present:** | | Yes ☑ No
   (If yes)Seals Intact: ☐ Yes ☐ No **(leave blank if no seals were present)**
3. **Thermometer:** 1 2 3 4 5 6 7 (8) A B C D E F G H
4. **Cooler Temperature(s):** 4.4/4.5 _____ _____ _____
   (Initial/Corrected) RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

5. **Packing Material:** | |Bubble Wrap | ✓ |Bubble Bags | | None | | Other _____
6. **Ice Type:** ☑ Wet ☐ Blue ☐ None
7. **Was the PM notified of out of temp cooler?:** | |Yes ☐ No
   Cooler temp should be above freezing to 6°C
8. **EZ Bottle Order?** ✓ Yes | No
   If yes but not on COC what is the EZ Bottle Order Number?: 3106489

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		✓	All containers needing acid/base preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.**	✓		
Short Hold Time Analysis (48 hours or less)? Analysis:		✓	**Circle:** HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form			
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:			Present	Absent	N/A
			Residual Chlorine Check (SVOC 625 Pest/PCB 608)			✓
Rush TAT Requested (4 days or less):		✓	Residual Chlorine Check (Total/Amenable/Free Cyanide)		✓	
Custody Signatures Present?	✓		Headspace Wisconsin Sulfide?			✓
Containers Intact?:	✓		Headspace in VOA Vials (>6mm): See Containter Count form for details	Present ✓	Absent	No VOA Vials Sent
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID	✓		Trip Blank Present?		✓	
Extra labels on Terracore Vials? (soils only)			Trip Blank Custody Seals?:			✓

COMMENTS:

COC PAGE ____ of ____

Sample Container Count

** Place a RED dot on containers that are out of conformance **

COC Line Item	WGFU	WGKU BG1U	MeOH (only) SBS DI R	DG9H VG9H	VOA VIAL HS >6mm	VG9U DG9U	VG9T	AMBER GLASS AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	PLASTIC BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	OTHER CG3H	CG3F	Syringe Kit		Matrix	Nitric Red HNO3 <2	Sulfuric Yellow H2SO4 <2	Sodium Hydroxide Green NaOH >10	Sodium Hydroxide/ ZnAc Black NaOH/Zn Ac >9
1				3	3/3							2					1	1	1		1	1						SL	1	1/4	10	
2																																
3																																
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
BP1U	1L unpreserved plastic		
BP1Z	1L NaOH, Zn, Ac		
BP2N	500mL HNO3 plastic		
BP2C	500mL NaOH plastic		
BP2S	500mL H2SO4 plastic		
BP2U	500mL unpreserved plastic		
BP2Z	500mL NaOH, Zn Ac		
BP3B	250mL NaOH plastic		
BP3N	250mL HNO3 plastic		
BP3F	250mL HNO3 plastic-field filtered		
BP3U	250mL unpreserved plastic		
BP3S	250mL H2SO4 plastic		
BP3Z	250mL NaOH, ZnAc plastic		
BP3R	250mL Unpres. FF SO4/OH buffer		

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

May 28, 2024

Mary Siegan
WSP - Novi, MI
46850 Magellan Drive
Suite 190
Novi, MI 48377

RE: Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

Dear Mary Siegan:

Enclosed are the analytical results for sample(s) received by the laboratory on May 11, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Brian Hall
brian.hall@pacelabs.com
(616)975-4500
Project Manager

Enclosures

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

CERTIFICATIONS

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

Pace Analytical Services Indianapolis

7726 Moller Road, Indianapolis, IN 46268
Illinois Accreditation #: 200074
Indiana Drinking Water Laboratory #: C-49-06
Kansas/TNI Certification #: E-10177
Kentucky UST Agency Interest #: 80226
Kentucky WW Laboratory ID #: 98019
Michigan Drinking Water Laboratory #9050
Ohio VAP Certified Laboratory #: CL0065
Oklahoma Laboratory #: 9204
Texas Certification #: T104704355
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

SAMPLE SUMMARY

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50372945001	**MW-213**	Water	05/09/24 08:00	05/11/24 09:35
50372945002	**MW-301**	Water	05/10/24 11:35	05/11/24 09:35
50372945003	**MW-302**	Water	05/09/24 10:25	05/11/24 09:35
50372945004	**MW-303A**	Water	05/09/24 13:40	05/11/24 09:35
50372945005	**MW-304**	Water	05/09/24 12:58	05/11/24 09:35
50372945006	**MW-305**	Water	05/09/24 09:50	05/11/24 09:35
50372945007	**Trip Blank**	Water	05/08/24 08:00	05/11/24 09:35
50372945008	**MW-101**	Water	05/09/24 11:25	05/11/24 09:35
50372945009	**MW-106A**	Water	05/08/24 12:30	05/11/24 09:35
50372945010	**MW-201**	Water	05/08/24 09:30	05/11/24 09:35
50372945011	**MW-202**	Water	05/09/24 12:15	05/11/24 09:35
50372945012	**MW-203B**	Water	05/09/24 14:10	05/11/24 09:35
50372945013	**MW-207A**	Water	05/08/24 13:10	05/11/24 09:35
50372945014	**MW-208B**	Water	05/08/24 13:55	05/11/24 09:35
50372945015	**MW-209**	Water	05/09/24 10:10	05/11/24 09:35
50372945016	**MW-210**	Water	05/09/24 11:03	05/11/24 09:35
50372945017	**MW-212**	Water	05/08/24 11:10	05/11/24 09:35

Pace Analytical Services, LLC
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SAMPLE ANALYTE COUNT

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50372945001	**MW-213**	EPA 6010	NWB	2	PASI-I
		EPA 6020	MTM	3	PASI-I
		EPA 5030B/8260	ALA	49	PASI-I
		NO2+NO3+NH3 Calculation	MMS	1	PASI-I
		EPA 353.2	ZM	1	PASI-I
		SM 4500-Cl-E	ZM	1	PASI-I
		SM-4500-NH3 G	OAS	1	PASI-I
		SM 5310C	YAM	1	PASI-I
50372945002	**MW-301**	EPA 6010	NWB	2	PASI-I
		EPA 6020	MTM	3	PASI-I
		EPA 5030B/8260	ALA	49	PASI-I
		NO2+NO3+NH3 Calculation	MMS	1	PASI-I
		EPA 353.2	ZM	1	PASI-I
		SM 4500-Cl-E	ZM	1	PASI-I
		SM-4500-NH3 G	OAS	1	PASI-I
		SM 5310C	YAM	1	PASI-I
50372945003	**MW-302**	EPA 6010	NWB	2	PASI-I
		EPA 6010	NWB	2	PASI-I
		EPA 6020	DMT	3	PASI-I
		EPA 6020	MTM	3	PASI-I
		EPA 5030B/8260	ALA	49	PASI-I
		NO2+NO3+NH3 Calculation	MMS	1	PASI-I
		EPA 353.2	ZM	1	PASI-I
		SM 4500-Cl-E	ZM	1	PASI-I
		SM-4500-NH3 G	OAS	1	PASI-I
		SM 5310C	YAM	1	PASI-I
50372945004	**MW-303A**	EPA 6010	NWB	2	PASI-I
		EPA 6020	MTM	3	PASI-I
		EPA 5030B/8260	ALA	49	PASI-I
		NO2+NO3+NH3 Calculation	MMS	1	PASI-I
		EPA 353.2	ZM	1	PASI-I
		SM 4500-Cl-E	ZM	1	PASI-I
		SM-4500-NH3 G	OAS	1	PASI-I
		SM 5310C	YAM	1	PASI-I
50372945005	**MW-304**	EPA 6010	NWB	2	PASI-I
		EPA 6020	MTM	3	PASI-I
		EPA 5030B/8260	ALA	49	PASI-I

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		NO2+NO3+NH3 Calculation	MMS	1	PASI-I
		EPA 353.2	ZM	1	PASI-I
		SM 4500-Cl-E	ZM	1	PASI-I
		SM-4500-NH3 G	OAS	1	PASI-I
		SM 5310C	YAM	1	PASI-I
50372945006	**MW-305**	EPA 6010	NWB	2	PASI-I
		EPA 6020	MTM	3	PASI-I
		EPA 5030B/8260	ALA	49	PASI-I
		NO2+NO3+NH3 Calculation	MMS	1	PASI-I
		EPA 353.2	ZM	1	PASI-I
		SM 4500-Cl-E	ZM	1	PASI-I
		SM-4500-NH3 G	OAS	1	PASI-I
		SM 5310C	YAM	1	PASI-I
50372945007	**Trip Blank**	EPA 5030B/8260	ALA	49	PASI-I
50372945008	**MW-101**	EPA 6010	NWB	2	PASI-I
		EPA 6020	MTM	3	PASI-I
		EPA 5030B/8260	ALA	49	PASI-I
		NO2+NO3+NH3 Calculation	MMS	1	PASI-I
		EPA 353.2	ZM	1	PASI-I
		SM 4500-Cl-E	ZM	1	PASI-I
		SM-4500-NH3 G	OAS	1	PASI-I
		SM 5310C	YAM	1	PASI-I
50372945009	**MW-106A**	EPA 6010	NWB	2	PASI-I
		EPA 6020	MTM	3	PASI-I
		EPA 5030B/8260	ALA	49	PASI-I
		NO2+NO3+NH3 Calculation	MMS	1	PASI-I
		EPA 353.2	ZM	1	PASI-I
		SM 4500-Cl-E	ZM	1	PASI-I
		SM-4500-NH3 G	OAS	1	PASI-I
		SM 5310C	YAM	1	PASI-I
50372945010	**MW-201**	EPA 6010	NWB	2	PASI-I
		EPA 6020	MTM	3	PASI-I
		EPA 5030B/8260	ALA	49	PASI-I
		NO2+NO3+NH3 Calculation	MMS	1	PASI-I
		EPA 353.2	ZM	1	PASI-I
		SM 4500-Cl-E	ZM	1	PASI-I
		SM-4500-NH3 G	OAS	1	PASI-I

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SAMPLE ANALYTE COUNT

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 5310C	YAM	1	PASI-I
50372945011	**MW-202**	EPA 6010	NWB	2	PASI-I
		EPA 6010	NWB	2	PASI-I
		EPA 6020	DMT	3	PASI-I
		EPA 6020	MTM	3	PASI-I
		EPA 5030B/8260	ALA	49	PASI-I
		NO2+NO3+NH3 Calculation	MMS	1	PASI-I
		EPA 353.2	ZM	1	PASI-I
		SM 4500-Cl-E	ZM	1	PASI-I
		SM-4500-NH3 G	OAS	1	PASI-I
		SM 5310C	YAM	1	PASI-I
50372945012	**MW-203B**	EPA 6010	NWB	2	PASI-I
		EPA 6020	MTM	3	PASI-I
		EPA 5030B/8260	ALA	49	PASI-I
		NO2+NO3+NH3 Calculation	MMS	1	PASI-I
		EPA 353.2	ZM	1	PASI-I
		SM 4500-Cl-E	ZM	1	PASI-I
		SM-4500-NH3 G	OAS	1	PASI-I
		SM 5310C	YAM	1	PASI-I
50372945013	**MW-207A**	EPA 6010	NWB	2	PASI-I
		EPA 6020	MTM	3	PASI-I
		EPA 5030B/8260	ALA	49	PASI-I
		NO2+NO3+NH3 Calculation	MMS	1	PASI-I
		EPA 353.2	ZM	1	PASI-I
		SM 4500-Cl-E	ZM	1	PASI-I
		SM-4500-NH3 G	OAS	1	PASI-I
		SM 5310C	YAM	1	PASI-I
50372945014	**MW-208B**	EPA 6010	NWB	2	PASI-I
		EPA 6020	MTM	3	PASI-I
		EPA 5030B/8260	ALA	49	PASI-I
		NO2+NO3+NH3 Calculation	MMS	1	PASI-I
		EPA 353.2	ZM	1	PASI-I
		SM 4500-Cl-E	ZM	1	PASI-I
		SM-4500-NH3 G	OAS	1	PASI-I
		SM 5310C	YAM	1	PASI-I
50372945015	**MW-209**	EPA 6010	NWB	2	PASI-I
		EPA 6020	MTM	3	PASI-I

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SAMPLE ANALYTE COUNT

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 5030B/8260	ALA	49	PASI-I
		NO2+NO3+NH3 Calculation	MMS	1	PASI-I
		EPA 353.2	ZM	1	PASI-I
		SM 4500-Cl-E	ZM	1	PASI-I
		SM-4500-NH3 G	OAS	1	PASI-I
		SM 5310C	YAM	1	PASI-I
50372945016	**MW-210**	EPA 6010	NWB	2	PASI-I
		EPA 6020	MTM	3	PASI-I
		EPA 5030B/8260	ALA	49	PASI-I
		NO2+NO3+NH3 Calculation	MMS	1	PASI-I
		EPA 353.2	ZM	1	PASI-I
		SM 4500-Cl-E	ZM	1	PASI-I
		SM-4500-NH3 G	OAS	1	PASI-I
		SM 5310C	YAM	1	PASI-I
50372945017	**MW-212**	EPA 6010	NWB	2	PASI-I
		EPA 6020	MTM	3	PASI-I
		EPA 5030B/8260	ALA	49	PASI-I
		NO2+NO3+NH3 Calculation	MMS	1	PASI-I
		EPA 353.2	ZM	1	PASI-I
		SM 4500-Cl-E	ZM	1	PASI-I
		SM-4500-NH3 G	OAS	1	PASI-I
		SM 5310C	YAM	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

ANALYTICAL RESULTS

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

Sample: MW-213 **Lab ID: 50372945001** Collected: 05/09/24 08:00 Received: 05/11/24 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis							
Potassium, Dissolved	**1530**	ug/L	500	1	05/20/24 16:11	05/21/24 13:15	7440-09-7	
Sodium, Dissolved	**80900**	ug/L	1000	1	05/20/24 16:11	05/21/24 13:15	7440-23-5	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis							
Arsenic, Dissolved	**1.4**	ug/L	1.0	1	05/17/24 09:45	05/18/24 00:53	7440-38-2	
Barium, Dissolved	**25.1**	ug/L	5.0	1	05/17/24 09:45	05/18/24 00:53	7440-39-3	
Zinc, Dissolved	**<10.0**	ug/L	10.0	1	05/17/24 09:45	05/18/24 00:53	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Indianapolis							
Acetone	**<20.0**	ug/L	20.0	1		05/21/24 03:40	67-64-1	
Acrylonitrile	**<5.0**	ug/L	5.0	1		05/21/24 03:40	107-13-1	
Benzene	**<1.0**	ug/L	1.0	1		05/21/24 03:40	71-43-2	
Bromochloromethane	**<1.0**	ug/L	1.0	1		05/21/24 03:40	74-97-5	
Bromodichloromethane	**<1.0**	ug/L	1.0	1		05/21/24 03:40	75-27-4	
Bromoform	**<1.0**	ug/L	1.0	1		05/21/24 03:40	75-25-2	
Bromomethane	**<5.0**	ug/L	5.0	1		05/21/24 03:40	74-83-9	
2-Butanone (MEK)	**<5.0**	ug/L	5.0	1		05/21/24 03:40	78-93-3	
Carbon disulfide	**<1.0**	ug/L	1.0	1		05/21/24 03:40	75-15-0	
Carbon tetrachloride	**<1.0**	ug/L	1.0	1		05/21/24 03:40	56-23-5	
Chlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 03:40	108-90-7	
Chloroethane	**<5.0**	ug/L	5.0	1		05/21/24 03:40	75-00-3	
Chloroform	**<1.0**	ug/L	1.0	1		05/21/24 03:40	67-66-3	
Chloromethane	**<5.0**	ug/L	5.0	1		05/21/24 03:40	74-87-3	
1,2-Dibromo-3-chloropropane	**<5.0**	ug/L	5.0	1		05/21/24 03:40	96-12-8	
Dibromochloromethane	**<1.0**	ug/L	1.0	1		05/21/24 03:40	124-48-1	
1,2-Dibromoethane (EDB)	**<1.0**	ug/L	1.0	1		05/21/24 03:40	106-93-4	
Dibromomethane	**<1.0**	ug/L	1.0	1		05/21/24 03:40	74-95-3	
1,2-Dichlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 03:40	95-50-1	
1,4-Dichlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 03:40	106-46-7	
trans-1,4-Dichloro-2-butene	**<5.0**	ug/L	5.0	1		05/21/24 03:40	110-57-6	
1,1-Dichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 03:40	75-34-3	
1,2-Dichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 03:40	107-06-2	
1,1-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 03:40	75-35-4	
cis-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 03:40	156-59-2	
trans-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 03:40	156-60-5	
1,2-Dichloropropane	**<1.0**	ug/L	1.0	1		05/21/24 03:40	78-87-5	
cis-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		05/21/24 03:40	10061-01-5	
trans-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		05/21/24 03:40	10061-02-6	
Ethylbenzene	**<1.0**	ug/L	1.0	1		05/21/24 03:40	100-41-4	
2-Hexanone	**<5.0**	ug/L	5.0	1		05/21/24 03:40	591-78-6	
Iodomethane	**<1.0**	ug/L	1.0	1		05/21/24 03:40	74-88-4	
Methylene Chloride	**<5.0**	ug/L	5.0	1		05/21/24 03:40	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<5.0**	ug/L	5.0	1		05/21/24 03:40	108-10-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

ANALYTICAL RESULTS

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

Sample: MW-213 **Lab ID: 50372945001** Collected: 05/09/24 08:00 Received: 05/11/24 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Indianapolis							
Styrene	**<1.0**	ug/L	1.0	1		05/21/24 03:40	100-42-5	
1,1,1,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		05/21/24 03:40	630-20-6	
1,1,2,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		05/21/24 03:40	79-34-5	
Tetrachloroethene	**<1.0**	ug/L	1.0	1		05/21/24 03:40	127-18-4	
Toluene	**<1.0**	ug/L	1.0	1		05/21/24 03:40	108-88-3	
1,1,1-Trichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 03:40	71-55-6	
1,1,2-Trichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 03:40	79-00-5	
Trichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 03:40	79-01-6	
Trichlorofluoromethane	**<1.0**	ug/L	1.0	1		05/21/24 03:40	75-69-4	
1,2,3-Trichloropropane	**<1.0**	ug/L	1.0	1		05/21/24 03:40	96-18-4	
Vinyl chloride	**<1.0**	ug/L	1.0	1		05/21/24 03:40	75-01-4	
Xylene (Total)	**<2.0**	ug/L	2.0	1		05/21/24 03:40	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	99	%.	79-124	1		05/21/24 03:40	460-00-4	
Dibromofluoromethane (S)	103	%.	82-128	1		05/21/24 03:40	1868-53-7	
Toluene-d8 (S)	98	%.	73-122	1		05/21/24 03:40	2037-26-5	
Total Inorganic Nitrogen	Analytical Method: NO2+NO3+NH3 Calculation Pace Analytical Services - Indianapolis							
Total Inorganic Nitrogen	**161**	ug/L	20.0	1		05/28/24 14:58		
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis							
Nitrogen, NO2 plus NO3	**21.8**	ug/L	20.0	1		05/20/24 14:59		
4500 Chloride	Analytical Method: SM 4500-Cl-E Pace Analytical Services - Indianapolis							
Chloride	**33000**	ug/L	1000	1		05/19/24 14:41	16887-00-6	
4500 Ammonia Water Low Level	Analytical Method: SM-4500-NH3 G Pace Analytical Services - Indianapolis							
Nitrogen, Ammonia	**139**	ug/L	20.0	1		05/21/24 15:24	7664-41-7	
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis							
Total Organic Carbon	**1050**	ug/L	500	1		05/17/24 10:36	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

Sample: MW-301 **Lab ID: 50372945002** Collected: 05/10/24 11:35 Received: 05/11/24 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis							
Potassium, Dissolved	**1210**	ug/L	500	1	05/20/24 16:11	05/21/24 13:17	7440-09-7	
Sodium, Dissolved	**99900**	ug/L	1000	1	05/20/24 16:11	05/21/24 13:17	7440-23-5	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis							
Arsenic, Dissolved	**3.1**	ug/L	1.0	1	05/17/24 09:45	05/18/24 00:57	7440-38-2	
Barium, Dissolved	**33.4**	ug/L	5.0	1	05/17/24 09:45	05/18/24 00:57	7440-39-3	
Zinc, Dissolved	**<10.0**	ug/L	10.0	1	05/17/24 09:45	05/18/24 00:57	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Indianapolis							
Acetone	**<20.0**	ug/L	20.0	1		05/21/24 05:08	67-64-1	
Acrylonitrile	**<5.0**	ug/L	5.0	1		05/21/24 05:08	107-13-1	
Benzene	**<1.0**	ug/L	1.0	1		05/21/24 05:08	71-43-2	
Bromochloromethane	**<1.0**	ug/L	1.0	1		05/21/24 05:08	74-97-5	
Bromodichloromethane	**<1.0**	ug/L	1.0	1		05/21/24 05:08	75-27-4	
Bromoform	**<1.0**	ug/L	1.0	1		05/21/24 05:08	75-25-2	
Bromomethane	**<5.0**	ug/L	5.0	1		05/21/24 05:08	74-83-9	
2-Butanone (MEK)	**<5.0**	ug/L	5.0	1		05/21/24 05:08	78-93-3	
Carbon disulfide	**<1.0**	ug/L	1.0	1		05/21/24 05:08	75-15-0	
Carbon tetrachloride	**<1.0**	ug/L	1.0	1		05/21/24 05:08	56-23-5	
Chlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 05:08	108-90-7	
Chloroethane	**<5.0**	ug/L	5.0	1		05/21/24 05:08	75-00-3	
Chloroform	**<1.0**	ug/L	1.0	1		05/21/24 05:08	67-66-3	
Chloromethane	**<5.0**	ug/L	5.0	1		05/21/24 05:08	74-87-3	
1,2-Dibromo-3-chloropropane	**<5.0**	ug/L	5.0	1		05/21/24 05:08	96-12-8	
Dibromochloromethane	**<1.0**	ug/L	1.0	1		05/21/24 05:08	124-48-1	
1,2-Dibromoethane (EDB)	**<1.0**	ug/L	1.0	1		05/21/24 05:08	106-93-4	
Dibromomethane	**<1.0**	ug/L	1.0	1		05/21/24 05:08	74-95-3	
1,2-Dichlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 05:08	95-50-1	
1,4-Dichlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 05:08	106-46-7	
trans-1,4-Dichloro-2-butene	**<5.0**	ug/L	5.0	1		05/21/24 05:08	110-57-6	
1,1-Dichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 05:08	75-34-3	
1,2-Dichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 05:08	107-06-2	
1,1-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 05:08	75-35-4	
cis-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 05:08	156-59-2	
trans-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 05:08	156-60-5	
1,2-Dichloropropane	**<1.0**	ug/L	1.0	1		05/21/24 05:08	78-87-5	
cis-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		05/21/24 05:08	10061-01-5	
trans-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		05/21/24 05:08	10061-02-6	
Ethylbenzene	**<1.0**	ug/L	1.0	1		05/21/24 05:08	100-41-4	
2-Hexanone	**<5.0**	ug/L	5.0	1		05/21/24 05:08	591-78-6	
Iodomethane	**<1.0**	ug/L	1.0	1		05/21/24 05:08	74-88-4	
Methylene Chloride	**<5.0**	ug/L	5.0	1		05/21/24 05:08	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<5.0**	ug/L	5.0	1		05/21/24 05:08	108-10-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

ANALYTICAL RESULTS

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

Sample: MW-301 **Lab ID: 50372945002** Collected: 05/10/24 11:35 Received: 05/11/24 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Indianapolis							
Styrene	**<1.0**	ug/L	1.0	1		05/21/24 05:08	100-42-5	
1,1,1,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		05/21/24 05:08	630-20-6	
1,1,2,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		05/21/24 05:08	79-34-5	
Tetrachloroethene	**<1.0**	ug/L	1.0	1		05/21/24 05:08	127-18-4	
Toluene	**<1.0**	ug/L	1.0	1		05/21/24 05:08	108-88-3	
1,1,1-Trichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 05:08	71-55-6	
1,1,2-Trichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 05:08	79-00-5	
Trichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 05:08	79-01-6	
Trichlorofluoromethane	**<1.0**	ug/L	1.0	1		05/21/24 05:08	75-69-4	
1,2,3-Trichloropropane	**<1.0**	ug/L	1.0	1		05/21/24 05:08	96-18-4	
Vinyl chloride	**<1.0**	ug/L	1.0	1		05/21/24 05:08	75-01-4	
Xylene (Total)	**<2.0**	ug/L	2.0	1		05/21/24 05:08	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	96	%.	79-124	1		05/21/24 05:08	460-00-4	
Dibromofluoromethane (S)	103	%.	82-128	1		05/21/24 05:08	1868-53-7	
Toluene-d8 (S)	96	%.	73-122	1		05/21/24 05:08	2037-26-5	
Total Inorganic Nitrogen	Analytical Method: NO2+NO3+NH3 Calculation Pace Analytical Services - Indianapolis							
Total Inorganic Nitrogen	**181**	ug/L	20.0	1		05/28/24 14:58		
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis							
Nitrogen, NO2 plus NO3	**<20.0**	ug/L	20.0	1		05/20/24 15:01		
4500 Chloride	Analytical Method: SM 4500-Cl-E Pace Analytical Services - Indianapolis							
Chloride	**42600**	ug/L	1000	1		05/19/24 14:42	16887-00-6	
4500 Ammonia Water Low Level	Analytical Method: SM-4500-NH3 G Pace Analytical Services - Indianapolis							
Nitrogen, Ammonia	**181**	ug/L	20.0	1		05/21/24 15:26	7664-41-7	
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis							
Total Organic Carbon	**1080**	ug/L	500	1		05/17/24 10:55	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

ANALYTICAL RESULTS

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

Sample: MW-302 **Lab ID: 50372945003** Collected: 05/09/24 10:25 Received: 05/11/24 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis							
Potassium	**1670**	ug/L	500	1	05/20/24 16:10	05/21/24 12:09	7440-09-7	
Sodium	**96100**	ug/L	1000	1	05/20/24 16:10	05/21/24 12:09	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis							
Potassium, Dissolved	**1670**	ug/L	500	1	05/20/24 16:11	05/21/24 13:18	7440-09-7	
Sodium, Dissolved	**95300**	ug/L	1000	1	05/20/24 16:11	05/21/24 13:18	7440-23-5	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis							
Arsenic	**<1.0**	ug/L	1.0	1	05/17/24 09:45	05/20/24 17:43	7440-38-2	
Barium	**32.3**	ug/L	5.0	1	05/17/24 09:45	05/20/24 17:43	7440-39-3	
Zinc	**<10.0**	ug/L	10.0	1	05/17/24 09:45	05/21/24 09:11	7440-66-6	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis							
Arsenic, Dissolved	**<1.0**	ug/L	1.0	1	05/17/24 09:45	05/18/24 01:01	7440-38-2	
Barium, Dissolved	**34.6**	ug/L	5.0	1	05/17/24 09:45	05/18/24 01:01	7440-39-3	
Zinc, Dissolved	**<10.0**	ug/L	10.0	1	05/17/24 09:45	05/18/24 01:01	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Indianapolis							
Acetone	**<20.0**	ug/L	20.0	1		05/21/24 05:38	67-64-1	
Acrylonitrile	**<5.0**	ug/L	5.0	1		05/21/24 05:38	107-13-1	
Benzene	**<1.0**	ug/L	1.0	1		05/21/24 05:38	71-43-2	
Bromochloromethane	**<1.0**	ug/L	1.0	1		05/21/24 05:38	74-97-5	
Bromodichloromethane	**<1.0**	ug/L	1.0	1		05/21/24 05:38	75-27-4	
Bromoform	**<1.0**	ug/L	1.0	1		05/21/24 05:38	75-25-2	
Bromomethane	**<5.0**	ug/L	5.0	1		05/21/24 05:38	74-83-9	
2-Butanone (MEK)	**<5.0**	ug/L	5.0	1		05/21/24 05:38	78-93-3	
Carbon disulfide	**<1.0**	ug/L	1.0	1		05/21/24 05:38	75-15-0	
Carbon tetrachloride	**<1.0**	ug/L	1.0	1		05/21/24 05:38	56-23-5	
Chlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 05:38	108-90-7	
Chloroethane	**<5.0**	ug/L	5.0	1		05/21/24 05:38	75-00-3	
Chloroform	**<1.0**	ug/L	1.0	1		05/21/24 05:38	67-66-3	
Chloromethane	**<5.0**	ug/L	5.0	1		05/21/24 05:38	74-87-3	
1,2-Dibromo-3-chloropropane	**<5.0**	ug/L	5.0	1		05/21/24 05:38	96-12-8	
Dibromochloromethane	**<1.0**	ug/L	1.0	1		05/21/24 05:38	124-48-1	
1,2-Dibromoethane (EDB)	**<1.0**	ug/L	1.0	1		05/21/24 05:38	106-93-4	
Dibromomethane	**<1.0**	ug/L	1.0	1		05/21/24 05:38	74-95-3	
1,2-Dichlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 05:38	95-50-1	
1,4-Dichlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 05:38	106-46-7	
trans-1,4-Dichloro-2-butene	**<5.0**	ug/L	5.0	1		05/21/24 05:38	110-57-6	
1,1-Dichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 05:38	75-34-3	
1,2-Dichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 05:38	107-06-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

ANALYTICAL RESULTS

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

Sample: MW-302 **Lab ID: 50372945003** Collected: 05/09/24 10:25 Received: 05/11/24 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 5030B/8260							
	Pace Analytical Services - Indianapolis							
1,1-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 05:38	75-35-4	
cis-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 05:38	156-59-2	
trans-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 05:38	156-60-5	
1,2-Dichloropropane	**<1.0**	ug/L	1.0	1		05/21/24 05:38	78-87-5	
cis-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		05/21/24 05:38	10061-01-5	
trans-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		05/21/24 05:38	10061-02-6	
Ethylbenzene	**<1.0**	ug/L	1.0	1		05/21/24 05:38	100-41-4	
2-Hexanone	**<5.0**	ug/L	5.0	1		05/21/24 05:38	591-78-6	
Iodomethane	**<1.0**	ug/L	1.0	1		05/21/24 05:38	74-88-4	
Methylene Chloride	**<5.0**	ug/L	5.0	1		05/21/24 05:38	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<5.0**	ug/L	5.0	1		05/21/24 05:38	108-10-1	
Styrene	**<1.0**	ug/L	1.0	1		05/21/24 05:38	100-42-5	
1,1,1,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		05/21/24 05:38	630-20-6	
1,1,2,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		05/21/24 05:38	79-34-5	
Tetrachloroethene	**<1.0**	ug/L	1.0	1		05/21/24 05:38	127-18-4	
Toluene	**<1.0**	ug/L	1.0	1		05/21/24 05:38	108-88-3	
1,1,1-Trichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 05:38	71-55-6	
1,1,2-Trichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 05:38	79-00-5	
Trichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 05:38	79-01-6	
Trichlorofluoromethane	**<1.0**	ug/L	1.0	1		05/21/24 05:38	75-69-4	
1,2,3-Trichloropropane	**<1.0**	ug/L	1.0	1		05/21/24 05:38	96-18-4	
Vinyl chloride	**<1.0**	ug/L	1.0	1		05/21/24 05:38	75-01-4	
Xylene (Total)	**<2.0**	ug/L	2.0	1		05/21/24 05:38	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	98	%.	79-124	1		05/21/24 05:38	460-00-4	
Dibromofluoromethane (S)	103	%.	82-128	1		05/21/24 05:38	1868-53-7	
Toluene-d8 (S)	98	%.	73-122	1		05/21/24 05:38	2037-26-5	
Total Inorganic Nitrogen	Analytical Method: NO2+NO3+NH3 Calculation							
	Pace Analytical Services - Indianapolis							
Total Inorganic Nitrogen	**40.7**	ug/L	20.0	1		05/28/24 14:58		
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2							
	Pace Analytical Services - Indianapolis							
Nitrogen, NO2 plus NO3	**<20.0**	ug/L	20.0	1		05/20/24 15:03		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
	Pace Analytical Services - Indianapolis							
Chloride	**39400**	ug/L	1000	1		05/19/24 14:45	16887-00-6	
4500 Ammonia Water Low Level	Analytical Method: SM-4500-NH3 G							
	Pace Analytical Services - Indianapolis							
Nitrogen, Ammonia	**40.7**	ug/L	20.0	1		05/21/24 15:27	7664-41-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

ANALYTICAL RESULTS

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

Sample: MW-302 **Lab ID: 50372945003** Collected: 05/09/24 10:25 Received: 05/11/24 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis							
Total Organic Carbon	**1100**	ug/L	500	1		05/17/24 11:14	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

ANALYTICAL RESULTS

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

Sample: MW-303A **Lab ID: 50372945004** Collected: 05/09/24 13:40 Received: 05/11/24 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis							
Potassium, Dissolved	**1090**	ug/L	500	1	05/20/24 16:11	05/21/24 13:20	7440-09-7	
Sodium, Dissolved	**107000**	ug/L	1000	1	05/20/24 16:11	05/21/24 13:20	7440-23-5	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis							
Arsenic, Dissolved	**4.4**	ug/L	1.0	1	05/17/24 09:45	05/18/24 01:05	7440-38-2	
Barium, Dissolved	**6.6**	ug/L	5.0	1	05/17/24 09:45	05/18/24 01:05	7440-39-3	
Zinc, Dissolved	**<10.0**	ug/L	10.0	1	05/17/24 09:45	05/18/24 01:05	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Indianapolis							
Acetone	**<20.0**	ug/L	20.0	1		05/21/24 06:07	67-64-1	
Acrylonitrile	**<5.0**	ug/L	5.0	1		05/21/24 06:07	107-13-1	
Benzene	**<1.0**	ug/L	1.0	1		05/21/24 06:07	71-43-2	
Bromochloromethane	**<1.0**	ug/L	1.0	1		05/21/24 06:07	74-97-5	
Bromodichloromethane	**<1.0**	ug/L	1.0	1		05/21/24 06:07	75-27-4	
Bromoform	**<1.0**	ug/L	1.0	1		05/21/24 06:07	75-25-2	
Bromomethane	**<5.0**	ug/L	5.0	1		05/21/24 06:07	74-83-9	
2-Butanone (MEK)	**<5.0**	ug/L	5.0	1		05/21/24 06:07	78-93-3	
Carbon disulfide	**<1.0**	ug/L	1.0	1		05/21/24 06:07	75-15-0	
Carbon tetrachloride	**<1.0**	ug/L	1.0	1		05/21/24 06:07	56-23-5	
Chlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 06:07	108-90-7	
Chloroethane	**<5.0**	ug/L	5.0	1		05/21/24 06:07	75-00-3	
Chloroform	**<1.0**	ug/L	1.0	1		05/21/24 06:07	67-66-3	
Chloromethane	**<5.0**	ug/L	5.0	1		05/21/24 06:07	74-87-3	
1,2-Dibromo-3-chloropropane	**<5.0**	ug/L	5.0	1		05/21/24 06:07	96-12-8	
Dibromochloromethane	**<1.0**	ug/L	1.0	1		05/21/24 06:07	124-48-1	
1,2-Dibromoethane (EDB)	**<1.0**	ug/L	1.0	1		05/21/24 06:07	106-93-4	
Dibromomethane	**<1.0**	ug/L	1.0	1		05/21/24 06:07	74-95-3	
1,2-Dichlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 06:07	95-50-1	
1,4-Dichlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 06:07	106-46-7	
trans-1,4-Dichloro-2-butene	**<5.0**	ug/L	5.0	1		05/21/24 06:07	110-57-6	
1,1-Dichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 06:07	75-34-3	
1,2-Dichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 06:07	107-06-2	
1,1-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 06:07	75-35-4	
cis-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 06:07	156-59-2	
trans-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 06:07	156-60-5	
1,2-Dichloropropane	**<1.0**	ug/L	1.0	1		05/21/24 06:07	78-87-5	
cis-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		05/21/24 06:07	10061-01-5	
trans-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		05/21/24 06:07	10061-02-6	
Ethylbenzene	**<1.0**	ug/L	1.0	1		05/21/24 06:07	100-41-4	
2-Hexanone	**<5.0**	ug/L	5.0	1		05/21/24 06:07	591-78-6	
Iodomethane	**<1.0**	ug/L	1.0	1		05/21/24 06:07	74-88-4	
Methylene Chloride	**<5.0**	ug/L	5.0	1		05/21/24 06:07	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<5.0**	ug/L	5.0	1		05/21/24 06:07	108-10-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

ANALYTICAL RESULTS

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

Sample: MW-303A **Lab ID: 50372945004** Collected: 05/09/24 13:40 Received: 05/11/24 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Indianapolis							
Styrene	**<1.0**	ug/L	1.0	1		05/21/24 06:07	100-42-5	
1,1,1,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		05/21/24 06:07	630-20-6	
1,1,2,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		05/21/24 06:07	79-34-5	
Tetrachloroethene	**<1.0**	ug/L	1.0	1		05/21/24 06:07	127-18-4	
Toluene	**<1.0**	ug/L	1.0	1		05/21/24 06:07	108-88-3	
1,1,1-Trichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 06:07	71-55-6	
1,1,2-Trichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 06:07	79-00-5	
Trichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 06:07	79-01-6	
Trichlorofluoromethane	**<1.0**	ug/L	1.0	1		05/21/24 06:07	75-69-4	
1,2,3-Trichloropropane	**<1.0**	ug/L	1.0	1		05/21/24 06:07	96-18-4	
Vinyl chloride	**<1.0**	ug/L	1.0	1		05/21/24 06:07	75-01-4	
Xylene (Total)	**<2.0**	ug/L	2.0	1		05/21/24 06:07	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	96	%.	79-124	1		05/21/24 06:07	460-00-4	
Dibromofluoromethane (S)	103	%.	82-128	1		05/21/24 06:07	1868-53-7	
Toluene-d8 (S)	97	%.	73-122	1		05/21/24 06:07	2037-26-5	
Total Inorganic Nitrogen	Analytical Method: NO2+NO3+NH3 Calculation Pace Analytical Services - Indianapolis							
Total Inorganic Nitrogen	**74.8**	ug/L	20.0	1		05/28/24 14:58		
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis							
Nitrogen, NO2 plus NO3	**<20.0**	ug/L	20.0	1		05/20/24 15:08		
4500 Chloride	Analytical Method: SM 4500-Cl-E Pace Analytical Services - Indianapolis							
Chloride	**44800**	ug/L	1000	1		05/19/24 14:48	16887-00-6	
4500 Ammonia Water Low Level	Analytical Method: SM-4500-NH3 G Pace Analytical Services - Indianapolis							
Nitrogen, Ammonia	**74.8**	ug/L	20.0	1		05/24/24 12:18	7664-41-7	
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis							
Total Organic Carbon	**1200**	ug/L	500	1		05/17/24 11:34	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Grand Rapids, MI 49512
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ANALYTICAL RESULTS

