2024 Annual Water Quality Report

Carroll County Landfill Western Expansion Area

Carroll, Iowa

February 2025

IDNR Permit No. 14-SDP-01-74P
Project I.D.: 25C002.00

Solving our clients' toughest science and engineering challenges.

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March 7, 2025

Geoffrey Spain
Iowa Department of Natural Resources
6200 Park Avenue
Suite 200
Des Moines, IA 50321

Re: 2024 Annual Water Quality Report
Carroll County Landfill Western Expansion Area
Permit No. 14-SDP-01-74P

Dear Geoffrey Spain:

On behalf of the Carroll County Solid Waste Management Commission, Foth Infrastructure & Environment, LLC is submitting the 2024 Annual Water Quality Report (AWQR) as required by the Iowa Department of Natural Resources (IDNR) Permit No. 14-SDP-01-74P. The contents of this report are intended to satisfy the requirements of 567 Iowa Administrative Code (IAC) 113.10(5)c(1) and 113.10(6)d(1) related to recordkeeping and notification, and annual reporting requirements listed in IAC 113.10(10) (effective 12/10/07).

This report was prepared using the IDNR AWQR report format required by Special Provision X.4.k. The Monitoring Well Maintenance and Performance Schedule, Summary, and Evaluation; the Leachate Control System Performance Evaluation Report (LCSPER); and the Methane Monitoring Report (MMR) have been incorporated directly into the AWQR as Tables 4, 5, 6, 11, and 12.

Thank you for your attention to this matter. Please contact us at our numbers listed below if you have any questions or need additional information.

Sincerely,

Foth Infrastructure & Environment, LLC

Gina Wilming
Senior Project Manager
Iowa CGP #2099
(319) 297-2065

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Lead Environmental Engineer
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2024 Annual Water Quality Report

Distribution

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Carroll County Landfill Western Expansion Area

Project ID: 25C002.00

Prepared for

Carroll County Solid Waste Mangement Commission

19111 Kittyhawk Avenue
Carroll, Iowa 51401

Prepared by

Foth Infrastructure & Environment, LLC

March 7, 2025

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2024 Annual Water Quality Report

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Certifications

I hereby certify that this document was prepared by me or under my direct supervision and that I am a qualified groundwater scientist as defined in 567 Iowa Administrative Code 113.10(1)d.

3/7/2025

Gina Wilming (date)
Iowa G.W.P. No. 2099.

My certification renewal date is
December 31, 2025

For the purposes of 567 Iowa Administrative Code 113.10(1)d, a "qualified groundwater scientist" means a scientist or an engineer who has received a baccalaureate or postgraduate degree in the natural sciences or engineering and has sufficient training and experience in groundwater hydrology and related fields demonstrated by state registration, professional certifications, or completion of accredited university programs that enable that individual to make sound professional judgments regarding groundwater monitoring, contaminant fate and transport, and corrective action.

List of Abbreviations, Acronyms, and Symbols

AWQR	Annual Water Quality Report
cm/s	centimeters per second
Commission	Carroll County Solid Waste Management Commission
Foth	Foth Infrastructure & Environment, LLC
GWPS	groundwater protection standard
HIR	Hydrogeologic Investigation Report
HMSP	Hydrologic Monitoring System Plan
HRG	Howard R. Green Company
IAC	Iowa Administrative Code
IDNR	Iowa Department of Natural Resources
LCSPER	Leachate Control System Performance Evaluation Report
LEL	Lower Explosive Limit
mg/L	milligrams per liter
MMR	Methane Monitoring Report
RCRA	Resource Conservation and Recovery Act
SSI	statistically significant increase (over background)
SSL	statistically significant level (over GWPS)
TSS	total suspended solids

1. Executive Summary

Foth Infrastructure & Environment, LLC (Foth) was retained by the Carroll County Solid Waste Management Commission (Commission) to provide an annual report summarizing the groundwater quality and hydrogeologic monitoring activities at Carroll County Landfill Western Expansion Area during 2024. This 2024 Annual Water Quality Report (AWQR) was prepared using the Iowa Department of Natural Resources (IDNR) AWQR report format required by Special Provision X.4.k. The Monitoring Well Maintenance and Performance Schedule, Summary, and Evaluation; the Leachate Control System Performance Evaluation Report (LCSPER); and the Methane Monitoring Report (MMR) have been incorporated directly into the AWQR as Tables 4, 5, 6, 11, and 12.

1.1 Period of Report Coverage

This AWQR presents an evaluation of the groundwater monitoring, methane monitoring, and leachate collection system monitoring, maintenance, and performance activities conducted at Carroll County Landfill Western Expansion Area for the period of January 1 through December 31, 2024.

1.2 Report Priority

Foth requests IDNR review and approval of the following:

- Removal of Appendix I metals data at MW-205 and MW-206 collected from sampling events occurring before achieving static water levels after well installation when higher total suspended solid (TSS) concentrations were observed. The following dataset adjustments are requested and are listed as crossed-off concentrations in Table 13:
    - Removal of antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, selenium, silver, thallium, vanadium, and zinc data at MW-205 from April 2020 through April 2021.
    - Removal of antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, selenium, silver, thallium, vanadium, and zinc data at MW-206 from October 2019 through August 2020.
- As detailed in Table 12, amendment of the Landfill Gas Monitoring Plan and Permit Special Provision X.5 by removing MW-206 from the methane monitoring network. Static groundwater levels are now established at MW-206, which has resulted in a submerged screen at this location. MW-205, located west of MW-206, also has a submerged screen. The natural confining conditions of the glacial till, exacerbated by clay placement and compaction activities associated with the construction of Phases 5B and 6, limit the potential for methane migration south of the Western Expansion Area. GP-3 currently provides adequate coverage for methane migration south of the Western Expansion Area. Since the screen is consistently submerged at MW-206, removal of this location from the methane monitoring network is requested.

1.3 Site Status and Applicable Rules

The Carroll County Landfill consists of the Closed Eastern Area and the active Western Expansion Area. The facility is located approximately two miles west-northwest of Carroll, Iowa, and situated in Section 22, Township 84 North, Range 35 West, in Carroll County, Iowa. A site map depicting the characteristics of the landfill and surrounding areas is provided in Figure 1.

The Western Expansion Area is an approximately 30-acre Resource Conservation and Recovery Act (RCRA) Subtitle D compliant composite lined area that opened in 2002 and continues to accept waste. The landfill operates under Permit No. 14-SDP-01-74P, reissued by the IDNR on December 18, 2023. The applicable regulatory requirements are established in the most recent revisions to 567 Iowa Administrative Code (IAC) Chapter 113 (effective 12/10/07).

Groundwater monitoring and reporting activities were conducted in accordance with Special Provision X.4 and 567 IAC 113.10. Details regarding the statistical methods utilized are included with the statistical reports in Appendix B. Monitoring well maintenance and performance was conducted in accordance with 567 IAC 113.10(2)f.

Methane monitoring and reporting activities were conducted in accordance with Special Provision X.5 and 567 IAC 113.9(2).

The leachate collection system monitoring, maintenance, and performance activities were conducted in accordance with Special Provisions X.2.b and c and 567 IAC 113.7(5)b.

2. Site Background

2.1 Site History

The Carroll County Landfill consists of approximately 230 acres and is owned and operated by the Commission. The facility has been in operation since 1972 and has accepted municipal, commercial, and industrial wastes from Buena Vista, Carroll, Crawford, Sac, and Shelby Counties and parts of Adair, Audubon, Calhoun, Guthrie, Pocahontas, and Pottawattamie Counties. The facility has been regulated by the IDNR since 1974. The adjacent Closed Eastern Area was closed in October 2007.

The Western Expansion Area's initial Phase 1A was constructed in 2002 with a clay liner, a geosynthetic liner, and a gravity-driven leachate collection system (Foth, 2002). Phase 1A is approximately 3.6 acres in size. The leachate collection system gravity drains to the north of the cell into a double-walled header liner running to the east, where it ties into the existing leachate header line north of the Closed Eastern Area. In 2006, the phased development expanded to the west with the construction of the 2.9-acre Phase 1B (Foth, 2006). Phase 1B expansion was also constructed with a clay liner, a geosynthetic liner, and a gravity-driven leachate collection system tied into Phase 1A.

During the summer of 2009, the 2.9-acre Phase 2A expansion was constructed west of Phase 1B (Foth, 2009). Phase 2A expansion was constructed with a clay liner, a geosynthetic liner, a groundwater underdrain system, and a leachate collection system. The geosynthetic liner and leachate collection system for Phase 2A are tied into Phases 1A and 1B. The groundwater underdrain system for Phase 2A gravity drains to the drainage way north of the Western Expansion Area, where it outlets at GU-2A.

In 2011, the 5.8-acre Phases 2B and 3 expansion was constructed west of the previous phases (Foth, 2011). Phases 2B and 3 were also constructed with a clay liner, a geosynthetic liner, a groundwater underdrain system, and a leachate collection system. As with the previous cell constructions, the geosynthetic liner and leachate collection system for Phases 2B and 3 are tied into the previous phases (Phases 1A, 1B, and 2A). The groundwater underdrain for Phases 2B and 3 gravity drains to the north of the cell and is tied into the underdrain system for Phase 2A.

In 2015, the 9.3-acre Phases 4A, 4B, and 5A expansion was constructed south of Phases 2A, 2B, and 3 (Foth, 2015). Phases 4A, 4B, and 5A were also constructed with a clay liner, a geosynthetic liner, a groundwater underdrain system, and a leachate collection system. The north end of the geosynthetic liner was tied into the south end of the liner for Phases 2A, 2B, and 3. The leachate collection system for Phases 4A, 4B, and 5A gravity drains to the south of the cell into a double-walled header liner running to the east, where it ties into the existing leachate header line south of the Closed Eastern Area. Phases 4A, 4B, and 5A were constructed with an independent groundwater underdrain system that drains south through the cell to the stormwater utility structure on the sedimentation pond's south side. At the utility structure, groundwater is combined with stormwater from the sedimentation pond and outlets to the surface on the south side of the sedimentation pond.

In 2019, the 6-acre Phases 5B and 6 expansion was constructed east of Phase 5A and south of Phases 1A and 1B. Phases 5B and 6 were constructed with a clay liner, a geosynthetic liner, and a leachate

collection system. The clay and geosynthetic liners were tied into the east end of the liners for Phase 5A and the south end of the liners for Phases 1A and 1B. The leachate collection system for Phases 5B and 6 gravity drains to the south of the cell into existing dual-walled maintenance holes, which are tied into the double-walled header line connecting the header line for the south side of the Western Expansion Area into the existing header line south of the Closed Eastern Area (Foth, 2019). Special Provision X.3.k approved the request to remove the requirement for the construction of a groundwater underdrain for Phases 5B and 6, given that a groundwater separation distance of greater than 5 feet was demonstrated for this area. As part of Phases 5B and 6 construction, stormwater improvements were constructed on the north side of the Western Expansion Area (Phases 1 through 3) and the south side of the soil stockpile located north of the Western Expansion Area.