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

Sample: MW-304 **Lab ID: 50372945005** Collected: 05/09/24 12:58 Received: 05/11/24 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis							
Potassium, Dissolved	**1460**	ug/L	500	1	05/20/24 16:11	05/21/24 13:22	7440-09-7	
Sodium, Dissolved	**78500**	ug/L	1000	1	05/20/24 16:11	05/21/24 13:22	7440-23-5	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis							
Arsenic, Dissolved	**1.4**	ug/L	1.0	1	05/17/24 09:45	05/18/24 01:17	7440-38-2	
Barium, Dissolved	**24.9**	ug/L	5.0	1	05/17/24 09:45	05/18/24 01:17	7440-39-3	
Zinc, Dissolved	**<10.0**	ug/L	10.0	1	05/17/24 09:45	05/18/24 01:17	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Indianapolis							
Acetone	**<20.0**	ug/L	20.0	1		05/21/24 06:36	67-64-1	
Acrylonitrile	**<5.0**	ug/L	5.0	1		05/21/24 06:36	107-13-1	
Benzene	**<1.0**	ug/L	1.0	1		05/21/24 06:36	71-43-2	
Bromochloromethane	**<1.0**	ug/L	1.0	1		05/21/24 06:36	74-97-5	
Bromodichloromethane	**<1.0**	ug/L	1.0	1		05/21/24 06:36	75-27-4	
Bromoform	**<1.0**	ug/L	1.0	1		05/21/24 06:36	75-25-2	
Bromomethane	**<5.0**	ug/L	5.0	1		05/21/24 06:36	74-83-9	
2-Butanone (MEK)	**<5.0**	ug/L	5.0	1		05/21/24 06:36	78-93-3	
Carbon disulfide	**<1.0**	ug/L	1.0	1		05/21/24 06:36	75-15-0	
Carbon tetrachloride	**<1.0**	ug/L	1.0	1		05/21/24 06:36	56-23-5	
Chlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 06:36	108-90-7	
Chloroethane	**<5.0**	ug/L	5.0	1		05/21/24 06:36	75-00-3	
Chloroform	**<1.0**	ug/L	1.0	1		05/21/24 06:36	67-66-3	
Chloromethane	**<5.0**	ug/L	5.0	1		05/21/24 06:36	74-87-3	
1,2-Dibromo-3-chloropropane	**<5.0**	ug/L	5.0	1		05/21/24 06:36	96-12-8	
Dibromochloromethane	**<1.0**	ug/L	1.0	1		05/21/24 06:36	124-48-1	
1,2-Dibromoethane (EDB)	**<1.0**	ug/L	1.0	1		05/21/24 06:36	106-93-4	
Dibromomethane	**<1.0**	ug/L	1.0	1		05/21/24 06:36	74-95-3	
1,2-Dichlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 06:36	95-50-1	
1,4-Dichlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 06:36	106-46-7	
trans-1,4-Dichloro-2-butene	**<5.0**	ug/L	5.0	1		05/21/24 06:36	110-57-6	
1,1-Dichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 06:36	75-34-3	
1,2-Dichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 06:36	107-06-2	
1,1-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 06:36	75-35-4	
cis-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 06:36	156-59-2	
trans-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 06:36	156-60-5	
1,2-Dichloropropane	**<1.0**	ug/L	1.0	1		05/21/24 06:36	78-87-5	
cis-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		05/21/24 06:36	10061-01-5	
trans-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		05/21/24 06:36	10061-02-6	
Ethylbenzene	**<1.0**	ug/L	1.0	1		05/21/24 06:36	100-41-4	
2-Hexanone	**<5.0**	ug/L	5.0	1		05/21/24 06:36	591-78-6	
Iodomethane	**<1.0**	ug/L	1.0	1		05/21/24 06:36	74-88-4	
Methylene Chloride	**<5.0**	ug/L	5.0	1		05/21/24 06:36	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<5.0**	ug/L	5.0	1		05/21/24 06:36	108-10-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

ANALYTICAL RESULTS

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

Sample: MW-304 **Lab ID: 50372945005** Collected: 05/09/24 12:58 Received: 05/11/24 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Indianapolis							
Styrene	**<1.0**	ug/L	1.0	1		05/21/24 06:36	100-42-5	
1,1,1,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		05/21/24 06:36	630-20-6	
1,1,2,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		05/21/24 06:36	79-34-5	
Tetrachloroethene	**<1.0**	ug/L	1.0	1		05/21/24 06:36	127-18-4	
Toluene	**<1.0**	ug/L	1.0	1		05/21/24 06:36	108-88-3	
1,1,1-Trichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 06:36	71-55-6	
1,1,2-Trichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 06:36	79-00-5	
Trichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 06:36	79-01-6	
Trichlorofluoromethane	**<1.0**	ug/L	1.0	1		05/21/24 06:36	75-69-4	
1,2,3-Trichloropropane	**<1.0**	ug/L	1.0	1		05/21/24 06:36	96-18-4	
Vinyl chloride	**<1.0**	ug/L	1.0	1		05/21/24 06:36	75-01-4	
Xylene (Total)	**<2.0**	ug/L	2.0	1		05/21/24 06:36	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	98	%.	79-124	1		05/21/24 06:36	460-00-4	
Dibromofluoromethane (S)	102	%.	82-128	1		05/21/24 06:36	1868-53-7	
Toluene-d8 (S)	97	%.	73-122	1		05/21/24 06:36	2037-26-5	
Total Inorganic Nitrogen	Analytical Method: NO2+NO3+NH3 Calculation Pace Analytical Services - Indianapolis							
Total Inorganic Nitrogen	**149**	ug/L	20.0	1		05/28/24 14:58		
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis							
Nitrogen, NO2 plus NO3	**149**	ug/L	20.0	1		05/20/24 15:10		
4500 Chloride	Analytical Method: SM 4500-Cl-E Pace Analytical Services - Indianapolis							
Chloride	**34100**	ug/L	1000	1		05/19/24 14:50	16887-00-6	
4500 Ammonia Water Low Level	Analytical Method: SM-4500-NH3 G Pace Analytical Services - Indianapolis							
Nitrogen, Ammonia	**<20.0**	ug/L	20.0	1		05/24/24 12:22	7664-41-7	
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis							
Total Organic Carbon	**1000**	ug/L	500	1		05/17/24 12:00	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

ANALYTICAL RESULTS

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

Sample: MW-305 **Lab ID: 50372945006** Collected: 05/09/24 09:50 Received: 05/11/24 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis							
Potassium, Dissolved	**1790**	ug/L	500	1	05/20/24 16:11	05/21/24 13:24	7440-09-7	
Sodium, Dissolved	**94600**	ug/L	1000	1	05/20/24 16:11	05/21/24 13:24	7440-23-5	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis							
Arsenic, Dissolved	**2.8**	ug/L	1.0	1	05/17/24 09:45	05/18/24 01:21	7440-38-2	
Barium, Dissolved	**39.2**	ug/L	5.0	1	05/17/24 09:45	05/18/24 01:21	7440-39-3	
Zinc, Dissolved	**<10.0**	ug/L	10.0	1	05/17/24 09:45	05/18/24 01:21	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Indianapolis							
Acetone	**<20.0**	ug/L	20.0	1		05/21/24 07:06	67-64-1	
Acrylonitrile	**<5.0**	ug/L	5.0	1		05/21/24 07:06	107-13-1	
Benzene	**<1.0**	ug/L	1.0	1		05/21/24 07:06	71-43-2	
Bromochloromethane	**<1.0**	ug/L	1.0	1		05/21/24 07:06	74-97-5	
Bromodichloromethane	**<1.0**	ug/L	1.0	1		05/21/24 07:06	75-27-4	
Bromoform	**<1.0**	ug/L	1.0	1		05/21/24 07:06	75-25-2	
Bromomethane	**<5.0**	ug/L	5.0	1		05/21/24 07:06	74-83-9	
2-Butanone (MEK)	**<5.0**	ug/L	5.0	1		05/21/24 07:06	78-93-3	
Carbon disulfide	**<1.0**	ug/L	1.0	1		05/21/24 07:06	75-15-0	
Carbon tetrachloride	**<1.0**	ug/L	1.0	1		05/21/24 07:06	56-23-5	
Chlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 07:06	108-90-7	
Chloroethane	**<5.0**	ug/L	5.0	1		05/21/24 07:06	75-00-3	
Chloroform	**<1.0**	ug/L	1.0	1		05/21/24 07:06	67-66-3	
Chloromethane	**<5.0**	ug/L	5.0	1		05/21/24 07:06	74-87-3	
1,2-Dibromo-3-chloropropane	**<5.0**	ug/L	5.0	1		05/21/24 07:06	96-12-8	
Dibromochloromethane	**<1.0**	ug/L	1.0	1		05/21/24 07:06	124-48-1	
1,2-Dibromoethane (EDB)	**<1.0**	ug/L	1.0	1		05/21/24 07:06	106-93-4	
Dibromomethane	**<1.0**	ug/L	1.0	1		05/21/24 07:06	74-95-3	
1,2-Dichlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 07:06	95-50-1	
1,4-Dichlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 07:06	106-46-7	
trans-1,4-Dichloro-2-butene	**<5.0**	ug/L	5.0	1		05/21/24 07:06	110-57-6	
1,1-Dichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 07:06	75-34-3	
1,2-Dichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 07:06	107-06-2	
1,1-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 07:06	75-35-4	
cis-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 07:06	156-59-2	
trans-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 07:06	156-60-5	
1,2-Dichloropropane	**<1.0**	ug/L	1.0	1		05/21/24 07:06	78-87-5	
cis-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		05/21/24 07:06	10061-01-5	
trans-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		05/21/24 07:06	10061-02-6	
Ethylbenzene	**<1.0**	ug/L	1.0	1		05/21/24 07:06	100-41-4	
2-Hexanone	**<5.0**	ug/L	5.0	1		05/21/24 07:06	591-78-6	
Iodomethane	**<1.0**	ug/L	1.0	1		05/21/24 07:06	74-88-4	
Methylene Chloride	**<5.0**	ug/L	5.0	1		05/21/24 07:06	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<5.0**	ug/L	5.0	1		05/21/24 07:06	108-10-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

ANALYTICAL RESULTS

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

Sample: MW-305 **Lab ID: 50372945006** Collected: 05/09/24 09:50 Received: 05/11/24 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Indianapolis							
Styrene	**<1.0**	ug/L	1.0	1		05/21/24 07:06	100-42-5	
1,1,1,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		05/21/24 07:06	630-20-6	
1,1,2,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		05/21/24 07:06	79-34-5	
Tetrachloroethene	**<1.0**	ug/L	1.0	1		05/21/24 07:06	127-18-4	
Toluene	**<1.0**	ug/L	1.0	1		05/21/24 07:06	108-88-3	
1,1,1-Trichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 07:06	71-55-6	
1,1,2-Trichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 07:06	79-00-5	
Trichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 07:06	79-01-6	
Trichlorofluoromethane	**<1.0**	ug/L	1.0	1		05/21/24 07:06	75-69-4	
1,2,3-Trichloropropane	**<1.0**	ug/L	1.0	1		05/21/24 07:06	96-18-4	
Vinyl chloride	**<1.0**	ug/L	1.0	1		05/21/24 07:06	75-01-4	
Xylene (Total)	**<2.0**	ug/L	2.0	1		05/21/24 07:06	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	97	%.	79-124	1		05/21/24 07:06	460-00-4	
Dibromofluoromethane (S)	101	%.	82-128	1		05/21/24 07:06	1868-53-7	
Toluene-d8 (S)	97	%.	73-122	1		05/21/24 07:06	2037-26-5	
Total Inorganic Nitrogen	Analytical Method: NO2+NO3+NH3 Calculation Pace Analytical Services - Indianapolis							
Total Inorganic Nitrogen	**380**	ug/L	20.0	1		05/28/24 14:58		
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis							
Nitrogen, NO2 plus NO3	**35.6**	ug/L	20.0	1		05/20/24 15:15		
4500 Chloride	Analytical Method: SM 4500-Cl-E Pace Analytical Services - Indianapolis							
Chloride	**36400**	ug/L	1000	1		05/19/24 14:51	16887-00-6	
4500 Ammonia Water Low Level	Analytical Method: SM-4500-NH3 G Pace Analytical Services - Indianapolis							
Nitrogen, Ammonia	**344**	ug/L	20.0	1		05/24/24 12:23	7664-41-7	
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis							
Total Organic Carbon	**1510**	ug/L	500	1		05/17/24 12:39	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
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ANALYTICAL RESULTS

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

Sample: Trip Blank **Lab ID: 50372945007** Collected: 05/08/24 08:00 Received: 05/11/24 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Indianapolis							
Acetone	**<20.0**	ug/L	20.0	1		05/21/24 07:35	67-64-1	
Acrylonitrile	**<5.0**	ug/L	5.0	1		05/21/24 07:35	107-13-1	
Benzene	**<1.0**	ug/L	1.0	1		05/21/24 07:35	71-43-2	
Bromochloromethane	**<1.0**	ug/L	1.0	1		05/21/24 07:35	74-97-5	
Bromodichloromethane	**<1.0**	ug/L	1.0	1		05/21/24 07:35	75-27-4	
Bromoform	**<1.0**	ug/L	1.0	1		05/21/24 07:35	75-25-2	
Bromomethane	**<5.0**	ug/L	5.0	1		05/21/24 07:35	74-83-9	
2-Butanone (MEK)	**<5.0**	ug/L	5.0	1		05/21/24 07:35	78-93-3	
Carbon disulfide	**<1.0**	ug/L	1.0	1		05/21/24 07:35	75-15-0	
Carbon tetrachloride	**<1.0**	ug/L	1.0	1		05/21/24 07:35	56-23-5	
Chlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 07:35	108-90-7	
Chloroethane	**<5.0**	ug/L	5.0	1		05/21/24 07:35	75-00-3	
Chloroform	**<1.0**	ug/L	1.0	1		05/21/24 07:35	67-66-3	
Chloromethane	**<5.0**	ug/L	5.0	1		05/21/24 07:35	74-87-3	
1,2-Dibromo-3-chloropropane	**<5.0**	ug/L	5.0	1		05/21/24 07:35	96-12-8	
Dibromochloromethane	**<1.0**	ug/L	1.0	1		05/21/24 07:35	124-48-1	
1,2-Dibromoethane (EDB)	**<1.0**	ug/L	1.0	1		05/21/24 07:35	106-93-4	
Dibromomethane	**<1.0**	ug/L	1.0	1		05/21/24 07:35	74-95-3	
1,2-Dichlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 07:35	95-50-1	
1,4-Dichlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 07:35	106-46-7	
trans-1,4-Dichloro-2-butene	**<5.0**	ug/L	5.0	1		05/21/24 07:35	110-57-6	
1,1-Dichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 07:35	75-34-3	
1,2-Dichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 07:35	107-06-2	
1,1-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 07:35	75-35-4	
cis-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 07:35	156-59-2	
trans-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 07:35	156-60-5	
1,2-Dichloropropane	**<1.0**	ug/L	1.0	1		05/21/24 07:35	78-87-5	
cis-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		05/21/24 07:35	10061-01-5	
trans-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		05/21/24 07:35	10061-02-6	
Ethylbenzene	**<1.0**	ug/L	1.0	1		05/21/24 07:35	100-41-4	
2-Hexanone	**<5.0**	ug/L	5.0	1		05/21/24 07:35	591-78-6	
Iodomethane	**<1.0**	ug/L	1.0	1		05/21/24 07:35	74-88-4	
Methylene Chloride	**<5.0**	ug/L	5.0	1		05/21/24 07:35	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<5.0**	ug/L	5.0	1		05/21/24 07:35	108-10-1	
Styrene	**<1.0**	ug/L	1.0	1		05/21/24 07:35	100-42-5	
1,1,1,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		05/21/24 07:35	630-20-6	
1,1,2,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		05/21/24 07:35	79-34-5	
Tetrachloroethene	**<1.0**	ug/L	1.0	1		05/21/24 07:35	127-18-4	
Toluene	**<1.0**	ug/L	1.0	1		05/21/24 07:35	108-88-3	
1,1,1-Trichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 07:35	71-55-6	
1,1,2-Trichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 07:35	79-00-5	
Trichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 07:35	79-01-6	
Trichlorofluoromethane	**<1.0**	ug/L	1.0	1		05/21/24 07:35	75-69-4	
1,2,3-Trichloropropane	**<1.0**	ug/L	1.0	1		05/21/24 07:35	96-18-4	
Vinyl chloride	**<1.0**	ug/L	1.0	1		05/21/24 07:35	75-01-4	
Xylene (Total)	**<2.0**	ug/L	2.0	1		05/21/24 07:35	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

ANALYTICAL RESULTS

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

Sample: Trip Blank **Lab ID: 50372945007** Collected: 05/08/24 08:00 Received: 05/11/24 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Indianapolis							
Surrogates								
4-Bromofluorobenzene (S)	96	%.	79-124	1		05/21/24 07:35	460-00-4	
Dibromofluoromethane (S)	102	%.	82-128	1		05/21/24 07:35	1868-53-7	
Toluene-d8 (S)	97	%.	73-122	1		05/21/24 07:35	2037-26-5	

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

Sample: MW-101 **Lab ID: 50372945008** Collected: 05/09/24 11:25 Received: 05/11/24 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis							
Potassium, Dissolved	**1680**	ug/L	500	1	05/20/24 16:11	05/21/24 13:26	7440-09-7	
Sodium, Dissolved	**67700**	ug/L	1000	1	05/20/24 16:11	05/21/24 13:26	7440-23-5	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis							
Arsenic, Dissolved	**1.9**	ug/L	1.0	1	05/17/24 09:45	05/18/24 01:25	7440-38-2	
Barium, Dissolved	**47.1**	ug/L	5.0	1	05/17/24 09:45	05/18/24 01:25	7440-39-3	
Zinc, Dissolved	**<10.0**	ug/L	10.0	1	05/17/24 09:45	05/18/24 01:25	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Indianapolis							
Acetone	**<20.0**	ug/L	20.0	1		05/21/24 08:04	67-64-1	
Acrylonitrile	**<5.0**	ug/L	5.0	1		05/21/24 08:04	107-13-1	
Benzene	**<1.0**	ug/L	1.0	1		05/21/24 08:04	71-43-2	
Bromochloromethane	**<1.0**	ug/L	1.0	1		05/21/24 08:04	74-97-5	
Bromodichloromethane	**<1.0**	ug/L	1.0	1		05/21/24 08:04	75-27-4	
Bromoform	**<1.0**	ug/L	1.0	1		05/21/24 08:04	75-25-2	
Bromomethane	**<5.0**	ug/L	5.0	1		05/21/24 08:04	74-83-9	
2-Butanone (MEK)	**<5.0**	ug/L	5.0	1		05/21/24 08:04	78-93-3	
Carbon disulfide	**<1.0**	ug/L	1.0	1		05/21/24 08:04	75-15-0	
Carbon tetrachloride	**<1.0**	ug/L	1.0	1		05/21/24 08:04	56-23-5	
Chlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 08:04	108-90-7	
Chloroethane	**<5.0**	ug/L	5.0	1		05/21/24 08:04	75-00-3	
Chloroform	**<1.0**	ug/L	1.0	1		05/21/24 08:04	67-66-3	
Chloromethane	**<5.0**	ug/L	5.0	1		05/21/24 08:04	74-87-3	
1,2-Dibromo-3-chloropropane	**<5.0**	ug/L	5.0	1		05/21/24 08:04	96-12-8	
Dibromochloromethane	**<1.0**	ug/L	1.0	1		05/21/24 08:04	124-48-1	
1,2-Dibromoethane (EDB)	**<1.0**	ug/L	1.0	1		05/21/24 08:04	106-93-4	
Dibromomethane	**<1.0**	ug/L	1.0	1		05/21/24 08:04	74-95-3	
1,2-Dichlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 08:04	95-50-1	
1,4-Dichlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 08:04	106-46-7	
trans-1,4-Dichloro-2-butene	**<5.0**	ug/L	5.0	1		05/21/24 08:04	110-57-6	
1,1-Dichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 08:04	75-34-3	
1,2-Dichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 08:04	107-06-2	
1,1-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 08:04	75-35-4	
cis-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 08:04	156-59-2	
trans-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 08:04	156-60-5	
1,2-Dichloropropane	**<1.0**	ug/L	1.0	1		05/21/24 08:04	78-87-5	
cis-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		05/21/24 08:04	10061-01-5	
trans-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		05/21/24 08:04	10061-02-6	
Ethylbenzene	**<1.0**	ug/L	1.0	1		05/21/24 08:04	100-41-4	
2-Hexanone	**<5.0**	ug/L	5.0	1		05/21/24 08:04	591-78-6	
Iodomethane	**<1.0**	ug/L	1.0	1		05/21/24 08:04	74-88-4	
Methylene Chloride	**<5.0**	ug/L	5.0	1		05/21/24 08:04	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<5.0**	ug/L	5.0	1		05/21/24 08:04	108-10-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

ANALYTICAL RESULTS

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

Sample: MW-101 **Lab ID: 50372945008** Collected: 05/09/24 11:25 Received: 05/11/24 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Indianapolis							
Styrene	**<1.0**	ug/L	1.0	1		05/21/24 08:04	100-42-5	
1,1,1,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		05/21/24 08:04	630-20-6	
1,1,2,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		05/21/24 08:04	79-34-5	
Tetrachloroethene	**<1.0**	ug/L	1.0	1		05/21/24 08:04	127-18-4	
Toluene	**<1.0**	ug/L	1.0	1		05/21/24 08:04	108-88-3	
1,1,1-Trichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 08:04	71-55-6	
1,1,2-Trichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 08:04	79-00-5	
Trichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 08:04	79-01-6	
Trichlorofluoromethane	**<1.0**	ug/L	1.0	1		05/21/24 08:04	75-69-4	
1,2,3-Trichloropropane	**<1.0**	ug/L	1.0	1		05/21/24 08:04	96-18-4	
Vinyl chloride	**<1.0**	ug/L	1.0	1		05/21/24 08:04	75-01-4	
Xylene (Total)	**<2.0**	ug/L	2.0	1		05/21/24 08:04	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	98	%.	79-124	1		05/21/24 08:04	460-00-4	
Dibromofluoromethane (S)	102	%.	82-128	1		05/21/24 08:04	1868-53-7	
Toluene-d8 (S)	97	%.	73-122	1		05/21/24 08:04	2037-26-5	
Total Inorganic Nitrogen	Analytical Method: NO2+NO3+NH3 Calculation Pace Analytical Services - Indianapolis							
Total Inorganic Nitrogen	**94.8**	ug/L	20.0	1		05/28/24 14:58		
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis							
Nitrogen, NO2 plus NO3	**<20.0**	ug/L	20.0	1		05/20/24 15:17		
4500 Chloride	Analytical Method: SM 4500-Cl-E Pace Analytical Services - Indianapolis							
Chloride	**28500**	ug/L	1000	1		05/19/24 14:52	16887-00-6	
4500 Ammonia Water Low Level	Analytical Method: SM-4500-NH3 G Pace Analytical Services - Indianapolis							
Nitrogen, Ammonia	**94.8**	ug/L	20.0	1		05/24/24 12:24	7664-41-7	
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis							
Total Organic Carbon	**1230**	ug/L	500	1		05/17/24 12:58	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
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ANALYTICAL RESULTS

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

Sample: MW-106A **Lab ID: 50372945009** Collected: 05/08/24 12:30 Received: 05/11/24 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis							
Potassium, Dissolved	**1200**	ug/L	500	1	05/20/24 16:11	05/21/24 13:28	7440-09-7	
Sodium, Dissolved	**79400**	ug/L	1000	1	05/20/24 16:11	05/21/24 13:28	7440-23-5	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis							
Arsenic, Dissolved	**5.5**	ug/L	1.0	1	05/17/24 09:45	05/18/24 01:29	7440-38-2	
Barium, Dissolved	**60.2**	ug/L	5.0	1	05/17/24 09:45	05/18/24 01:29	7440-39-3	
Zinc, Dissolved	**<10.0**	ug/L	10.0	1	05/17/24 09:45	05/18/24 01:29	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Indianapolis							
Acetone	**<20.0**	ug/L	20.0	1		05/21/24 08:34	67-64-1	
Acrylonitrile	**<5.0**	ug/L	5.0	1		05/21/24 08:34	107-13-1	
Benzene	**<1.0**	ug/L	1.0	1		05/21/24 08:34	71-43-2	
Bromochloromethane	**<1.0**	ug/L	1.0	1		05/21/24 08:34	74-97-5	
Bromodichloromethane	**<1.0**	ug/L	1.0	1		05/21/24 08:34	75-27-4	
Bromoform	**<1.0**	ug/L	1.0	1		05/21/24 08:34	75-25-2	
Bromomethane	**<5.0**	ug/L	5.0	1		05/21/24 08:34	74-83-9	
2-Butanone (MEK)	**<5.0**	ug/L	5.0	1		05/21/24 08:34	78-93-3	
Carbon disulfide	**<1.0**	ug/L	1.0	1		05/21/24 08:34	75-15-0	
Carbon tetrachloride	**<1.0**	ug/L	1.0	1		05/21/24 08:34	56-23-5	
Chlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 08:34	108-90-7	
Chloroethane	**<5.0**	ug/L	5.0	1		05/21/24 08:34	75-00-3	
Chloroform	**<1.0**	ug/L	1.0	1		05/21/24 08:34	67-66-3	
Chloromethane	**<5.0**	ug/L	5.0	1		05/21/24 08:34	74-87-3	
1,2-Dibromo-3-chloropropane	**<5.0**	ug/L	5.0	1		05/21/24 08:34	96-12-8	
Dibromochloromethane	**<1.0**	ug/L	1.0	1		05/21/24 08:34	124-48-1	
1,2-Dibromoethane (EDB)	**<1.0**	ug/L	1.0	1		05/21/24 08:34	106-93-4	
Dibromomethane	**<1.0**	ug/L	1.0	1		05/21/24 08:34	74-95-3	
1,2-Dichlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 08:34	95-50-1	
1,4-Dichlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 08:34	106-46-7	
trans-1,4-Dichloro-2-butene	**<5.0**	ug/L	5.0	1		05/21/24 08:34	110-57-6	
1,1-Dichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 08:34	75-34-3	
1,2-Dichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 08:34	107-06-2	
1,1-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 08:34	75-35-4	
cis-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 08:34	156-59-2	
trans-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 08:34	156-60-5	
1,2-Dichloropropane	**<1.0**	ug/L	1.0	1		05/21/24 08:34	78-87-5	
cis-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		05/21/24 08:34	10061-01-5	
trans-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		05/21/24 08:34	10061-02-6	
Ethylbenzene	**<1.0**	ug/L	1.0	1		05/21/24 08:34	100-41-4	
2-Hexanone	**<5.0**	ug/L	5.0	1		05/21/24 08:34	591-78-6	
Iodomethane	**<1.0**	ug/L	1.0	1		05/21/24 08:34	74-88-4	
Methylene Chloride	**<5.0**	ug/L	5.0	1		05/21/24 08:34	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<5.0**	ug/L	5.0	1		05/21/24 08:34	108-10-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

ANALYTICAL RESULTS

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

Sample: MW-106A **Lab ID: 50372945009** Collected: 05/08/24 12:30 Received: 05/11/24 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 5030B/8260							
	Pace Analytical Services - Indianapolis							
Styrene	**<1.0**	ug/L	1.0	1		05/21/24 08:34	100-42-5	
1,1,1,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		05/21/24 08:34	630-20-6	
1,1,2,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		05/21/24 08:34	79-34-5	
Tetrachloroethene	**<1.0**	ug/L	1.0	1		05/21/24 08:34	127-18-4	
Toluene	**<1.0**	ug/L	1.0	1		05/21/24 08:34	108-88-3	
1,1,1-Trichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 08:34	71-55-6	
1,1,2-Trichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 08:34	79-00-5	
Trichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 08:34	79-01-6	
Trichlorofluoromethane	**<1.0**	ug/L	1.0	1		05/21/24 08:34	75-69-4	
1,2,3-Trichloropropane	**<1.0**	ug/L	1.0	1		05/21/24 08:34	96-18-4	
Vinyl chloride	**<1.0**	ug/L	1.0	1		05/21/24 08:34	75-01-4	
Xylene (Total)	**<2.0**	ug/L	2.0	1		05/21/24 08:34	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	98	%.	79-124	1		05/21/24 08:34	460-00-4	
Dibromofluoromethane (S)	103	%.	82-128	1		05/21/24 08:34	1868-53-7	
Toluene-d8 (S)	98	%.	73-122	1		05/21/24 08:34	2037-26-5	
Total Inorganic Nitrogen	Analytical Method: NO2+NO3+NH3 Calculation							
	Pace Analytical Services - Indianapolis							
Total Inorganic Nitrogen	**87.8**	ug/L	20.0	1		05/28/24 14:58		
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2							
	Pace Analytical Services - Indianapolis							
Nitrogen, NO2 plus NO3	**<20.0**	ug/L	20.0	1		05/20/24 15:20		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
	Pace Analytical Services - Indianapolis							
Chloride	**38600**	ug/L	1000	1		05/19/24 14:53	16887-00-6	
4500 Ammonia Water Low Level	Analytical Method: SM-4500-NH3 G							
	Pace Analytical Services - Indianapolis							
Nitrogen, Ammonia	**87.8**	ug/L	20.0	1		05/24/24 12:25	7664-41-7	
5310C TOC	Analytical Method: SM 5310C							
	Pace Analytical Services - Indianapolis							
Total Organic Carbon	**1690**	ug/L	500	1		05/17/24 13:17	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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Grand Rapids, MI 49512
(616)975-4500

ANALYTICAL RESULTS

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

Sample: MW-201 **Lab ID: 50372945010** Collected: 05/08/24 09:30 Received: 05/11/24 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis							
Potassium, Dissolved	**1410**	ug/L	500	1	05/20/24 16:11	05/21/24 13:33	7440-09-7	
Sodium, Dissolved	**68500**	ug/L	1000	1	05/20/24 16:11	05/21/24 13:33	7440-23-5	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis							
Arsenic, Dissolved	**3.8**	ug/L	1.0	1	05/17/24 09:45	05/18/24 01:41	7440-38-2	
Barium, Dissolved	**41.8**	ug/L	5.0	1	05/17/24 09:45	05/18/24 01:41	7440-39-3	
Zinc, Dissolved	**<10.0**	ug/L	10.0	1	05/17/24 09:45	05/18/24 01:41	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Indianapolis							
Acetone	**<20.0**	ug/L	20.0	1		05/21/24 09:03	67-64-1	
Acrylonitrile	**<5.0**	ug/L	5.0	1		05/21/24 09:03	107-13-1	
Benzene	**<1.0**	ug/L	1.0	1		05/21/24 09:03	71-43-2	
Bromochloromethane	**<1.0**	ug/L	1.0	1		05/21/24 09:03	74-97-5	
Bromodichloromethane	**<1.0**	ug/L	1.0	1		05/21/24 09:03	75-27-4	
Bromoform	**<1.0**	ug/L	1.0	1		05/21/24 09:03	75-25-2	
Bromomethane	**<5.0**	ug/L	5.0	1		05/21/24 09:03	74-83-9	
2-Butanone (MEK)	**<5.0**	ug/L	5.0	1		05/21/24 09:03	78-93-3	
Carbon disulfide	**<1.0**	ug/L	1.0	1		05/21/24 09:03	75-15-0	
Carbon tetrachloride	**<1.0**	ug/L	1.0	1		05/21/24 09:03	56-23-5	
Chlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 09:03	108-90-7	
Chloroethane	**<5.0**	ug/L	5.0	1		05/21/24 09:03	75-00-3	
Chloroform	**<1.0**	ug/L	1.0	1		05/21/24 09:03	67-66-3	
Chloromethane	**<5.0**	ug/L	5.0	1		05/21/24 09:03	74-87-3	
1,2-Dibromo-3-chloropropane	**<5.0**	ug/L	5.0	1		05/21/24 09:03	96-12-8	
Dibromochloromethane	**<1.0**	ug/L	1.0	1		05/21/24 09:03	124-48-1	
1,2-Dibromoethane (EDB)	**<1.0**	ug/L	1.0	1		05/21/24 09:03	106-93-4	
Dibromomethane	**<1.0**	ug/L	1.0	1		05/21/24 09:03	74-95-3	
1,2-Dichlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 09:03	95-50-1	
1,4-Dichlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 09:03	106-46-7	
trans-1,4-Dichloro-2-butene	**<5.0**	ug/L	5.0	1		05/21/24 09:03	110-57-6	
1,1-Dichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 09:03	75-34-3	
1,2-Dichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 09:03	107-06-2	
1,1-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 09:03	75-35-4	
cis-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 09:03	156-59-2	
trans-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 09:03	156-60-5	
1,2-Dichloropropane	**<1.0**	ug/L	1.0	1		05/21/24 09:03	78-87-5	
cis-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		05/21/24 09:03	10061-01-5	
trans-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		05/21/24 09:03	10061-02-6	
Ethylbenzene	**<1.0**	ug/L	1.0	1		05/21/24 09:03	100-41-4	
2-Hexanone	**<5.0**	ug/L	5.0	1		05/21/24 09:03	591-78-6	
Iodomethane	**<1.0**	ug/L	1.0	1		05/21/24 09:03	74-88-4	
Methylene Chloride	**<5.0**	ug/L	5.0	1		05/21/24 09:03	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<5.0**	ug/L	5.0	1		05/21/24 09:03	108-10-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

ANALYTICAL RESULTS

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

Sample: MW-201 **Lab ID: 50372945010** Collected: 05/08/24 09:30 Received: 05/11/24 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 5030B/8260							
	Pace Analytical Services - Indianapolis							
Styrene	**<1.0**	ug/L	1.0	1		05/21/24 09:03	100-42-5	
1,1,1,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		05/21/24 09:03	630-20-6	
1,1,2,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		05/21/24 09:03	79-34-5	
Tetrachloroethene	**<1.0**	ug/L	1.0	1		05/21/24 09:03	127-18-4	
Toluene	**<1.0**	ug/L	1.0	1		05/21/24 09:03	108-88-3	
1,1,1-Trichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 09:03	71-55-6	
1,1,2-Trichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 09:03	79-00-5	
Trichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 09:03	79-01-6	
Trichlorofluoromethane	**<1.0**	ug/L	1.0	1		05/21/24 09:03	75-69-4	
1,2,3-Trichloropropane	**<1.0**	ug/L	1.0	1		05/21/24 09:03	96-18-4	
Vinyl chloride	**<1.0**	ug/L	1.0	1		05/21/24 09:03	75-01-4	
Xylene (Total)	**<2.0**	ug/L	2.0	1		05/21/24 09:03	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	97	%.	79-124	1		05/21/24 09:03	460-00-4	
Dibromofluoromethane (S)	102	%.	82-128	1		05/21/24 09:03	1868-53-7	
Toluene-d8 (S)	98	%.	73-122	1		05/21/24 09:03	2037-26-5	
Total Inorganic Nitrogen	Analytical Method: NO2+NO3+NH3 Calculation							
	Pace Analytical Services - Indianapolis							
Total Inorganic Nitrogen	**82.1**	ug/L	20.0	1		05/28/24 14:58		
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2							
	Pace Analytical Services - Indianapolis							
Nitrogen, NO2 plus NO3	**53.5**	ug/L	20.0	1		05/20/24 15:22		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
	Pace Analytical Services - Indianapolis							
Chloride	**18100**	ug/L	1000	1		05/19/24 14:54	16887-00-6	
4500 Ammonia Water Low Level	Analytical Method: SM-4500-NH3 G							
	Pace Analytical Services - Indianapolis							
Nitrogen, Ammonia	**28.6**	ug/L	20.0	1		05/24/24 12:27	7664-41-7	
5310C TOC	Analytical Method: SM 5310C							
	Pace Analytical Services - Indianapolis							
Total Organic Carbon	**1100**	ug/L	500	1		05/17/24 14:34	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