2.2 Geology and Hydrogeology

A preliminary Hydrogeologic Investigation Report (HIR) for the Carroll County Sanitary Landfill was prepared in May 1991 (Howard R. Green Company [HRG], 1991). An HIR was developed for the Western Expansion Area in 2001 (Foth, 2001) and approved by IDNR in the permit renewal issued in June 2001. The site-specific geologic and hydrogeologic characteristics presented in this section are summarized from these two reports.

The Carroll County Landfill is located near the margin of the Southern Iowa Drift Plain landform. The Southern Iowa Drift Plain is characterized by gently rolling topography. The hill slopes generally have a stepped (multi-level) surface with slopes steepening near the stream valleys. The Southern Iowa Drift Plain also has well-established surface water drainage systems with obvious watershed divides. The flat upland hilltops are usually loess-capped remnants of older land surfaces that survived the erosional effects of multiple glacial advances, the most recent being the Des Moines Lobe glacial advance (Prior, 1991). The Des Moines Lobe extended into the northeastern half of Carroll County about 14,000 years ago. The Middle Raccoon River, which borders the landfill on the east and northeast, is interpreted to be the furthest western extent of the Des Moines Lobe.

The major topographic feature at the site is a ridgeline that runs approximately west to east and is an interfluve between the Middle Raccoon River, located east and northeast of the landfill, and an unnamed tributary to the Raccoon River located south of the landfill. The landfill has been developed by excavating along the ridgeline.

The site geology generally consists of Holocene silty-colluvium/alluvium or Wisconsinian loess over a very thick Pre-Illinoian till which overlays the basal “salt and pepper sands” and Cretaceous-aged bedrock. The thickness of the Quaternary sediments (overburden) is greater than 120 feet thick at the Western Expansion Area. Regionally, these sediments range from the surface to approximately 150 to 250 feet below ground surface. The colluvium/alluvium consists of sandy to clayey silt and flanks the sides of the ridge. Loess was identified near the top of the ridgeline with a maximum thickness of about 10 feet and thinned toward the flanks of the ridge. Pre-Illinoian Till underlies the colluvium/alluvium and loess layers and was observed at a maximum thickness of 120 feet at MW-5. The uppermost bedrock unit was not encountered during the previous investigations. Based on regional studies, the upper unit is expected to be the Cretaceous-aged Dakota formation, which is composed of sandstones and shale facies.

The water table generally exists within the till along the ridge line and within the colluvium/alluvium at lower elevations. The geometric mean vertical hydraulic conductivity of the fine-grained till was 2.1x10-8 centimeters per second (cm/s). The geometric mean horizontal hydraulic conductivity calculated for the till is 5.6x10-7 cm/s, and for the colluvial/alluvial silts is 5.4x10-5 cm/s.

Flow at the water table within the Quaternary sediments generally follows a subdued version of the landscape, with recharge areas in upland positions of the ridgeline and discharge to the nearby Raccoon River and unnamed streams. Groundwater elevation is seasonally dependent and is typically highest in the spring and lowest in the fall.

3. Quality Assurance/Quality Control Summary

In 2024, field blanks, field duplicates, and trip blanks were collected and analyzed at the frequencies listed in the *Hydrologic Monitoring System Plan* (Foth, 2008). Data validation reports detailing any resampling, data qualifiers added because of data validation, and an overall assessment of the data are included in Appendix A.

In 2024, resampling was not considered regarding data quality review. The overall data assessments indicated that method criteria, precision, accuracy, representativeness, comparability, completeness, and suitability for intended use were acceptable in 2024.

3.1 Sample Turbidity

Low-flow or no-purge sampling techniques were utilized in 2024, which was consistent with minimizing turbidity and TSS in the groundwater samples. Note that GU-4A is not currently included in this evaluation since samples were not collected at GU-4A in 2024. See Table 1 for details.

In 2024, background wells MW-122R and MW-200 had TSS concentrations below the five milligrams per liter (mg/L) level for satisfactory sample quality. The 2024 background review indicated that turbidity is not impacting the representativeness of the background data set, and the 2024 background data is suitable for use in interwell statistical comparisons. Note that in addition to supplementing the background data set, MW-200 primarily serves as a downgradient monitoring location for the Western Expansion Area. As a result, the TSS at MW-200 also indicated satisfactory sample quality for downgradient compliance monitoring at this well.

TSS concentrations were also below 5 mg/L at GU-2A and MW-121R in 2024, indicating satisfactory sample quality for these downgradient monitoring wells.

TSS concentrations were very slightly above 5 mg/L in April 2024 at MW-119R (i.e., 5.37 mg/L) and in September 2024 at MW-205 (i.e., 6 mg/L). Given that TSS concentrations only slightly exceeded the 5 mg/L limit and were below 10 mg/L, it is unlikely that turbidity was impacting the data at these locations during the sampling events.

At MW-206, TSS concentrations were 27.3 and 28.6 mg/L in April and September 2024, respectively. In Special Provision X.4.g, IDNR indicated it would consider higher TSS levels as representative of site groundwater conditions if sample quality does not improve with improved well construction, well development, and/or sampling methods. MW-206 was installed in August 2019. As detailed in Table 5, no maintenance activities are recommended for MW-206 based on the review of well depths. Therefore, redevelopment is not recommended currently. Sampling is typically conducted by no purge sampling with a bladder pump. Field staff use caution during pump placement to prevent pump interaction with the bottom of the well and limit disturbance to the water column. The 2024 metals detected in MW-206 were consistent with recent sampling events, indicating that turbidity was not likely impacting the data in 2024. Therefore, no data set adjustments are recommended.

Post-installation groundwater elevations at MW-205 and MW-206 have appeared to achieve static conditions in 2024. As groundwater elevations increased and became closer to static conditions, lower TSS concentrations were identified at these wells. Since static water levels have been achieved, TSS and Appendix I metals data were reviewed, and correlations were observed for TSS and several Appendix I metals in MW-205 and MW-206. Therefore, the removal of the Appendix I metals data prior to achieving static water levels when higher TSS concentrations were observed is requested. The following dataset adjustments are requested and are listed as crossed-off concentrations in Table 13:

- Removal of antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, selenium, silver, thallium, vanadium, and zinc data at MW-205 from April 2020 through April 2021.

- Removal of antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, selenium, silver, thallium, vanadium, and zinc data at MW-206 from October 2019 through August 2020.

4. Conclusions and Recommendations

4.1 2024 Data Evaluation Summary

4.1.1 Groundwater

As detailed in Tables 1 and 2, samples were not collected at GU-4A in 2024. No statistically significant increases (SSIs) above background were identified at detection monitoring locations GU-2A, MW-119RR, MW-200, MW-205, and MW-206 during the Spring and Fall 2024 statistical evaluations. These locations will remain in the detection monitoring program in 2025. Details regarding the future sampling schedules are provided in Table 2.

SSIs continued to be identified for arsenic, benzene, and cis-1,2-dichloroethene in assessment monitoring well MW-121R during the Spring and Fall 2024 statistical evaluations. No statistically significant levels (SSLs) above the groundwater protection standard (GWPS) were identified. Since the Fall 2024 statistical evaluation did not identify all Appendix II constituents below background for three consecutive sampling events, MW-121R will not exit assessment monitoring. Details regarding the future sampling schedule for MW-121R are provided in Table 2.

4.1.2 Monitoring Well Maintenance and Performance Reevaluation

As indicated in Table 4, the complete biennial monitoring well maintenance and performance review was conducted in 2023. The 2024 well maintenance and performance review activities for 2024 consisted of a review of well depths [567 IAC 113.10(2)f(3)] and groundwater separation distance [567 IAC 113.6(2)i]. The results of the 2024 review are included in Tables 5 and 6. Based on the review of the well depth information, no maintenance activities are recommended. In addition, the minimum five-foot separation distance was maintained at Phases 1-6 in 2024.

The next biennial review of the horizontal and vertical acceptability, water level conditions, and well recharge rates and chemistry will be conducted in 2025. Well depth and groundwater separation distance reviews will continue to be conducted annually.

4.1.3 Leachate Control System Performance

As detailed in Table 11, head levels at PZ-Leachate, LHMR-1B, LHMR-2B, LHMR-3, LHMR-4B, LHMR-5B, and LHMR-6 were below one foot of head over the liner in 2024, indicating compliance with 567 IAC 113.7(5)b(3) for the Western Expansion Area.

4.1.4 Methane

The quarterly methane monitoring results did not indicate concentrations in exceedance of 25% of the lower explosive limit (LEL) for facility structures, 100% LEL at subsurface monitoring locations, and 100% LEL at the facility boundary. Based on 567 IAC 113.9(2), no actions are required for this facility regarding methane control at this time. Monitoring of potential methane emissions and migration will be conducted quarterly in 2025 in accordance with the 567 IAC 113.9(2) and Special Provision X.5.

As detailed in the Report Priority and Table 11, removal of MW-206 from the methane monitoring network is requested.

4.2 Recommendations for Future Monitoring

On behalf of the Commission, Foth presents the following recommendations for future monitoring at the Carroll County Landfill Western Expansion Area:

- Continue collecting water level and well depth measurements on a semiannual basis.
- Continue collecting TSS samples and field turbidity measurements during sampling events in 2025.
- Continue detection, assessment, and background monitoring as listed in Table 2.

5. References

Foth Infrastructure & Environment, LLC (Foth), 2001. *Permit Renewal Documentation Report, Section 8: Hydrogeologic Investigation Report - Western Expansion Site, Carroll County Sanitary Landfill, Carroll, Iowa, Scope ID: 00C022*. February. [Doc. No. 41250].

Foth, 2002. *Construction Quality Assurance Report, Construction of Phase I Western Expansion, Carroll County Sanitary Landfill, Carroll, Iowa, Scope I.D.: 01C018.* October. [Doc. No. 41249].

Foth, 2006. *Phase 1B, Carroll County Sanitary Landfill, Construction Quality Assurance Report, Scope I.D.: 05C010.* July. [Doc. No. 41244].

Foth, 2008. *Hydrologic Monitoring System and Gas Monitoring Plan, Carroll County Sanitary Landfill Western Expansion Area.* January. [Doc. No. 16450].

Foth, 2009. *Landfill Construction Observation Report, Phase 2A Construction, Carroll County Landfill, Project I.D.: 08C030.* July. [Doc. No. 44808].

Foth, 2011. *Landfill Construction Observation Report, Construction of Landfill Phases 2B/3, Carroll County Landfill, Project I.D.: 10C022.* July. [Doc. No. 65981].