ANALYTICAL RESULTS

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

Sample: MW-202 **Lab ID: 50372945011** Collected: 05/09/24 12:15 Received: 05/11/24 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis							
Potassium	**1230**	ug/L	500	1	05/20/24 16:10	05/21/24 12:11	7440-09-7	
Sodium	**70400**	ug/L	1000	1	05/20/24 16:10	05/21/24 12:11	7440-23-5	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis							
Potassium, Dissolved	**1270**	ug/L	500	1	05/20/24 16:11	05/21/24 13:35	7440-09-7	
Sodium, Dissolved	**71800**	ug/L	1000	1	05/20/24 16:11	05/21/24 13:35	7440-23-5	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis							
Arsenic	**3.7**	ug/L	1.0	1	05/17/24 09:45	05/20/24 17:47	7440-38-2	
Barium	**72.2**	ug/L	5.0	1	05/17/24 09:45	05/20/24 17:47	7440-39-3	
Zinc	**<10.0**	ug/L	10.0	1	05/17/24 09:45	05/21/24 09:15	7440-66-6	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis							
Arsenic, Dissolved	**3.8**	ug/L	1.0	1	05/17/24 09:45	05/18/24 01:45	7440-38-2	
Barium, Dissolved	**71.5**	ug/L	5.0	1	05/17/24 09:45	05/18/24 01:45	7440-39-3	
Zinc, Dissolved	**<10.0**	ug/L	10.0	1	05/17/24 09:45	05/18/24 01:45	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Indianapolis							
Acetone	**<20.0**	ug/L	20.0	1		05/21/24 09:32	67-64-1	
Acrylonitrile	**<5.0**	ug/L	5.0	1		05/21/24 09:32	107-13-1	
Benzene	**<1.0**	ug/L	1.0	1		05/21/24 09:32	71-43-2	
Bromochloromethane	**<1.0**	ug/L	1.0	1		05/21/24 09:32	74-97-5	
Bromodichloromethane	**<1.0**	ug/L	1.0	1		05/21/24 09:32	75-27-4	
Bromoform	**<1.0**	ug/L	1.0	1		05/21/24 09:32	75-25-2	
Bromomethane	**<5.0**	ug/L	5.0	1		05/21/24 09:32	74-83-9	
2-Butanone (MEK)	**<5.0**	ug/L	5.0	1		05/21/24 09:32	78-93-3	
Carbon disulfide	**<1.0**	ug/L	1.0	1		05/21/24 09:32	75-15-0	
Carbon tetrachloride	**<1.0**	ug/L	1.0	1		05/21/24 09:32	56-23-5	
Chlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 09:32	108-90-7	
Chloroethane	**<5.0**	ug/L	5.0	1		05/21/24 09:32	75-00-3	
Chloroform	**<1.0**	ug/L	1.0	1		05/21/24 09:32	67-66-3	
Chloromethane	**<5.0**	ug/L	5.0	1		05/21/24 09:32	74-87-3	
1,2-Dibromo-3-chloropropane	**<5.0**	ug/L	5.0	1		05/21/24 09:32	96-12-8	
Dibromochloromethane	**<1.0**	ug/L	1.0	1		05/21/24 09:32	124-48-1	
1,2-Dibromoethane (EDB)	**<1.0**	ug/L	1.0	1		05/21/24 09:32	106-93-4	
Dibromomethane	**<1.0**	ug/L	1.0	1		05/21/24 09:32	74-95-3	
1,2-Dichlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 09:32	95-50-1	
1,4-Dichlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 09:32	106-46-7	
trans-1,4-Dichloro-2-butene	**<5.0**	ug/L	5.0	1		05/21/24 09:32	110-57-6	
1,1-Dichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 09:32	75-34-3	
1,2-Dichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 09:32	107-06-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

ANALYTICAL RESULTS

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

Sample: MW-202 **Lab ID: 50372945011** Collected: 05/09/24 12:15 Received: 05/11/24 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 5030B/8260							
	Pace Analytical Services - Indianapolis							
1,1-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 09:32	75-35-4	
cis-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 09:32	156-59-2	
trans-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 09:32	156-60-5	
1,2-Dichloropropane	**<1.0**	ug/L	1.0	1		05/21/24 09:32	78-87-5	
cis-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		05/21/24 09:32	10061-01-5	
trans-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		05/21/24 09:32	10061-02-6	
Ethylbenzene	**<1.0**	ug/L	1.0	1		05/21/24 09:32	100-41-4	
2-Hexanone	**<5.0**	ug/L	5.0	1		05/21/24 09:32	591-78-6	
Iodomethane	**<1.0**	ug/L	1.0	1		05/21/24 09:32	74-88-4	
Methylene Chloride	**<5.0**	ug/L	5.0	1		05/21/24 09:32	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<5.0**	ug/L	5.0	1		05/21/24 09:32	108-10-1	
Styrene	**<1.0**	ug/L	1.0	1		05/21/24 09:32	100-42-5	
1,1,1,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		05/21/24 09:32	630-20-6	
1,1,2,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		05/21/24 09:32	79-34-5	
Tetrachloroethene	**<1.0**	ug/L	1.0	1		05/21/24 09:32	127-18-4	
Toluene	**<1.0**	ug/L	1.0	1		05/21/24 09:32	108-88-3	
1,1,1-Trichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 09:32	71-55-6	
1,1,2-Trichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 09:32	79-00-5	
Trichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 09:32	79-01-6	
Trichlorofluoromethane	**<1.0**	ug/L	1.0	1		05/21/24 09:32	75-69-4	
1,2,3-Trichloropropane	**<1.0**	ug/L	1.0	1		05/21/24 09:32	96-18-4	
Vinyl chloride	**<1.0**	ug/L	1.0	1		05/21/24 09:32	75-01-4	
Xylene (Total)	**<2.0**	ug/L	2.0	1		05/21/24 09:32	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	96	%.	79-124	1		05/21/24 09:32	460-00-4	
Dibromofluoromethane (S)	101	%.	82-128	1		05/21/24 09:32	1868-53-7	
Toluene-d8 (S)	97	%.	73-122	1		05/21/24 09:32	2037-26-5	
Total Inorganic Nitrogen	Analytical Method: NO2+NO3+NH3 Calculation							
	Pace Analytical Services - Indianapolis							
Total Inorganic Nitrogen	**57.4**	ug/L	20.0	1		05/28/24 14:58		
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2							
	Pace Analytical Services - Indianapolis							
Nitrogen, NO2 plus NO3	**57.4**	ug/L	20.0	1		05/20/24 15:24		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
	Pace Analytical Services - Indianapolis							
Chloride	**32300**	ug/L	1000	1		05/19/24 14:58	16887-00-6	
4500 Ammonia Water Low Level	Analytical Method: SM-4500-NH3 G							
	Pace Analytical Services - Indianapolis							
Nitrogen, Ammonia	**<20.0**	ug/L	20.0	1		05/24/24 12:31	7664-41-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

ANALYTICAL RESULTS

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

Sample: MW-202 **Lab ID: 50372945011** Collected: 05/09/24 12:15 Received: 05/11/24 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis							
Total Organic Carbon	**1220**	ug/L	500	1		05/22/24 02:14	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

ANALYTICAL RESULTS

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

Sample: MW-203B **Lab ID: 50372945012** Collected: 05/09/24 14:10 Received: 05/11/24 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis							
Potassium, Dissolved	**4570**	ug/L	500	1	05/20/24 16:11	05/21/24 13:37	7440-09-7	
Sodium, Dissolved	**89100**	ug/L	1000	1	05/20/24 16:11	05/21/24 13:37	7440-23-5	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis							
Arsenic, Dissolved	**6.7**	ug/L	1.0	1	05/17/24 09:45	05/18/24 01:49	7440-38-2	
Barium, Dissolved	**69.3**	ug/L	5.0	1	05/17/24 09:45	05/18/24 01:49	7440-39-3	
Zinc, Dissolved	**<10.0**	ug/L	10.0	1	05/17/24 09:45	05/18/24 01:49	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Indianapolis							
Acetone	**<20.0**	ug/L	20.0	1		05/21/24 10:02	67-64-1	
Acrylonitrile	**<5.0**	ug/L	5.0	1		05/21/24 10:02	107-13-1	
Benzene	**<1.0**	ug/L	1.0	1		05/21/24 10:02	71-43-2	
Bromochloromethane	**<1.0**	ug/L	1.0	1		05/21/24 10:02	74-97-5	
Bromodichloromethane	**<1.0**	ug/L	1.0	1		05/21/24 10:02	75-27-4	
Bromoform	**<1.0**	ug/L	1.0	1		05/21/24 10:02	75-25-2	
Bromomethane	**<5.0**	ug/L	5.0	1		05/21/24 10:02	74-83-9	
2-Butanone (MEK)	**<5.0**	ug/L	5.0	1		05/21/24 10:02	78-93-3	
Carbon disulfide	**<1.0**	ug/L	1.0	1		05/21/24 10:02	75-15-0	
Carbon tetrachloride	**<1.0**	ug/L	1.0	1		05/21/24 10:02	56-23-5	
Chlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 10:02	108-90-7	
Chloroethane	**<5.0**	ug/L	5.0	1		05/21/24 10:02	75-00-3	
Chloroform	**<1.0**	ug/L	1.0	1		05/21/24 10:02	67-66-3	
Chloromethane	**<5.0**	ug/L	5.0	1		05/21/24 10:02	74-87-3	
1,2-Dibromo-3-chloropropane	**<5.0**	ug/L	5.0	1		05/21/24 10:02	96-12-8	
Dibromochloromethane	**<1.0**	ug/L	1.0	1		05/21/24 10:02	124-48-1	
1,2-Dibromoethane (EDB)	**<1.0**	ug/L	1.0	1		05/21/24 10:02	106-93-4	
Dibromomethane	**<1.0**	ug/L	1.0	1		05/21/24 10:02	74-95-3	
1,2-Dichlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 10:02	95-50-1	
1,4-Dichlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 10:02	106-46-7	
trans-1,4-Dichloro-2-butene	**<5.0**	ug/L	5.0	1		05/21/24 10:02	110-57-6	
1,1-Dichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 10:02	75-34-3	
1,2-Dichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 10:02	107-06-2	
1,1-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 10:02	75-35-4	
cis-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 10:02	156-59-2	
trans-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 10:02	156-60-5	
1,2-Dichloropropane	**<1.0**	ug/L	1.0	1		05/21/24 10:02	78-87-5	
cis-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		05/21/24 10:02	10061-01-5	
trans-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		05/21/24 10:02	10061-02-6	
Ethylbenzene	**<1.0**	ug/L	1.0	1		05/21/24 10:02	100-41-4	
2-Hexanone	**<5.0**	ug/L	5.0	1		05/21/24 10:02	591-78-6	
Iodomethane	**<1.0**	ug/L	1.0	1		05/21/24 10:02	74-88-4	
Methylene Chloride	**<5.0**	ug/L	5.0	1		05/21/24 10:02	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<5.0**	ug/L	5.0	1		05/21/24 10:02	108-10-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

ANALYTICAL RESULTS

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

Sample: MW-203B **Lab ID: 50372945012** Collected: 05/09/24 14:10 Received: 05/11/24 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Indianapolis							
Styrene	**<1.0**	ug/L	1.0	1		05/21/24 10:02	100-42-5	
1,1,1,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		05/21/24 10:02	630-20-6	
1,1,2,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		05/21/24 10:02	79-34-5	
Tetrachloroethene	**<1.0**	ug/L	1.0	1		05/21/24 10:02	127-18-4	
Toluene	**<1.0**	ug/L	1.0	1		05/21/24 10:02	108-88-3	
1,1,1-Trichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 10:02	71-55-6	
1,1,2-Trichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 10:02	79-00-5	
Trichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 10:02	79-01-6	
Trichlorofluoromethane	**<1.0**	ug/L	1.0	1		05/21/24 10:02	75-69-4	
1,2,3-Trichloropropane	**<1.0**	ug/L	1.0	1		05/21/24 10:02	96-18-4	
Vinyl chloride	**<1.0**	ug/L	1.0	1		05/21/24 10:02	75-01-4	
Xylene (Total)	**<2.0**	ug/L	2.0	1		05/21/24 10:02	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	99	%.	79-124	1		05/21/24 10:02	460-00-4	
Dibromofluoromethane (S)	102	%.	82-128	1		05/21/24 10:02	1868-53-7	
Toluene-d8 (S)	97	%.	73-122	1		05/21/24 10:02	2037-26-5	
Total Inorganic Nitrogen	Analytical Method: NO2+NO3+NH3 Calculation Pace Analytical Services - Indianapolis							
Total Inorganic Nitrogen	**242**	ug/L	20.0	1		05/28/24 14:58		
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis							
Nitrogen, NO2 plus NO3	**159**	ug/L	20.0	1		05/20/24 15:26		
4500 Chloride	Analytical Method: SM 4500-Cl-E Pace Analytical Services - Indianapolis							
Chloride	**40200**	ug/L	1000	1		05/19/24 14:59	16887-00-6	
4500 Ammonia Water Low Level	Analytical Method: SM-4500-NH3 G Pace Analytical Services - Indianapolis							
Nitrogen, Ammonia	**83.2**	ug/L	20.0	1		05/24/24 12:32	7664-41-7	
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis							
Total Organic Carbon	**1680**	ug/L	500	1		05/22/24 02:33	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
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ANALYTICAL RESULTS

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

Sample: MW-207A **Lab ID: 50372945013** Collected: 05/08/24 13:10 Received: 05/11/24 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis							
Potassium, Dissolved	**726**	ug/L	500	1	05/20/24 16:11	05/21/24 13:39	7440-09-7	
Sodium, Dissolved	**20400**	ug/L	1000	1	05/20/24 16:11	05/21/24 13:39	7440-23-5	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis							
Arsenic, Dissolved	**<1.0**	ug/L	1.0	1	05/17/24 09:45	05/18/24 01:53	7440-38-2	
Barium, Dissolved	**53.4**	ug/L	5.0	1	05/17/24 09:45	05/18/24 01:53	7440-39-3	
Zinc, Dissolved	**<10.0**	ug/L	10.0	1	05/17/24 09:45	05/18/24 01:53	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Indianapolis							
Acetone	**<20.0**	ug/L	20.0	1		05/21/24 10:31	67-64-1	
Acrylonitrile	**<5.0**	ug/L	5.0	1		05/21/24 10:31	107-13-1	
Benzene	**<1.0**	ug/L	1.0	1		05/21/24 10:31	71-43-2	
Bromochloromethane	**<1.0**	ug/L	1.0	1		05/21/24 10:31	74-97-5	
Bromodichloromethane	**<1.0**	ug/L	1.0	1		05/21/24 10:31	75-27-4	
Bromoform	**<1.0**	ug/L	1.0	1		05/21/24 10:31	75-25-2	
Bromomethane	**<5.0**	ug/L	5.0	1		05/21/24 10:31	74-83-9	
2-Butanone (MEK)	**<5.0**	ug/L	5.0	1		05/21/24 10:31	78-93-3	
Carbon disulfide	**<1.0**	ug/L	1.0	1		05/21/24 10:31	75-15-0	
Carbon tetrachloride	**<1.0**	ug/L	1.0	1		05/21/24 10:31	56-23-5	
Chlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 10:31	108-90-7	
Chloroethane	**<5.0**	ug/L	5.0	1		05/21/24 10:31	75-00-3	
Chloroform	**<1.0**	ug/L	1.0	1		05/21/24 10:31	67-66-3	
Chloromethane	**<5.0**	ug/L	5.0	1		05/21/24 10:31	74-87-3	
1,2-Dibromo-3-chloropropane	**<5.0**	ug/L	5.0	1		05/21/24 10:31	96-12-8	
Dibromochloromethane	**<1.0**	ug/L	1.0	1		05/21/24 10:31	124-48-1	
1,2-Dibromoethane (EDB)	**<1.0**	ug/L	1.0	1		05/21/24 10:31	106-93-4	
Dibromomethane	**<1.0**	ug/L	1.0	1		05/21/24 10:31	74-95-3	
1,2-Dichlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 10:31	95-50-1	
1,4-Dichlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 10:31	106-46-7	
trans-1,4-Dichloro-2-butene	**<5.0**	ug/L	5.0	1		05/21/24 10:31	110-57-6	
1,1-Dichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 10:31	75-34-3	
1,2-Dichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 10:31	107-06-2	
1,1-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 10:31	75-35-4	
cis-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 10:31	156-59-2	
trans-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 10:31	156-60-5	
1,2-Dichloropropane	**<1.0**	ug/L	1.0	1		05/21/24 10:31	78-87-5	
cis-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		05/21/24 10:31	10061-01-5	
trans-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		05/21/24 10:31	10061-02-6	
Ethylbenzene	**<1.0**	ug/L	1.0	1		05/21/24 10:31	100-41-4	
2-Hexanone	**<5.0**	ug/L	5.0	1		05/21/24 10:31	591-78-6	
Iodomethane	**<1.0**	ug/L	1.0	1		05/21/24 10:31	74-88-4	
Methylene Chloride	**<5.0**	ug/L	5.0	1		05/21/24 10:31	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<5.0**	ug/L	5.0	1		05/21/24 10:31	108-10-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

ANALYTICAL RESULTS

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

Sample: MW-207A **Lab ID: 50372945013** Collected: 05/08/24 13:10 Received: 05/11/24 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Indianapolis							
Styrene	**<1.0**	ug/L	1.0	1		05/21/24 10:31	100-42-5	
1,1,1,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		05/21/24 10:31	630-20-6	
1,1,2,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		05/21/24 10:31	79-34-5	
Tetrachloroethene	**<1.0**	ug/L	1.0	1		05/21/24 10:31	127-18-4	
Toluene	**<1.0**	ug/L	1.0	1		05/21/24 10:31	108-88-3	
1,1,1-Trichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 10:31	71-55-6	
1,1,2-Trichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 10:31	79-00-5	
Trichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 10:31	79-01-6	
Trichlorofluoromethane	**<1.0**	ug/L	1.0	1		05/21/24 10:31	75-69-4	
1,2,3-Trichloropropane	**<1.0**	ug/L	1.0	1		05/21/24 10:31	96-18-4	
Vinyl chloride	**<1.0**	ug/L	1.0	1		05/21/24 10:31	75-01-4	
Xylene (Total)	**<2.0**	ug/L	2.0	1		05/21/24 10:31	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	97	%.	79-124	1		05/21/24 10:31	460-00-4	
Dibromofluoromethane (S)	103	%.	82-128	1		05/21/24 10:31	1868-53-7	
Toluene-d8 (S)	97	%.	73-122	1		05/21/24 10:31	2037-26-5	
Total Inorganic Nitrogen	Analytical Method: NO2+NO3+NH3 Calculation Pace Analytical Services - Indianapolis							
Total Inorganic Nitrogen	**<40.0**	ug/L	40.0	2		05/28/24 14:58		
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis							
Nitrogen, NO2 plus NO3	**36.4**	ug/L	20.0	1		05/20/24 15:28		
4500 Chloride	Analytical Method: SM 4500-Cl-E Pace Analytical Services - Indianapolis							
Chloride	**11300**	ug/L	1000	1		05/19/24 15:00	16887-00-6	
4500 Ammonia Water Low Level	Analytical Method: SM-4500-NH3 G Pace Analytical Services - Indianapolis							
Nitrogen, Ammonia	**<40.0**	ug/L	40.0	2		05/24/24 14:51	7664-41-7	D3
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis							
Total Organic Carbon	**8450**	ug/L	500	1		05/22/24 02:53	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

ANALYTICAL RESULTS

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

Sample: MW-208B **Lab ID: 50372945014** Collected: 05/08/24 13:55 Received: 05/11/24 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis							
Potassium, Dissolved	**1150**	ug/L	500	1	05/20/24 16:11	05/21/24 13:40	7440-09-7	
Sodium, Dissolved	**86700**	ug/L	1000	1	05/20/24 16:11	05/21/24 13:40	7440-23-5	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis							
Arsenic, Dissolved	**8.3**	ug/L	1.0	1	05/17/24 09:45	05/18/24 02:05	7440-38-2	
Barium, Dissolved	**55.2**	ug/L	5.0	1	05/17/24 09:45	05/18/24 02:05	7440-39-3	
Zinc, Dissolved	**<10.0**	ug/L	10.0	1	05/17/24 09:45	05/18/24 02:05	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Indianapolis							
Acetone	**<20.0**	ug/L	20.0	1		05/21/24 11:01	67-64-1	
Acrylonitrile	**<5.0**	ug/L	5.0	1		05/21/24 11:01	107-13-1	
Benzene	**<1.0**	ug/L	1.0	1		05/21/24 11:01	71-43-2	
Bromochloromethane	**<1.0**	ug/L	1.0	1		05/21/24 11:01	74-97-5	
Bromodichloromethane	**<1.0**	ug/L	1.0	1		05/21/24 11:01	75-27-4	
Bromoform	**<1.0**	ug/L	1.0	1		05/21/24 11:01	75-25-2	
Bromomethane	**<5.0**	ug/L	5.0	1		05/21/24 11:01	74-83-9	
2-Butanone (MEK)	**<5.0**	ug/L	5.0	1		05/21/24 11:01	78-93-3	
Carbon disulfide	**<1.0**	ug/L	1.0	1		05/21/24 11:01	75-15-0	
Carbon tetrachloride	**<1.0**	ug/L	1.0	1		05/21/24 11:01	56-23-5	
Chlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 11:01	108-90-7	
Chloroethane	**<5.0**	ug/L	5.0	1		05/21/24 11:01	75-00-3	
Chloroform	**<1.0**	ug/L	1.0	1		05/21/24 11:01	67-66-3	
Chloromethane	**<5.0**	ug/L	5.0	1		05/21/24 11:01	74-87-3	
1,2-Dibromo-3-chloropropane	**<5.0**	ug/L	5.0	1		05/21/24 11:01	96-12-8	
Dibromochloromethane	**<1.0**	ug/L	1.0	1		05/21/24 11:01	124-48-1	
1,2-Dibromoethane (EDB)	**<1.0**	ug/L	1.0	1		05/21/24 11:01	106-93-4	
Dibromomethane	**<1.0**	ug/L	1.0	1		05/21/24 11:01	74-95-3	
1,2-Dichlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 11:01	95-50-1	
1,4-Dichlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 11:01	106-46-7	
trans-1,4-Dichloro-2-butene	**<5.0**	ug/L	5.0	1		05/21/24 11:01	110-57-6	
1,1-Dichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 11:01	75-34-3	
1,2-Dichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 11:01	107-06-2	
1,1-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 11:01	75-35-4	
cis-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 11:01	156-59-2	
trans-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 11:01	156-60-5	
1,2-Dichloropropane	**<1.0**	ug/L	1.0	1		05/21/24 11:01	78-87-5	
cis-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		05/21/24 11:01	10061-01-5	
trans-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		05/21/24 11:01	10061-02-6	
Ethylbenzene	**<1.0**	ug/L	1.0	1		05/21/24 11:01	100-41-4	
2-Hexanone	**<5.0**	ug/L	5.0	1		05/21/24 11:01	591-78-6	
Iodomethane	**<1.0**	ug/L	1.0	1		05/21/24 11:01	74-88-4	
Methylene Chloride	**<5.0**	ug/L	5.0	1		05/21/24 11:01	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<5.0**	ug/L	5.0	1		05/21/24 11:01	108-10-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

ANALYTICAL RESULTS

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

Sample: MW-208B **Lab ID: 50372945014** Collected: 05/08/24 13:55 Received: 05/11/24 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 5030B/8260							
	Pace Analytical Services - Indianapolis							
Styrene	**<1.0**	ug/L	1.0	1		05/21/24 11:01	100-42-5	
1,1,1,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		05/21/24 11:01	630-20-6	
1,1,2,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		05/21/24 11:01	79-34-5	
Tetrachloroethene	**<1.0**	ug/L	1.0	1		05/21/24 11:01	127-18-4	
Toluene	**<1.0**	ug/L	1.0	1		05/21/24 11:01	108-88-3	
1,1,1-Trichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 11:01	71-55-6	
1,1,2-Trichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 11:01	79-00-5	
Trichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 11:01	79-01-6	
Trichlorofluoromethane	**<1.0**	ug/L	1.0	1		05/21/24 11:01	75-69-4	
1,2,3-Trichloropropane	**<1.0**	ug/L	1.0	1		05/21/24 11:01	96-18-4	
Vinyl chloride	**<1.0**	ug/L	1.0	1		05/21/24 11:01	75-01-4	
Xylene (Total)	**<2.0**	ug/L	2.0	1		05/21/24 11:01	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	99	%.	79-124	1		05/21/24 11:01	460-00-4	
Dibromofluoromethane (S)	102	%.	82-128	1		05/21/24 11:01	1868-53-7	
Toluene-d8 (S)	98	%.	73-122	1		05/21/24 11:01	2037-26-5	
Total Inorganic Nitrogen	Analytical Method: NO2+NO3+NH3 Calculation							
	Pace Analytical Services - Indianapolis							
Total Inorganic Nitrogen	**280**	ug/L	20.0	1		05/28/24 14:58		
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2							
	Pace Analytical Services - Indianapolis							
Nitrogen, NO2 plus NO3	**<20.0**	ug/L	20.0	1		05/20/24 15:29		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
	Pace Analytical Services - Indianapolis							
Chloride	**34700**	ug/L	1000	1		05/19/24 15:01	16887-00-6	
4500 Ammonia Water Low Level	Analytical Method: SM-4500-NH3 G							
	Pace Analytical Services - Indianapolis							
Nitrogen, Ammonia	**280**	ug/L	20.0	1		05/24/24 12:34	7664-41-7	
5310C TOC	Analytical Method: SM 5310C							
	Pace Analytical Services - Indianapolis							
Total Organic Carbon	**1340**	ug/L	500	1		05/22/24 03:19	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

ANALYTICAL RESULTS

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

Sample: MW-209 **Lab ID: 50372945015** Collected: 05/09/24 10:10 Received: 05/11/24 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis							
Potassium, Dissolved	**1090**	ug/L	500	1	05/20/24 16:11	05/21/24 13:42	7440-09-7	
Sodium, Dissolved	**92900**	ug/L	1000	1	05/20/24 16:11	05/21/24 13:42	7440-23-5	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis							
Arsenic, Dissolved	**2.4**	ug/L	1.0	1	05/17/24 09:45	05/18/24 02:09	7440-38-2	
Barium, Dissolved	**47.3**	ug/L	5.0	1	05/17/24 09:45	05/18/24 02:09	7440-39-3	
Zinc, Dissolved	**<10.0**	ug/L	10.0	1	05/17/24 09:45	05/18/24 02:09	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Indianapolis							
Acetone	**<20.0**	ug/L	20.0	1		05/21/24 11:30	67-64-1	
Acrylonitrile	**<5.0**	ug/L	5.0	1		05/21/24 11:30	107-13-1	
Benzene	**<1.0**	ug/L	1.0	1		05/21/24 11:30	71-43-2	
Bromochloromethane	**<1.0**	ug/L	1.0	1		05/21/24 11:30	74-97-5	
Bromodichloromethane	**<1.0**	ug/L	1.0	1		05/21/24 11:30	75-27-4	
Bromoform	**<1.0**	ug/L	1.0	1		05/21/24 11:30	75-25-2	
Bromomethane	**<5.0**	ug/L	5.0	1		05/21/24 11:30	74-83-9	
2-Butanone (MEK)	**<5.0**	ug/L	5.0	1		05/21/24 11:30	78-93-3	
Carbon disulfide	**<1.0**	ug/L	1.0	1		05/21/24 11:30	75-15-0	
Carbon tetrachloride	**<1.0**	ug/L	1.0	1		05/21/24 11:30	56-23-5	
Chlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 11:30	108-90-7	
Chloroethane	**<5.0**	ug/L	5.0	1		05/21/24 11:30	75-00-3	
Chloroform	**<1.0**	ug/L	1.0	1		05/21/24 11:30	67-66-3	
Chloromethane	**<5.0**	ug/L	5.0	1		05/21/24 11:30	74-87-3	
1,2-Dibromo-3-chloropropane	**<5.0**	ug/L	5.0	1		05/21/24 11:30	96-12-8	
Dibromochloromethane	**<1.0**	ug/L	1.0	1		05/21/24 11:30	124-48-1	
1,2-Dibromoethane (EDB)	**<1.0**	ug/L	1.0	1		05/21/24 11:30	106-93-4	
Dibromomethane	**<1.0**	ug/L	1.0	1		05/21/24 11:30	74-95-3	
1,2-Dichlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 11:30	95-50-1	
1,4-Dichlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 11:30	106-46-7	
trans-1,4-Dichloro-2-butene	**<5.0**	ug/L	5.0	1		05/21/24 11:30	110-57-6	
1,1-Dichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 11:30	75-34-3	
1,2-Dichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 11:30	107-06-2	
1,1-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 11:30	75-35-4	
cis-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 11:30	156-59-2	
trans-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 11:30	156-60-5	
1,2-Dichloropropane	**<1.0**	ug/L	1.0	1		05/21/24 11:30	78-87-5	
cis-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		05/21/24 11:30	10061-01-5	
trans-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		05/21/24 11:30	10061-02-6	
Ethylbenzene	**<1.0**	ug/L	1.0	1		05/21/24 11:30	100-41-4	
2-Hexanone	**<5.0**	ug/L	5.0	1		05/21/24 11:30	591-78-6	
Iodomethane	**<1.0**	ug/L	1.0	1		05/21/24 11:30	74-88-4	
Methylene Chloride	**<5.0**	ug/L	5.0	1		05/21/24 11:30	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<5.0**	ug/L	5.0	1		05/21/24 11:30	108-10-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

ANALYTICAL RESULTS

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

Sample: MW-209 **Lab ID: 50372945015** Collected: 05/09/24 10:10 Received: 05/11/24 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 5030B/8260							
	Pace Analytical Services - Indianapolis							
Styrene	**<1.0**	ug/L	1.0	1		05/21/24 11:30	100-42-5	
1,1,1,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		05/21/24 11:30	630-20-6	
1,1,2,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		05/21/24 11:30	79-34-5	
Tetrachloroethene	**<1.0**	ug/L	1.0	1		05/21/24 11:30	127-18-4	
Toluene	**<1.0**	ug/L	1.0	1		05/21/24 11:30	108-88-3	
1,1,1-Trichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 11:30	71-55-6	
1,1,2-Trichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 11:30	79-00-5	
Trichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 11:30	79-01-6	
Trichlorofluoromethane	**<1.0**	ug/L	1.0	1		05/21/24 11:30	75-69-4	
1,2,3-Trichloropropane	**<1.0**	ug/L	1.0	1		05/21/24 11:30	96-18-4	
Vinyl chloride	**<1.0**	ug/L	1.0	1		05/21/24 11:30	75-01-4	
Xylene (Total)	**<2.0**	ug/L	2.0	1		05/21/24 11:30	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	99	%.	79-124	1		05/21/24 11:30	460-00-4	
Dibromofluoromethane (S)	102	%.	82-128	1		05/21/24 11:30	1868-53-7	
Toluene-d8 (S)	98	%.	73-122	1		05/21/24 11:30	2037-26-5	
Total Inorganic Nitrogen	Analytical Method: NO2+NO3+NH3 Calculation							
	Pace Analytical Services - Indianapolis							
Total Inorganic Nitrogen	**68.3**	ug/L	20.0	1		05/28/24 14:58		
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2							
	Pace Analytical Services - Indianapolis							
Nitrogen, NO2 plus NO3	**68.3**	ug/L	20.0	1		05/20/24 15:31		
4500 Chloride	Analytical Method: SM 4500-Cl-E							
	Pace Analytical Services - Indianapolis							
Chloride	**37100**	ug/L	1000	1		05/19/24 15:02	16887-00-6	
4500 Ammonia Water Low Level	Analytical Method: SM-4500-NH3 G							
	Pace Analytical Services - Indianapolis							
Nitrogen, Ammonia	**<20.0**	ug/L	20.0	1		05/24/24 12:36	7664-41-7	
5310C TOC	Analytical Method: SM 5310C							
	Pace Analytical Services - Indianapolis							
Total Organic Carbon	**1190**	ug/L	500	1		05/22/24 03:44	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
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ANALYTICAL RESULTS

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

Sample: MW-210 **Lab ID: 50372945016** Collected: 05/09/24 11:03 Received: 05/11/24 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis							
Potassium, Dissolved	**2150**	ug/L	500	1	05/20/24 16:11	05/21/24 13:44	7440-09-7	
Sodium, Dissolved	**135000**	ug/L	1000	1	05/20/24 16:11	05/21/24 13:44	7440-23-5	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis							
Arsenic, Dissolved	**6.7**	ug/L	1.0	1	05/17/24 09:45	05/18/24 02:13	7440-38-2	
Barium, Dissolved	**74.5**	ug/L	5.0	1	05/17/24 09:45	05/18/24 02:13	7440-39-3	
Zinc, Dissolved	**12.5**	ug/L	10.0	1	05/17/24 09:45	05/18/24 02:13	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Indianapolis							
Acetone	**<20.0**	ug/L	20.0	1		05/21/24 11:59	67-64-1	
Acrylonitrile	**<5.0**	ug/L	5.0	1		05/21/24 11:59	107-13-1	
Benzene	**<1.0**	ug/L	1.0	1		05/21/24 11:59	71-43-2	
Bromochloromethane	**<1.0**	ug/L	1.0	1		05/21/24 11:59	74-97-5	
Bromodichloromethane	**<1.0**	ug/L	1.0	1		05/21/24 11:59	75-27-4	
Bromoform	**<1.0**	ug/L	1.0	1		05/21/24 11:59	75-25-2	
Bromomethane	**<5.0**	ug/L	5.0	1		05/21/24 11:59	74-83-9	
2-Butanone (MEK)	**<5.0**	ug/L	5.0	1		05/21/24 11:59	78-93-3	
Carbon disulfide	**<1.0**	ug/L	1.0	1		05/21/24 11:59	75-15-0	
Carbon tetrachloride	**<1.0**	ug/L	1.0	1		05/21/24 11:59	56-23-5	
Chlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 11:59	108-90-7	
Chloroethane	**<5.0**	ug/L	5.0	1		05/21/24 11:59	75-00-3	
Chloroform	**<1.0**	ug/L	1.0	1		05/21/24 11:59	67-66-3	
Chloromethane	**<5.0**	ug/L	5.0	1		05/21/24 11:59	74-87-3	
1,2-Dibromo-3-chloropropane	**<5.0**	ug/L	5.0	1		05/21/24 11:59	96-12-8	
Dibromochloromethane	**<1.0**	ug/L	1.0	1		05/21/24 11:59	124-48-1	
1,2-Dibromoethane (EDB)	**<1.0**	ug/L	1.0	1		05/21/24 11:59	106-93-4	
Dibromomethane	**<1.0**	ug/L	1.0	1		05/21/24 11:59	74-95-3	
1,2-Dichlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 11:59	95-50-1	
1,4-Dichlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 11:59	106-46-7	
trans-1,4-Dichloro-2-butene	**<5.0**	ug/L	5.0	1		05/21/24 11:59	110-57-6	
1,1-Dichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 11:59	75-34-3	
1,2-Dichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 11:59	107-06-2	
1,1-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 11:59	75-35-4	
cis-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 11:59	156-59-2	
trans-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 11:59	156-60-5	
1,2-Dichloropropane	**<1.0**	ug/L	1.0	1		05/21/24 11:59	78-87-5	
cis-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		05/21/24 11:59	10061-01-5	
trans-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		05/21/24 11:59	10061-02-6	
Ethylbenzene	**<1.0**	ug/L	1.0	1		05/21/24 11:59	100-41-4	
2-Hexanone	**<5.0**	ug/L	5.0	1		05/21/24 11:59	591-78-6	
Iodomethane	**<1.0**	ug/L	1.0	1		05/21/24 11:59	74-88-4	
Methylene Chloride	**<5.0**	ug/L	5.0	1		05/21/24 11:59	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<5.0**	ug/L	5.0	1		05/21/24 11:59	108-10-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

ANALYTICAL RESULTS

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

Sample: MW-210 **Lab ID: 50372945016** Collected: 05/09/24 11:03 Received: 05/11/24 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Indianapolis							
Styrene	**<1.0**	ug/L	1.0	1		05/21/24 11:59	100-42-5	
1,1,1,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		05/21/24 11:59	630-20-6	
1,1,2,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		05/21/24 11:59	79-34-5	
Tetrachloroethene	**<1.0**	ug/L	1.0	1		05/21/24 11:59	127-18-4	
Toluene	**<1.0**	ug/L	1.0	1		05/21/24 11:59	108-88-3	
1,1,1-Trichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 11:59	71-55-6	
1,1,2-Trichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 11:59	79-00-5	
Trichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 11:59	79-01-6	
Trichlorofluoromethane	**<1.0**	ug/L	1.0	1		05/21/24 11:59	75-69-4	
1,2,3-Trichloropropane	**<1.0**	ug/L	1.0	1		05/21/24 11:59	96-18-4	
Vinyl chloride	**<1.0**	ug/L	1.0	1		05/21/24 11:59	75-01-4	
Xylene (Total)	**<2.0**	ug/L	2.0	1		05/21/24 11:59	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	98	%.	79-124	1		05/21/24 11:59	460-00-4	
Dibromofluoromethane (S)	105	%.	82-128	1		05/21/24 11:59	1868-53-7	
Toluene-d8 (S)	98	%.	73-122	1		05/21/24 11:59	2037-26-5	
Total Inorganic Nitrogen	Analytical Method: NO2+NO3+NH3 Calculation Pace Analytical Services - Indianapolis							
Total Inorganic Nitrogen	**147**	ug/L	20.0	1		05/28/24 14:58		
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis							
Nitrogen, NO2 plus NO3	**105**	ug/L	20.0	1		05/20/24 15:36		
4500 Chloride	Analytical Method: SM 4500-Cl-E Pace Analytical Services - Indianapolis							
Chloride	**30600**	ug/L	1000	1		05/19/24 15:03	16887-00-6	
4500 Ammonia Water Low Level	Analytical Method: SM-4500-NH3 G Pace Analytical Services - Indianapolis							
Nitrogen, Ammonia	**41.7**	ug/L	20.0	1		05/24/24 12:37	7664-41-7	
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis							
Total Organic Carbon	**1740**	ug/L	500	1		05/22/24 04:09	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