Foth, 2015. *Landfill Construction Observation Report, Construction of Landfill Phases 4A/5A, Carroll County Landfill.* August 31. [Doc. No. 84214].

Foth, 2019. *Construction Quality Assurance Report – Phases 5B & 6, Permit No. 14-SDP-01-74P, Carroll County Landfill Western Expansion Area.* September 5. [Doc. No. 95874].

Foth, 2021. *2020 Annual Water Quality Report, Carroll County Landfill Western Expansion Area, IDNR Permit No. 14-SDP-01-74P, Project I.D.: 21C002.00.* February 28. [Doc. No. 99869].

Foth, 2022. *2021 Annual Water Quality Report, Carroll County Landfill Western Expansion Area, Carroll, Iowa, IDNR Permit No. 14-SDP-01-74P, Project I.D.: 22C002.00.* February 28. [Doc. No. 102447].

Foth, 2023. *2022 Annual Water Quality Report, Carroll County Landfill Western Expansion Area, Carroll, Iowa, IDNR Permit No. 14-SDP-01-74P, Project I.D.: 23C002.00.* February 28. [Doc. No. 105966].

Foth, 2024. *2023 Annual Water Quality Report, Carroll County Landfill Western Expansion Area, IDNR Permit No. 14-SDP-01-74P, Project I.D.: 24C002.00*. March 1. [Doc. No. 109295].

Howard R. Green Company (HRG), May 1991. *Hydrogeologic Investigation Report and Hydrologic Monitoring System Plan, Carroll County Sanitary Landfill.*

Iowa Department of Natural Resources (IDNR). Letter to Mary Wittry, 5 Jul 2024. "2023 Carroll County Sanitary Landfill, Annual Water Quality Report – Western Expansion Area, Permit #14-SDP-01-74P." [Doc. No. 107375].

Prior, J.C., 1991. *Landforms of Iowa.* Iowa City: University of Iowa Press.

United States Environmental Protection Agency (USEPA), 2009. *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance.* EPA 530-R-09-007. Office of Resource Conservation and Recovery, Program Implementation and Information Division, Washington, D.C.

Tables

Table 1
Monitoring Program Summary
2024 Annual Water Quality Report
Carroll County Landfill Western Expansion Area
Permit No. 14-SDP-01-74P

Monitoring Well	Formation	Current Monitoring Program [1]	Change for Next Sampling Event	Constituents w/ SSI [2]	Constituents w/ SSL [2]	Total # of Samples in Each Monitoring Program			
						Detection	Assessment	Corrective Action	Background
Downgradient Monitoring Locations									
GU-2A	Holocene Alluvium/Colluvium and Pre-Illinoian Glacial Till	Detection	No Change	None	None	27	0	0	N/A
GU-4A [3]	Holocene Alluvium/Colluvium and Pre-Illinoian Glacial Till	Detection [3]	N/A	N/A	N/A	0	0	0	N/A
MW-119RR	Holocene Colluvium/Alluvium - Silt, Clayey Silt, and Silty Clay	Detection	No Change	None	None	11	0	0	N/A
MW-121R	Holocene Colluvium/Alluvium - Clayey Silt, Sandy Silt	Assessment	No Change	Arsenic; Benzene; cis-1,2-Dichloroethene;	None	9	23	0	N/A
MW-200 [4]	Holocene Colluvium/Alluvium - Silty Clay	Detection	No Change	None	None	30	5	0	4
MW-204RR [5]	Pre-Illinoian Glacial Till - Clay & Sandy Clay	Water-Level Only [5]	N/A	N/A	N/A	0	0	0	N/A
MW-205 [5]	Pre-Illinoian Glacial Till - Clay & Sandy Clay	Detection	Detection	None	None	12	0	0	N/A
MW-206	Pre-Illinoian Glacial Till - Clay & Sandy Clay	Detection	No Change	None	None	13	0	0	N/A
Background Monitoring Locations									
MW-122R	Pre-Illinoian Glacial Till - Silty Clay	Background	No Change	None	None	0	0	0	41
MW-200 [4]	Pre-Illinoian Glacial Till - Silty Clay	Background	No Change	None	None	0	0	0	39

Comments:

N/A= not applicable

[1] Current Monitoring Program is from the last event the location was sampled (i.e., Sep. 2024 event).

[2] SSIs and SSLs are from the Fall 2024 statistical evaluation.

[3] Baseline detection monitoring will be initiated at GU-4A once the water level in the sample location is at or above the elevation of the horizontal underdrain discharge pipe connected perpendicular to the vertical sample pipe.

[4] MW-200 primarily serves as a downgradient monitoring location; however, MW-200 is also used to supplement the background data set.

[5] In the *2023 AWQR* (Foth, 2024), Foth requested to replace MW-204RR with MW-205 in the permitted groundwater monitoring network for the Western Expansion Area due to the dry to limited water depths consistently observed at MW-204RR. The Iowa Department of Natural Resources (IDNR) approved the request in their letter dated July 5, 2024 (IDNR, 2024). Therefore, MW-205 was sampled in 2024. MW-204RR is being retained as a water level only location.

Table 2
Monitoring Program Implementation Schedule
2024 Annual Water Quality Report
Carroll County Landfill Western Expansion Area
Permit No. 14-SDP-01-74P

Monitoring Well	Monitoring Program	Sampling Date and Constituents [1]		Upcoming Sampling Dates and Constituents [1]		Full Appendix II Sample Dates	
		Apr. 2024	Sep. 2024	Spring 2025	Fall 2025	Previously Collected	Next Event
Downgradient Monitoring Locations							
GU-2A	Detection	Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	N/A	N/A
GU-4A	Detection	Dry [2]	Dry [2]	TBD [2]	TBD [2]	N/A	N/A
MW-119RR	Detection	Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	N/A	N/A
MW-121R	Assessment	Appendix II, TSS	Full Appendix II, TSS	Appendix II, TSS	Appendix II, TSS	Jun. 2014, Aug. 2014, Oct. 2019, Sep. 2024	Fall 2029
MW-200 [3]	Detection	Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	Oct. 2015, Jul. 2016, Oct. 2019, Sep. 2020, Sep. 2024	N/A
MW-204RR [4]	Detection [4]	Insufficient Water [4]	Water-Level Only [4]	Water-Level Only [4]	Water-Level Only [4]	N/A	N/A
MW-205 [4]	Detection	Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	N/A	N/A
MW-206	Detection	Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	Appendix I, TSS	N/A	N/A
Background Monitoring Locations							
MW-122R	Background	Appendix II, TSS	Full Appendix II, TSS	Appendix II, TSS	Appendix II, TSS	Mar. 2009, Jun. 2009, Sep. 2009, Mar. 2010, Sep. 2010, Mar. 2011, Aug. 2014, Oct. 2015, Oct. 2019, Sep. 2020, Sep. 2024	Fall 2029
MW-200 [3]	Background	Appendix II, TSS	Full Appendix II, TSS	Appendix II, TSS	Appendix II, TSS	Oct. 2015, Jul. 2016, Oct. 2019, Sep. 2020, Sep. 2024	Fall 2029

Comments:
N/A = not applicable
TBD = to be determined
TSS = total suspended solids

[1] Appendix II locations were sampled for the Appendix I and detected Appendix II constituents in Apr. 2024. In accordance with Permit Special Provision X.4.h, the 5-year resampling for the full Appendix II list was conducted at the assessment and background monitoring locations in Sep. 2024. Appendix II locations will be sampled for the Appendix I and detected Appendix II constituents in Spring and Fall 2025

[2] Baseline detection monitoring will be initiated at GU-4A once the water level in the sample location is at or above the elevation of the horizontal underdrain discharge pipe connected perpendicular to the vertical sample pipe. Upcoming sampling events in 2025 are contingent upon GU-4A having applicable flow for sample collection.

[3] MW-200 primarily serves as a downgradient monitoring location; however, MW-200 is also used to supplement the background dataset.

[4] In the *2023 AWQR* (Foth, 2024), Foth requested to replace MW-204RR with MW-205 in the permitted groundwater monitoring network for the Western Expansion Area due to the dry to limited water depths consistently observed at MW-204RR. The Iowa Department of Natural Resources (IDNR) approved the request in their letter dated July 5, 2024 (IDNR, 2024). Therefore, MW-205 was sampled in 2024 and will be sampled in 2025. MW-204RR is being retained as a water level only location.

Table 3
September 2024 Appendix II Detections
2024 Annual Water Quality Report
Carroll County Landfill Western Expansion Area
Permit No. 14-SDP-01-74P

Constituent	Sample Date	Unit	MW-121R (d)	MW-122R (b)	MW-200 (b)
Arsenic	2024-09	mg/L	0.0183		
Barium	2024-09	mg/L	0.708	0.703	0.492
Benzene	2024-09	ug/L	1.00		
Benzyl Alcohol	2024-09	ug/L			4.15 J
Cadmium	2024-09	mg/L			0.000436
Chromium	2024-09	mg/L		0.00214 J	
cis-1,2-Dichloroethene	2024-09	ug/L	8.47		
Cobalt	2024-09	mg/L	0.00206		
Nickel	2024-09	mg/L	0.0422		0.00697
Selenium	2024-09	mg/L		0.00241 J	
Total Suspended Solids	2024-09	mg/L	2.00		
Vinyl Chloride	2024-09	ug/L	0.592 J		

(d) = downgradient
(b) = background

Table 4
Monitoring Well Maintenance and Performance Reevaluation Schedule
2024 Annual Water Quality Report
Carroll County Landfill Western Expansion Area
Permit No. 14-SDP-01-74P

Compliance with:	Monitoring Calendar Years									
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
567 IAC 113.10(2)"f"(1): High and low water levels (semiannual)		Completed		Completed		Completed		Completed		Scheduled
567 IAC 113.10(2)"f"(2): Changes in the hydrologic setting and flow paths		Completed		Completed		Completed		Completed		Scheduled
567 IAC 113.10(2)"f"(3): Well depths	Completed	Completed	Completed	Completed	Completed	Completed	Completed	Completed	Completed	Scheduled
567 IAC 113.10(2)"f"(4)" Well recharge rates and chemistry		Completed		Completed		Completed		Completed		Scheduled
567 IAC 113.6(2)"i": Waste separation from ground water	Completed	Completed	Completed	Completed	Completed	Completed	Completed	Completed	Completed	Scheduled

Comments:
IAC = Iowa Administrative Code
• Groundwater elevations and measured well depths are shown on Table 5 and the field sampling forms in Appendix A.
• Groundwater separation distance measurements are shown on Table 6.