ANALYTICAL RESULTS

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

Sample: MW-212 **Lab ID: 50372945017** Collected: 05/08/24 11:10 Received: 05/11/24 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis							
Potassium, Dissolved	**992**	ug/L	500	1	05/20/24 16:11	05/21/24 13:46	7440-09-7	
Sodium, Dissolved	**90800**	ug/L	1000	1	05/20/24 16:11	05/21/24 13:46	7440-23-5	
6020 MET ICPMS, Dissolved	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis							
Arsenic, Dissolved	**6.0**	ug/L	1.0	1	05/17/24 09:45	05/18/24 02:17	7440-38-2	
Barium, Dissolved	**66.2**	ug/L	5.0	1	05/17/24 09:45	05/18/24 02:17	7440-39-3	
Zinc, Dissolved	**<10.0**	ug/L	10.0	1	05/17/24 09:45	05/18/24 02:17	7440-66-6	
8260 MSV Low Level	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Indianapolis							
Acetone	**<20.0**	ug/L	20.0	1		05/21/24 12:29	67-64-1	
Acrylonitrile	**<5.0**	ug/L	5.0	1		05/21/24 12:29	107-13-1	
Benzene	**<1.0**	ug/L	1.0	1		05/21/24 12:29	71-43-2	
Bromochloromethane	**<1.0**	ug/L	1.0	1		05/21/24 12:29	74-97-5	
Bromodichloromethane	**<1.0**	ug/L	1.0	1		05/21/24 12:29	75-27-4	
Bromoform	**<1.0**	ug/L	1.0	1		05/21/24 12:29	75-25-2	
Bromomethane	**<5.0**	ug/L	5.0	1		05/21/24 12:29	74-83-9	
2-Butanone (MEK)	**<5.0**	ug/L	5.0	1		05/21/24 12:29	78-93-3	
Carbon disulfide	**<1.0**	ug/L	1.0	1		05/21/24 12:29	75-15-0	
Carbon tetrachloride	**<1.0**	ug/L	1.0	1		05/21/24 12:29	56-23-5	
Chlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 12:29	108-90-7	
Chloroethane	**<5.0**	ug/L	5.0	1		05/21/24 12:29	75-00-3	
Chloroform	**<1.0**	ug/L	1.0	1		05/21/24 12:29	67-66-3	
Chloromethane	**<5.0**	ug/L	5.0	1		05/21/24 12:29	74-87-3	
1,2-Dibromo-3-chloropropane	**<5.0**	ug/L	5.0	1		05/21/24 12:29	96-12-8	
Dibromochloromethane	**<1.0**	ug/L	1.0	1		05/21/24 12:29	124-48-1	
1,2-Dibromoethane (EDB)	**<1.0**	ug/L	1.0	1		05/21/24 12:29	106-93-4	
Dibromomethane	**<1.0**	ug/L	1.0	1		05/21/24 12:29	74-95-3	
1,2-Dichlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 12:29	95-50-1	
1,4-Dichlorobenzene	**<1.0**	ug/L	1.0	1		05/21/24 12:29	106-46-7	
trans-1,4-Dichloro-2-butene	**<5.0**	ug/L	5.0	1		05/21/24 12:29	110-57-6	
1,1-Dichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 12:29	75-34-3	
1,2-Dichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 12:29	107-06-2	
1,1-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 12:29	75-35-4	
cis-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 12:29	156-59-2	
trans-1,2-Dichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 12:29	156-60-5	
1,2-Dichloropropane	**<1.0**	ug/L	1.0	1		05/21/24 12:29	78-87-5	
cis-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		05/21/24 12:29	10061-01-5	
trans-1,3-Dichloropropene	**<1.0**	ug/L	1.0	1		05/21/24 12:29	10061-02-6	
Ethylbenzene	**<1.0**	ug/L	1.0	1		05/21/24 12:29	100-41-4	
2-Hexanone	**<5.0**	ug/L	5.0	1		05/21/24 12:29	591-78-6	
Iodomethane	**<1.0**	ug/L	1.0	1		05/21/24 12:29	74-88-4	
Methylene Chloride	**<5.0**	ug/L	5.0	1		05/21/24 12:29	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<5.0**	ug/L	5.0	1		05/21/24 12:29	108-10-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

ANALYTICAL RESULTS

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

Sample: MW-212 **Lab ID: 50372945017** Collected: 05/08/24 11:10 Received: 05/11/24 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level	Analytical Method: EPA 5030B/8260 Pace Analytical Services - Indianapolis							
Styrene	**<1.0**	ug/L	1.0	1		05/21/24 12:29	100-42-5	
1,1,1,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		05/21/24 12:29	630-20-6	
1,1,2,2-Tetrachloroethane	**<1.0**	ug/L	1.0	1		05/21/24 12:29	79-34-5	
Tetrachloroethene	**<1.0**	ug/L	1.0	1		05/21/24 12:29	127-18-4	
Toluene	**<1.0**	ug/L	1.0	1		05/21/24 12:29	108-88-3	
1,1,1-Trichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 12:29	71-55-6	
1,1,2-Trichloroethane	**<1.0**	ug/L	1.0	1		05/21/24 12:29	79-00-5	
Trichloroethene	**<1.0**	ug/L	1.0	1		05/21/24 12:29	79-01-6	
Trichlorofluoromethane	**<1.0**	ug/L	1.0	1		05/21/24 12:29	75-69-4	
1,2,3-Trichloropropane	**<1.0**	ug/L	1.0	1		05/21/24 12:29	96-18-4	
Vinyl chloride	**<1.0**	ug/L	1.0	1		05/21/24 12:29	75-01-4	
Xylene (Total)	**<2.0**	ug/L	2.0	1		05/21/24 12:29	1330-20-7	
Surrogates								
4-Bromofluorobenzene (S)	98	%.	79-124	1		05/21/24 12:29	460-00-4	
Dibromofluoromethane (S)	102	%.	82-128	1		05/21/24 12:29	1868-53-7	
Toluene-d8 (S)	97	%.	73-122	1		05/21/24 12:29	2037-26-5	
Total Inorganic Nitrogen	Analytical Method: NO2+NO3+NH3 Calculation Pace Analytical Services - Indianapolis							
Total Inorganic Nitrogen	**119**	ug/L	20.0	1		05/28/24 14:58		
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis							
Nitrogen, NO2 plus NO3	**<20.0**	ug/L	20.0	1		05/20/24 15:38		
4500 Chloride	Analytical Method: SM 4500-Cl-E Pace Analytical Services - Indianapolis							
Chloride	**33300**	ug/L	1000	1		05/19/24 15:04	16887-00-6	
4500 Ammonia Water Low Level	Analytical Method: SM-4500-NH3 G Pace Analytical Services - Indianapolis							
Nitrogen, Ammonia	**119**	ug/L	20.0	1		05/24/24 12:38	7664-41-7	
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis							
Total Organic Carbon	**1600**	ug/L	500	1		05/22/24 04:28	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

QUALITY CONTROL DATA

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

QC Batch: 789980
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372945003, 50372945011

METHOD BLANK: 3614583 Matrix: Water
Associated Lab Samples: 50372945003, 50372945011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Potassium	ug/L	<500	500	05/21/24 11:14	
Sodium	ug/L	<1000	1000	05/21/24 11:14	

LABORATORY CONTROL SAMPLE: 3614584

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Potassium	ug/L	10000	9680	97	80-120	
Sodium	ug/L	10000	9620	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3614585 3614586

Parameter	Units	50372909024 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Potassium	ug/L	16300	10000	10000	25700	26900	94	106	75-125	4	20	
Sodium	ug/L	1450000	10000	10000	1390000	1450000	-657	-33	75-125	4	20	E,P6

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

QC Batch: 789969
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372945001, 50372945002, 50372945003, 50372945004, 50372945005, 50372945006, 50372945008, 50372945009, 50372945010, 50372945011, 50372945012, 50372945013, 50372945014, 50372945015, 50372945016, 50372945017

METHOD BLANK: 3614541 Matrix: Water
Associated Lab Samples: 50372945001, 50372945002, 50372945003, 50372945004, 50372945005, 50372945006, 50372945008, 50372945009, 50372945010, 50372945011, 50372945012, 50372945013, 50372945014, 50372945015, 50372945016, 50372945017

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Potassium, Dissolved	ug/L	<500	500	05/21/24 13:11	
Sodium, Dissolved	ug/L	<1000	1000	05/21/24 13:11	

LABORATORY CONTROL SAMPLE: 3614542

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Potassium, Dissolved	ug/L	10000	10000	100	80-120	
Sodium, Dissolved	ug/L	10000	10200	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3614543 3614544

Parameter	Units	50373084001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Potassium, Dissolved	ug/L	1.4 mg/L	10000	10000	11700	11000	103	96	75-125	6	20	
Sodium, Dissolved	ug/L	17.1 mg/L	10000	10000	27200	25300	100	82	75-125	7	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

QC Batch: 790470
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372945003, 50372945011

METHOD BLANK: 3617124 Matrix: Water
Associated Lab Samples: 50372945003, 50372945011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	<1.0	1.0	05/20/24 15:45	
Barium	ug/L	<5.0	5.0	05/20/24 15:45	
Zinc	ug/L	<10.0	10.0	05/21/24 07:49	

LABORATORY CONTROL SAMPLE: 3617125

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	40	38.7	97	80-120	
Barium	ug/L	40	37.5	94	80-120	
Zinc	ug/L	40	41.2	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3617126 3617127

Parameter	Units	50372871008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	1.4	40	40	39.5	39.8	95	96	75-125	1	20	
Barium	ug/L	66.4	40	40	106	107	99	101	75-125	1	20	
Zinc	ug/L	ND	40	40	38.2	38.2	93	93	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

QC Batch: 790471
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET Dissolved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372945001, 50372945002, 50372945003, 50372945004, 50372945005, 50372945006, 50372945008, 50372945009, 50372945010, 50372945011, 50372945012, 50372945013, 50372945014, 50372945015, 50372945016, 50372945017

METHOD BLANK: 3617128 Matrix: Water
Associated Lab Samples: 50372945001, 50372945002, 50372945003, 50372945004, 50372945005, 50372945006, 50372945008, 50372945009, 50372945010, 50372945011, 50372945012, 50372945013, 50372945014, 50372945015, 50372945016, 50372945017

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic, Dissolved	ug/L	<1.0	1.0	05/18/24 00:37	
Barium, Dissolved	ug/L	<5.0	5.0	05/18/24 00:37	
Zinc, Dissolved	ug/L	<10.0	10.0	05/18/24 00:37	

LABORATORY CONTROL SAMPLE: 3617129

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic, Dissolved	ug/L	40	40.6	101	80-120	
Barium, Dissolved	ug/L	40	40.1	100	80-120	
Zinc, Dissolved	ug/L	40	41.0	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3617130 3617131

Parameter	Units	50372949001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic, Dissolved	ug/L	ND	40	40	41.0	41.5	102	103	75-125	1	20	
Barium, Dissolved	ug/L	27.9	40	40	67.8	67.1	100	98	75-125	1	20	
Zinc, Dissolved	ug/L	ND	40	40	37.5	36.7	90	88	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

QC Batch: 790959
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Low Level
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372945001, 50372945002, 50372945003, 50372945004, 50372945005, 50372945006, 50372945007, 50372945008, 50372945009, 50372945010, 50372945011, 50372945012, 50372945013, 50372945014, 50372945015, 50372945016, 50372945017

METHOD BLANK: 3619344
Matrix: Water
Associated Lab Samples: 50372945001, 50372945002, 50372945003, 50372945004, 50372945005, 50372945006, 50372945007, 50372945008, 50372945009, 50372945010, 50372945011, 50372945012, 50372945013, 50372945014, 50372945015, 50372945016, 50372945017

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<1.0	1.0	05/21/24 02:42	
1,1,1-Trichloroethane	ug/L	<1.0	1.0	05/21/24 02:42	
1,1,2,2-Tetrachloroethane	ug/L	<1.0	1.0	05/21/24 02:42	
1,1,2-Trichloroethane	ug/L	<1.0	1.0	05/21/24 02:42	
1,1-Dichloroethane	ug/L	<1.0	1.0	05/21/24 02:42	
1,1-Dichloroethene	ug/L	<1.0	1.0	05/21/24 02:42	
1,2,3-Trichloropropane	ug/L	<1.0	1.0	05/21/24 02:42	
1,2-Dibromo-3-chloropropane	ug/L	<5.0	5.0	05/21/24 02:42	
1,2-Dibromoethane (EDB)	ug/L	<1.0	1.0	05/21/24 02:42	
1,2-Dichlorobenzene	ug/L	<1.0	1.0	05/21/24 02:42	
1,2-Dichloroethane	ug/L	<1.0	1.0	05/21/24 02:42	
1,2-Dichloropropane	ug/L	<1.0	1.0	05/21/24 02:42	
1,4-Dichlorobenzene	ug/L	<1.0	1.0	05/21/24 02:42	
2-Butanone (MEK)	ug/L	<5.0	5.0	05/21/24 02:42	
2-Hexanone	ug/L	<5.0	5.0	05/21/24 02:42	
4-Methyl-2-pentanone (MIBK)	ug/L	<5.0	5.0	05/21/24 02:42	
Acetone	ug/L	<20.0	20.0	05/21/24 02:42	
Acrylonitrile	ug/L	<5.0	5.0	05/21/24 02:42	
Benzene	ug/L	<1.0	1.0	05/21/24 02:42	
Bromochloromethane	ug/L	<1.0	1.0	05/21/24 02:42	
Bromodichloromethane	ug/L	<1.0	1.0	05/21/24 02:42	
Bromoform	ug/L	<1.0	1.0	05/21/24 02:42	
Bromomethane	ug/L	<5.0	5.0	05/21/24 02:42	
Carbon disulfide	ug/L	<1.0	1.0	05/21/24 02:42	
Carbon tetrachloride	ug/L	<1.0	1.0	05/21/24 02:42	
Chlorobenzene	ug/L	<1.0	1.0	05/21/24 02:42	
Chloroethane	ug/L	<5.0	5.0	05/21/24 02:42	
Chloroform	ug/L	<1.0	1.0	05/21/24 02:42	
Chloromethane	ug/L	<5.0	5.0	05/21/24 02:42	
cis-1,2-Dichloroethene	ug/L	<1.0	1.0	05/21/24 02:42	
cis-1,3-Dichloropropene	ug/L	<1.0	1.0	05/21/24 02:42	
Dibromochloromethane	ug/L	<1.0	1.0	05/21/24 02:42	
Dibromomethane	ug/L	<1.0	1.0	05/21/24 02:42	
Ethylbenzene	ug/L	<1.0	1.0	05/21/24 02:42	
Iodomethane	ug/L	<1.0	1.0	05/21/24 02:42	
Methylene Chloride	ug/L	<5.0	5.0	05/21/24 02:42	
Styrene	ug/L	<1.0	1.0	05/21/24 02:42	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

QUALITY CONTROL DATA

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

METHOD BLANK: 3619344 Matrix: Water

Associated Lab Samples: 50372945001, 50372945002, 50372945003, 50372945004, 50372945005, 50372945006, 50372945007, 50372945008, 50372945009, 50372945010, 50372945011, 50372945012, 50372945013, 50372945014, 50372945015, 50372945016, 50372945017

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Tetrachloroethene	ug/L	<1.0	1.0	05/21/24 02:42	
Toluene	ug/L	<1.0	1.0	05/21/24 02:42	
trans-1,2-Dichloroethene	ug/L	<1.0	1.0	05/21/24 02:42	
trans-1,3-Dichloropropene	ug/L	<1.0	1.0	05/21/24 02:42	
trans-1,4-Dichloro-2-butene	ug/L	<5.0	5.0	05/21/24 02:42	
Trichloroethene	ug/L	<1.0	1.0	05/21/24 02:42	
Trichlorofluoromethane	ug/L	<1.0	1.0	05/21/24 02:42	
Vinyl chloride	ug/L	<1.0	1.0	05/21/24 02:42	
Xylene (Total)	ug/L	<2.0	2.0	05/21/24 02:42	
4-Bromofluorobenzene (S)	%.	97	79-124	05/21/24 02:42	
Dibromofluoromethane (S)	%.	103	82-128	05/21/24 02:42	
Toluene-d8 (S)	%.	96	73-122	05/21/24 02:42	

LABORATORY CONTROL SAMPLE: 3619345

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	56.1	112	81-130	
1,1,1-Trichloroethane	ug/L	50	56.7	113	71-126	
1,1,2,2-Tetrachloroethane	ug/L	50	49.9	100	70-126	
1,1,2-Trichloroethane	ug/L	50	53.8	108	79-125	
1,1-Dichloroethane	ug/L	50	54.7	109	79-120	
1,1-Dichloroethene	ug/L	50	53.2	106	71-130	
1,2,3-Trichloropropane	ug/L	50	51.5	103	74-127	
1,2-Dibromo-3-chloropropane	ug/L	50	54.2	108	80-132	
1,2-Dibromoethane (EDB)	ug/L	50	56.0	112	80-120	
1,2-Dichlorobenzene	ug/L	50	54.4	109	79-123	
1,2-Dichloroethane	ug/L	50	57.0	114	72-123	
1,2-Dichloropropane	ug/L	50	55.7	111	76-125	
1,4-Dichlorobenzene	ug/L	50	52.1	104	79-116	
2-Butanone (MEK)	ug/L	250	275	110	67-135	
2-Hexanone	ug/L	250	264	106	65-135	
4-Methyl-2-pentanone (MIBK)	ug/L	250	273	109	69-136	
Acetone	ug/L	250	254	102	34-156	
Acrylonitrile	ug/L	250	283	113	67-146	
Benzene	ug/L	50	53.4	107	76-122	
Bromochloromethane	ug/L	50	48.8	98	73-119	
Bromodichloromethane	ug/L	50	57.9	116	80-126	
Bromoform	ug/L	50	46.8	94	77-124	
Bromomethane	ug/L	50	44.7	89	10-175	
Carbon disulfide	ug/L	50	46.0	92	69-121	
Carbon tetrachloride	ug/L	50	57.7	115	73-127	
Chlorobenzene	ug/L	50	53.0	106	76-118	

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4171 40th St. SE
Grand Rapids, MI 49512
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QUALITY CONTROL DATA

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

LABORATORY CONTROL SAMPLE: 3619345

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloroethane	ug/L	50	58.3	117	36-162	
Chloroform	ug/L	50	55.8	112	78-121	
Chloromethane	ug/L	50	46.6	93	37-143	
cis-1,2-Dichloroethene	ug/L	50	55.5	111	77-123	
cis-1,3-Dichloropropene	ug/L	50	53.4	107	76-132	
Dibromochloromethane	ug/L	50	56.5	113	79-130	
Dibromomethane	ug/L	50	56.6	113	79-124	
Ethylbenzene	ug/L	50	55.1	110	76-120	
Iodomethane	ug/L	50	38.0	76	10-148	
Methylene Chloride	ug/L	50	54.6	109	71-121	
Styrene	ug/L	50	55.1	110	80-121	
Tetrachloroethene	ug/L	50	54.4	109	71-122	
Toluene	ug/L	50	51.3	103	74-118	
trans-1,2-Dichloroethene	ug/L	50	53.7	107	75-122	
trans-1,3-Dichloropropene	ug/L	50	52.2	104	77-126	
trans-1,4-Dichloro-2-butene	ug/L	50	44.4	89	53-136	
Trichloroethene	ug/L	50	53.9	108	74-125	
Trichlorofluoromethane	ug/L	50	50.7	101	64-138	
Vinyl chloride	ug/L	50	47.1	94	55-139	
Xylene (Total)	ug/L	150	160	107	73-119	
4-Bromofluorobenzene (S)	%.			101	79-124	
Dibromofluoromethane (S)	%.			104	82-128	
Toluene-d8 (S)	%.			98	73-122	

MATRIX SPIKE SAMPLE: 3619346

Parameter	Units	50372945001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<1.0	50	52.5	105	47-139	
1,1,1-Trichloroethane	ug/L	<1.0	50	56.2	112	47-145	
1,1,2,2-Tetrachloroethane	ug/L	<1.0	50	46.9	94	49-133	
1,1,2-Trichloroethane	ug/L	<1.0	50	49.6	99	52-136	
1,1-Dichloroethane	ug/L	<1.0	50	52.1	104	52-137	
1,1-Dichloroethene	ug/L	<1.0	50	52.7	105	53-144	
1,2,3-Trichloropropane	ug/L	<1.0	50	48.6	97	47-134	
1,2-Dibromo-3-chloropropane	ug/L	<5.0	50	50.2	100	39-148	
1,2-Dibromoethane (EDB)	ug/L	<1.0	50	52.1	104	55-133	
1,2-Dichlorobenzene	ug/L	<1.0	50	51.4	103	43-133	
1,2-Dichloroethane	ug/L	<1.0	50	54.6	109	50-138	
1,2-Dichloropropane	ug/L	<1.0	50	53.2	106	54-139	
1,4-Dichlorobenzene	ug/L	<1.0	50	48.9	98	41-131	
2-Butanone (MEK)	ug/L	<5.0	250	251	100	45-138	
2-Hexanone	ug/L	<5.0	250	248	99	45-135	
4-Methyl-2-pentanone (MIBK)	ug/L	<5.0	250	255	102	46-138	
Acetone	ug/L	<20.0	250	235	94	25-151	
Acrylonitrile	ug/L	<5.0	250	267	107	47-147	

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QUALITY CONTROL DATA

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

MATRIX SPIKE SAMPLE: 3619346

Parameter	Units	50372945001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	<1.0	50	51.7	103	53-138	
Bromochloromethane	ug/L	<1.0	50	46.8	94	52-130	
Bromodichloromethane	ug/L	<1.0	50	55.9	112	50-146	
Bromoform	ug/L	<1.0	50	43.3	87	45-132	
Bromomethane	ug/L	<5.0	50	44.2	88	10-173	
Carbon disulfide	ug/L	<1.0	50	43.9	88	47-133	
Carbon tetrachloride	ug/L	<1.0	50	58.1	116	43-148	
Chlorobenzene	ug/L	<1.0	50	50.9	102	52-131	
Chloroethane	ug/L	<5.0	50	57.4	115	25-169	
Chloroform	ug/L	<1.0	50	53.2	106	54-138	
Chloromethane	ug/L	<5.0	50	48.2	96	33-137	
cis-1,2-Dichloroethene	ug/L	<1.0	50	53.2	106	50-141	
cis-1,3-Dichloropropene	ug/L	<1.0	50	48.9	98	47-135	
Dibromochloromethane	ug/L	<1.0	50	51.7	103	48-139	
Dibromomethane	ug/L	<1.0	50	54.9	110	51-141	
Ethylbenzene	ug/L	<1.0	50	52.5	105	50-136	
Iodomethane	ug/L	<1.0	50	35.6	71	10-145	
Methylene Chloride	ug/L	<5.0	50	44.9	90	48-131	
Styrene	ug/L	<1.0	50	51.7	103	46-136	
Tetrachloroethene	ug/L	<1.0	50	52.3	105	44-138	
Toluene	ug/L	<1.0	50	48.6	97	52-132	
trans-1,2-Dichloroethene	ug/L	<1.0	50	51.6	103	50-137	
trans-1,3-Dichloropropene	ug/L	<1.0	50	47.7	95	46-130	
trans-1,4-Dichloro-2-butene	ug/L	<5.0	50	38.8	78	24-134	
Trichloroethene	ug/L	<1.0	50	53.7	107	49-140	
Trichlorofluoromethane	ug/L	<1.0	50	50.8	102	44-153	
Vinyl chloride	ug/L	<1.0	50	48.2	96	41-147	
Xylene (Total)	ug/L	<2.0	150	154	103	44-138	
4-Bromofluorobenzene (S)	%.				99	79-124	
Dibromofluoromethane (S)	%.				106	82-128	
Toluene-d8 (S)	%.				97	73-122	

SAMPLE DUPLICATE: 3619347

Parameter	Units	50372945002 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<1.0	<1.0		20	
1,1,1-Trichloroethane	ug/L	<1.0	<1.0		20	
1,1,2,2-Tetrachloroethane	ug/L	<1.0	<1.0		20	
1,1,2-Trichloroethane	ug/L	<1.0	<1.0		20	
1,1-Dichloroethane	ug/L	<1.0	<1.0		20	
1,1-Dichloroethene	ug/L	<1.0	<1.0		20	
1,2,3-Trichloropropane	ug/L	<1.0	<1.0		20	
1,2-Dibromo-3-chloropropane	ug/L	<5.0	<5.0		20	
1,2-Dibromoethane (EDB)	ug/L	<1.0	<1.0		20	
1,2-Dichlorobenzene	ug/L	<1.0	<1.0		20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

QUALITY CONTROL DATA

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

SAMPLE DUPLICATE: 3619347

Parameter	Units	50372945002 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dichloroethane	ug/L	<1.0	<1.0		20	
1,2-Dichloropropane	ug/L	<1.0	<1.0		20	
1,4-Dichlorobenzene	ug/L	<1.0	<1.0		20	
2-Butanone (MEK)	ug/L	<5.0	<5.0		20	
2-Hexanone	ug/L	<5.0	<5.0		20	
4-Methyl-2-pentanone (MIBK)	ug/L	<5.0	<5.0		20	
Acetone	ug/L	<20.0	<20.0		20	
Acrylonitrile	ug/L	<5.0	<5.0		20	
Benzene	ug/L	<1.0	<1.0		20	
Bromochloromethane	ug/L	<1.0	<1.0		20	
Bromodichloromethane	ug/L	<1.0	<1.0		20	
Bromoform	ug/L	<1.0	<1.0		20	
Bromomethane	ug/L	<5.0	<5.0		20	
Carbon disulfide	ug/L	<1.0	<1.0		20	
Carbon tetrachloride	ug/L	<1.0	<1.0		20	
Chlorobenzene	ug/L	<1.0	<1.0		20	
Chloroethane	ug/L	<5.0	<5.0		20	
Chloroform	ug/L	<1.0	<1.0		20	
Chloromethane	ug/L	<5.0	<5.0		20	
cis-1,2-Dichloroethene	ug/L	<1.0	<1.0		20	
cis-1,3-Dichloropropene	ug/L	<1.0	<1.0		20	
Dibromochloromethane	ug/L	<1.0	<1.0		20	
Dibromomethane	ug/L	<1.0	<1.0		20	
Ethylbenzene	ug/L	<1.0	<1.0		20	
Iodomethane	ug/L	<1.0	<1.0		20	
Methylene Chloride	ug/L	<5.0	<5.0		20	
Styrene	ug/L	<1.0	<1.0		20	
Tetrachloroethene	ug/L	<1.0	<1.0		20	
Toluene	ug/L	<1.0	<1.0		20	
trans-1,2-Dichloroethene	ug/L	<1.0	<1.0		20	
trans-1,3-Dichloropropene	ug/L	<1.0	<1.0		20	
trans-1,4-Dichloro-2-butene	ug/L	<5.0	<5.0		20	
Trichloroethene	ug/L	<1.0	<1.0		20	
Trichlorofluoromethane	ug/L	<1.0	<1.0		20	
Vinyl chloride	ug/L	<1.0	<1.0		20	
Xylene (Total)	ug/L	<2.0	<2.0		20	
4-Bromofluorobenzene (S)	%.	96	98			
Dibromofluoromethane (S)	%.	103	102			
Toluene-d8 (S)	%.	96	98			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

QC Batch: 790873
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, preserved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372945001, 50372945002, 50372945003, 50372945004, 50372945005, 50372945006, 50372945008, 50372945009, 50372945010, 50372945011, 50372945012, 50372945013, 50372945014, 50372945015, 50372945016, 50372945017

METHOD BLANK: 3619105 Matrix: Water
Associated Lab Samples: 50372945001, 50372945002, 50372945003, 50372945004, 50372945005, 50372945006, 50372945008, 50372945009, 50372945010, 50372945011, 50372945012, 50372945013, 50372945014, 50372945015, 50372945016, 50372945017

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	ug/L	<20.0	20.0	05/20/24 14:54	

LABORATORY CONTROL SAMPLE: 3619106

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	ug/L	2000	1890	94	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3619107 3619108

Parameter	Units	50372945003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	ug/L	<20.0	2000	2000	1900	1870	95	94	90-110	1	20	

MATRIX SPIKE SAMPLE: 3619109

Parameter	Units	50372945008 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	ug/L	<20.0	2000	2000	100	90-110	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(616)975-4500

QUALITY CONTROL DATA

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

QC Batch: 790785
QC Batch Method: SM 4500-Cl-E
Analysis Method: SM 4500-Cl-E
Analysis Description: 4500 Chloride
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372945001, 50372945002, 50372945003, 50372945004, 50372945005, 50372945006, 50372945008, 50372945009, 50372945010, 50372945011, 50372945012, 50372945013, 50372945014, 50372945015, 50372945016, 50372945017

METHOD BLANK: 3618854 Matrix: Water
Associated Lab Samples: 50372945001, 50372945002, 50372945003, 50372945004, 50372945005, 50372945006, 50372945008, 50372945009, 50372945010, 50372945011, 50372945012, 50372945013, 50372945014, 50372945015, 50372945016, 50372945017

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	ug/L	<1000	1000	05/19/24 14:38	

LABORATORY CONTROL SAMPLE: 3618855

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	ug/L	20000	21800	109	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3618856 3618857

Parameter	Units	50372945003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	ug/L	39400	20000	20000	62800	61500	117	111	90-110	2	20	M3

MATRIX SPIKE SAMPLE: 3618858

Parameter	Units	50372945004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloride	ug/L	44800	20000	66400	108	90-110	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

QC Batch: 791152
QC Batch Method: SM-4500-NH3 G
Analysis Method: SM-4500-NH3 G
Analysis Description: 4500 Ammonia Low Level
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372945001, 50372945002, 50372945003

METHOD BLANK: 3620178 Matrix: Water
Associated Lab Samples: 50372945001, 50372945002, 50372945003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	ug/L	<20.0	20.0	05/21/24 14:51	

LABORATORY CONTROL SAMPLE: 3620179

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	ug/L	1000	1020	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3620180 3620181

Parameter	Units	50372781010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Ammonia	ug/L	41.5	1000	1000	971	974	93	93	90-110	0	20	

MATRIX SPIKE SAMPLE: 3620182

Parameter	Units	50372781011 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	ug/L	<20.0	1000	793	79	90-110	M0

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

QC Batch: 791861
QC Batch Method: SM-4500-NH3 G
Analysis Method: SM-4500-NH3 G
Analysis Description: 4500 Ammonia Low Level
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372945004, 50372945005, 50372945006, 50372945008, 50372945009, 50372945010, 50372945011, 50372945012, 50372945013, 50372945014, 50372945015, 50372945016, 50372945017

METHOD BLANK: 3623702 Matrix: Water
Associated Lab Samples: 50372945004, 50372945005, 50372945006, 50372945008, 50372945009, 50372945010, 50372945011, 50372945012, 50372945013, 50372945014, 50372945015, 50372945016, 50372945017

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	ug/L	<20.0	20.0	05/24/24 12:15	

LABORATORY CONTROL SAMPLE: 3623703

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	ug/L	1000	1020	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3623704 3623705

Parameter	Units	50372945004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Ammonia	ug/L	74.8	1000	1000	1130	1130	106	106	90-110	0	20	

MATRIX SPIKE SAMPLE: 3623706

Parameter	Units	50373404004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	ug/L	0.11 mg/L	1000	1150	104	90-110	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

QC Batch: 790140 | Analysis Method: SM 5310C
QC Batch Method: SM 5310C | Analysis Description: 5310C Total Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372945001, 50372945002, 50372945003, 50372945004, 50372945005, 50372945006, 50372945008, 50372945009, 50372945010

METHOD BLANK: 3615148 Matrix: Water
Associated Lab Samples: 50372945001, 50372945002, 50372945003, 50372945004, 50372945005, 50372945006, 50372945008, 50372945009, 50372945010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Carbon	ug/L	<500	500	05/17/24 03:16	

LABORATORY CONTROL SAMPLE: 3615149

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	ug/L	10000	9530	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3615150 3615151

Parameter	Units	50372770005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	ug/L	0.93J mg/L	10000	10000	10200	9700	93	88	80-120	5	20	

MATRIX SPIKE SAMPLE: 3615152

Parameter	Units	50372945005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	ug/L	1000	10000	9260	83	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

QC Batch: 791074
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Total Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372945011, 50372945012, 50372945013, 50372945014, 50372945015, 50372945016, 50372945017

METHOD BLANK: 3619850 Matrix: Water
Associated Lab Samples: 50372945011, 50372945012, 50372945013, 50372945014, 50372945015, 50372945016, 50372945017

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Carbon	ug/L	<500	500	05/21/24 23:35	

LABORATORY CONTROL SAMPLE: 3619851

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	ug/L	10000	9810	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3619852 3619853

Parameter	Units	50373264001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	ug/L	7.1 mg/L	10000	10000	16400	16800	93	97	80-120	2	20	

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REPORT OF LABORATORY ANALYSIS

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4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

QUALIFIERS

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M3	Matrix spike recovery was outside laboratory control limits due to matrix interferences.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50372945003	**MW-302**	EPA 3010	789980	EPA 6010	791097
50372945011	**MW-202**	EPA 3010	789980	EPA 6010	791097
50372945001	**MW-213**	EPA 3010	789969	EPA 6010	791100
50372945002	**MW-301**	EPA 3010	789969	EPA 6010	791100
50372945003	**MW-302**	EPA 3010	789969	EPA 6010	791100
50372945004	**MW-303A**	EPA 3010	789969	EPA 6010	791100
50372945005	**MW-304**	EPA 3010	789969	EPA 6010	791100
50372945006	**MW-305**	EPA 3010	789969	EPA 6010	791100
50372945008	**MW-101**	EPA 3010	789969	EPA 6010	791100
50372945009	**MW-106A**	EPA 3010	789969	EPA 6010	791100
50372945010	**MW-201**	EPA 3010	789969	EPA 6010	791100
50372945011	**MW-202**	EPA 3010	789969	EPA 6010	791100
50372945012	**MW-203B**	EPA 3010	789969	EPA 6010	791100
50372945013	**MW-207A**	EPA 3010	789969	EPA 6010	791100
50372945014	**MW-208B**	EPA 3010	789969	EPA 6010	791100
50372945015	**MW-209**	EPA 3010	789969	EPA 6010	791100
50372945016	**MW-210**	EPA 3010	789969	EPA 6010	791100
50372945017	**MW-212**	EPA 3010	789969	EPA 6010	791100
50372945003	**MW-302**	EPA 200.2	790470	EPA 6020	790699
50372945011	**MW-202**	EPA 200.2	790470	EPA 6020	790699
50372945001	**MW-213**	EPA 200.2	790471	EPA 6020	790700
50372945002	**MW-301**	EPA 200.2	790471	EPA 6020	790700
50372945003	**MW-302**	EPA 200.2	790471	EPA 6020	790700
50372945004	**MW-303A**	EPA 200.2	790471	EPA 6020	790700
50372945005	**MW-304**	EPA 200.2	790471	EPA 6020	790700
50372945006	**MW-305**	EPA 200.2	790471	EPA 6020	790700
50372945008	**MW-101**	EPA 200.2	790471	EPA 6020	790700
50372945009	**MW-106A**	EPA 200.2	790471	EPA 6020	790700
50372945010	**MW-201**	EPA 200.2	790471	EPA 6020	790700
50372945011	**MW-202**	EPA 200.2	790471	EPA 6020	790700
50372945012	**MW-203B**	EPA 200.2	790471	EPA 6020	790700
50372945013	**MW-207A**	EPA 200.2	790471	EPA 6020	790700
50372945014	**MW-208B**	EPA 200.2	790471	EPA 6020	790700
50372945015	**MW-209**	EPA 200.2	790471	EPA 6020	790700
50372945016	**MW-210**	EPA 200.2	790471	EPA 6020	790700
50372945017	**MW-212**	EPA 200.2	790471	EPA 6020	790700
50372945001	**MW-213**	EPA 5030B/8260	790959		
50372945002	**MW-301**	EPA 5030B/8260	790959		
50372945003	**MW-302**	EPA 5030B/8260	790959		
50372945004	**MW-303A**	EPA 5030B/8260	790959		
50372945005	**MW-304**	EPA 5030B/8260	790959		
50372945006	**MW-305**	EPA 5030B/8260	790959		
50372945007	**Trip Blank**	EPA 5030B/8260	790959		
50372945008	**MW-101**	EPA 5030B/8260	790959		
50372945009	**MW-106A**	EPA 5030B/8260	790959		
50372945010	**MW-201**	EPA 5030B/8260	790959		
50372945011	**MW-202**	EPA 5030B/8260	790959		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50372945012	**MW-203B**	EPA 5030B/8260	790959		
50372945013	**MW-207A**	EPA 5030B/8260	790959		
50372945014	**MW-208B**	EPA 5030B/8260	790959		
50372945015	**MW-209**	EPA 5030B/8260	790959		
50372945016	**MW-210**	EPA 5030B/8260	790959		
50372945017	**MW-212**	EPA 5030B/8260	790959		
50372945001	**MW-213**	NO2+NO3+NH3 Calculation	792327		
50372945002	**MW-301**	NO2+NO3+NH3 Calculation	792327		
50372945003	**MW-302**	NO2+NO3+NH3 Calculation	792327		
50372945004	**MW-303A**	NO2+NO3+NH3 Calculation	792327		
50372945005	**MW-304**	NO2+NO3+NH3 Calculation	792327		
50372945006	**MW-305**	NO2+NO3+NH3 Calculation	792327		
50372945008	**MW-101**	NO2+NO3+NH3 Calculation	792327		
50372945009	**MW-106A**	NO2+NO3+NH3 Calculation	792327		
50372945010	**MW-201**	NO2+NO3+NH3 Calculation	792327		
50372945011	**MW-202**	NO2+NO3+NH3 Calculation	792327		
50372945012	**MW-203B**	NO2+NO3+NH3 Calculation	792327		
50372945013	**MW-207A**	NO2+NO3+NH3 Calculation	792327		
50372945014	**MW-208B**	NO2+NO3+NH3 Calculation	792327		
50372945015	**MW-209**	NO2+NO3+NH3 Calculation	792327		
50372945016	**MW-210**	NO2+NO3+NH3 Calculation	792327		
50372945017	**MW-212**	NO2+NO3+NH3 Calculation	792327		
50372945001	**MW-213**	EPA 353.2	790873		
50372945002	**MW-301**	EPA 353.2	790873		
50372945003	**MW-302**	EPA 353.2	790873		
50372945004	**MW-303A**	EPA 353.2	790873		
50372945005	**MW-304**	EPA 353.2	790873		
50372945006	**MW-305**	EPA 353.2	790873		
50372945008	**MW-101**	EPA 353.2	790873		
50372945009	**MW-106A**	EPA 353.2	790873		
50372945010	**MW-201**	EPA 353.2	790873		
50372945011	**MW-202**	EPA 353.2	790873		
50372945012	**MW-203B**	EPA 353.2	790873		
50372945013	**MW-207A**	EPA 353.2	790873		
50372945014	**MW-208B**	EPA 353.2	790873		
50372945015	**MW-209**	EPA 353.2	790873		
50372945016	**MW-210**	EPA 353.2	790873		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50372945017	**MW-212**	EPA 353.2	790873		
50372945001	**MW-213**	SM 4500-Cl-E	790785		
50372945002	**MW-301**	SM 4500-Cl-E	790785		
50372945003	**MW-302**	SM 4500-Cl-E	790785		
50372945004	**MW-303A**	SM 4500-Cl-E	790785		
50372945005	**MW-304**	SM 4500-Cl-E	790785		
50372945006	**MW-305**	SM 4500-Cl-E	790785		
50372945008	**MW-101**	SM 4500-Cl-E	790785		
50372945009	**MW-106A**	SM 4500-Cl-E	790785		
50372945010	**MW-201**	SM 4500-Cl-E	790785		
50372945011	**MW-202**	SM 4500-Cl-E	790785		
50372945012	**MW-203B**	SM 4500-Cl-E	790785		
50372945013	**MW-207A**	SM 4500-Cl-E	790785		
50372945014	**MW-208B**	SM 4500-Cl-E	790785		
50372945015	**MW-209**	SM 4500-Cl-E	790785		
50372945016	**MW-210**	SM 4500-Cl-E	790785		
50372945017	**MW-212**	SM 4500-Cl-E	790785		
50372945001	**MW-213**	SM-4500-NH3 G	791152		
50372945002	**MW-301**	SM-4500-NH3 G	791152		
50372945003	**MW-302**	SM-4500-NH3 G	791152		
50372945004	**MW-303A**	SM-4500-NH3 G	791861		
50372945005	**MW-304**	SM-4500-NH3 G	791861		
50372945006	**MW-305**	SM-4500-NH3 G	791861		
50372945008	**MW-101**	SM-4500-NH3 G	791861		
50372945009	**MW-106A**	SM-4500-NH3 G	791861		
50372945010	**MW-201**	SM-4500-NH3 G	791861		
50372945011	**MW-202**	SM-4500-NH3 G	791861		
50372945012	**MW-203B**	SM-4500-NH3 G	791861		
50372945013	**MW-207A**	SM-4500-NH3 G	791861		
50372945014	**MW-208B**	SM-4500-NH3 G	791861		
50372945015	**MW-209**	SM-4500-NH3 G	791861		
50372945016	**MW-210**	SM-4500-NH3 G	791861		
50372945017	**MW-212**	SM-4500-NH3 G	791861		
50372945001	**MW-213**	SM 5310C	790140		
50372945002	**MW-301**	SM 5310C	790140		
50372945003	**MW-302**	SM 5310C	790140		
50372945004	**MW-303A**	SM 5310C	790140		
50372945005	**MW-304**	SM 5310C	790140		
50372945006	**MW-305**	SM 5310C	790140		
50372945008	**MW-101**	SM 5310C	790140		
50372945009	**MW-106A**	SM 5310C	790140		
50372945010	**MW-201**	SM 5310C	790140		
50372945011	**MW-202**	SM 5310C	791074		
50372945012	**MW-203B**	SM 5310C	791074		
50372945013	**MW-207A**	SM 5310C	791074		
50372945014	**MW-208B**	SM 5310C	791074		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Smith's Creek LF GW Annual Q2
Pace Project No.: 50372945

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50372945015	**MW-209**	SM 5310C	791074		
50372945016	**MW-210**	SM 5310C	791074		
50372945017	**MW-212**	SM 5310C	791074		

Pace® Location Requested (City/State):
Pace Analytical Grand Rapids
4171 40th Street SE, Grand Rapids, MI 49512

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here

50372945

Scan QR Code for instructions

Company Name:	WSP - Novi, MI	Contact/Report To:	Mary Siegan
Street Address:	46850 Magellan Drive, Novi, MI 48377	Phone #:	(248)536-5435
		E-Mail:	mary.siegan@wsp.com
		Cc E-Mail:	
Customer Project #:			
Project Name:	Smith's Creek LF GW Annual Q2	Invoice To:	Mary Siegan
		Invoice E-Mail:	mary.siegan@wsp.com
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	
		Quote #:	
Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [ ] ET		County / State origin of sample(s):	Michigan

Data Deliverables: [ ] Level II [ ] Level III [ ] Level IV [ ] EQUIS [ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No

Rush (Pre-approval required): [ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other _____

DW PWSID # or WW Permit # as applicable:

Date Results Requested:

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW),Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Specify Container Size **

Identify Container Preservative Type***

Analysis Requested

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	353.2 N+N; 4500 LL NH3; TIN	4500 Chloride	5310C TOC	8260 MSV LL VOC	Metals, Dissolved - 60106020	Metals, Total - 6010/6020	Sample Comment
MW-213	GW	G	5/9	—	5/9	—	7			X	X	X	X	X		001
MW-301	GW	G	5/10	1135	5/10	1135	7									002
MW-302			5/9	1025	5/9	1025	8								X	003
MW-303A				1340		1340	7									004
MW-304				1258		1258										005
MW-305				0950		0950										006
Trip Blank	OT	—	—	—	—	—	3						X			007

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only

Proj. Mgr: **Brian Hall**

AcctNum / Client ID:

Table #:

Profile / Template: **8284**

Prelog / Bottle Ord. ID: **EZ 3106470**

Preservation non-conformance identified for sample.