Table 5
Monitoring Well Maintenance and Performance Summary
2024 Annual Water Quality Report
Carroll County Landfill Western Expansion Area
Permit No. 14-SDP-01-74P

Well	Top of Casing (feet amsl)	Top of Screen (feet amsl)	Total Depth (feet bTOC)	Measurement Description	Date of Measurements		Maximum Depth Discrepancy (feet)
					Apr. 2024	Sep. 2024	
Downgradient Monitoring Locations							
MW-119RR	1288.29	1265.83	33.29	Groundwater Level (feet bTOC)	24.12	24.58	0.26
				Groundwater Elevation (feet amsl)	1264.17	1263.71	
				Measured Well Depth (feet bTOC)	33.03	33.03	
				Submerged screen	N	N	
MW-121R	1284.19	1264.97	29.22	Groundwater Level (feet bTOC)	22.56	23.08	0.38
				Groundwater Elevation (feet amsl)	1261.63	1261.11	
				Measured Well Depth (feet bTOC)	28.86	28.84	
				Submerged screen	N	N	
MW-200 [(1)]	1288.46	1264.91	33.23	Groundwater Level (feet bTOC)	21.40	20.88	-0.30
				Groundwater Elevation (feet amsl)	1267.06	1267.58	
				Measured Well Depth (feet bTOC)	33.50	33.53	
				Submerged screen	Y	Y	
MW-205	1296.46	1244.30	62.16	Groundwater Level (feet bTOC)	41.66	41.68	-0.10
				Groundwater Elevation (feet amsl)	1254.80	1254.78	
				Measured Well Depth (feet bTOC)	62.16	62.26	
				Submerged screen	Y	Y	
MW-206	1300.72	1247.57	63.15	Groundwater Level (feet bTOC)	27.77	27.78	0.03
				Groundwater Elevation (feet amsl)	1272.95	1272.94	
				Measured Well Depth (feet bTOC)	63.14	63.12	
				Submerged screen	Y	Y	
Background Monitoring Locations							
MW-122R	1317.21	1302.24	29.97	Groundwater Level (feet bTOC)	28.19	26.69	-0.51
				Groundwater Elevation (feet amsl)	1289.02	1290.52	
				Measured Well Depth (feet bTOC)	30.48	30.44	
				Submerged screen	N	N	

Comments:
amsl = above mean sea level
bTOC = below top of casing
[(1)] MW-200 primarily serves as a downgradient monitoring location; therefore, MW-200 is listed in this table under the "downgradient monitoring locations" heading. However, MW-200 is also used to supplement the background data set.

Well Depths:
• In accordance with 567 IAC 113.10(2)f(3), well depth measurements were collected in 2024 to ensure the wells are physically intact and not filling with sediment. The 2024 well depths are within one foot of the original well depths at MW-119RR, MW-121R, MW-122R, MW-200, MW-205, and MW-206. The well depth measurements indicate that these wells are not filling with sediment and remain physically intact. Based on review of the well depth information, no maintenance activities are recommended for these wells.
• It is noted that the original well depths were slightly shallower than the recent well depths at MW-122R, MW-200, and MW-205. Based on review of the well depth measurements collected from 2008-2024 at MW-122R and MW-200, the discrepancy with the original well depth is attributed to an error in the well construction records for these wells. The original well depths were calculated based on the top of casing elevation and bottom of boring depth indicated on the well construction forms. The well construction forms did not include initial well depth measurements to verify the construction details. At MW-205, the maximum difference was only 0.11 feet deeper and attributed to differences in water level meters.

Table 6
Groundwater Separation Distance Evaluation
2024 Annual Water Quality Report
Carroll County Landfill Western Expansion Area
Permit No. 14-SDP-01-74P

Well	Unit	Date	Bottom of Waste Elevation (feet amsl)	Groundwater Elevation (feet amsl)	Groundwater Separation Distance (feet)	Acceptable (Yes/No)
Groundwater Separation Distance Piezometers						
MW-119RR	Phase 1A	Apr. 2024	1271.44	1264.17	7.27	Yes
		Sep. 2024	1271.44	1263.71	7.73	Yes
MW-121R	Phase 1B	Apr. 2024	1273.22	1261.63	11.59	Yes
		Sep. 2024	1273.22	1261.11	12.11	Yes
PZ-2A	Phase 2A	Mar. 2024	1275.37	Dry	>5	Yes
		Sep. 2024	1275.37	Dry	>5	Yes
PZ-2B/3	Phase 2B/3	Apr. 2024	1277.02	Dry	>5	Yes
		Sep. 2024	1277.02	Dry	>5	Yes
PZ-4A	Phase 4A	Apr. 2024	1269.04	Dry	>5	Yes
		Sep. 2024	1269.04	Dry	>5	Yes
PZ-4B	Phase 4B	Apr. 2024	1268.32	Dry	>5	Yes
		Sep. 2024	1268.32	Dry	>5	Yes
PZ-5A	Phase 5A	Apr. 2024	1267.46	Dry	>5	Yes
		Sep. 2024	1267.46	Dry	>5	Yes
PZ-5B	Phases 5B & 6	Apr. 2024	1267.68	Dry	>5	Yes
		Sep. 2024	1267.68	Dry	>5	Yes

Comments:

amsl = above mean sea level

- The contents of this table are intended to satisfy the requirements set forth in 567 IAC 113.6(2)i and Special Provision X.4.j.
- The minimum five-foot separation distance was maintained at Phases 1A, 1B, 2A, 2B, 3, 4A, 4B, 5A, 5B, and 6 in 2024.

Table 7
Background and GWPS Summary
2024 Annual Water Quality Report
Carroll County Landfill Western Expansion Area
Permit No. 14-SDP-01-74P

Constituent [1]	CAS #	Units	Samples	Detections [2]	Min [3]	Max [3]	Mean [3]	Note	Background Level	Statistical Test	GWPS	Source [4]
Interwell Background/GWPS (Apr. 2008 - Sep. 2024) [5]												
2,4-D	94-75-7	ug/L	19	1	0.152 (1/2 RL)	0.655 J	0.509	J-Flagged Only	**0.637 (RL)**	DQR	**70**	MCL
2-Butanone	78-93-3	ug/L	78	1	2.12 J	5.0 (1/2 RL)	4.96	J-Flagged Only	**10.0 (RL)**	DQR	**4,000**	SS
3-Methylcholanthrene	56-49-5	ug/L	15	1	1.23 J	7.45 (1/2 RL)	5.09	J-Flagged Only	**10.9 (RL)**	DQR	**N/A**	N/A
alpha-BHC	319-84-6	ug/L	41	2	0.00273 (1/2 RL)	0.03335 (1/2 RL)	0.01726	J-Flagged Only	**0.0667 (RL)**	DQR	**0.028**	SS
Antimony	744-36-0	mg/L	75	1	0.0005 (1/2 RL)	0.0101	0.00178		**0.0101**	Non-Parametric (1-of-2)	**0.0101**	Background
Arsenic	7440-38-2	mg/L	75	7	0.0005 (1/2 RL)	0.00801	0.00098		**0.00801**	Non-Parametric (1-of-2)	**0.01**	MCL
Barium	7440-39-3	mg/L	75	75	0.107	1.05	0.500		**1.05**	Non-Parametric (1-of-2)	**2**	MCL
Benzyl Alcohol [6]	100-51-6	ug/L	15	1	4.15 J	7.45 (1/2 RL)	5.27	J-Flagged Only	**10.9 (RL)**	DQR	**700**	SS
Beryllium	7440-41-7	mg/L	75	2	0.0005 (1/2 RL)	0.00348	0.00058		**0.00348**	Non-Parametric (1-of-2)	**0.004**	MCL
Cadmium	7440-43-9	mg/L	75	28	0.00005 (1/2 RL)	0.00179	0.00026		**0.00179**	Non-Parametric (1-of-2)	**0.005**	MCL
Chromium	7440-47-3	mg/L	75	24	0.00188 J	0.0343	0.00572		**0.0343**	Non-Parametric (1-of-2)	**0.1**	MCL
Cobalt	7440-48-4	mg/L	75	11	0.00003 J	0.026	0.00372		**0.026**	Non-Parametric (1-of-2)	**0.026**	Background
Copper	7440-50-8	mg/L	75	4	0.000866 J	0.0536	0.00620		**0.0536**	Non-Parametric (1-of-2)	**1.3**	MCL
Dieldrin	60-57-1	ug/L	15	1	0.00321 J	0.03335 (1/2 RL)	0.01767	J-Flagged Only	**0.0667 (RL)**	DQR	**0.011**	SS
Endosulfan I	959-98-8	ug/L	35	12	0.00252 J	10.3	0.3742		**0.0667 (RL)**	DQR	**42**	SS
Heptachlor Epoxide	1024-57-3	ug/L	41	3	0.00273 (1/2 RL)	0.03335 (1/2 RL)	0.01729	J-Flagged Only	**0.0667 (RL)**	DQR	**0.2**	MCL
Lead	7439-92-1	mg/L	75	8	0.000173 J	0.0362	0.00167		**0.0362**	Non-Parametric (1-of-2)	**0.0362**	Background
Lindane (BHC, Gamma-)	58-89-9	ug/L	15	1	0.00317 (1/2 RL)	0.03335 (1/2 RL)	0.01806	J-Flagged Only	**0.0667 (RL)**	DQR	**0.2**	MCL
Methoxychlor	72-43-5	ug/L	41	1	0.00273 (1/2 RL)	0.03335 (1/2 RL)	0.01746	J-Flagged Only	**0.0667 (RL)**	DQR	**40**	MCL
Methylene Chloride	75-09-2	ug/L	78	3	0.188 J	5.0 (1/2 RL)	2.45	J-Flagged Only	**5.0 (RL)**	DQR	**5**	MCL
Nickel	7440-02-0	mg/L	75	25	0.001 (1/2 RL)	0.0545	0.01191		**0.0545**	Non-Parametric (1-of-2)	**0.1**	SS
Selenium	7782-49-2	mg/L	75	13	0.00125 (1/2 RL)	0.005 (1/2 RL)	0.00242	J-Flagged Only	**0.005 (RL)**	DQR	**0.05**	MCL
Tin [7]	7440-31-5	mg/L	55	4	0.0025 (1/2 RL)	0.376	0.0309		**0.376**	Non-Parametric (1-of-2)	**4.2**	SS
Total Suspended Solids	TSS	mg/L	44	24	0.625 J	119	4.154		**N/A**	N/A	**N/A**	N/A
Vanadium	7440-62-2	mg/L	75	17	0.000304 J	0.0921	0.0123		**0.0921**	Non-Parametric (1-of-2)	**0.0921**	Background
Zinc	7440-66-6	mg/L	75	26	0.005 (1/2 RL)	0.224	0.0217		**0.224**	Non-Parametric (1-of-2)	**2**	SS
Intrawell Background/GWPS - MW-200 (Sep. 2009 - Apr. 2023) [8]												
Antimony	7440-36-0	mg/L	37	1	0.0005 (1/2 RL)	0.0101	0.00185		**0.0101**	Non-Parametric (1-of-2)	**0.0101**	Background
Arsenic	7440-38-2	mg/L	37	3	0.0005 (1/2 RL)	0.00801	0.00108		**0.00801**	Non-Parametric (1-of-2)	**0.01**	MCL
Barium	7440-39-3	mg/L	37	37	0.37	1.05	0.464		**1.05**	Non-Parametric (1-of-2)	**2**	MCL
Beryllium	7440-41-7	mg/L	37	2	0.0005 (1/2 RL)	0.00348	0.00065		**0.00348**	Non-Parametric (1-of-2)	**0.004**	MCL
Cadmium	7440-43-9	mg/L	37	28	0.000075 J	0.00179	0.00032		**0.00179**	Non-Parametric (1-of-2)	**0.005**	MCL
Chromium	7440-47-3	mg/L	37	4	0.00188 J	0.0343	0.00565		**0.0343**	Non-Parametric (1-of-2)	**0.1**	MCL
Cobalt	7440-48-4	mg/L	37	8	0.00003 J	0.026	0.00365		**0.026**	Non-Parametric (1-of-2)	**0.026**	Background
Copper	7440-50-8	mg/L	37	3	0.001 (1/2 RL)	0.0536	0.00689		**0.0536**	Non-Parametric (1-of-2)	**1.3**	MCL
Lead	7439-92-1	mg/L	37	6	0.000173 J	0.0362	0.00238		**0.0362**	Non-Parametric (1-of-2)	**0.0362**	Background