Additional Instructions from Pace®:
Fill Triplicate Volume at MS/MSD Sample Points as Needed
Metals - K,Na,As,Ba,Zn

Collected By: (Printed Name) Ian Cisco

Signature:

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice:
3	D	0.0	SEE SCVR	SEE SCVR	Y

Relinquished by/Company: (Signature) WSP	Date/Time: 5/10/24 1600	Received by/Company: (Signature) FedEx	Date/Time:	Tracking Number:
Relinquished by/Company: (Signature) FedEx	Date/Time: 5.11.24 0935	Received by/Company: (Signature) PACE	Date/Time: 5.11.24 0935	Delivered by: [ ] In- Person [ ] Courier [ ] FedEX [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 1 of 2

Pace® Location Requested (City/State):
Pace Analytical Grand Rapids
4171 40th Street SE, Grand Rapids, MI 49512

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here

Scan QR Code for instructions

Company Name:	WSP - Novi, MI	Contact/Report To:	Mary Siegan
Street Address:	46850 Magellan Drive, Novi, MI 48377	Phone #:	(248)536-5435
		E-Mail:	mary.siegan@wsp.com
		Cc E-Mail:	
Customer Project #:			
Project Name:	Smith's Creek LF GW Annual Q2	Invoice To:	Mary Siegan
		Invoice E-Mail:	mary.siegan@wsp.com
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	
		Quote #:	
Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [X] ET		County / State origin of sample(s):	Michigan

Data Deliverables:
[ ] Level II [ ] Level III [ ] Level IV
[ ] EQUIS
[ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No

Rush (Pre-approval required):
[ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other _____

DW PWSID # or WW Permit # as applicable:

Date Results Requested:

Field Filtered (if applicable): [ ] Yes [ ] No
Analysis:

Specify Container Size **

Identify Container Preservative Type***

Analysis Requested

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only
Proj. Mgr: **Brian Hall**
AcctNum / Client ID:
Table #:
Profile / Template: **8284**
Prelog / Bottle Ord. ID: **EZ 3106470**

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW),Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	353.2 N+N; 4500 LL NH3; TIN	4500 Chloride	5310C TOC	8260 MSV LL VOC	Metals, Dissolved - 60106020	Metals, Total - 6010/6020	Sample Comment	Preservation non-conformance identified for sample.
MW-101	GW	G	5/9	1125	5/9	1125	7			X	X	X	X	X		008	
MW-106A			5/8	1230	5/8	1230										009	
MW-201			↓	0930	↓	0930	↓									010	
MW-202			5/9	1215	5/9	1215	8								X	011	
MW-203B			5/9	1410	5/9	1410	7									012	
MW-207A			5/8	1310	5/8	1310										013	
MW-208B			5/8	1355	5/8	1355										014	
MW-209			5/9	1010	5/9	1010										015	
MW-210			5/9	1103	5/9	1103										016	
MW-212	↓	↓	5/8	1110	5/8	1110	↓			↓	↓	↓	↓	↓		017	

Additional Instructions from Pace®:
Fill Triplicate Volume at MS/MSD Sample Points as Needed
Metals - K,Na,As,Ba,Zn

Collected By:
(Printed Name)

Signature:

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice:
3	D	0.0	SEE SCVR	SEE SCVR	Y

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Tracking Number:
WSP	5/10/24 1600	FedEx		
FedEx	5-11-24 0935	PACE	5-11-24 0935	Delivered by: [ ] In- Person [ ] Courier [ ] FedEX [ ] UPS [ ] Other
				Page: 2 of 2

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/

F-IN-Q-290-rev.26, 30Apr2024

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: NMS 05.11.2024 1335

1. **Courier:** ☐FED EX | UPS ☐CLIENT ☐PACE ☐NOW/JETT | OTHER _____
2. **Custody Seal on Cooler/Box Present:** | | Yes ☐ No
   (If yes)Seals Intact: ☐ Yes ☐ No **(leave blank if no seals were present)**
3. **Thermometer:** 1 2 3 4 5 6 7 8 A B C (D) E F G H
4. **Cooler Temperature(s):** 1.7|1.7 | 0.5|0.5 | 1.3|1.3 | | **(Initial/Corrected)** RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

5. **Packing Material:** | |Bubble Wrap X| Bubble Bags | | None | | Other _____
6. **Ice Type:** X Wet ☐ Blue ☐ None
7. **Was the PM notified of out of temp cooler?:** | |Yes ☐No
   Cooler temp should be above freezing to 6°C
8. **EZ Bottle Order?** X Yes | |No
   If yes but not on COC what is the EZ Bottle Order Number?:

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		X	All containers needing acid/base preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.**	X		
Short Hold Time Analysis (48 hours or less)? Analysis:		X	**Circle: HNO3 (<2) H2SO4 (<2) NaOH (>10) NaOH/ZnAc (>9)** Any non-conformance to pH recommendations will be noted on the container count form			
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:			Present	Absent	N/A
			Residual Chlorine Check (SVOC 625 Pest/PCB 608)			X
Rush TAT Requested (4 days or less):		X	Residual Chlorine Check (Total/Amenable/Free Cyanide)			X
Custody Signatures Present?	X		Headspace Wisconsin Sulfide?			X
Containers Intact?:	X		Headspace in VOA Vials (>6mm): See Containter Count form for details	Present	Absent X	No VOA Vials Sent —
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID		X	Trip Blank Present?	X	—	
Extra labels on Terracore Vials? (soils only)		X	Trip Blank Custody Seals?:		X	—

nms 5.11.24

COMMENTS: BP3U for sample points "MW-203B" and "MW-301" have no labels or writing on containers.

COC PAGE 1 **of** 2

Sample Container Count

** Place a RED dot on containers that are out of conformance **

COC Line Item	WGFU	WGKU BG1U	MeOH (only) SBS DI R	AMBER GLASS: DG9H VG9H	VOA VIAL HS >6mm	VG9U DG9U	VG9T	AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	PLASTIC: BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	OTHER: CG3H	CG3F	Syringe Kit	Matrix	Nitric Red HNO3 <2	Sulfuric Yellow H2SO4 <2	Sodium Hydroxide Green NaOH >10	Sodium Hydroxide/ ZnAc Black NaOH/Zn Ac >9
1				3								1						1	'	1	1						WT	✓	✓		
2				|							1						1		1	1						|	|	|		
3				|							1						1	1	1	1						|	|	|		
4				|							1						1		1	1						|	|	|		
5				|							|						|		|	|					|	|	|		
6				|							|						|		|	|					|	|	|		
7				3																							|				
8																															
9																															
10																															
11																															
12																															

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
BP1U	1L unpreserved plastic		
BP1Z	1L NaOH, Zn, Ac		
BP2N	500mL HNO3 plastic		
BP2C	500mL NaOH plastic		
BP2S	500mL H2SO4 plastic		
BP2U	500mL unpreserved plastic		
BP2Z	500mL NaOH, Zn Ac		
BP3B	250mL NaOH plastic		
BP3N	250mL HNO3 plastic		
BP3F	250mL HNO3 plastic-field filtered		
BP3U	250mL unpreserved plastic		
BP3S	250mL H2SO4 plastic		
BP3Z	250mL NaOH, ZnAc plastic		
BP3R	250mL Unpres. FF SO4/OH buffer		

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe

COC PAGE 2 **of** 2

Sample Container Count

** Place a RED dot on containers that are out of conformance **

									AMBER GLASS							PLASTIC									OTHER								
			MeOH (only)																											Nitric	Sulfuric	Sodium Hydroxide	Sodium Hydroxide/ ZnAc
			SBS																											Red	Yellow	Green	Black
			DI		VOA VIAL HS >6mm																												
COC Line Item	WGFU	WGKU BG1U	R	DG9H VG9H		VG9U DG9U	VG9T	AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	CG3H	CG3F	Syringe Kit		Matrix	HNO3 <2	H2SO4 <2	NaOH >10	NaOH/Zn Ac >9
1				3								1						1		1	1							WT	✓	✓		
2												1						1		1	1											
3												1						1		1	1											
4												1						1	1	1	1											
5												1						1		1	1											
6												1						1		1	1											
7																																
8																																
9																																
10												1						1		1	1											
11																																
12																																

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
BP1U	1L unpreserved plastic		
BP1Z	1L NaOH, Zn, Ac		
BP2N	500mL HNO3 plastic		
BP2C	500mL NaOH plastic		
BP2S	500mL H2SO4 plastic		
BP2U	500mL unpreserved plastic		
BP2Z	500mL NaOH, Zn Ac		
BP3B	250mL NaOH plastic		
BP3N	250mL HNO3 plastic		
BP3F	250mL HNO3 plastic-field filtered		
BP3U	250mL unpreserved plastic		
BP3S	250mL H2SO4 plastic		
BP3Z	250mL NaOH, ZnAc plastic		
BP3R	250mL Unpres. FF SO4/OH buffer		

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

June 01, 2024

Mary Siegan
WSP - Novi, MI
46850 Magellan Drive
Suite 190
Novi, MI 48377

RE: Project: Smith's Creek LF SW Annual Q2
Pace Project No.: 50372946

Dear Mary Siegan:

Enclosed are the analytical results for sample(s) received by the laboratory on May 11, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Indianapolis

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Brian Hall
brian.hall@pacelabs.com
(616)975-4500
Project Manager

Enclosures

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

CERTIFICATIONS

Project: Smith's Creek LF SW Annual Q2
Pace Project No.: 50372946

Pace Analytical Services Indianapolis

7726 Moller Road, Indianapolis, IN 46268
Illinois Accreditation #: 200074
Indiana Drinking Water Laboratory #: C-49-06
Kansas/TNI Certification #: E-10177
Kentucky UST Agency Interest #: 80226
Kentucky WW Laboratory ID #: 98019
Michigan Drinking Water Laboratory #9050
Ohio VAP Certified Laboratory #: CL0065
Oklahoma Laboratory #: 9204
Texas Certification #: T104704355
Washington Dept of Ecology #: C1081
Wisconsin Laboratory #: 999788130
USDA Foreign Soil Permit #: 525-23-13-23119
USDA Compliance Agreement #: IN-SL-22-001

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

SAMPLE SUMMARY

Project: Smith's Creek LF SW Annual Q2
Pace Project No.: 50372946

Lab ID	Sample ID	Matrix	Date Collected	Date Received
50372946001	**SW-U2**	Water	05/10/24 10:17	05/11/24 09:35
50372946002	**SW-U1**	Water	05/10/24 10:35	05/11/24 09:35
50372946003	**SW-DIA**	Water	05/10/24 10:55	05/11/24 09:35

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SAMPLE ANALYTE COUNT

Project: Smith's Creek LF SW Annual Q2
Pace Project No.: 50372946

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
50372946001	**SW-U2**	EPA 9056	ADM	2	PASI-I
		EPA 6010	ELK	4	PASI-I
		EPA 6020	DMT	2	PASI-I
		SM 2320B	DAW	2	PASI-I
		SM 2540C	SL	1	PASI-I
		SM 2540D	IRH	1	PASI-I
		NO2+NO3+NH3 Calculation	MMS	1	PASI-I
		EPA 353.2	ZM	1	PASI-I
		SM-4500-NH3 G	OAS	1	PASI-I
		SM 5310C	YAM	1	PASI-I
50372946002	**SW-U1**	EPA 9056	ADM	2	PASI-I
		EPA 6010	ELK	4	PASI-I
		EPA 6020	DMT	2	PASI-I
		SM 2320B	DAW	2	PASI-I
		SM 2540C	SL	1	PASI-I
		SM 2540D	IRH	1	PASI-I
		NO2+NO3+NH3 Calculation	MMS	1	PASI-I
		EPA 353.2	ZM	1	PASI-I
		SM-4500-NH3 G	OAS	1	PASI-I
		SM 5310C	YAM	1	PASI-I
50372946003	**SW-DIA**	EPA 9056	ADM	2	PASI-I
		EPA 6010	ELK	4	PASI-I
		EPA 6020	DMT	2	PASI-I
		SM 2320B	DAW	2	PASI-I
		SM 2540C	SL	1	PASI-I
		SM 2540D	IRH	1	PASI-I
		NO2+NO3+NH3 Calculation	MMS	1	PASI-I
		EPA 353.2	ZM	1	PASI-I
		SM-4500-NH3 G	OAS	1	PASI-I
		SM 5310C	YAM	1	PASI-I

PASI-I = Pace Analytical Services - Indianapolis

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
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ANALYTICAL RESULTS

Project: Smith's Creek LF SW Annual Q2
Pace Project No.: 50372946

Sample: SW-U2 **Lab ID: 50372946001** Collected: 05/10/24 10:17 Received: 05/11/24 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis							
Chloride	**37000**	ug/L	10000	10		05/23/24 21:34	16887-00-6	
Sulfate	**20400**	ug/L	2000	1		05/23/24 21:17	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis							
Calcium	**79900**	ug/L	1000	1	05/20/24 16:18	05/21/24 13:58	7440-70-2	
Iron	**1140**	ug/L	100	1	05/20/24 16:18	05/21/24 13:58	7439-89-6	
Magnesium	**22000**	ug/L	1000	1	05/20/24 16:18	05/21/24 13:58	7439-95-4	
Sodium	**19200**	ug/L	1000	1	05/20/24 16:18	05/21/24 13:58	7440-23-5	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis							
Barium	**27.6**	ug/L	5.0	1	05/17/24 09:45	05/20/24 17:58	7440-39-3	
Zinc	**<10.0**	ug/L	10.0	1	05/17/24 09:45	05/21/24 09:26	7440-66-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis							
Alkalinity, Total as CaCO3	**251000**	ug/L	10000	1		05/15/24 20:31		
Alkalinity,Bicarbonate (CaCO3)	**239000**	ug/L	10000	1		05/15/24 20:31		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis							
Total Dissolved Solids	**327000**	ug/L	20000	1		05/15/24 12:18		
2540D Total Suspended Solids	Analytical Method: SM 2540D Pace Analytical Services - Indianapolis							
Total Suspended Solids	**8800**	ug/L	2500	1		05/16/24 14:26		
Total Inorganic Nitrogen	Analytical Method: NO2+NO3+NH3 Calculation Pace Analytical Services - Indianapolis							
Total Inorganic Nitrogen	**181**	ug/L	20.0	1		05/28/24 14:58		
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis							
Nitrogen, NO2 plus NO3	**152**	ug/L	20.0	1		05/20/24 15:40		
4500 Ammonia Water Low Level	Analytical Method: SM-4500-NH3 G Pace Analytical Services - Indianapolis							
Nitrogen, Ammonia	**28.8**	ug/L	20.0	1		05/24/24 12:39	7664-41-7	
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis							
Total Organic Carbon	**10800**	ug/L	500	1		05/22/24 04:49	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: Smith's Creek LF SW Annual Q2
Pace Project No.: 50372946

Sample: SW-U1 **Lab ID: 50372946002** Collected: 05/10/24 10:35 Received: 05/11/24 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis							
Chloride	**31800**	ug/L	10000	10		05/23/24 22:08	16887-00-6	
Sulfate	**6380**	ug/L	2000	1		05/23/24 21:51	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis							
Calcium	**69800**	ug/L	1000	1	05/20/24 16:18	05/21/24 14:00	7440-70-2	
Iron	**969**	ug/L	100	1	05/20/24 16:18	05/21/24 14:00	7439-89-6	
Magnesium	**18300**	ug/L	1000	1	05/20/24 16:18	05/21/24 14:00	7439-95-4	
Sodium	**18400**	ug/L	1000	1	05/20/24 16:18	05/21/24 14:00	7440-23-5	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis							
Barium	**20.6**	ug/L	5.0	1	05/17/24 09:45	05/20/24 18:01	7440-39-3	
Zinc	**<10.0**	ug/L	10.0	1	05/17/24 09:45	05/21/24 09:30	7440-66-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis							
Alkalinity, Total as CaCO3	**226000**	ug/L	10000	1		05/15/24 20:31		
Alkalinity,Bicarbonate (CaCO3)	**216000**	ug/L	10000	1		05/15/24 20:31		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis							
Total Dissolved Solids	**297000**	ug/L	20000	1		05/15/24 12:19		
2540D Total Suspended Solids	Analytical Method: SM 2540D Pace Analytical Services - Indianapolis							
Total Suspended Solids	**7200**	ug/L	2500	1		05/16/24 14:26		
Total Inorganic Nitrogen	Analytical Method: NO2+NO3+NH3 Calculation Pace Analytical Services - Indianapolis							
Total Inorganic Nitrogen	**38.6**	ug/L	20.0	1		05/28/24 14:58		
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis							
Nitrogen, NO2 plus NO3	**38.6**	ug/L	20.0	1		05/20/24 15:42		
4500 Ammonia Water Low Level	Analytical Method: SM-4500-NH3 G Pace Analytical Services - Indianapolis							
Nitrogen, Ammonia	**<20.0**	ug/L	20.0	1		05/24/24 12:41	7664-41-7	
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis							
Total Organic Carbon	**15900**	ug/L	500	1		05/22/24 05:09	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Smith's Creek LF SW Annual Q2
Pace Project No.: 50372946

Sample: SW-DIA **Lab ID: 50372946003** Collected: 05/10/24 10:55 Received: 05/11/24 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
9056 IC Anions	Analytical Method: EPA 9056 Pace Analytical Services - Indianapolis							
Chloride	**33500**	ug/L	10000	10		05/23/24 22:59	16887-00-6	
Sulfate	**76300**	ug/L	20000	10		05/23/24 22:59	14808-79-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010 Pace Analytical Services - Indianapolis							
Calcium	**101000**	ug/L	1000	1	05/20/24 16:18	05/21/24 14:01	7440-70-2	
Iron	**3370**	ug/L	100	1	05/20/24 16:18	05/21/24 14:01	7439-89-6	
Magnesium	**31400**	ug/L	1000	1	05/20/24 16:18	05/21/24 14:01	7439-95-4	
Sodium	**24600**	ug/L	1000	1	05/20/24 16:18	05/21/24 14:01	7440-23-5	
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 200.2 Pace Analytical Services - Indianapolis							
Barium	**62.7**	ug/L	5.0	1	05/17/24 09:45	05/20/24 18:05	7440-39-3	
Zinc	**18.1**	ug/L	10.0	1	05/17/24 09:45	05/21/24 09:33	7440-66-6	
2320B Alkalinity	Analytical Method: SM 2320B Pace Analytical Services - Indianapolis							
Alkalinity, Total as CaCO3	**305000**	ug/L	10000	1		05/15/24 20:31		
Alkalinity,Bicarbonate (CaCO3)	**291000**	ug/L	10000	1		05/15/24 20:31		
2540C Total Dissolved Solids	Analytical Method: SM 2540C Pace Analytical Services - Indianapolis							
Total Dissolved Solids	**415000**	ug/L	20000	1		05/15/24 12:19		
2540D Total Suspended Solids	Analytical Method: SM 2540D Pace Analytical Services - Indianapolis							
Total Suspended Solids	**1640000**	ug/L	71400	1		05/16/24 14:26		
Total Inorganic Nitrogen	Analytical Method: NO2+NO3+NH3 Calculation Pace Analytical Services - Indianapolis							
Total Inorganic Nitrogen	**598**	ug/L	20.0	1		05/28/24 14:58		
353.2 Nitrogen, NO2/NO3 pres.	Analytical Method: EPA 353.2 Pace Analytical Services - Indianapolis							
Nitrogen, NO2 plus NO3	**84.3**	ug/L	20.0	1		05/20/24 15:43		
4500 Ammonia Water Low Level	Analytical Method: SM-4500-NH3 G Pace Analytical Services - Indianapolis							
Nitrogen, Ammonia	**514**	ug/L	20.0	1		05/24/24 12:42	7664-41-7	
5310C TOC	Analytical Method: SM 5310C Pace Analytical Services - Indianapolis							
Total Organic Carbon	**13600**	ug/L	2000	4		05/22/24 22:13	7440-44-0	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

QUALITY CONTROL DATA

Project: Smith's Creek LF SW Annual Q2
Pace Project No.: 50372946

QC Batch: 791513
QC Batch Method: EPA 9056
Analysis Method: EPA 9056
Analysis Description: 9056 IC Anions
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372946001, 50372946002, 50372946003

METHOD BLANK: 3621821 Matrix: Water
Associated Lab Samples: 50372946001, 50372946002, 50372946003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	ug/L	<1000	1000	05/23/24 14:16	
Sulfate	ug/L	<2000	2000	05/23/24 14:16	

LABORATORY CONTROL SAMPLE: 3621822

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	ug/L	2500	2500	100	80-120	
Sulfate	ug/L	5000	5110	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3621823 3621824

Parameter	Units	50372871008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	ug/L	20.4 mg/L	2500	2500	23000	23000	103	106	80-120	0	15	
Sulfate	ug/L	65.2 mg/L	50000	50000	119000	118000	107	106	80-120	0	15	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(616)975-4500

QUALITY CONTROL DATA

Project: Smith's Creek LF SW Annual Q2
Pace Project No.: 50372946

QC Batch: 789981
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372946001, 50372946002, 50372946003

METHOD BLANK: 3614587 Matrix: Water
Associated Lab Samples: 50372946001, 50372946002, 50372946003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Calcium	ug/L	<1000	1000	05/21/24 13:30	
Iron	ug/L	<100	100	05/21/24 13:30	
Magnesium	ug/L	<1000	1000	05/21/24 13:30	
Sodium	ug/L	<1000	1000	05/21/24 13:30	

LABORATORY CONTROL SAMPLE: 3614588

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	ug/L	10000	9710	97	80-120	
Iron	ug/L	10000	9340	93	80-120	
Magnesium	ug/L	10000	9200	92	80-120	
Sodium	ug/L	10000	9130	91	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3614589 3614590

Parameter	Units	50372871008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	ug/L	101000	10000	10000	112000	113000	111	123	75-125	1	20	
Iron	ug/L	1420	10000	10000	11000	11300	95	99	75-125	3	20	
Magnesium	ug/L	29900	10000	10000	39500	40200	96	103	75-125	2	20	
Sodium	ug/L	19200	10000	10000	30100	29300	109	101	75-125	3	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3614591 3614592

Parameter	Units	50372949001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	ug/L	622000	10000	10000	594000	600000	-281	-222	75-125	1	20	P6
Iron	ug/L	ND	10000	10000	9420	9160	94	91	75-125	3	20	
Magnesium	ug/L	51600	10000	10000	58000	57600	64	61	75-125	1	20	P6
Sodium	ug/L	84100	10000	10000	89700	89100	56	50	75-125	1	20	P6

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: Smith's Creek LF SW Annual Q2
Pace Project No.: 50372946

QC Batch: 790470
QC Batch Method: EPA 200.2
Analysis Method: EPA 6020
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372946001, 50372946002, 50372946003

METHOD BLANK: 3617124 Matrix: Water
Associated Lab Samples: 50372946001, 50372946002, 50372946003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Barium	ug/L	<5.0	5.0	05/20/24 15:45	
Zinc	ug/L	<10.0	10.0	05/21/24 07:49	

LABORATORY CONTROL SAMPLE: 3617125

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	ug/L	40	37.5	94	80-120	
Zinc	ug/L	40	41.2	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3617126 3617127

Parameter	Units	50372871008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Barium	ug/L	66.4	40	40	106	107	99	101	75-125	1	20	
Zinc	ug/L	ND	40	40	38.2	38.2	93	93	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Smith's Creek LF SW Annual Q2
Pace Project No.: 50372946

QC Batch: 790207
QC Batch Method: SM 2320B
Analysis Method: SM 2320B
Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372946001, 50372946002, 50372946003

METHOD BLANK: 3615514 Matrix: Water
Associated Lab Samples: 50372946001, 50372946002, 50372946003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	ug/L	<10000	10000	05/15/24 20:31	
Alkalinity,Bicarbonate (CaCO3)	ug/L	<10000	10000	05/15/24 20:31	

LABORATORY CONTROL SAMPLE: 3615515

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	ug/L	50000	50900	102	90-110	

SAMPLE DUPLICATE: 3615516

Parameter	Units	50372932002 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	ug/L	281 mg/L	282000	0	20	
Alkalinity,Bicarbonate (CaCO3)	ug/L	281 mg/L	282000	0	20	

SAMPLE DUPLICATE: 3615517

Parameter	Units	50372835001 Result	Dup Result	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	ug/L	421 mg/L	427000	2	20	
Alkalinity,Bicarbonate (CaCO3)	ug/L	421 mg/L	427000	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Smith's Creek LF SW Annual Q2
Pace Project No.: 50372946

QC Batch: 790010
QC Batch Method: SM 2540C
Analysis Method: SM 2540C
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372946001, 50372946002, 50372946003

METHOD BLANK: 3614682 Matrix: Water
Associated Lab Samples: 50372946001, 50372946002, 50372946003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	ug/L	<20000	20000	05/15/24 12:15	

LABORATORY CONTROL SAMPLE: 3614683

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	ug/L	300000	275000	92	80-120	

SAMPLE DUPLICATE: 3614684

Parameter	Units	50372871008 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	ug/L	414 mg/L	415000	0	10	

SAMPLE DUPLICATE: 3614685

Parameter	Units	50372949001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	ug/L	2640 mg/L	2550000	3	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

QUALITY CONTROL DATA

Project: Smith's Creek LF SW Annual Q2
Pace Project No.: 50372946

QC Batch: 790341
QC Batch Method: SM 2540D
Analysis Method: SM 2540D
Analysis Description: 2540D Total Suspended Solids
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372946001, 50372946002, 50372946003

METHOD BLANK: 3616218 Matrix: Water
Associated Lab Samples: 50372946001, 50372946002, 50372946003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	ug/L	<2500	2500	05/16/24 14:26	

LABORATORY CONTROL SAMPLE: 3616219

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Suspended Solids	ug/L	100000	98000	98	80-120	

SAMPLE DUPLICATE: 3616220

Parameter	Units	50372946003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	ug/L	1640000	1290000	24	10	R1

SAMPLE DUPLICATE: 3616221

Parameter	Units	50372977001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	ug/L	426 mg/L	449000	5	10	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

QUALITY CONTROL DATA

Project: Smith's Creek LF SW Annual Q2
Pace Project No.: 50372946

QC Batch: 790873
QC Batch Method: EPA 353.2
Analysis Method: EPA 353.2
Analysis Description: 353.2 Nitrate + Nitrite, preserved
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372946001, 50372946002, 50372946003

METHOD BLANK: 3619105 Matrix: Water
Associated Lab Samples: 50372946001, 50372946002, 50372946003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, NO2 plus NO3	ug/L	<20.0	20.0	05/20/24 14:54	

LABORATORY CONTROL SAMPLE: 3619106

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	ug/L	2000	1890	94	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3619107 3619108

Parameter	Units	50372945003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, NO2 plus NO3	ug/L	<20.0	2000	2000	1900	1870	95	94	90-110	1	20	

MATRIX SPIKE SAMPLE: 3619109

Parameter	Units	50372945008 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, NO2 plus NO3	ug/L	<20.0	2000	2000	100	90-110	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

QUALITY CONTROL DATA

Project: Smith's Creek LF SW Annual Q2
Pace Project No.: 50372946

QC Batch: 791861
QC Batch Method: SM-4500-NH3 G
Analysis Method: SM-4500-NH3 G
Analysis Description: 4500 Ammonia Low Level
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372946001, 50372946002, 50372946003

METHOD BLANK: 3623702 Matrix: Water
Associated Lab Samples: 50372946001, 50372946002, 50372946003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	ug/L	<20.0	20.0	05/24/24 12:15	

LABORATORY CONTROL SAMPLE: 3623703

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	ug/L	1000	1020	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3623704 3623705

Parameter	Units	50372945004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Nitrogen, Ammonia	ug/L	74.8	1000	1000	1130	1130	106	106	90-110	0	20	

MATRIX SPIKE SAMPLE: 3623706

Parameter	Units	50373404004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	ug/L	0.11 mg/L	1000	1150	104	90-110	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
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QUALITY CONTROL DATA

Project: Smith's Creek LF SW Annual Q2
Pace Project No.: 50372946

QC Batch: 791074
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Total Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372946001, 50372946002

METHOD BLANK: 3619850 Matrix: Water
Associated Lab Samples: 50372946001, 50372946002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Carbon	ug/L	<500	500	05/21/24 23:35	

LABORATORY CONTROL SAMPLE: 3619851

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	ug/L	10000	9810	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3619852 3619853

Parameter	Units	50373264001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	ug/L	7.1 mg/L	10000	10000	16400	16800	93	97	80-120	2	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

QUALITY CONTROL DATA

Project: Smith's Creek LF SW Annual Q2
Pace Project No.: 50372946

QC Batch: 791387
QC Batch Method: SM 5310C
Analysis Method: SM 5310C
Analysis Description: 5310C Total Organic Carbon
Laboratory: Pace Analytical Services - Indianapolis
Associated Lab Samples: 50372946003

METHOD BLANK: 3621194 Matrix: Water
Associated Lab Samples: 50372946003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Carbon	ug/L	<500	500	05/22/24 21:48	

LABORATORY CONTROL SAMPLE: 3621195

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	ug/L	10000	10200	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3621196 3621197

Parameter	Units	50373301001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Total Organic Carbon	ug/L	5.3 mg/L	10000	10000	14400	14800	92	95	80-120	2	20	

MATRIX SPIKE SAMPLE: 3621198

Parameter	Units	50372835004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	ug/L	2.7 mg/L	10000	12300	96	80-120	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

QUALIFIERS

Project: Smith's Creek LF SW Annual Q2
Pace Project No.: 50372946

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.
R1	RPD value was outside control limits.

Pace Analytical Services, LLC
4171 40th St. SE
Grand Rapids, MI 49512
(616)975-4500

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Smith's Creek LF SW Annual Q2
Pace Project No.: 50372946

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50372946001	**SW-U2**	EPA 9056	791513		
50372946002	**SW-U1**	EPA 9056	791513		
50372946003	**SW-DIA**	EPA 9056	791513		
50372946001	**SW-U2**	EPA 3010	789981	EPA 6010	791166
50372946002	**SW-U1**	EPA 3010	789981	EPA 6010	791166
50372946003	**SW-DIA**	EPA 3010	789981	EPA 6010	791166
50372946001	**SW-U2**	EPA 200.2	790470	EPA 6020	790699
50372946002	**SW-U1**	EPA 200.2	790470	EPA 6020	790699
50372946003	**SW-DIA**	EPA 200.2	790470	EPA 6020	790699
50372946001	**SW-U2**	SM 2320B	790207		
50372946002	**SW-U1**	SM 2320B	790207		
50372946003	**SW-DIA**	SM 2320B	790207		
50372946001	**SW-U2**	SM 2540C	790010		
50372946002	**SW-U1**	SM 2540C	790010		
50372946003	**SW-DIA**	SM 2540C	790010		
50372946001	**SW-U2**	SM 2540D	790341		
50372946002	**SW-U1**	SM 2540D	790341		
50372946003	**SW-DIA**	SM 2540D	790341		
50372946001	**SW-U2**	NO2+NO3+NH3 Calculation	792327		
50372946002	**SW-U1**	NO2+NO3+NH3 Calculation	792327		
50372946003	**SW-DIA**	NO2+NO3+NH3 Calculation	792327		
50372946001	**SW-U2**	EPA 353.2	790873		
50372946002	**SW-U1**	EPA 353.2	790873		
50372946003	**SW-DIA**	EPA 353.2	790873		
50372946001	**SW-U2**	SM-4500-NH3 G	791861		
50372946002	**SW-U1**	SM-4500-NH3 G	791861		
50372946003	**SW-DIA**	SM-4500-NH3 G	791861		
50372946001	**SW-U2**	SM 5310C	791074		
50372946002	**SW-U1**	SM 5310C	791074		
50372946003	**SW-DIA**	SM 5310C	791387		

Pace® Location Requested (City/State):
Pace Analytical Grand Rapids
4171 40th Street SE, Grand Rapids, MI 49512

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here

Scan QR Code for instructions

Company Name:	WSP - Novi, MI	Contact/Report To:	Mary Siegan
Street Address:	46850 Magellan Drive, Novi, MI 48377	Phone #:	(248)536-5435
		E-Mail:	mary.siegan@wsp.com
		Cc E-Mail:	
Customer Project #:			
Project Name:	Smith's Creek LF SW Annual Q2	Invoice To:	Mary Siegan
		Invoice E-Mail:	mary.siegan@wsp.com
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	
		Quote #:	

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [X] ET

County / State origin of sample(s): Michigan

Data Deliverables: [ ] Level II [ ] Level III [ ] Level IV [ ] EQUIS [ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No

Rush (Pre-approval required): [ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other _____

DW PWSID # or WW Permit # as applicable:

Date Results Requested:

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW),Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	2320B Alkalinity; 9056 IC Cl/SO4	2540C Total Dissolved Solids	2540D Total Suspended Solids	353.2 N+N; 4500 LL NH3; TIN	5310C TOC	Metals, Total - 6010/6020
SW-U1	SW	G	5/10/24	1035	5/10/24	1035	6			X	X	X	X	X	X
SW-U2	SW	G	↓	1017	↓	1017	↓			↓	↓	↓	↓	↓	↓
SW-D1A	SW	G	↓	1055	↓	1055	↓			↓	↓	↓	↓	↓	↓

Specify Container Size **

Identify Container Preservative Type***

Analysis Requested

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only

Proj. Mgr: **Brian Hall**

AcctNum / Client ID:

Table #:

Profile / Template: **8218**

Prelog / Bottle Ord. ID: **EZ 3106486**

Sample Comment

Preservation non-conformance identified for sample.

Additional Instructions from Pace®:
Annual Metals - Ca,Fe,Mg,Na,Ba,Zn

Collected By:
(Printed Name) Jon Cisco
Signature:

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Tracking Number:
1 WSP	5/10/24 1600			
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In- Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEX [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 1 of 1

F-IN-Q-290-rev.26, 30Apr2024

50372946

SAMPLE CONDITION UPON RECEIPT FORM

Date/Time and Initials of person examining contents: NMS 05.11.2024 1335

1. **Courier:** [X] FED EX | UPS [ ] CLIENT [ ] PACE [ ] NOW/JETT | OTHER _____
2. **Custody Seal on Cooler/Box Present:** [X] Yes [ ] No
   (If yes)Seals Intact: [X] Yes [ ] No **(leave blank if no seals were present)**
3. **Thermometer:** 1 2 3 4 5 6 7 8 A B C (D) E F G H
4. **Cooler Temperature(s):** 1.7/1.7 | 0.5/0.5 | 1.3/1.3 | _____
   (Initial/Corrected) RECORD TEMPS OF ALL COOLERS RECEIVED (use Comments below to add more)

5. **Packing Material:** | Bubble Wrap [X] Bubble Bags | None | Other _____
6. **Ice Type:** [X] Wet [ ] Blue [ ] None
7. **Was the PM notified of out of temp cooler?:** | Yes [ ] No
   Cooler temp should be above freezing to 6°C
8. **EZ Bottle Order?** [X] Yes | No
   If yes but not on COC what is the EZ Bottle Order Number?:

All discrepancies will be written out in the comments section below.

	Yes	No		Yes	No	N/A
USDA Regulated Soils? (HI, ID, NY, WA, OR,CA, NM, TX, OK, AR, LA, TN, AL, MS, NC, SC, GA, FL, or Puerto Rico)		X	All containers needing acid/base preservation have been pH CHECKED?: **Exceptions: VOA, coliform, LLHg, O&G, RAD CHEM, and any container with a septum cap or preserved with HCl.** Circle: (HNO3 (<2)) (H2SO4 (<2)) NaOH (>10) NaOH/ZnAc (>9) Any non-conformance to pH recommendations will be noted on the container count form	X		
Short Hold Time Analysis (48 hours or less)? Analysis:						
Time 5035A TC placed in Freezer or Short Holds To Lab	Time:		Residual Chlorine Check (SVOC 625 Pest/PCB 608)	Present	Absent	N/A X
Rush TAT Requested (4 days or less):			Residual Chlorine Check (Total/Amenable/Free Cyanide)			X
Custody Signatures Present?			Headspace Wisconsin Sulfide?			X
Containers Intact?:	X		Headspace in VOA Vials (>6mm): See Containter Count form for details	Present	Absent	No VOA Vials Sent X
Sample Label (IDs/Dates/Times) Match COC?: Except TCs, which only require sample ID			Trip Blank Present?		X	
Extra labels on Terracore Vials? (soils only)		X	Trip Blank Custody Seals?:			X

COMMENTS: 3 samples points came in with a separate project; "Smith's Creek LF GW Annual Q2" for WSP-Novi, MI. No COC included for the three sample points. Refer to SCC for more details on time, date, and I.D.s. BP3N, BP3S, and AG3S were all pH'd but no analysis was present on container labels, unsure if they include rush or TAT requirements.

COC PAGE 1 **of** 1

Sample Container Count

** Place a RED dot on containers that are out of conformance **

COC Line Item	WGFU	WGKU BG1U	MeOH (only) SBS DI R	DG9H VG9H	VOA VIAL HS >6mm	VG9U DG9U	VG9T	AMBER GLASS AG0U	AG1H	AG1U	AG3U	AG3S	AG3SF	AG3B	PLASTIC BP1U	BP1N	BP2U	BP3U	BP3N	BP3F	BP3S	BP3B	BP3Z	OTHER CG3H	CG3F	Syringe Kit		Matrix	Nitric Red HNO3 <2	Sulfuric Yellow H2SO4 <2	Sodium Hydroxide Green NaOH >10	Sodium Hydroxide/ ZnAc Black NaOH/ZnAc >9
1						"SW-U2"		"5/10"		"1017"		1			1		1	1	1		1							WT	✓	✓		
2						"SW-U1"		"5/10"		"1035"		1			1		1	1	1		1							1	1	1		
3						"SW-DIA"		"5/10"		"1005"		1			1		1	1	1		1							1	1	1		
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Container Codes

Glass

DG9H	40mL HCl amber voa vial	BG1T	glass
DG9P	40mL TSP amber vial	BG1U	1L unpreserved glass
DG9S	40mL H2SO4 amber vial	CG3U	250mL Unpres Clear Glass
DG9T	40mL Na Thio amber vial	AG0U	100mL unpres amber glass
DG9U	40mL unpreserved amber vial	AG1H	1L HCl amber glass
VG9H	40mL HCl clear vial	AG1S	1L H2SO4 amber glass
VG9T	40mL Na Thio. clear vial	AG1T	1L Na Thiosulfate amber glass
VG9U	40mL unpreserved clear vial	AG1U	1liter unpres amber glass
I	40mL w/hexane wipe vial	AG2N	500mL HNO3 amber glass
WGKU	8oz unpreserved clear jar	AG2S	500mL H2SO4 amber glass
WGFU	4oz clear soil jar	AG2U	500mL unpres amber glass
JGFU	4oz unpreserved amber wide	AG3S	250mL H2SO4 amber glass
CG3H	250mL clear glass HCl	AG3SF	250mL H2SO4 amb glass -field filtered
CG3F	250mL clear glass HCl, Field Filter	AG3U	250mL unpres amber glass
BG1H	1L HCl clear glass	AG3B	250mL NaOH amber glass
BG1S	1L H2SO4 clear glass		

Plastic

BP1B	1L NaOH plastic	BP4U	125mL unpreserved plastic
BP1N	1L HNO3 plastic	BP4N	125mL HNO3 plastic
BP1S	1L H2SO4 plastic	BP4S	125mL H2SO4 plastic
BP1U	1L unpreserved plastic		
BP1Z	1L NaOH, Zn, Ac		
BP2N	500mL HNO3 plastic		
BP2C	500mL NaOH plastic		
BP2S	500mL H2SO4 plastic		
BP2U	500mL unpreserved plastic		
BP2Z	500mL NaOH, Zn Ac		
BP3B	250mL NaOH plastic		
BP3N	250mL HNO3 plastic		
BP3F	250mL HNO3 plastic-field filtered		
BP3U	250mL unpreserved plastic		
BP3S	250mL H2SO4 plastic		
BP3Z	250mL NaOH, ZnAc plastic		
BP3R	250mL Unpres. FF SO4/OH buffer		

Miscellaneous

Syringe Kit	LL Cr+6 sampling kit
ZPLC	Ziploc Bag
R	Terracore Kit
SP5T	120mL Coliform Sodium Thiosulfate
GN	General Container
U	Summa Can (air sample)
WT	Water
SL	Solid
OL:	Oil
NAL	Non-aqueous liquid
WP	Wipe

APPENDIX B

Field Data Sheets

Well ID MW-101

GROUNDWATER SAMPLE COLLECTION RECORD

SITE IDENTIFICATION

COMPANY: Smith's Creek Landfill
FACILITY/SITE: Smith's Creek Landfill
PROJECT NUMBER: US0030747.9191
ADDRESS: 6779 Smith's Creek Rd. Smith's Creek, MI
CONTACT: Matt Williams
PHONE: (248) 459-3309

WEATHER CONDITIONS

SKY: ~~dry~~ Cloudy
GROUND: dry
AIR TEMPERATURE (°F): 60
PRECIPITATION (LAST 24 HRS): no

WELL SECURITY

PROTECTIVE COVER: ok
BUMPER POSTS: ok
EXTERNAL WELL ID: ok
LOCK: ok
WELL DIAMETER: 2"
CONCRETE PAD: ok

CALCULATIONS

WELL ELEVATION (FT/MSL):
DEPTH TO WATER (FT): 23.31
GROUNDWATER ELEVATION (FT/MSL):
TOTAL WELL DEPTH (FT): 76.9
WELL STICK-UP (FT):
WATER VOLUME IN CASING (GALLONS): 9.11

PURGING

INITIAL PURGE DATE: 5/9/24
INITIAL PURGE TIME: 11:25

STABILIZATION READINGS

	1	2	3	4	5	6	Final
Time	11:31	11:37					11:43
Volume Removed (gal)	9.11	18.22					27.33
pH (s.u.)	7.82	7.92					8.00
Conductivity. (µmho/cm)	673	562.8					538.6
Temperature (°C)	12.8	11.7					11.3

SAMPLING

SAMPLE DATE: 5/9
SAMPLE TIME: 1125
TOTAL BOTTLES COLLECTED: 7
FILTERED FOR METALS: yes
SAMPLE CLARITY (clear, sl. turbid, m. turbid, v. turbid): clear
COLOR (yellow, brown, rust, grey, white, colorless): none
ODOR (sulfur, LFG, musty, solvent, petrol, no odor): None
SAMPLE COLLECTED BY: IC

EQUIPMENT

FIELD METER USED: YSI Pro+
CALIBRATION TIME: 0900
PH CALIBRATION STANDARDS (s.u.): 4/7/10
CONDUCTIVITY STANDARD (µmho/cm): 1,413
PURIFIED WATER SUPPLIED BY: lab
PUMP/BAILER TYP MP50

SAMPLING COMPANY: WSP USA Inc.
SAMPLER'S PHONE:
SAMPLER'S ADDRESS:
CLIENT REPRESENTATIVES: 46850 Magellan Dr, Suite 190, Novi, MI 48377
REGULATORY REPRESENTATIVES:

COMMENTS:

DATE FORM COMPLETED: 5/9
FORM COMPLETED BY (signature):

Well ID MW-106A

GROUNDWATER SAMPLE COLLECTION RECORD

SITE IDENTIFICATION

COMPANY: Smith's Creek Landfill
FACILITY/SITE: Smith's Creek Landfill
PROJECT NUMBER: US0030747.9191
ADDRESS: 6779 Smith's Creek Rd. Smith's Creek, MI
CONTACT: Matt Williams
PHONE: (248) 459-3309

WEATHER CONDITIONS

SKY: clear
GROUND: dry
AIR TEMPERATURE (°F): 66
PRECIPITATION (LAST 24 HRS): yes

WELL SECURITY

PROTECTIVE COVER: ok
BUMPER POSTS: ok
EXTERNAL WELL ID: ok
LOCK: ok
WELL DIAMETER: 2"
CONCRETE PAD: ok

CALCULATIONS

WELL ELEVATION (FT/MSL):
DEPTH TO WATER (FT): 32.79
GROUNDWATER ELEVATION (FT/MSL):
TOTAL WELL DEPTH (FT): 75.2
WELL STICK-UP (FT):
WATER VOLUME IN CASING (GALLONS): 7.2

PURGING

INITIAL PURGE DATE: 5/8/24
INITIAL PURGE TIME: 1209

STABILIZATION READINGS

	1	2	3	4	5	6	Final
Time	1214	1220					1230
Volume Removed (gal)	7.2	14.4					21.6
pH (s.u.)	7.55	7.56					7.61
Conductivity. (µmho/cm)	339	327.6					338.1
Temperature (°C)	14.7	11.8					12.3

SAMPLING

SAMPLE DATE: 5/8/24
SAMPLE TIME: 1230
TOTAL BOTTLES COLLECTED: 7
FILTERED FOR METALS: yes
SAMPLE CLARITY (clear, sl. turbid, m. turbid, v. turbid): clear
COLOR (yellow, brown, rust, grey, white, colorless): none
ODOR (sulfur, LFG, musty, solvent, petrol, no odor): none
SAMPLE COLLECTED BY: JC

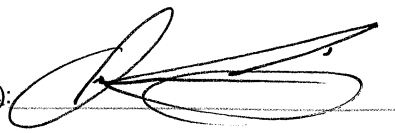
EQUIPMENT

FIELD METER USED: YSI Pro+
CALIBRATION TIME: 1050
PH CALIBRATION STANDARDS (s.u.): 4/7/10
CONDUCTIVITY STANDARD (µmho/cm): 6413
PURIFIED WATER SUPPLIED BY: TE lab
PUMP/BAILER TYP MP50

SAMPLING COMPANY: WSP USA Inc.
SAMPLER'S PHONE:
SAMPLER'S ADDRESS: 46850 Magellan Dr, Suite 190, Novi, MI 48377
CLIENT REPRESENTATIVES:
REGULATORY REPRESENTATIVES:

COMMENTS:

DATE FORM COMPLETED: 5/8/24 FORM COMPLETED BY (signature):



Well ID MW-201

GROUNDWATER SAMPLE COLLECTION RECORD

SITE IDENTIFICATION

COMPANY: Smith's Creek Landfill
FACILITY/SITE: Smith's Creek Landfill
PROJECT NUMBER: US0030747.9191
ADDRESS: 6779 Smith's Creek Rd. Smith's Creek, MI
CONTACT: Matt Williams
PHONE: (248) 459-3309

WEATHER CONDITIONS

SKY: clear
GROUND: mist
AIR TEMPERATURE (°F): 64F
PRECIPITATION (LAST 24 HRS): yes

WELL SECURITY

PROTECTIVE COVER: ok
BUMPER POSTS: NA
EXTERNAL WELL ID: ok
LOCK: ok
WELL DIAMETER: 2"
CONCRETE PAD: ok

CALCULATIONS

WELL ELEVATION (FT/MSL):
DEPTH TO WATER (FT): 22.88
GROUNDWATER ELEVATION (FT/MSL):
TOTAL WELL DEPTH (FT): 75.4
WELL STICK-UP (FT):
WATER VOLUME IN CASING (GALLONS): 8.93

PURGING

INITIAL PURGE DATE: 5/8/24
INITIAL PURGE TIME: 0945

STABILIZATION READINGS

	1	2	3	4	5	6	Final
Time	1000	1015					0925
Volume Removed (gal)	8.93	17.86					~~17.86~~ 26.79
pH (s.u.)	8.00	8.07					8.71
Conductivity. (µmho/cm)	324.2	129.5					0.455
Temperature (°C)	13.0	15.8					12.5

SAMPLING

SAMPLE DATE: 5/9/24
SAMPLE TIME: 0938
TOTAL BOTTLES COLLECTED: 1
FILTERED FOR METALS: yes
SAMPLE CLARITY (clear, sl. turbid, m. turbid, v. turbid): clear
COLOR (yellow, brown, rust, grey, white, colorless): none
ODOR (sulfur, LFG, musty, solvent, petrol, no odor): none
SAMPLE COLLECTED BY: JC

EQUIPMENT

FIELD METER USED: YSI Prot
CALIBRATION TIME: 1000
PH CALIBRATION STANDARDS (s.u.): 4/7/10
CONDUCTIVITY STANDARD (µmho/cm): ~~1413~~ 1413
PURIFIED WATER SUPPLIED BY: lab
PUMP/BAILER TYP MP50

SAMPLING COMPANY: WSP USA Inc.
SAMPLER'S PHONE:
SAMPLER'S ADDRESS: 46850 Magellan Dr, Suite 190, Novi, MI 48377
CLIENT REPRESENTATIVES:
REGULATORY REPRESENTATIVES:

COMMENTS:

DATE FORM COMPLETED: 5/9
FORM COMPLETED BY (signature):

Well ID MW-202

GROUNDWATER SAMPLE COLLECTION RECORD

SITE IDENTIFICATION

COMPANY: Smith's Creek Landfill
FACILITY/SITE: Smith's Creek Landfill
PROJECT NUMBER: US0030747.9191
ADDRESS: 6779 Smith's Creek Rd. Smith's Creek, MI
CONTACT: Matt Williams
PHONE: (248) 459-3309

WEATHER CONDITIONS

SKY: cloudy
GROUND: wet
AIR TEMPERATURE (°F): 60
PRECIPITATION (LAST 24 HRS): no

WELL SECURITY

PROTECTIVE COVER: yes
BUMPER POSTS: NA
EXTERNAL WELL ID: ok
LOCK: ok
WELL DIAMETER: 2"
CONCRETE PAD: ok

CALCULATIONS

WELL ELEVATION (FT/MSL):
DEPTH TO WATER (FT): 24.39
GROUNDWATER ELEVATION (FT/MSL):
TOTAL WELL DEPTH (FT): 64.6
WELL STICK-UP (FT):
WATER VOLUME IN CASING (GALLONS): 6.8

PURGING

INITIAL PURGE DATE: 5/9/24
INITIAL PURGE TIME: 12:01

STABILIZATION READINGS

	1	2	3	4	5	6	Final
Time	12:05	12:09					12:13
Volume Removed (gal)	6.8	13.6					20.4
pH (s.u.)	8.15	8.12					8.15
Conductivity. (µmho/cm)	405.5	397.3					327.3
Temperature (°C)	12.6	11.7					12.0

SAMPLING

SAMPLE DATE: 5/9/24
SAMPLE TIME: 12:15
TOTAL BOTTLES COLLECTED: 8
FILTERED FOR METALS: 1 no, 1 yes
SAMPLE CLARITY (clear, sl. turbid, m. turbid, v. turbid): clear
COLOR (yellow, brown, rust, grey, white, colorless): none
ODOR (sulfur, LFG, musty, solvent, petrol, no odor): none
SAMPLE COLLECTED BY: JC

EQUIPMENT

FIELD METER USED: YSI Pro+
CALIBRATION TIME: 0900
PH CALIBRATION STANDARDS (s.u.): 4/7/10
CONDUCTIVITY STANDARD (µmho/cm): 1,413
PURIFIED WATER SUPPLIED BY: lab
PUMP/BAILER TYP MP50

SAMPLING COMPANY: WSP USA Inc.
SAMPLER'S PHONE:
SAMPLER'S ADDRESS: 46850 Magellan Dr, Suite 190, Novi, MI 48377
CLIENT REPRESENTATIVES:
REGULATORY REPRESENTATIVES:

COMMENTS: Total Metals Sampled

DATE FORM COMPLETED: 5/9
FORM COMPLETED BY (signature):

Well ID MW-203B

GROUNDWATER SAMPLE COLLECTION RECORD

SITE IDENTIFICATION

COMPANY: Smith's Creek Landfill
FACILITY/SITE: Smith's Creek Landfill
PROJECT NUMBER: US0030747.9191
ADDRESS: 6779 Smith's Creek Rd. Smith's Creek, MI
CONTACT: Matt Williams
PHONE: (248) 459-3309

WEATHER CONDITIONS

SKY: cloudy
GROUND: moist
AIR TEMPERATURE (°F): 58
PRECIPITATION (LAST 24 HRS): 10

WELL SECURITY

PROTECTIVE COVER: ok
BUMPER POSTS: NA
EXTERNAL WELL ID: ok
LOCK: ok
WELL DIAMETER: 2"
CONCRETE PAD: ok

CALCULATIONS

WELL ELEVATION (FT/MSL):
DEPTH TO WATER (FT): 25.35
GROUNDWATER ELEVATION (FT/MSL):
TOTAL WELL DEPTH (FT): 73.21
WELL STICK-UP (FT):
WATER VOLUME IN CASING (GALLONS): 8.12

PURGING

INITIAL PURGE DATE: 5/9/24
INITIAL PURGE TIME: 1:52

STABILIZATION READINGS

	1	2	3	4	5	6	Final
Time	1:57	2:02					2:07
Volume Removed (gal)	8.12	16.24					24.36
pH (s.u.)	8.82	8.70					9.49
Conductivity. (µmho/cm)	501.9	508.4					479.5
Temperature (°C)	11.2	11.2					10.8

SAMPLING

SAMPLE DATE: 5/9/24
SAMPLE TIME: 14:10
TOTAL BOTTLES COLLECTED: 7
FILTERED FOR METALS: yes
SAMPLE CLARITY (clear, sl. turbid, m. turbid, v. turbid): clear
COLOR (yellow, brown, rust, grey, white, colorless): none
ODOR (sulfur, LFG, musty, solvent, petrol, no odor): none
SAMPLE COLLECTED BY: IC

EQUIPMENT

FIELD METER USED: YSI Pro+
CALIBRATION TIME: 0900
PH CALIBRATION STANDARDS (s.u.): 4/7/10
CONDUCTIVITY STANDARD (µmho/cm): 1431
PURIFIED WATER SUPPLIED BY: lab
PUMP/BAILER TYP MP50

SAMPLING COMPANY: WSP USA Inc.
SAMPLER'S PHONE:
SAMPLER'S ADDRESS: 46850 Magellan Dr, Suite 190, Novi, MI 48377
CLIENT REPRESENTATIVES:
REGULATORY REPRESENTATIVES:

COMMENTS:

DATE FORM COMPLETED: 5/9
FORM COMPLETED BY (signature):

Well ID MW-207A

GROUNDWATER SAMPLE COLLECTION RECORD

SITE IDENTIFICATION

COMPANY: Smith's Creek Landfill
FACILITY/SITE: Smith's Creek Landfill
PROJECT NUMBER: US0030747.9191
ADDRESS: 6779 Smith's Creek Rd. Smith's Creek, MI
CONTACT: Matt Williams
PHONE: (248) 459-3309

WEATHER CONDITIONS

SKY: clear
GROUND: moist
AIR TEMPERATURE (°F): 68
PRECIPITATION (LAST 24 HRS): yes

WELL SECURITY

PROTECTIVE COVER: ok
BUMPER POSTS: ok
EXTERNAL WELL ID: ok
LOCK: ok
WELL DIAMETER: 2"
CONCRETE PAD: ok

CALCULATIONS

WELL ELEVATION (FT/MSL):
DEPTH TO WATER (FT): 36.49
GROUNDWATER ELEVATION (FT/MSL):
TOTAL WELL DEPTH (FT): 82.9
WELL STICK-UP (FT):
WATER VOLUME IN CASING (GALLONS): 7.9

PURGING

INITIAL PURGE DATE: 5/8/24
INITIAL PURGE TIME: 12:49 PM

STABILIZATION READINGS

	1	2	3	4	5	6	Final
Time	12:54	12:59					1:04
Volume Removed (gal)	7.9	15.8					23.7
pH (s.u.)	6.92	6.95					7.32
Conductivity. (µmho/cm)	867	847					569.6
Temperature (°C)	13.7	11.5					13.8

SAMPLING

SAMPLE DATE: 5/8/24
SAMPLE TIME: 13:15
TOTAL BOTTLES COLLECTED: 7
FILTERED FOR METALS: yes
SAMPLE CLARITY (clear, sl. turbid, m. turbid, v. turbid): clear
COLOR (yellow, brown, rust, grey, white, colorless): none
ODOR (sulfur, LFG, musty, solvent, petrol, no odor): none
SAMPLE COLLECTED BY: JC

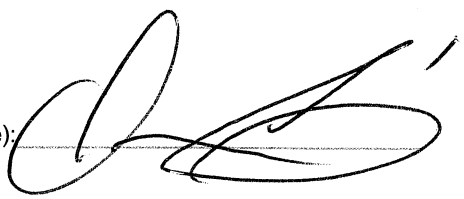
EQUIPMENT

FIELD METER USED: YSI Prot
CALIBRATION TIME: 1000
PH CALIBRATION STANDARDS (s.u.): 7/7/10
CONDUCTIVITY STANDARD (µmho/cm): 1,413
PURIFIED WATER SUPPLIED BY: lab
PUMP/BAILER TYP MP50

SAMPLING COMPANY: WSP USA Inc.
SAMPLER'S PHONE:
SAMPLER'S ADDRESS: 46850 Magellan Dr. Suite 190. Novi. MI 48377
CLIENT REPRESENTATIVES:
REGULATORY REPRESENTATIVES:

COMMENTS:

DATE FORM COMPLETED: 5/8/24 FORM COMPLETED BY (signature):



Well ID MW-208B

GROUNDWATER SAMPLE COLLECTION RECORD

SITE IDENTIFICATION

COMPANY: Smith's Creek Landfill
FACILITY/SITE: Smith's Creek Landfill
PROJECT NUMBER: US0030747.9191
ADDRESS: 6779 Smith's Creek Rd. Smith's Creek, MI
CONTACT: Matt Williams
PHONE: (248) 459-3309

WEATHER CONDITIONS

SKY: clear
GROUND: wet
AIR TEMPERATURE (°F): 66
PRECIPITATION (LAST 24 HRS): yes

WELL SECURITY

PROTECTIVE COVER ok
BUMPER POSTS: no
EXTERNAL WELL ID: ok
LOCK: ok
WELL DIAMETER 2"
CONCRETE PAD: ok

CALCULATIONS

WELL ELEVATION (FT/MSL):
DEPTH TO WATER (FT): 34.97
GROUNDWATER ELEVATION (FT/MSL):
TOTAL WELL DEPTH (FT): ~~NA~~ 14.9
WELL STICK-UP (FT):
WATER VOLUME IN CASING (GALLONS): 6.8

PURGING

INITIAL PURGE DATE: 5/8/24
INITIAL PURGE TIME: 1330

STABILIZATION READINGS

	1	2	3	4	5	6	Final
Time	1335	1340					1345
Volume Removed (gal)	6.8	13.6					20.4
pH (s.u.)	7.78	7.79					7.79
Conductivity. (µmho/cm)	357.5	348					343.6
Temperature (°C)	17.4	12.9					14.3

SAMPLING

SAMPLE DATE: 5/8
SAMPLE TIME: 1355
TOTAL BOTTLES COLLECTED: 7
FILTERED FOR METALS: yes
SAMPLE CLARITY (clear, sl. turbid, m. turbid, v. turbid): ~~clear~~ sl. turbid
COLOR (yellow, brown, rust, grey, white, colorless): none
ODOR (sulfur, LFG, musty, solvent, petrol, no odor): none

EQUIPMENT

FIELD METER USED: YSI Pro+
CALIBRATION TIME: 1600
PH CALIBRATION STANDARDS (s.u.): 4/7/10
CONDUCTIVITY STANDARD (µmho/cm): 1,413
PURIFIED WATER SUPPLIED BY: lab
PUMP/BAILER TYP MP50

SAMPLE COLLECTED BY: LC
SAMPLING COMPANY: WSP USA Inc.
SAMPLER'S PHONE:
SAMPLER'S ADDRESS: 46850 Magellan Dr, Suite 190, Novi, MI 48377
CLIENT REPRESENTATIVES:
REGULATORY REPRESENTATIVES:

COMMENTS:

DATE FORM COMPLETED: 5/8/24 FORM COMPLETED BY (signature):

Well ID MW-209

GROUNDWATER SAMPLE COLLECTION RECORD

SITE IDENTIFICATION

COMPANY: Smith's Creek Landfill
FACILITY/SITE: Smith's Creek Landfill
PROJECT NUMBER: US0030747.9191
ADDRESS: 6779 Smith's Creek Rd. Smith's Creek, MI
CONTACT: Matt Williams
PHONE: (248) 459-3309

WEATHER CONDITIONS

SKY: clear
GROUND: wet
AIR TEMPERATURE (°F): 66
PRECIPITATION (LAST 24 HRS): yes

WELL SECURITY

PROTECTIVE COVER: ok
BUMPER POSTS: NA
EXTERNAL WELL ID: Broken
LOCK: ok
WELL DIAMETER: 2"
CONCRETE PAD: ok

CALCULATIONS

WELL ELEVATION (FT/MSL):
DEPTH TO WATER (FT): ~~47~~ 29.85
GROUNDWATER ELEVATION (FT/MSL):
TOTAL WELL DEPTH (FT): 79.2
WELL STICK-UP (FT):
WATER VOLUME IN CASING (GALLONS): 8.40

PURGING

INITIAL PURGE DATE: 5/8/24
INITIAL PURGE TIME: 1411

STABILIZATION READINGS

	1	2	3	4	5	6	Final
Time	1421	1426					1008
Volume Removed (gal)	8.40	16.80					25.2
pH (s.u.)	8.05	7.95					8.12
Conductivity. (µmho/cm)	321.2	360.1					0483
Temperature (°C)	16.1	12.5					13.0

SAMPLING

SAMPLE DATE: 5/9/24
SAMPLE TIME: 1010
TOTAL BOTTLES COLLECTED: 7
FILTERED FOR METALS: yes
SAMPLE CLARITY (clear, sl. turbid, m. turbid, v. turbid): clear
COLOR (yellow, brown, rust, grey, white, colorless): clear
ODOR (sulfur, LFG, musty, solvent, petrol, no odor): clear
SAMPLE COLLECTED BY: LC

EQUIPMENT

FIELD METER USED: YSI Pro+
CALIBRATION TIME: 1000
PH CALIBRATION STANDARDS (s.u.): 4/7/10
CONDUCTIVITY STANDARD (µmho/cm): 1,413
PURIFIED WATER SUPPLIED BY: lab
PUMP/BAILER TYP: MP50

SAMPLING COMPANY: WSP USA Inc.
SAMPLER'S PHONE:
SAMPLER'S ADDRESS: 46850 Magellan Dr, Suite 190, Novi, MI 48377
CLIENT REPRESENTATIVES:
REGULATORY REPRESENTATIVES:

COMMENTS:

DATE FORM COMPLETED: 5/9/24 FORM COMPLETED BY (signature):

Well ID MW-210

GROUNDWATER SAMPLE COLLECTION RECORD

SITE IDENTIFICATION

COMPANY: Smith's Creek Landfill
FACILITY/SITE: Smith's Creek Landfill
PROJECT NUMBER: US0030747.9191
ADDRESS: 6779 Smith's Creek Rd. Smith's Creek, MI
CONTACT: Matt Williams
PHONE: (248) 459-3309

WEATHER CONDITIONS

SKY: clear
GROUND: wet
AIR TEMPERATURE (°F): 64
PRECIPITATION (LAST 24 HRS): yes

WELL SECURITY

PROTECTIVE COVER dk
BUMPER POSTS: NA
EXTERNAL WELL ID: dk
LOCK: ok
WELL DIAMETER 2"
CONCRETE PAD: dk

CALCULATIONS

WELL ELEVATION (FT/MSL):
DEPTH TO WATER (FT): ~~25.7~~ 28.62
GROUNDWATER ELEVATION (FT/MSL):
TOTAL WELL DEPTH (FT): 71.9
WELL STICK-UP (FT):
WATER VOLUME IN CASING (GALLONS): 7.58

PURGING

INITIAL PURGE DATE: ~~5/8/24~~ 5/9/24
INITIAL PURGE TIME: ~~1442~~ 1046

STABILIZATION READINGS

	1	2	3	4	5	6	Final
Time	1447	~~1457~~	dry	1051	1056		11:01
Volume Removed (gal)	7.58	~~15.16~~		7.58	15.16	~~22~~	22.74
pH (s.u.)	7.92			7.55	7.57		7.62
Conductivity. (µmho/cm)	3541.8			1590	~~1.56~~ 1559		1450
Temperature (°C)	14.1			12.1	12.6		12.4

SAMPLING

SAMPLE DATE: 5/9/24
SAMPLE TIME: 1103
TOTAL BOTTLES COLLECTED: 7
FILTERED FOR METALS: yes
SAMPLE CLARITY (clear, sl. turbid, m. turbid, v. turbid): clear
COLOR (yellow, brown, rust, grey, white, colorless): none
ODOR (sulfur, LFG, musty, solvent, petrol, no odor): none
SAMPLE COLLECTED BY: JC

EQUIPMENT

FIELD METER USED: YSI Pro+
CALIBRATION TIME: 1000
PH CALIBRATION STANDARDS (s.u.): 4/7/10
CONDUCTIVITY STANDARD (µmho/cm): 1,413
PURIFIED WATER SUPPLIED BY: lab
PUMP/BAILER TYP rp50

SAMPLING COMPANY: WSP USA Inc.
SAMPLER'S PHONE:
SAMPLER'S ADDRESS: 46850 Magellan Dr, Suite 190, Novi, MI 48377
CLIENT REPRESENTATIVES:
REGULATORY REPRESENTATIVES:

COMMENTS:

DATE FORM COMPLETED: 5/9
FORM COMPLETED BY (signature):

Well ID MW-212

GROUNDWATER SAMPLE COLLECTION RECORD

SITE IDENTIFICATION

COMPANY: Smith's Creek Landfill
FACILITY/SITE: Smith's Creek Landfill
PROJECT NUMBER: US0030747.9191
ADDRESS: 6779 Smith's Creek Rd. Smith's Creek, MI
CONTACT: Matt Williams
PHONE: (248) 459-3309

WEATHER CONDITIONS

SKY: clear
GROUND: wet
AIR TEMPERATURE (°F): 64F
PRECIPITATION (LAST 24 HRS): yes

WELL SECURITY

PROTECTIVE COVER: ok
BUMPER POSTS: NA
EXTERNAL WELL ID: ok
LOCK: ok
WELL DIAMETER: 2"
CONCRETE PAD: ok

CALCULATIONS

WELL ELEVATION (FT/MSL):
DEPTH TO WATER (FT): 28.82
GROUNDWATER ELEVATION (FT/MSL):
TOTAL WELL DEPTH (FT): 65.2
WELL STICK-UP (FT): 2'
WATER VOLUME IN CASING (GALLONS): 6.18

PURGING

INITIAL PURGE DATE: 5/8/10
INITIAL PURGE TIME: 1030

STABILIZATION READINGS

	1	2	3	4	5	6	Final
Time	1040	1050					1103
Volume Removed (gal)	6.18	12.36					18.54
pH (s.u.)	7.94	7.94					7.94
Conductivity. (µmho/cm)	368.8	349.1					316.2
Temperature (°C)	15.7	12.5					12.9

SAMPLING

SAMPLE DATE: 5/8/24
SAMPLE TIME: 1110
TOTAL BOTTLES COLLECTED: 7
FILTERED FOR METALS: yes
SAMPLE CLARITY (clear, sl. turbid, m. turbid, v. turbid): clear
COLOR (yellow, brown, rust, grey, white, colorless): clear
ODOR (sulfur, LFG, musty, solvent, petrol, no odor): none
SAMPLE COLLECTED BY: IC
SAMPLING COMPANY: WSP USA Inc.
SAMPLER'S PHONE:
SAMPLER'S ADDRESS: 46850 Magellan Dr, Suite 190, Novi, MI 48377

EQUIPMENT

FIELD METER USED: YSI Pro+
CALIBRATION TIME: 1000
PH CALIBRATION STANDARDS (s.u.): 4/7/10
CONDUCTIVITY STANDARD (µmho/cm): 1,413
PURIFIED WATER SUPPLIED BY: lab
PUMP/BAILER TYP

CLIENT REPRESENTATIVES:
REGULATORY REPRESENTATIVES:

COMMENTS:

DATE FORM COMPLETED: 5/8
FORM COMPLETED BY (signature):

Well ID MW-301

GROUNDWATER SAMPLE COLLECTION RECORD

SITE IDENTIFICATION

COMPANY: Smith's Creek Landfill
FACILITY/SITE: Smith's Creek Landfill
PROJECT NUMBER: US0030747.9191
ADDRESS: 6779 Smith's Creek Rd. Smith's Creek, MI
CONTACT: Matt Williams
PHONE: (248) 459-3309

WEATHER CONDITIONS

SKY: clear
GROUND: moist
AIR TEMPERATURE (°F): 66
PRECIPITATION (LAST 24 HRS): none

WELL SECURITY

PROTECTIVE COVER: ok
BUMPER POSTS: none
EXTERNAL WELL ID: ok
LOCK: ok
WELL DIAMETER: 2"
CONCRETE PAD: ok

CALCULATIONS

WELL ELEVATION (FT/MSL):
DEPTH TO WATER (FT): 33.43
GROUNDWATER ELEVATION (FT/MSL):
TOTAL WELL DEPTH (FT): 84.3
WELL STICK-UP (FT):
WATER VOLUME IN CASING (GALLONS): 8.65

PURGING

INITIAL PURGE DATE: 5/10/24
INITIAL PURGE TIME: 11:14

STABILIZATION READINGS

	1	2	3	4	5	6	Final
Time	11:20	11:26					11:32
Volume Removed (gal)	8.65	17.3					25.95
pH (s.u.)	8.34	8.38					8.39
Conductivity. (µmho/cm)	381.3	385.5					382.3
Temperature (°C)	11.1	11.8					12.0

SAMPLING

SAMPLE DATE: 5/10
SAMPLE TIME: ~~1235~~ 1135
TOTAL BOTTLES COLLECTED: 7
FILTERED FOR METALS: yes
SAMPLE CLARITY (clear, sl. turbid, m. turbid, v. turbid):
COLOR (yellow, brown, rust, grey, white, colorless):
ODOR (sulfur, LFG, musty, solvent, petrol, no odor):
SAMPLE COLLECTED BY: RK

EQUIPMENT

FIELD METER USED: YSI Pro+
CALIBRATION TIME: 0920
PH CALIBRATION STANDARDS (s.u.): 4/7/10
CONDUCTIVITY STANDARD (µmho/cm): 1.413 mS/cm
PURIFIED WATER SUPPLIED BY: lab
PUMP/BAILER TYP MP50

SAMPLING COMPANY: WSP USA Inc.
SAMPLER'S PHONE:
SAMPLER'S ADDRESS: 46850 Magellan Dr, Suite 190, Novi, MI 48377
CLIENT REPRESENTATIVES:
REGULATORY REPRESENTATIVES:

COMMENTS:

DATE FORM COMPLETED: 5/10/24
FORM COMPLETED BY (signature):