Table 7
Background and GWPS Summary
2024 Annual Water Quality Report
Carroll County Landfill Western Expansion Area
Permit No. 14-SDP-01-74P

Constituent [1]	CAS #	Units	Samples	Detections [2]	Min [3]	Max [3]	Mean [3]	Note	Background Level	Statistical Test	GWPS	Source [4]
Intrawell Background/GWPS Continued - MW-200 (Sep. 2009 - Apr. 2023) [7]												
Nickel	7440-02-0	mg/L	37	25	0.00232 J	0.0545	0.01182		**0.0545**	Non-Parametric (1-of-2)	**0.1**	SS
Tin [7]	7440-31-5	mg/L	24	2	0.0025 (1/2 RL)	0.376	0.03323		**0.376**	Non-Parametric (1-of-2)	**4.2**	SS
Vanadium	7440-62-2	mg/L	37	13	0.000529 J	0.0921	0.0128		**0.0921**	Non-Parametric (1-of-2)	**0.0921**	Background
Zinc	7440-66-6	mg/L	37	13	0.005 (1/2 RL)	0.224	0.026		**0.224**	Non-Parametric (1-of-2)	**2**	SS

Comments:

N/A = not applicable

GWPS = groundwater protection standard

MCL = maximum concentration limit

RL = reporting limit taken as the laboratory practical quantitation limit (PQL)

SS = statewide standard

[1] Constituents listed under the interwell background/GWPS section consist of the constituents detected above the laboratory minimum detection limit (MDL) in the combined MW-122R and MW-200 data set. Constituents listed under the intrawell background/GWPS section consist of the detected metals in MW-200.

[2] The number of detections includes J-flagged data (concentrations above the MDL but below the reporting limit (RL)).

[3] Non-detect concentrations are included in the calculation of minimum, maximum, and mean; 1/2 the RL was utilized for non-detect concentrations.

[4] Sources are either the Maximum Contaminant Level (MCL) promulgated under Section 1412 of the Safe Drinking Water Act in 40 Code of Federal Regulations (CFR) Part 141 (MCL) or the 567 IAC Chapter 137 Statewide Standards for a Protected Groundwater Source (SS). If background is higher than the MCL or SS, the GWPS is background. Background as the GWPS is both the *two-sample* test prediction limit method and the *one-sample* test confidence limit method where the fixed GWPS is the background upper tolerance limit with 95% confidence and 95% coverage. N/A = not applicable; constituent does not have a MCL or SS, and using background as the GWPS is not applicable due to limited detections.

[5] Interwell background consists of the Apr. 2008 through Sep. 2024 combined MW-122R and MW-200 data. No background data set adjustments were recommended in 2024. The previous background data set adjustments detailed in the statistical reports provided in Appendix B and listed as crossed-out concentrations in Table 13 were maintained in 2024.

[6] Benzyl alcohol was newly detected in background in 2024.

[7] Note that tin is an Appendix II parameter. Starting with the Fall 2022 statistical evaluation, professional judgment was used to remove tin from MW-200's intrawell analysis since tin has not been detected in the downgradient wells or in the background data set above the practical quantitation limit (PQL) since 2013. Similarly, starting with the Fall 2023 statistical evaluation, professional judgment was used to remove tin from the interwell prediction limit analysis since tin has not been detected in any downgradient wells or in the background data set above the PQL since 2013. However, tin was analyzed at the assessment and background monitoring wells in Sep. 2024 due to the 5-year resampling of the full Appendix II list; therefore, tin was analyzed using intrawell and interwell prediction limits in the Fall 2024 statistical evaluation.

[8] MW-200 primarily serves as a downgradient monitoring location; however, MW-200 is also used to supplement the background data set. As a result, intrawell statistical comparisons for the detected metals in MW-200 are primarily conducted to evaluate for SSIs over background in detection monitoring. In addition, intrawell statistical comparisons for the detected metals in MW-200, along with a review for detection of non-metal constituents and Mann-Kendall trend tests for the detected metals, are conducted to provide ongoing documentation that MW-200 is suitable for inclusion in the background metals data set. Intrawell background was not updated in 2024. For the Spring and Fall 2024 statistical evaluation, intrawell background consisted of the Sep. 2009 through Apr. 2023 detected metals in MW-200. The previous background data set adjustments detailed in the statistical reports provided in Appendix B and listed as crossed-out concentrations in Table 13 were maintained in 2024. In accordance with the Unified Guidance Section 5.3.2 (USEPA, 2009), the intrawell background data set is not updated semiannually, but rather periodically. The periodic update occurs after 4 to 8 new compliance observations have been collected and there are no SSIs recorded for the intrawell constituents, including since the last update. Intrawell background will be updated in the Fall 2025 statistical evaluation if there continues to be no SSIs identified at MW-200. Note that the number of samples, number of detections, min, max, and mean are calculated including the current event (i.e., calculated using all sample data: Sep. 2009 - Sep. 2024).

• The MW-200 evaluations conducted during the Spring and Fall 2024 statistical evaluations indicated that MW-200 remained suitable for inclusion in the background metals data set.

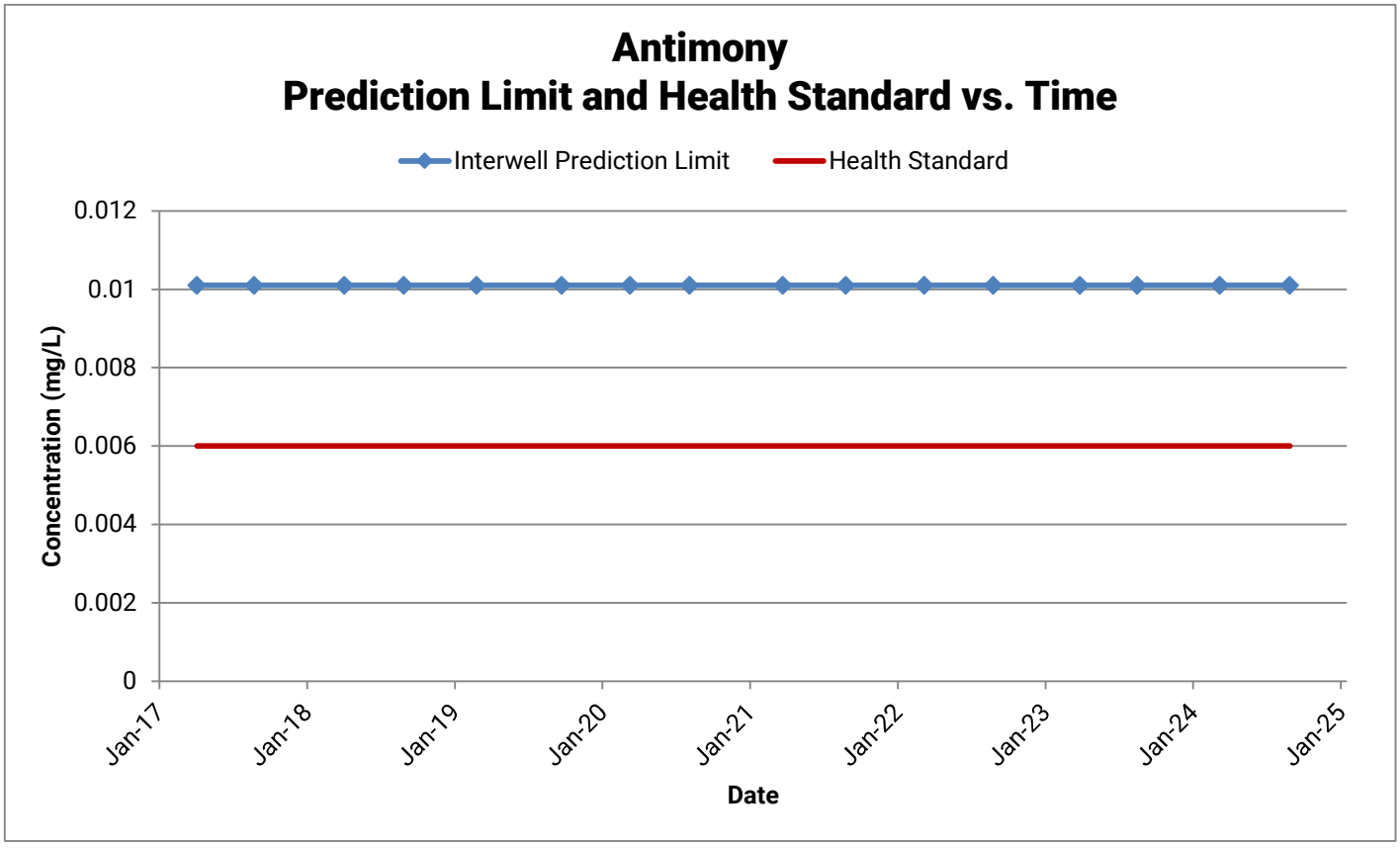
Summary of Prediction Limits and Health Standards
2024 Annual Water Quality Report
Carroll County Landfill Western Expansion Area
Permit No. 14-SDP-01-74P

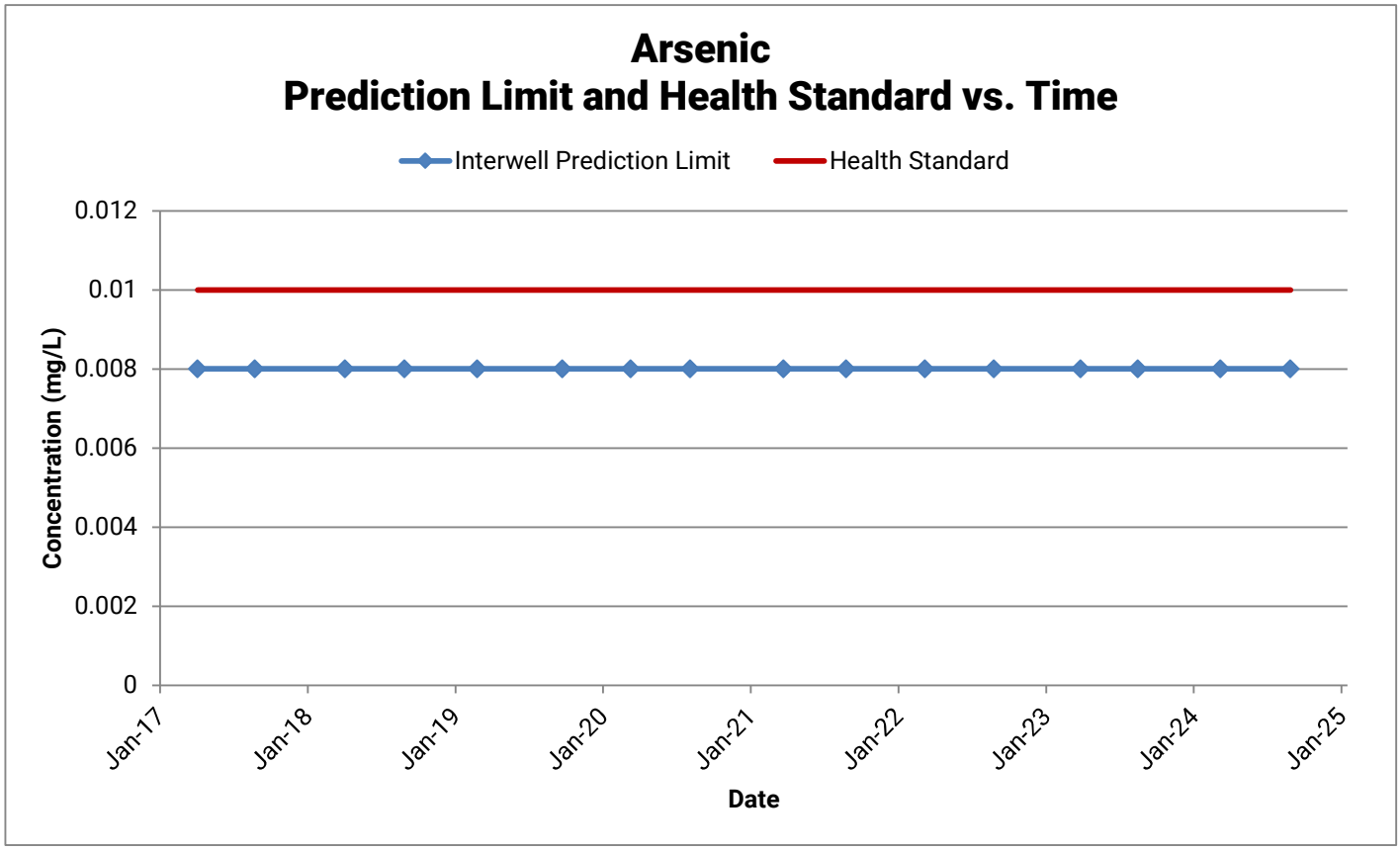
Comments:

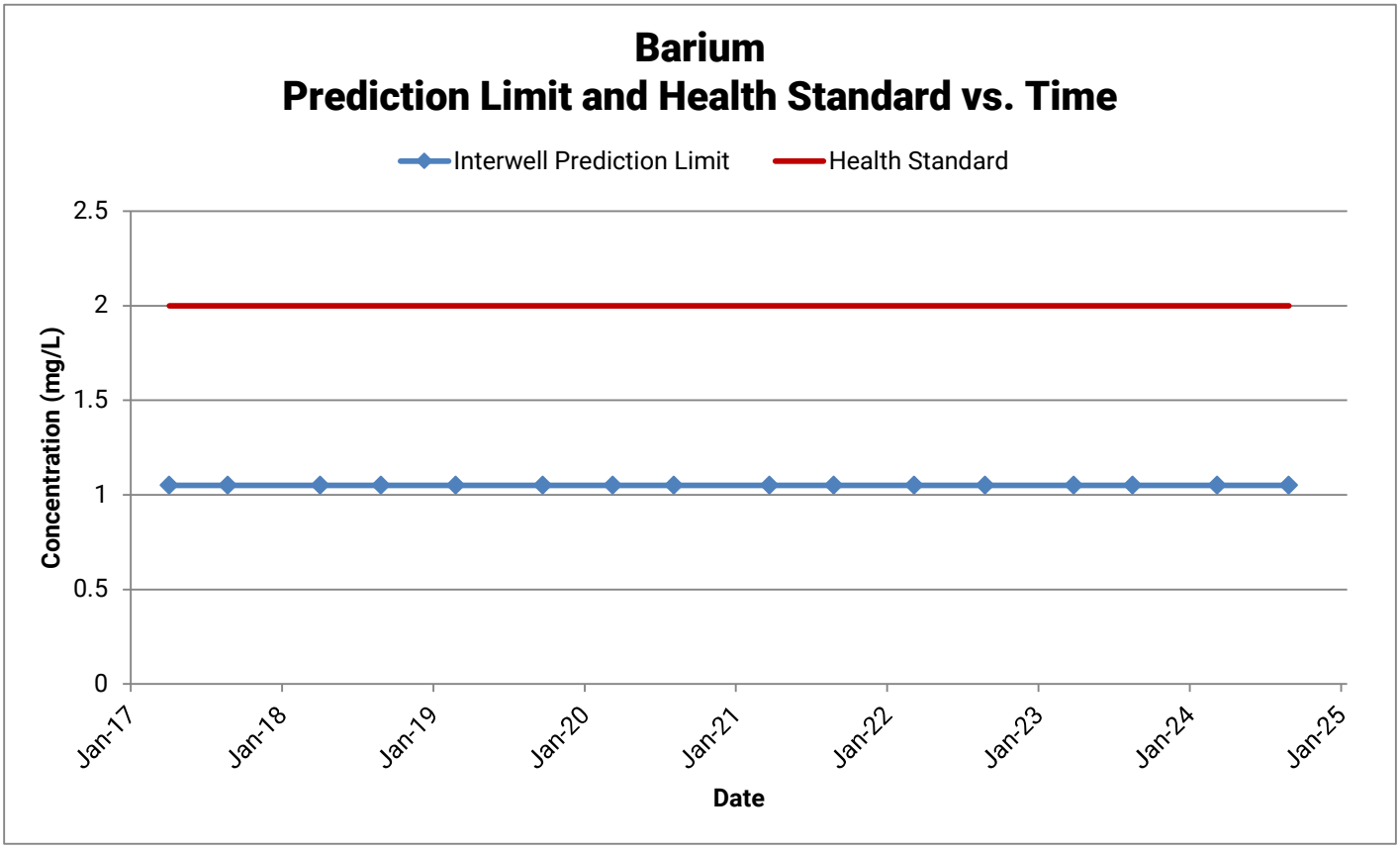
• The following graphs depict the interwell and intrawell prediction limits for statistical analysis starting with the Spring 2017 statistical evaluation.

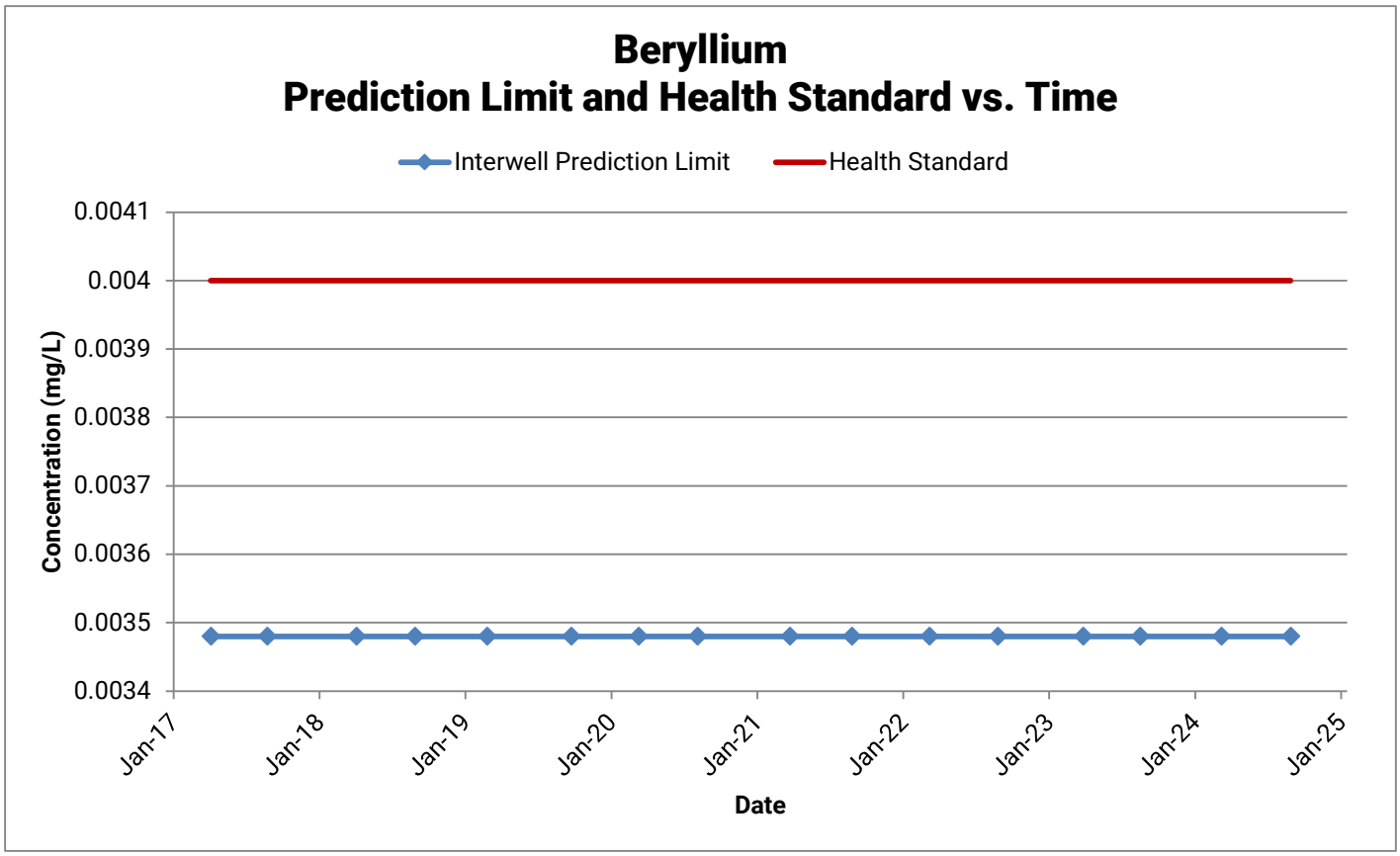
• Wells included in the background data sets and the sources of the background and health standards are presented in Table 7. As further detailed in Table 7, intrawell prediction limit comparisons are conducted at MW-200 to provide ongoing documentation that MW-200 remains suitable for inclusion in the background metals data set. In addition, intrawell prediction limits are utilized for the detection monitoring comparisons to background for the metals constituents at MW-200.