Well ID MW-302

GROUNDWATER SAMPLE COLLECTION RECORD

SITE IDENTIFICATION

COMPANY: Smith's Creek Landfill
FACILITY/SITE: Smith's Creek Landfill
PROJECT NUMBER: US0030747.9191
ADDRESS: 6779 Smith's Creek Rd. Smith's Creek, MI
CONTACT: Matt Williams
PHONE: (248) 459-3309

WEATHER CONDITIONS

SKY: clear
GROUND: wet
AIR TEMPERATURE (°F): 64
PRECIPITATION (LAST 24 HRS): yes

WELL SECURITY

PROTECTIVE COVER: ok
BUMPER POSTS: NA
EXTERNAL WELL ID: ok
LOCK: ok
WELL DIAMETER: 2"
CONCRETE PAD: ok

CALCULATIONS

WELL ELEVATION (FT/MSL):
DEPTH TO WATER (FT): 25.7
GROUNDWATER ELEVATION (FT/MSL):
TOTAL WELL DEPTH (FT): 80.4
WELL STICK-UP (FT):
WATER VOLUME IN CASING (GALLONS): 7.58

PURGING

INITIAL PURGE DATE: 5/8/24
INITIAL PURGE TIME:

STABILIZATION READINGS

	1	2	3	4	5	6	Final
Time	1447	dry	1447				10:29
Volume Removed (gal)	7.58		7.58				15.16
pH (s.u.)	7.92		7.92				8.06
Conductivity. (µmho/cm)	~~3548~~		3548				~~0.483~~ 4830
Temperature (°C)	14.1		14.1				14.3

1C

SAMPLING

SAMPLE DATE: 5/9
SAMPLE TIME: 1025
TOTAL BOTTLES COLLECTED: 8
FILTERED FOR METALS: 1 yes, 1 no
SAMPLE CLARITY (clear, sl. turbid, m. turbid, v. turbid): clear
COLOR (yellow, brown, rust, grey, white, colorless): none
ODOR (sulfur, LFG, musty, solvent, petrol, no odor): none
SAMPLE COLLECTED BY: 1C

EQUIPMENT

FIELD METER USED: YSI Pro+
CALIBRATION TIME: 1000
PH CALIBRATION STANDARDS (s.u.): 4/7/10
CONDUCTIVITY STANDARD (µmho/cm): 1,413
PURIFIED WATER SUPPLIED BY: lab
PUMP/BAILER TYP MP50

SAMPLING COMPANY: WSP USA Inc.
SAMPLER'S PHONE:
SAMPLER'S ADDRESS: 46850 Magellan Dr, Suite 190, Novi, MI 48377
CLIENT REPRESENTATIVES:
REGULATORY REPRESENTATIVES:

COMMENTS:

Total metals collected here

DATE FORM COMPLETED: 5/9
FORM COMPLETED BY (signature):

Well ID MW-303A

GROUNDWATER SAMPLE COLLECTION RECORD

SITE IDENTIFICATION

COMPANY: Smith's Creek Landfill
FACILITY/SITE: Smith's Creek Landfill
PROJECT NUMBER: US0030747.9191
ADDRESS: 6779 Smith's Creek Rd. Smith's Creek, MI
CONTACT: Matt Williams
PHONE: (248) 459-3309

WEATHER CONDITIONS

SKY: cloudy
GROUND: moist
AIR TEMPERATURE (°F): 55
PRECIPITATION (LAST 24 HRS): no

WELL SECURITY

PROTECTIVE COVER: yes
BUMPER POSTS: NA
EXTERNAL WELL ID: ok
LOCK: ok
WELL DIAMETER: 2"
CONCRETE PAD: ok

CALCULATIONS

WELL ELEVATION (FT/MSL):
DEPTH TO WATER (FT): 22.2
GROUNDWATER ELEVATION (FT/MSL):
TOTAL WELL DEPTH (FT): 75.7
WELL STICK-UP (FT):
WATER VOLUME IN CASING (GALLONS): 8.8

PURGING

INITIAL PURGE DATE: 5/9/24
INITIAL PURGE TIME: 1:18

STABILIZATION READINGS

	1	2	3	4	5	6	Final
Time	1:24	1:30					1:36
Volume Removed (gal)	8.8	17.6					26.4
pH (s.u.)	8.61	8.57					8.55
Conductivity. (µmho/cm)	585.6	533.9					522.6
Temperature (°C)	12.2	10.9					11.0

SAMPLING

SAMPLE DATE: 5/9
SAMPLE TIME: 1340
TOTAL BOTTLES COLLECTED: 7
FILTERED FOR METALS: yes
SAMPLE CLARITY (clear, sl. turbid, m. turbid, v. turbid): clear
COLOR (yellow, brown, rust, grey, white, colorless): none
ODOR (sulfur, LFG, musty, solvent, petrol, no odor): none
SAMPLE COLLECTED BY: JC

EQUIPMENT

FIELD METER USED: YSI Pro1
CALIBRATION TIME: 0900
PH CALIBRATION STANDARDS (s.u.): 4/7/10
CONDUCTIVITY STANDARD (µmho/cm): 1413
PURIFIED WATER SUPPLIED BY: lab
PUMP/BAILER TYP MP50

SAMPLING COMPANY: WSP USA Inc.
SAMPLER'S PHONE:
SAMPLER'S ADDRESS: 46850 Magellan Dr, Suite 190, Novi, MI 48377
CLIENT REPRESENTATIVES:
REGULATORY REPRESENTATIVES:

COMMENTS:

DATE FORM COMPLETED: 5/9
FORM COMPLETED BY (signature): 

Well ID MW-304

GROUNDWATER SAMPLE COLLECTION RECORD

SITE IDENTIFICATION

COMPANY: Smith's Creek Landfill
FACILITY/SITE: Smith's Creek Landfill
PROJECT NUMBER: US0030747.9191
ADDRESS: 6779 Smith's Creek Rd. Smith's Creek, MI
CONTACT: Matt Williams
PHONE: (248) 459-3309

WEATHER CONDITIONS

SKY: cloudy
GROUND: moist
AIR TEMPERATURE (°F): 60
PRECIPITATION (LAST 24 HRS): no

WELL SECURITY

PROTECTIVE COVER: ok
BUMPER POSTS: ok
EXTERNAL WELL ID: ok
LOCK: ok
WELL DIAMETER: 2"
CONCRETE PAD: ok

CALCULATIONS

WELL ELEVATION (FT/MSL):
DEPTH TO WATER (FT): 24.9
GROUNDWATER ELEVATION (FT/MSL):
TOTAL WELL DEPTH (FT): 75.7
WELL STICK-UP (FT):
WATER VOLUME IN CASING (GALLONS): 8.6

PURGING

INITIAL PURGE DATE: 5/9/24
INITIAL PURGE TIME: 1237

STABILIZATION READINGS

	1	2	3	4	5	6	Final
Time	1243	1249					1255
Volume Removed (gal)	8.6	17.2					25.91
pH (s.u.)	8.26	8.10					8.12
Conductivity. (µmho/cm)	461.4	453.3					448.4
Temperature (°C)	12.1	12.3					12.0

SAMPLING

SAMPLE DATE: 5/9
SAMPLE TIME: 1258
TOTAL BOTTLES COLLECTED: 14 (FD01)
FILTERED FOR METALS: yes
SAMPLE CLARITY (clear, sl. turbid, m. turbid, v. turbid): clear
COLOR (yellow, brown, rust, grey, white, colorless): none
ODOR (sulfur, LFG, musty, solvent, petrol, no odor): none
SAMPLE COLLECTED BY: JC

EQUIPMENT

FIELD METER USED: YSI Pro+
CALIBRATION TIME: 0900
PH CALIBRATION STANDARDS (s.u.): 4/7/10
CONDUCTIVITY STANDARD (µmho/cm): 1,413
PURIFIED WATER SUPPLIED BY: lab
PUMP/BAILER TYP MP50

SAMPLING COMPANY: WSP USA Inc.
SAMPLER'S PHONE:
SAMPLER'S ADDRESS: 46850 Magellan Dr, Suite 190, Novi, MI 48377
CLIENT REPRESENTATIVES:
REGULATORY REPRESENTATIVES:

COMMENTS:

FD01 here (MW-213)

DATE FORM COMPLETED: 5/9
FORM COMPLETED BY (signature):

Well ID MW-305

GROUNDWATER SAMPLE COLLECTION RECORD

SITE IDENTIFICATION

COMPANY: Smith's Creek Landfill
FACILITY/SITE: Smith's Creek Landfill
PROJECT NUMBER: US0030747.9191
ADDRESS: 6779 Smith's Creek Rd. Smith's Creek, MI
CONTACT: Matt Williams
PHONE: (248) 459-3309

WEATHER CONDITIONS

SKY: clear
GROUND: wet
AIR TEMPERATURE (°F): 64
PRECIPITATION (LAST 24 HRS): yes

WELL SECURITY

PROTECTIVE COVER: ok
BUMPER POSTS: ok
EXTERNAL WELL ID: ok
LOCK: ok
WELL DIAMETER: 2"
CONCRETE PAD: ok

CALCULATIONS

WELL ELEVATION (FT/MSL):
DEPTH TO WATER (FT): 30.5
GROUNDWATER ELEVATION (FT/MSL):
TOTAL WELL DEPTH (FT): 75.8
WELL STICK-UP (FT): 2'
WATER VOLUME IN CASING (GALLONS): 7.7

PURGING

INITIAL PURGE DATE: 5/8/24
INITIAL PURGE TIME: 1127

STABILIZATION READINGS

	1	2	3	4	5	6	Final
Time	1139	1150					9:50
Volume Removed (gal)	7.7	~~12.7~~ 12.8					
pH (s.u.)	7.71	7.52					7.79
Conductivity. (µmho/cm)	361.5	361.8					0.372
Temperature (°C)	15.0	12.8					12.3

SAMPLING

SAMPLE DATE: 5/9
SAMPLE TIME: 0950
TOTAL BOTTLES COLLECTED: 7
FILTERED FOR METALS: yes
SAMPLE CLARITY (clear, sl. turbid, m. turbid, v. turbid): clear
COLOR (yellow, brown, rust, grey, white, colorless): none
ODOR (sulfur, LFG, musty, solvent, petrol, no odor): none
SAMPLE COLLECTED BY: IC

EQUIPMENT

FIELD METER USED: 451 Prot
CALIBRATION TIME: 1000
PH CALIBRATION STANDARDS (s.u.): 4/7/10
CONDUCTIVITY STANDARD (µmho/cm): 1,413
PURIFIED WATER SUPPLIED BY: lab
PUMP/BAILER TYP MP56

SAMPLING COMPANY: WSP USA Inc.
SAMPLER'S PHONE:
SAMPLER'S ADDRESS: 46850 Magellan Dr, Suite 190, Novi, MI 48377
CLIENT REPRESENTATIVES:
REGULATORY REPRESENTATIVES:

COMMENTS:

DATE FORM COMPLETED: 5/9
FORM COMPLETED BY (signature):

Sample ID SW-D1A

SURFACE WATER SAMPLE COLLECTION RECORD

SITE IDENTIFICATION

COMPANY: St. Clair County
FACILITY/SITE: Smith's Creek Landfill
ADDRESS: 6779 Smith's Creek Rd., 48074
CONTACT: Matt Williams
PHONE: 248-459-3309

WEATHER CONDITIONS DURING SAMPLING

SKY: clear
WIND (mph): 5
AIR TEMPERATURE (°F): 60

SAMPLING ☐ NOT COLLECTED

SAMPLE DATE: 5/10/24
SAMPLE TIME: ~~1235~~ 1055
TOTAL BOTTLES COLLECTED: 6
SAMPLE FILTERED DURING COLLECTION? ☐ N
SAMPLE CLARIT turbid - clear
SAMPLE COLOR: none brown
SAMPLE ODOR: none

FIELD MEASUREMENTS

FIELD MEASUREMENT TIME: ~~1240~~
FINAL pH (S.U.): 8.19
FINAL CONDUCTIVITY (µMHO/CM): 655 µS/cm
SAMPLE TEMPERATURE (°C): 16.4
DISSOLVED OXYGEN (mg/L):: 11.16

EQUIPMENT

FIELD METER USED: YSI Pro+
INITIAL CALIBRATION TIME: 0920
FINAL CALIBRATION TIME: 0920
FINAL CALIBRATION pH: 4/7/10
FINAL CALIBRATION SC: 1413 µS/cm
DEIONIZED WATER SUPPLIED BY: lab

SAMPLE COLLECTED BY: IC
SAMPLING COMPANY: WSP USA Inc.
SAMPLER'S PHONE: 248-295-0135
SAMPLER'S ADDRESS: 27200 Haggerty Road, Ste B-12, Farmington Hills, Michigan
CLIENT REPRESENTATIVES:
REGULATORY REPRESENTATIVES:

COMMENTS:

Sample ID SW-U1

SURFACE WATER SAMPLE COLLECTION RECORD

SITE IDENTIFICATION

COMPANY: St. Clair County
FACILITY/SITE: Smiths Creek Landfill
ADDRESS: 6779 Smiths Creek Rd., 48074
CONTACT: Matt Williams
PHONE: 248-459-3309

WEATHER CONDITIONS DURING SAMPLING

SKY: clear
WIND (mph): 5
AIR TEMPERATURE (°F): 62

SAMPLING ☐ NOT COLLECTED

SAMPLE DATE: 3/10/24
SAMPLE TIME: 1035
TOTAL BOTTLES COLLECTED: 6
SAMPLE FILTERED DURING COLLECTION? ☐ N
SAMPLE CLARIT clear
SAMPLE COLOR: none
SAMPLE ODOR: none

FIELD MEASUREMENTS

FIELD MEASUREMENT TIME: 1040
FINAL pH (S.U.): 7.91
FINAL CONDUCTIVITY (µMHO/CM): 395.5 µS/cm
SAMPLE TEMPERATURE (°C): 15.6
DISSOLVED OXYGEN (mg/L):: 7.16

EQUIPMENT

FIELD METER USED: YSI Pro+
INITIAL CALIBRATION TIME: 0920
FINAL CALIBRATION TIME: 0920
FINAL CALIBRATION pH: 4/7/10
FINAL CALIBRATION SC: 1413
DEIONIZED WATER SUPPLIED BY: lab

SAMPLE COLLECTED BY: IC
SAMPLING COMPANY: WSP USA Inc.
SAMPLER'S PHONE: 248-295-0135
SAMPLER'S ADDRESS: 27200 Haggerty Road, Ste B-12, Farmington Hills, Michigan
CLIENT REPRESENTATIVES:
REGULATORY REPRESENTATIVES:

COMMENTS:

Sample ID SW-U2

SURFACE WATER SAMPLE COLLECTION RECORD

SITE IDENTIFICATION

COMPANY: St. Clair County
FACILITY/SITE: Smiths Creek Landfill
ADDRESS: 6779 Smiths Creek Rd., 48074
CONTACT: Matt Williams
PHONE: 248-459-3309

WEATHER CONDITIONS DURING SAMPLING

SKY: clear
WIND (mph): 5
AIR TEMPERATURE (°F): 60

SAMPLING ☐ NOT COLLECTED

SAMPLE DATE: 5/10/24
SAMPLE TIME: 1017
TOTAL BOTTLES COLLECTED: 6
SAMPLE FILTERED DURING COLLECTION? ☐N
SAMPLE CLARIT clear
SAMPLE COLOR: clear
SAMPLE ODOR: none

FIELD MEASUREMENTS

FIELD MEASUREMENT TIME: 1020
FINAL pH (S.U.): 8.13
FINAL CONDUCTIVITY (µMHO/CM): 809 µS/cm
SAMPLE TEMPERATURE (°C): 17.0
DISSOLVED OXYGEN (mg/L):: 2.57

EQUIPMENT

FIELD METER USED: YSI Pro+
INITIAL CALIBRATION TIME: 0926
FINAL CALIBRATION TIME: 0920
FINAL CALIBRATION pH: 4/7/10
FINAL CALIBRATION SC: 1,413 mS/cm
DEIONIZED WATER SUPPLIED BY: lab

SAMPLE COLLECTED BY: IC
SAMPLING COMPANY: WSP USA Inc.
SAMPLER'S PHONE: 248-295-0135
SAMPLER'S ADDRESS: 27200 Haggerty Road, Ste B-12, Farmington Hills, Michigan
CLIENT REPRESENTATIVES:
REGULATORY REPRESENTATIVES:

COMMENTS:

Sample ID SW-D2

SURFACE WATER SAMPLE COLLECTION RECORD

SITE IDENTIFICATION

COMPANY: St. Clair County
FACILITY/SITE: Smiths Creek Landfill
ADDRESS: 6779 Smiths Creek Rd., 48074
CONTACT: Matt Williams
PHONE: 248-459-3309

WEATHER CONDITIONS DURING SAMPLING

SKY: clear
WIND (mph): 5
AIR TEMPERATURE (°F): 60

SAMPLING ☒ NOT COLLECTED

SAMPLE DATE: 5/10 —
SAMPLE TIME: —
TOTAL BOTTLES COLLECTED: 6 —
SAMPLE FILTERED DURING COLLECTION? ☐
SAMPLE CLARIT —
SAMPLE COLOR: —
SAMPLE ODOR: —

FIELD MEASUREMENTS

FIELD MEASUREMENT TIME: —
FINAL pH (S.U.): —
FINAL CONDUCTIVITY (µMHO/CM): —
SAMPLE TEMPERATURE (°C): —
DISSOLVED OXYGEN (mg/L):: —

EQUIPMENT

FIELD METER USED:
INITIAL CALIBRATION TIME:
FINAL CALIBRATION TIME:
FINAL CALIBRATION pH:
FINAL CALIBRATION SC:
DEIONIZED WATER SUPPLIED BY:

SAMPLE COLLECTED BY:
SAMPLING COMPANY: WSP USA Inc.
SAMPLER'S PHONE: 248-295-0135
SAMPLER'S ADDRESS: 27200 Haggerty Road, Ste B-12, Farmington Hills, Michigan
CLIENT REPRESENTATIVES:
REGULATORY REPRESENTATIVES:

COMMENTS: no water present, not collected

SAMPLE ID: Leachate

LEACHATE SAMPLE COLLECTION RECORD

SITE IDENTIFICATION

COMPANY: St. Clair County
FACILITY/SITE: Smiths Creek Landfill
ADDRESS: 6779 Smiths Creek Rd., 48074
CONTACT: Matt Williams
PHONE: 248-459-3309

WEATHER CONDITIONS DURING SAMPLING

SKY: clear
WIND (mph): 5
AIR TEMPERATURE (°F): 60F

SAMPLING ☐ NOT COLLECTED

SAMPLE DATE: 5/10/24
SAMPLE TIME: ~~0920~~ 0940
TOTAL BOTTLES COLLECTED:
SAMPLE FILTERED DURING COLLECTION? ☐ N
SAMPLE CLARITY: v. turbid
SAMPLE COLOR: brown
SAMPLE ODOR: strong

FIELD MEASUREMENTS

FIELD MEASUREMENT TIME: 1006
FINAL pH (S.U.): 7.2
FINAL CONDUCTIVITY (µMHO/CM): 19900 µS/cm
SAMPLE TEMPERATURE (°C): 18.9

EQUIPMENT

FIELD METER USED: 451 Prot
INITIAL CALIBRATION TIME: 0920
FINAL CALIBRATION TIME: 0926
FINAL CALIBRATION pH: 4/7/10
FINAL CALIBRATION SC: 1.413mS/cm
FILTER TYPE USED: NA
PUMP OR BAILER USED: bailer

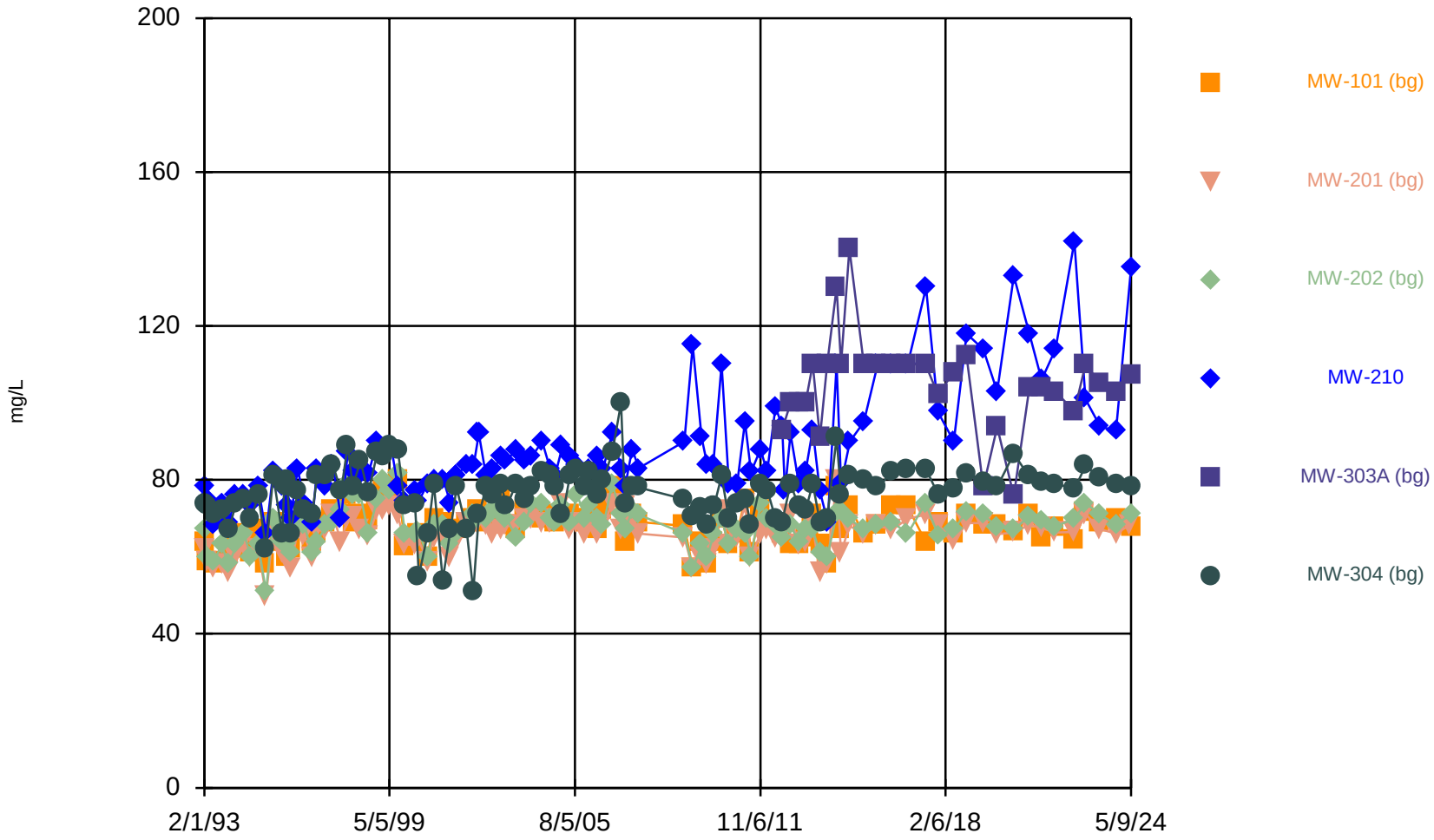
SAMPLE COLLECTED BY: IC
SAMPLING COMPANY: WSP USA Inc.
SAMPLER'S PHONE: 248-295-0135
SAMPLER'S ADDRESS: 27200 Haggerty Rd, Ste. B-12, Farmington Hills, Michigan
CLIENT REPRESENTATIVES:
REGULATORY REPRESENTATIVES:

COMMENTS:

APPENDIX C

Time Series Plots
MW-210

Time Series

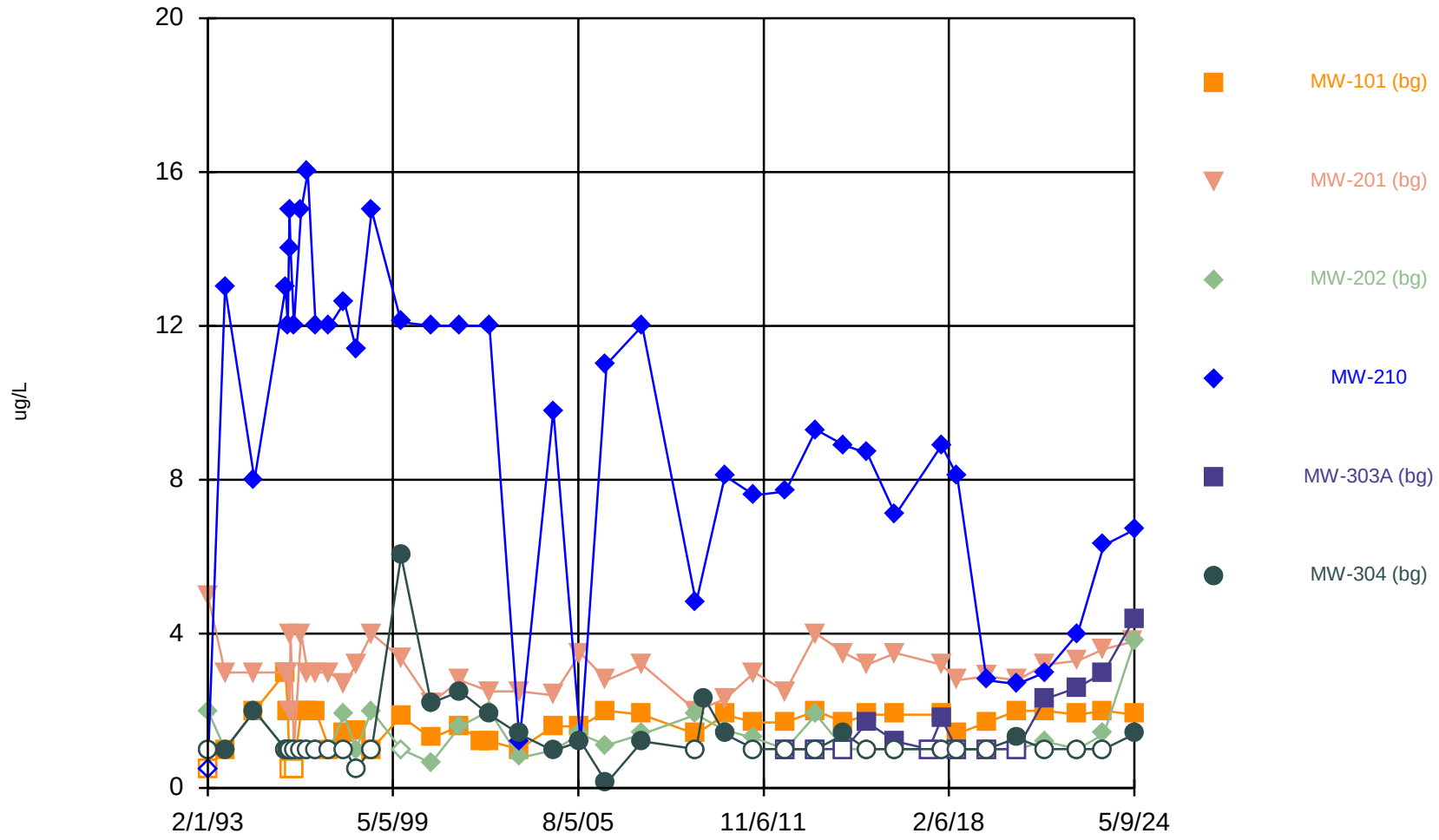


Constituent: Sodium Analysis Run 6/23/2024 4:15 PM View: SCL SW

Smiths Creek LF Client: St. Clair County Data: Dt-scl[IN USE BY 9SRD9Y3]

Hollow symbols indicate censored values.

Time Series

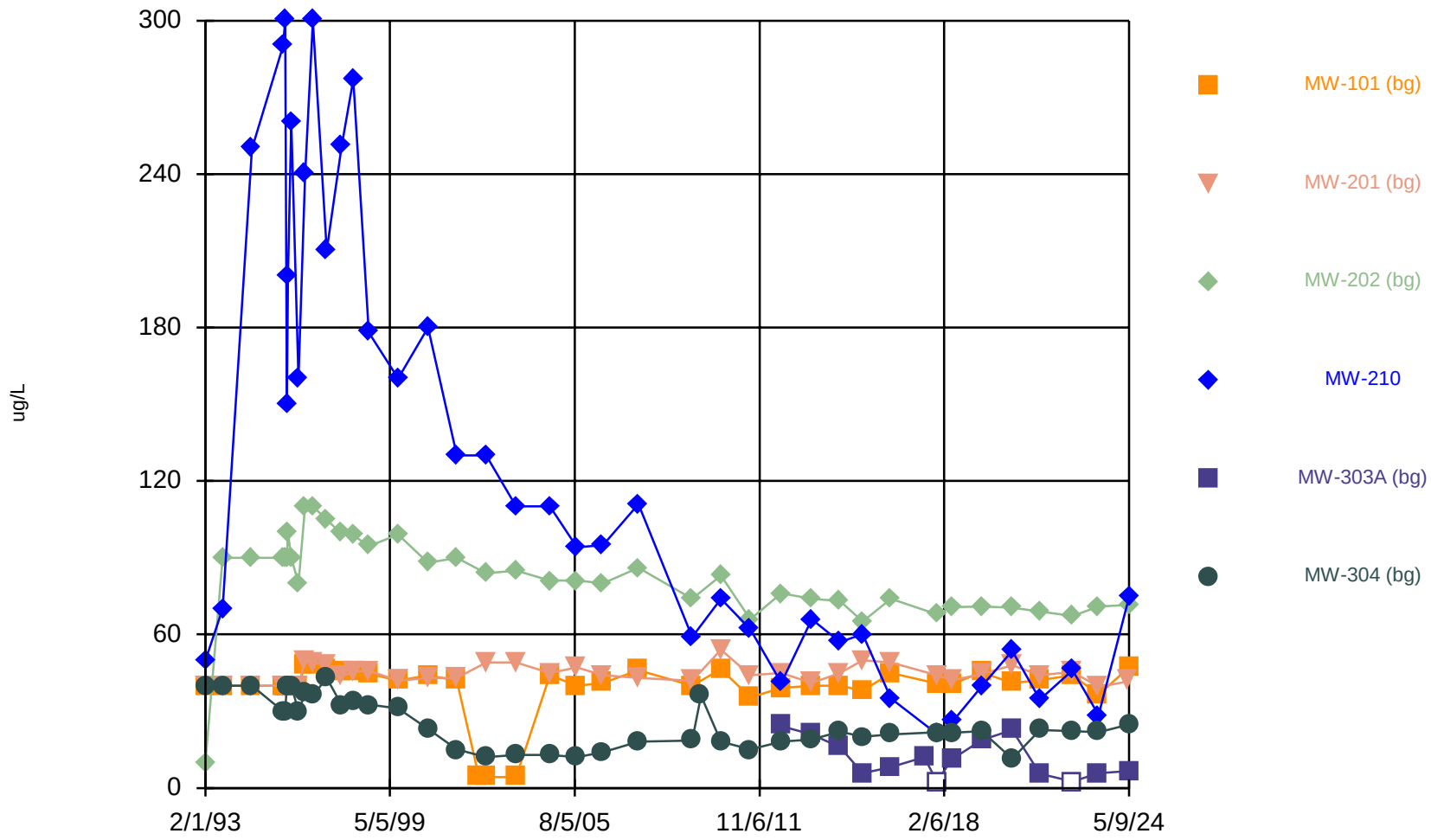


Constituent: Arsenic Analysis Run 6/23/2024 4:21 PM View: SCL SW

Smiths Creek LF Client: St. Clair County Data: Dt-scl[IN USE BY 9SRD9Y3]

Hollow symbols indicate censored values.

Time Series

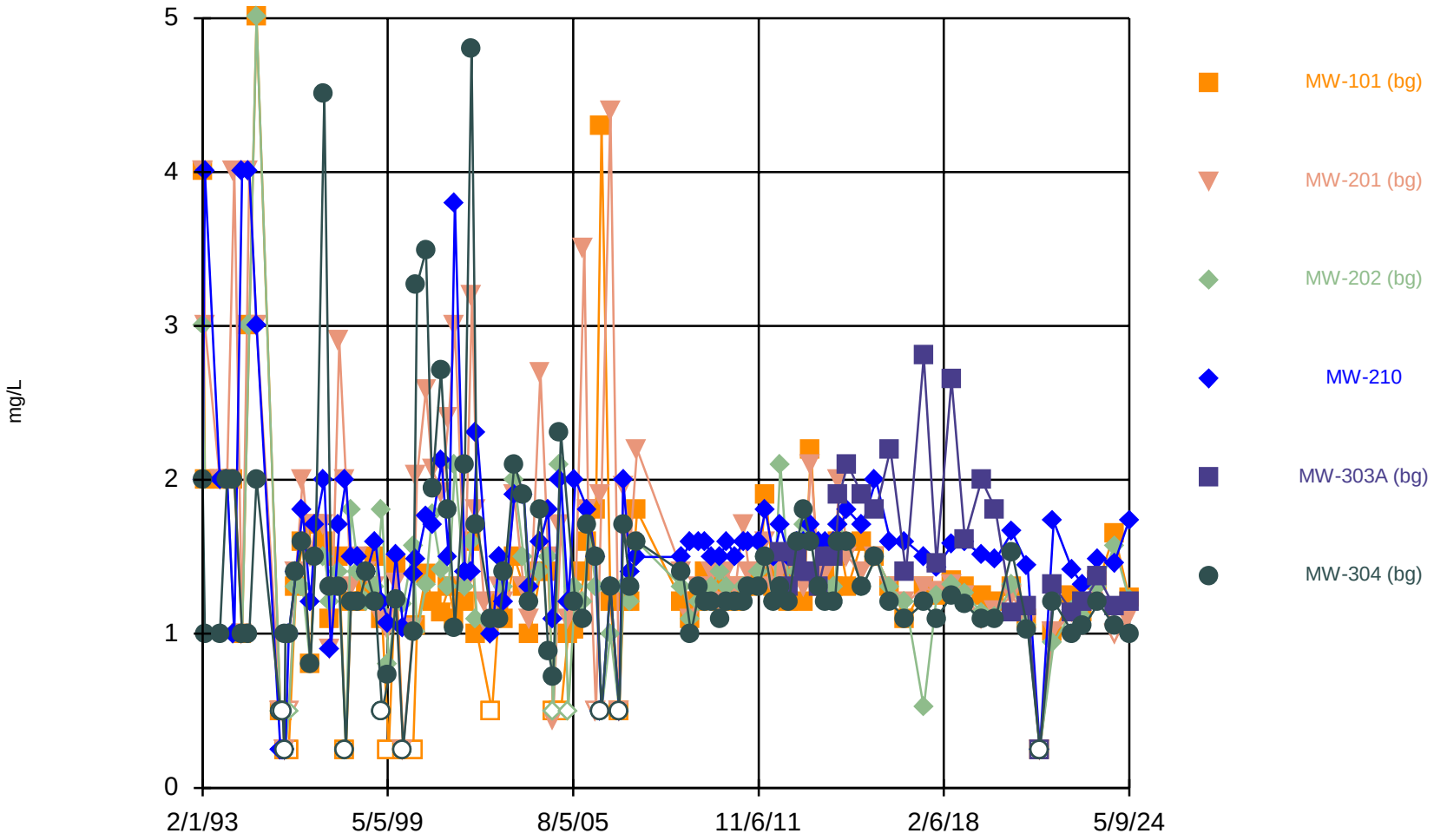


Constituent: Barium Analysis Run 6/23/2024 4:21 PM View: SCL SW

Smiths Creek LF Client: St. Clair County Data: Dt-scl[IN USE BY 9SRD9Y3]

Hollow symbols indicate censored values.