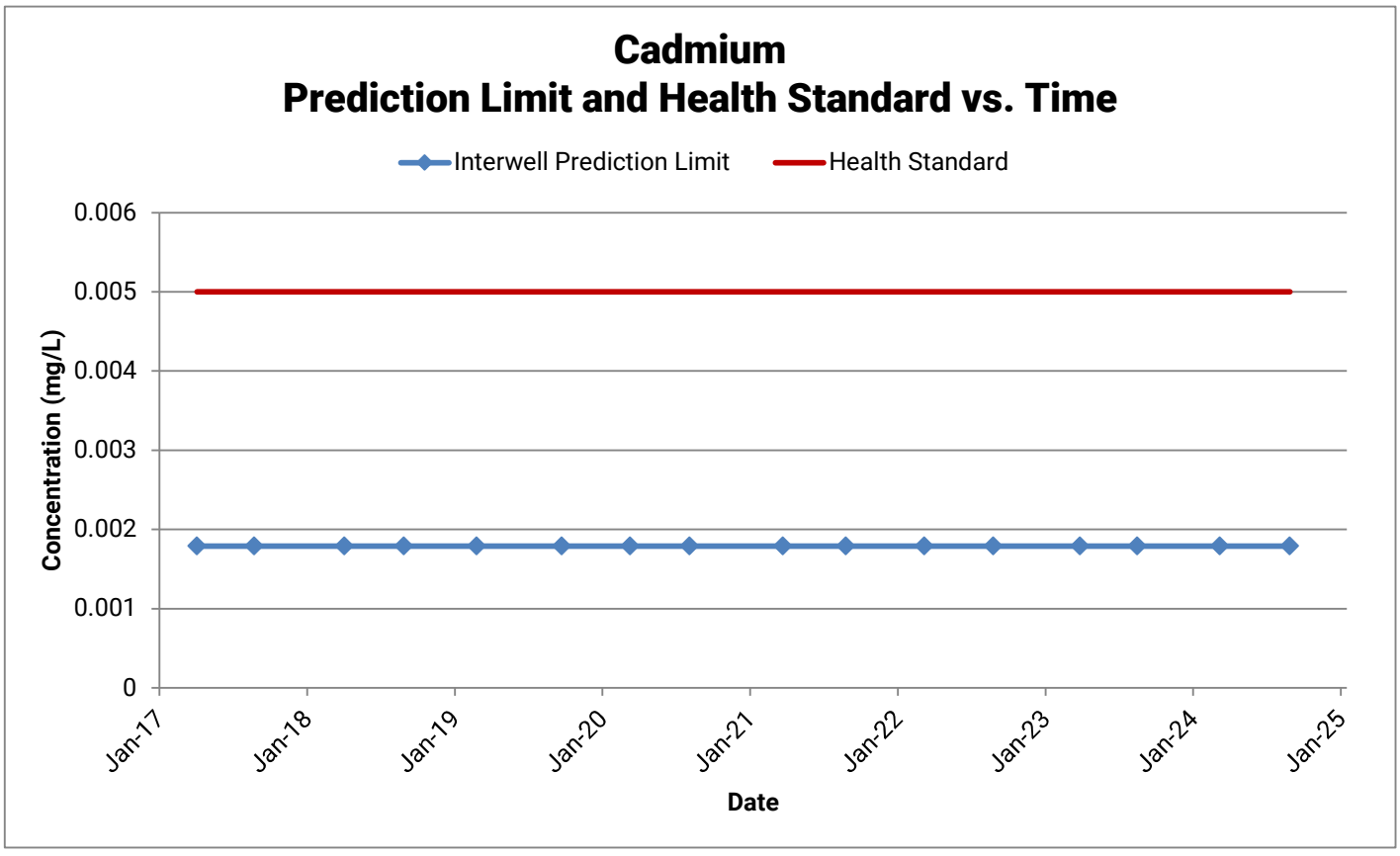
• Although tin has been detected in the background data, it has not been detected above the PQL in the downgradient data. During events when tin is not sampled in the downgradient data, the statistical evaluations do not include comparisons to background for tin. However, the prediction limit value that would have been utilized is provided on the graphs.