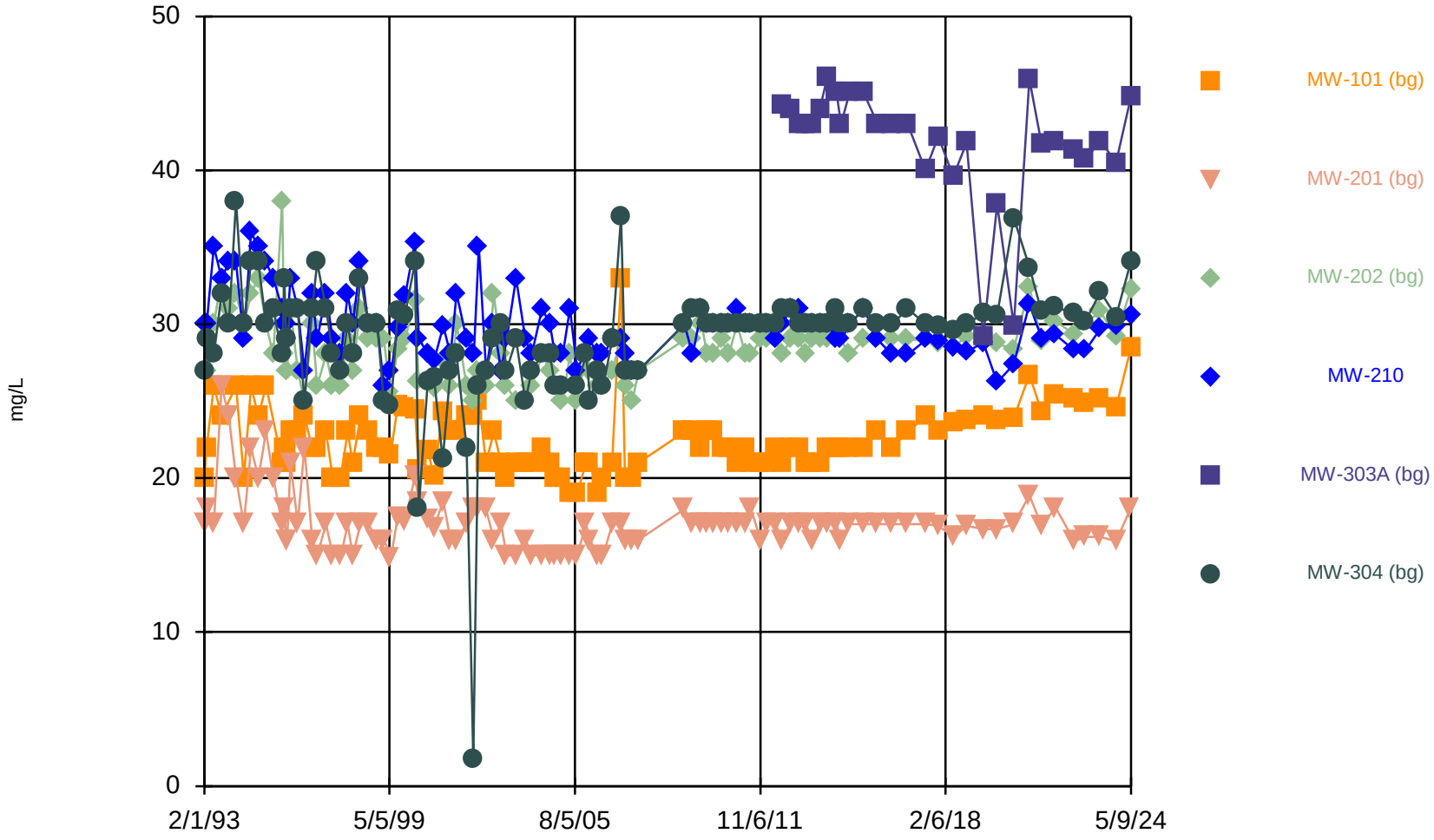
Time Series



Constituent: Carbon, Total Organic Analysis Run 6/23/2024 4:21 PM View: SCL SW

Smiths Creek LF Client: St. Clair County Data: Dt-scl[IN USE BY 9SRD9Y3]

Time Series

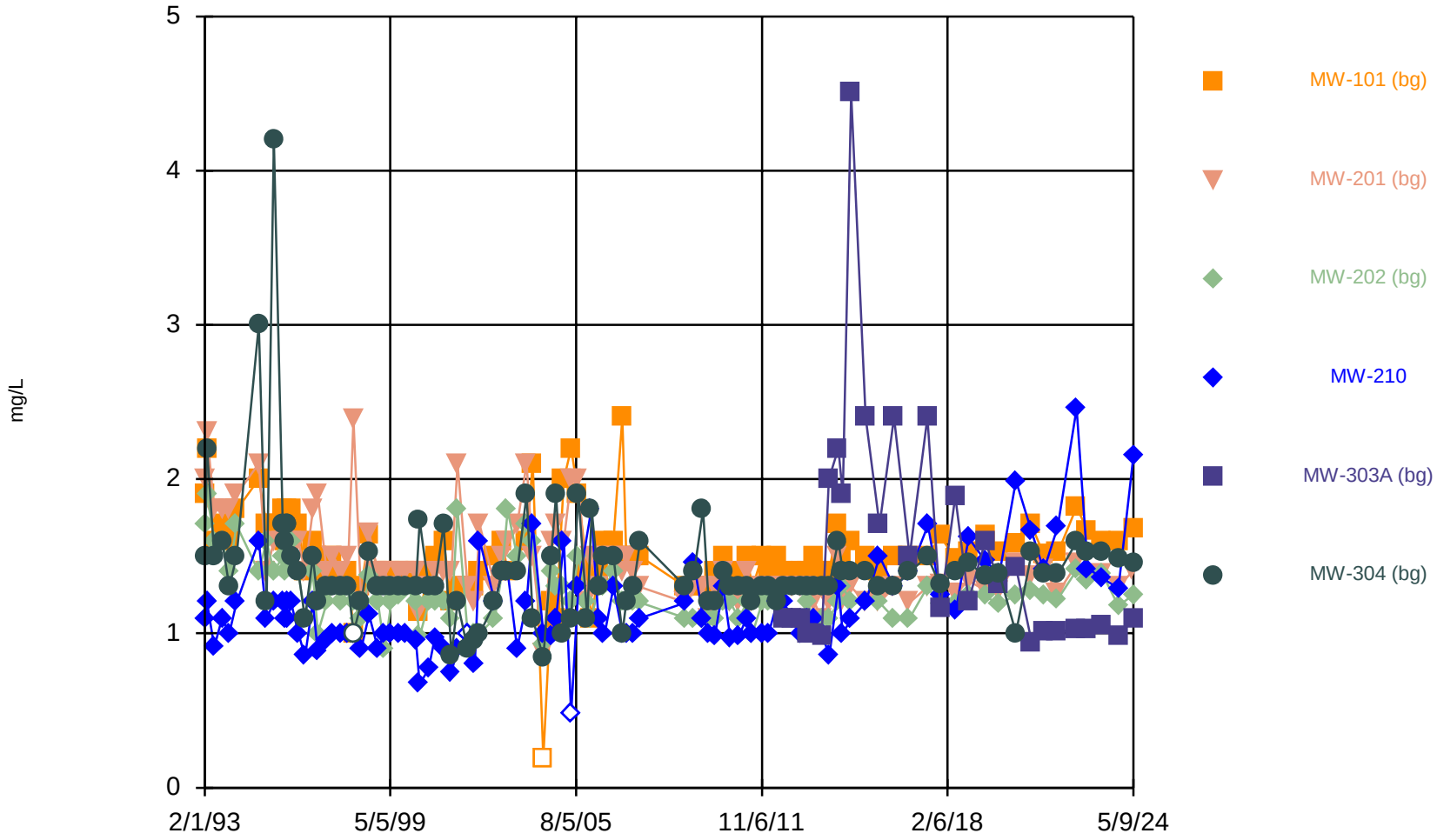


Constituent: Chloride Analysis Run 6/23/2024 4:21 PM View: SCL SW

Smiths Creek LF Client: St. Clair County Data: Dt-scl[IN USE BY 9SRD9Y3]

Hollow symbols indicate censored values.

Time Series

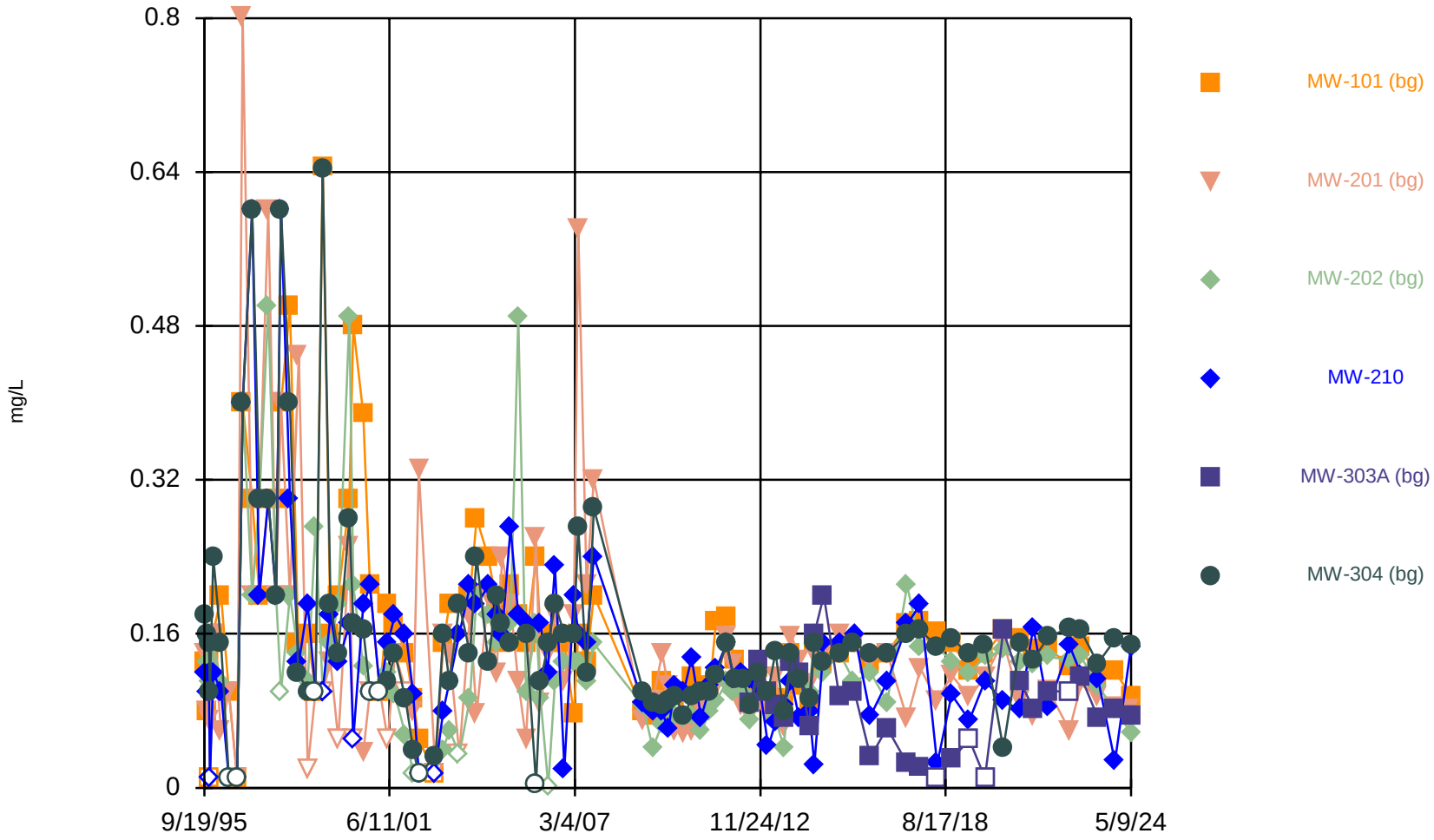


Constituent: Potassium Analysis Run 6/23/2024 4:21 PM View: SCL SW

Smiths Creek LF Client: St. Clair County Data: Dt-scl[IN USE BY 9SRD9Y3]

Hollow symbols indicate censored values.

Time Series



Constituent: Total Inorganic Nitrogen Analysis Run 6/23/2024 4:21 PM View: SCL SW

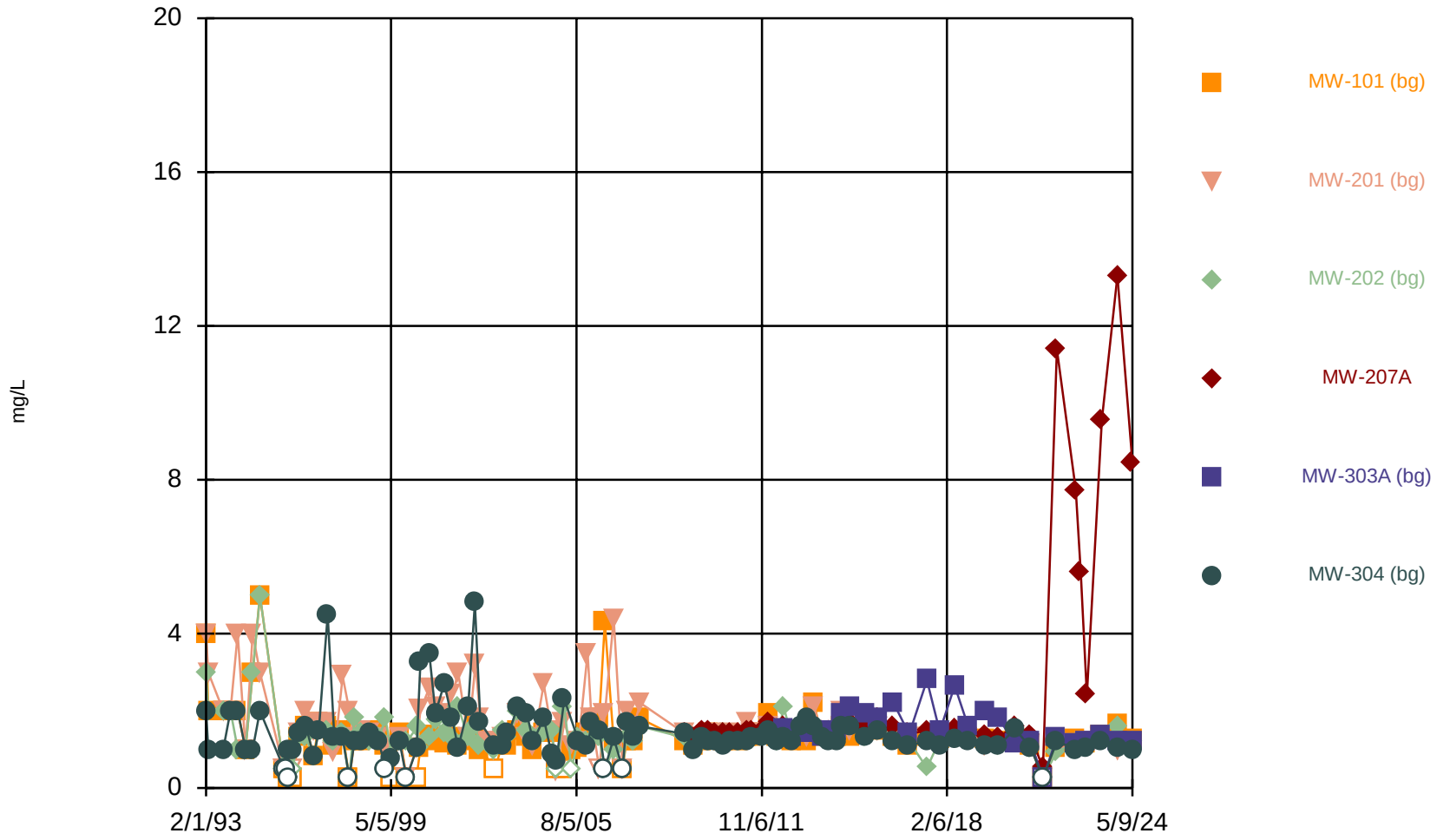
Smiths Creek LF Client: St. Clair County Data: Dt-scl[IN USE BY 9SRD9Y3]

APPENDIX D

Time Series Plots
MW-207A

Hollow symbols indicate censored values.

Time Series

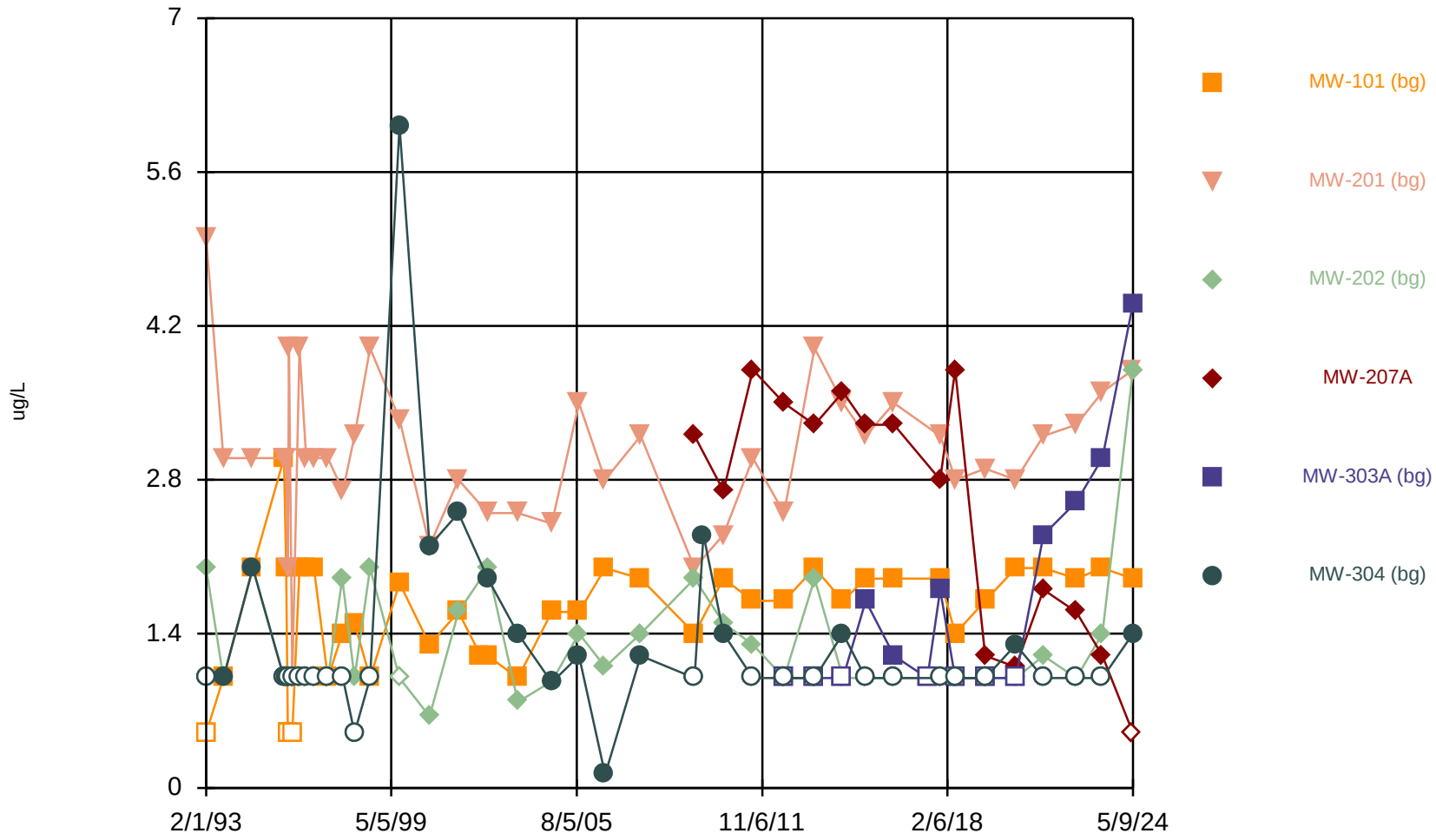


Constituent: Carbon, Total Organic Analysis Run 6/23/2024 4:25 PM View: SCL SW

Smiths Creek LF Client: St. Clair County Data: Dt-scl[IN USE BY 9SRD9Y3]

Hollow symbols indicate censored values.

Time Series

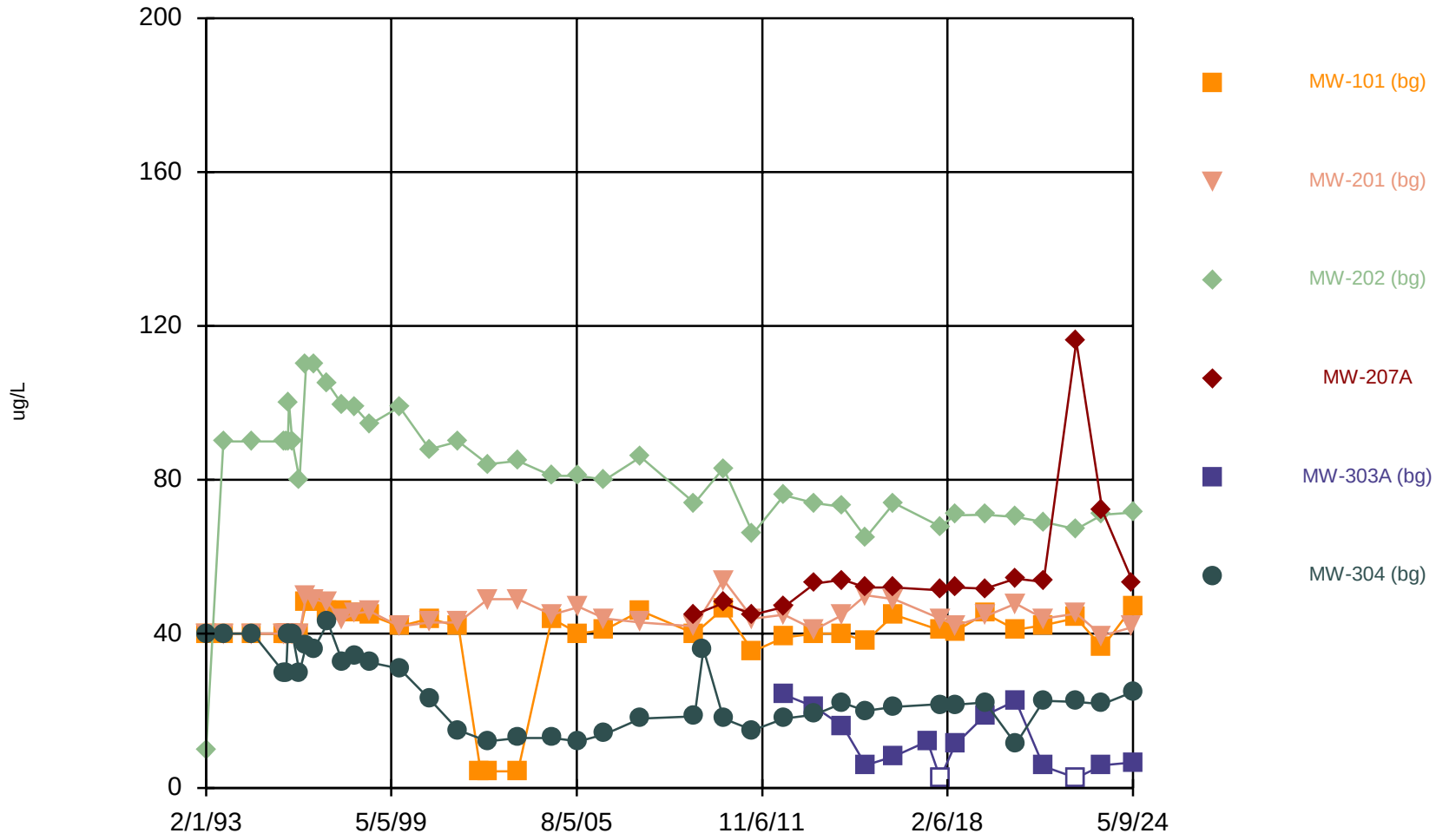


Constituent: Arsenic Analysis Run 6/23/2024 4:25 PM View: SCL SW

Smiths Creek LF Client: St. Clair County Data: Dt-scl[IN USE BY 9SRD9Y3]

Hollow symbols indicate censored values.

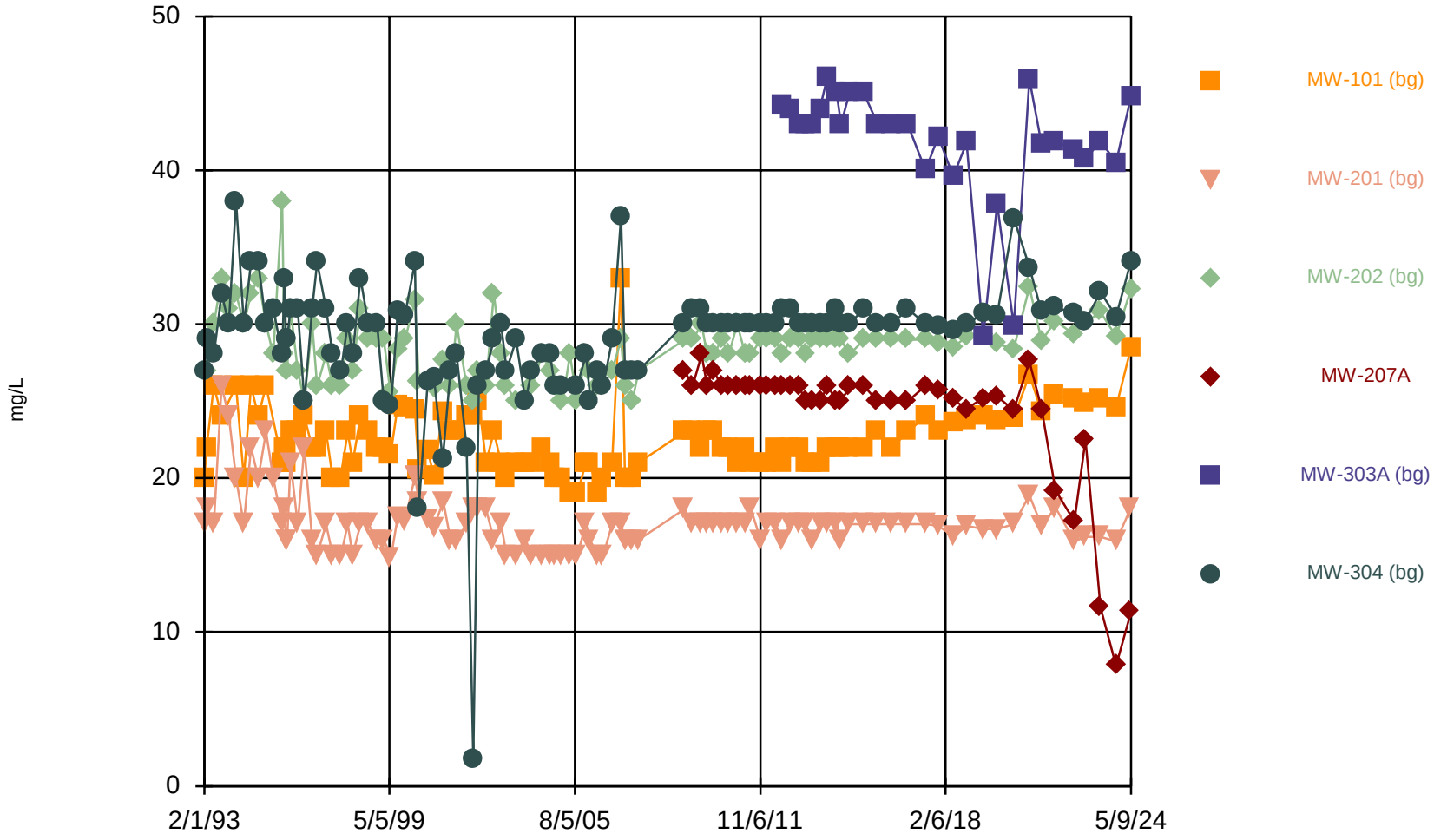
Time Series



Constituent: Barium Analysis Run 6/23/2024 4:25 PM View: SCL SW

Smiths Creek LF Client: St. Clair County Data: Dt-scl[IN USE BY 9SRD9Y3]

Time Series

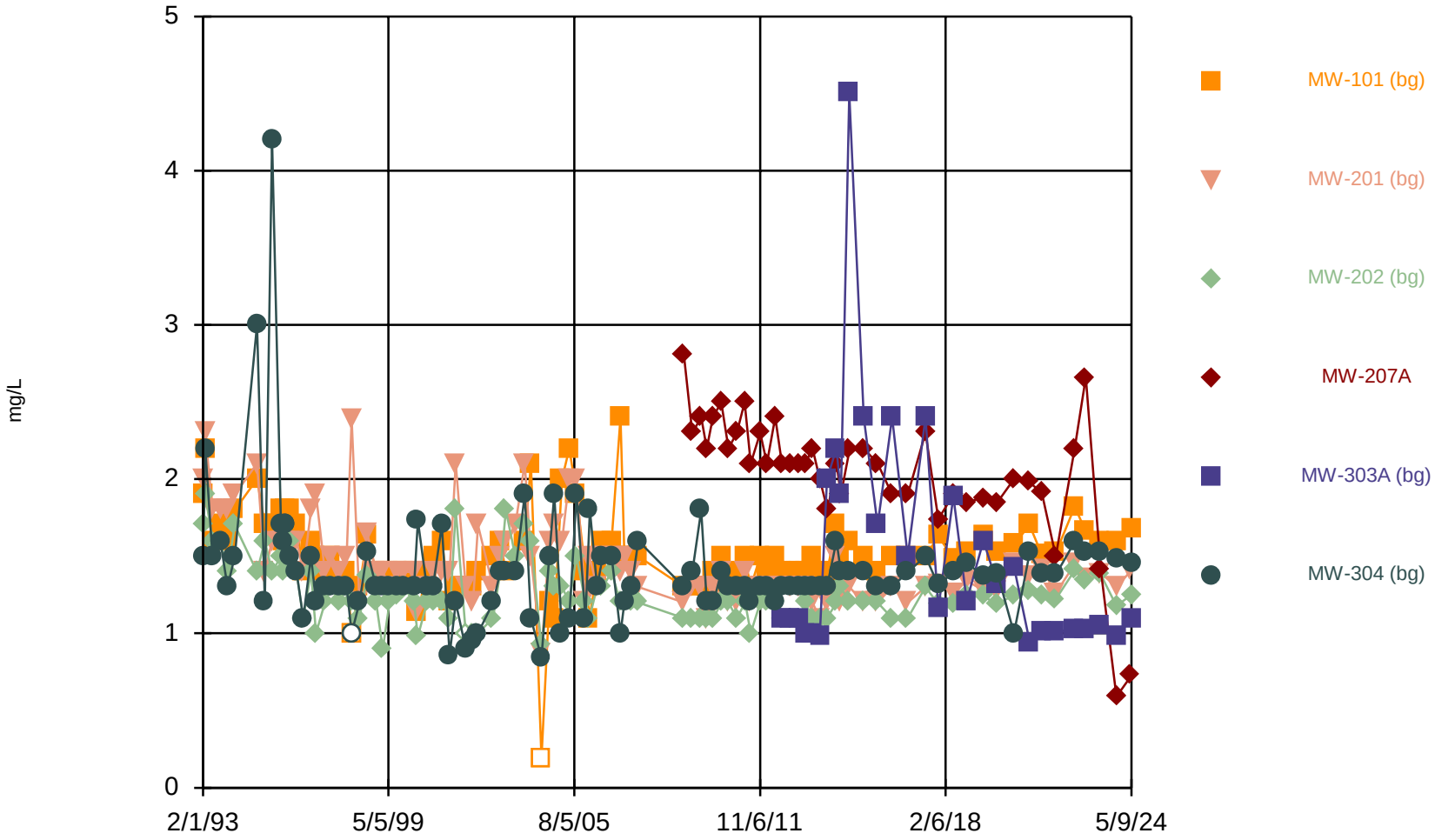


Constituent: Chloride Analysis Run 6/23/2024 4:25 PM View: SCL SW

Smiths Creek LF Client: St. Clair County Data: Dt-scl[IN USE BY 9SRD9Y3]

Hollow symbols indicate censored values.

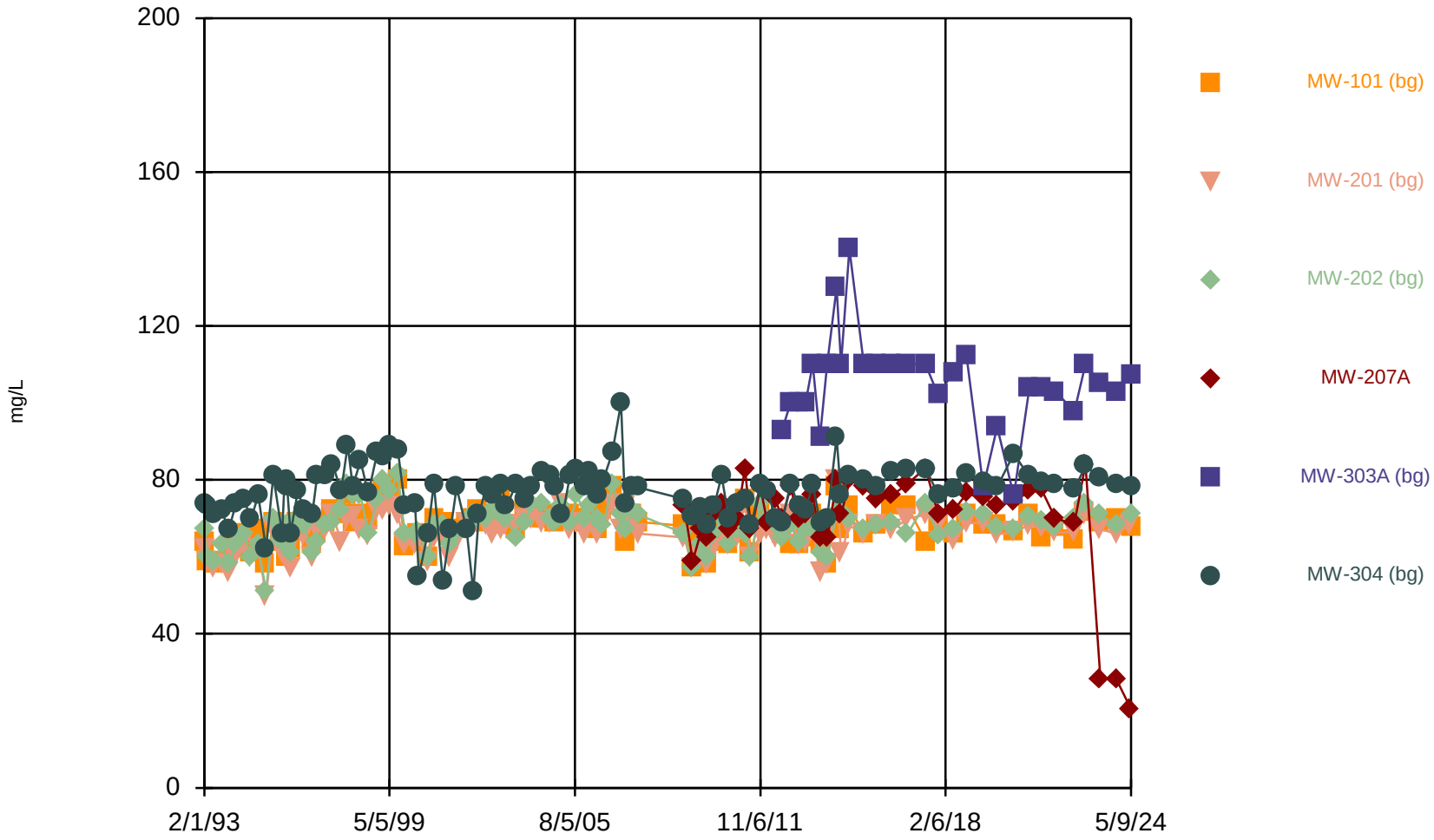
Time Series



Constituent: Potassium Analysis Run 6/23/2024 4:25 PM View: SCL SW

Smiths Creek LF Client: St. Clair County Data: Dt-scl[IN USE BY 9SRD9Y3]

Time Series

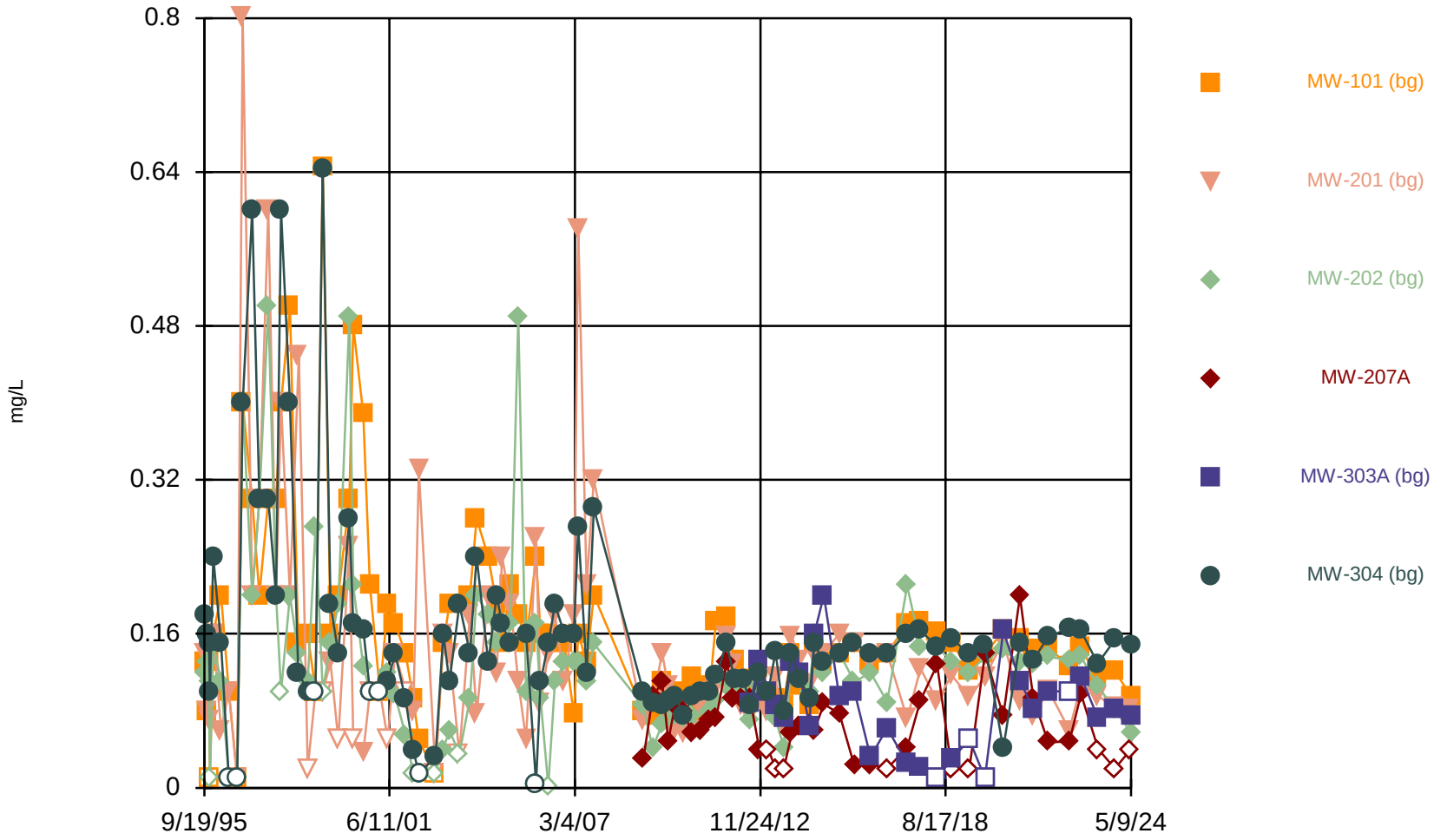


Constituent: Sodium Analysis Run 6/23/2024 4:25 PM View: SCL SW

Smiths Creek LF Client: St. Clair County Data: Dt-scl[IN USE BY 9SRD9Y3]

Hollow symbols indicate censored values.

Time Series



Constituent: Total Inorganic Nitrogen Analysis Run 6/23/2024 4:25 PM View: SCL SW

Smiths Creek LF Client: St. Clair County Data: Dt-scl[IN USE BY 9SRD9Y3]

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