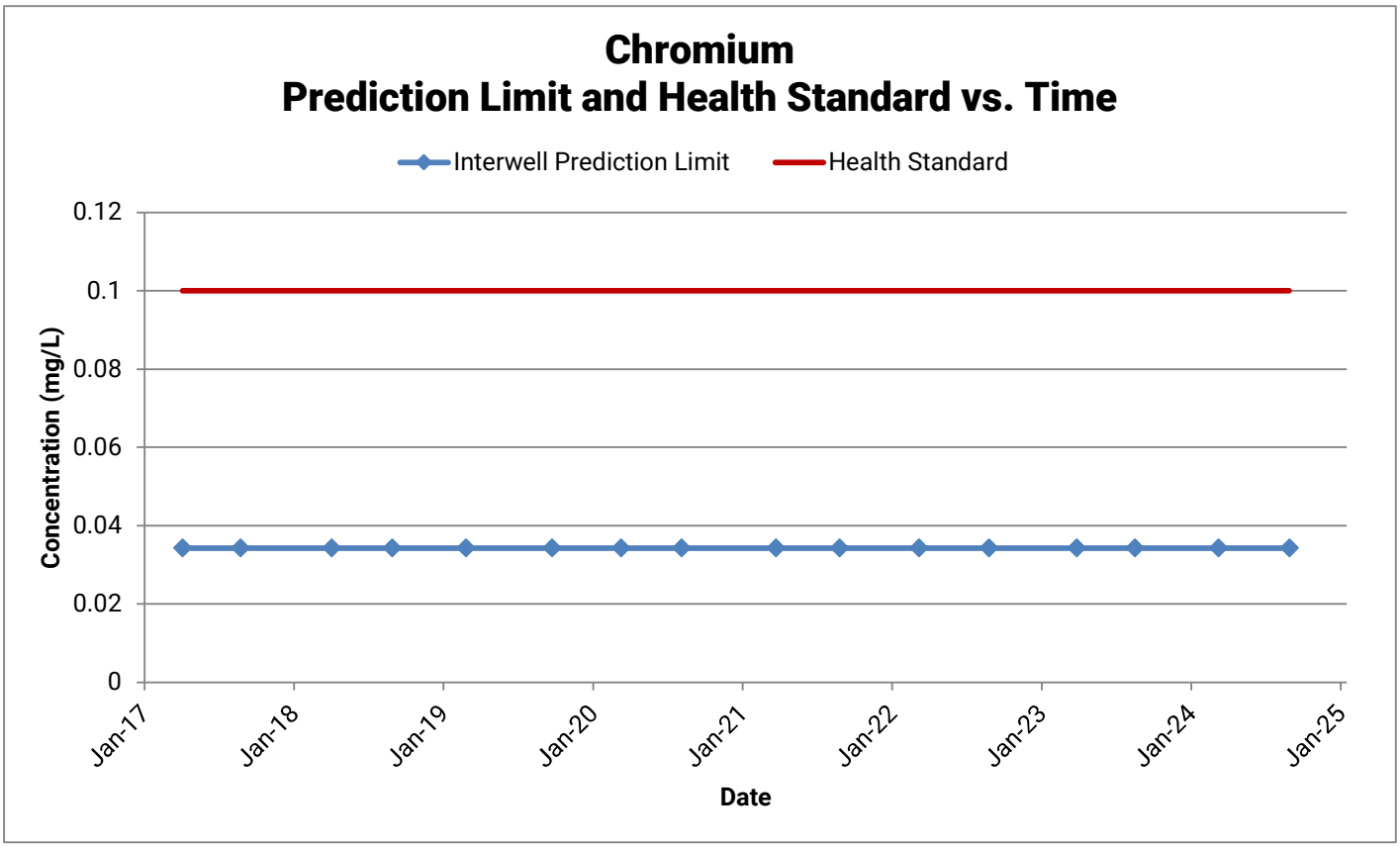


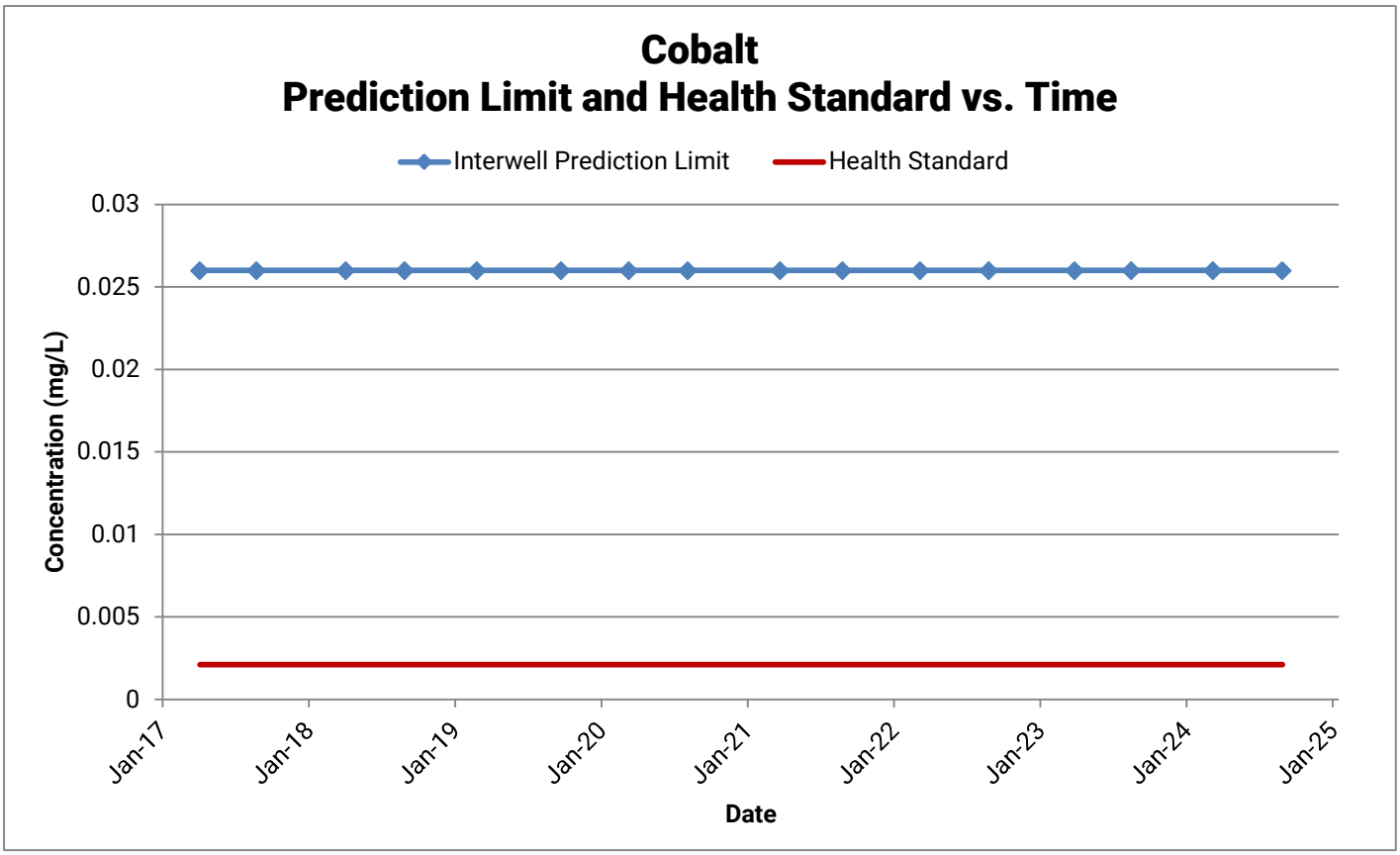

Arsenic
Prediction Limit and Health Standard vs. Time
Interwell Prediction Limit
Health Standard
0.012
0.01
0.008
0.006
0.004
0.002
0
Concentration (mg/L)
Jan-17
Jan-18
Jan-19
Jan-20
Jan-21
Jan-22
Jan-23
Jan-24
Jan-25
Date

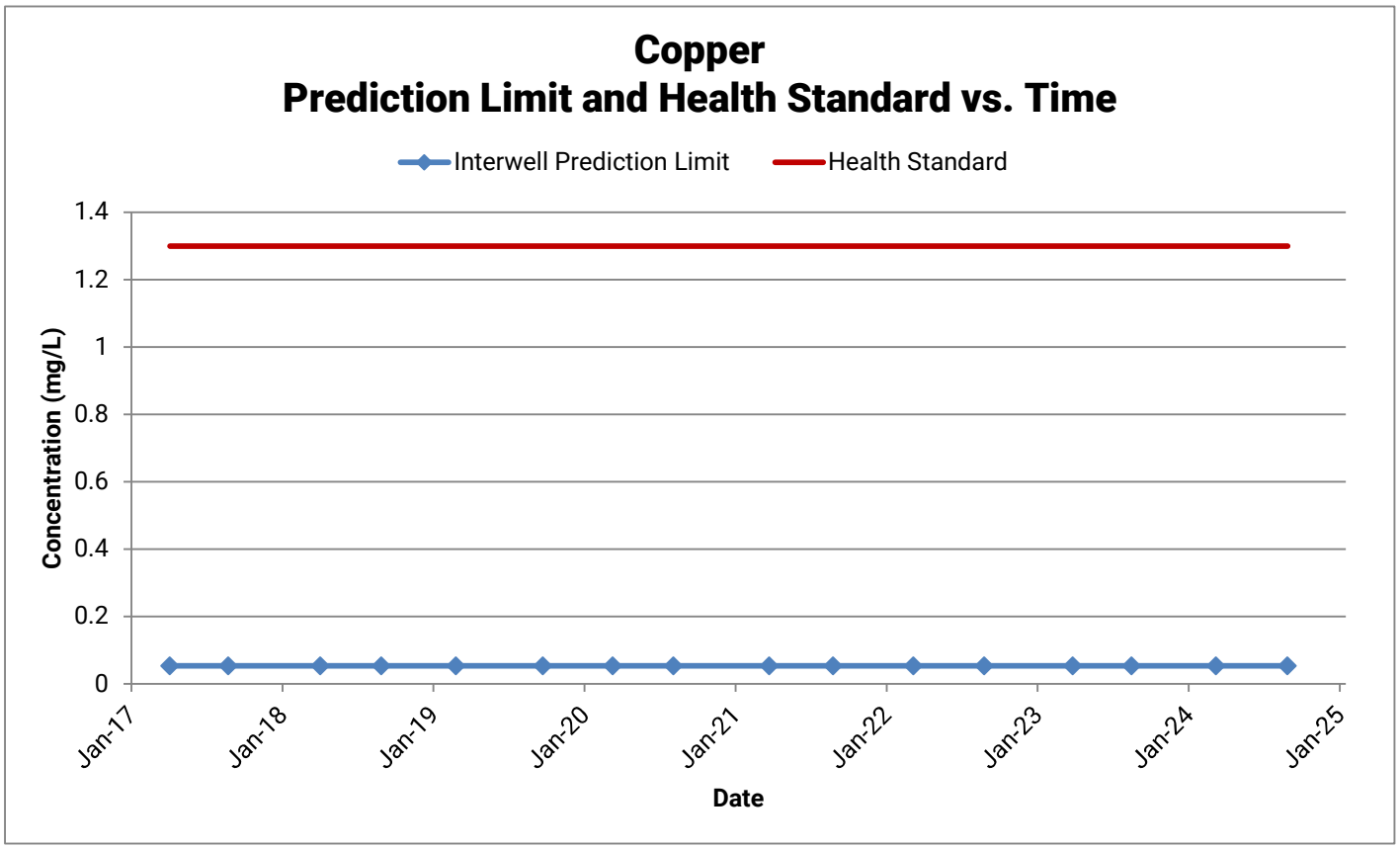

Barium
Prediction Limit and Health Standard vs. Time
Interwell Prediction Limit
Health Standard
2.5
2
1.5
1
0.5
0
Concentration (mg/L)
Jan-17
Jan-18
Jan-19
Jan-20
Jan-21
Jan-22
Jan-23
Jan-24
Jan-25
Date

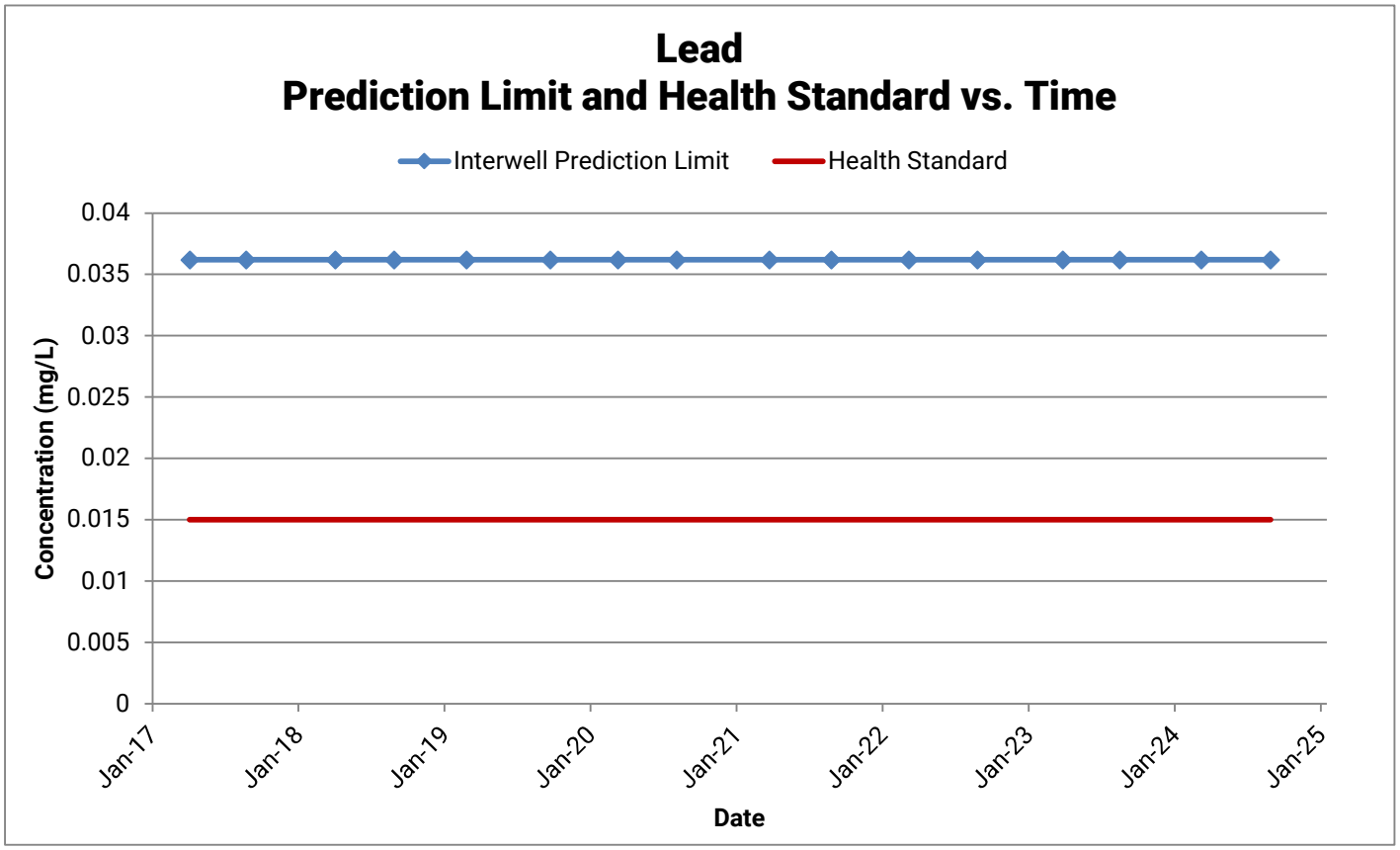

Beryllium
Prediction Limit and Health Standard vs. Time
Interwell Prediction Limit
Health Standard
0.0041
0.004
0.0039
0.0038
0.0037
0.0036
0.0035
0.0034
Concentration (mg/L)
Jan-17
Jan-18
Jan-19
Jan-20
Jan-21
Jan-22
Jan-23
Jan-24
Jan-25
Date

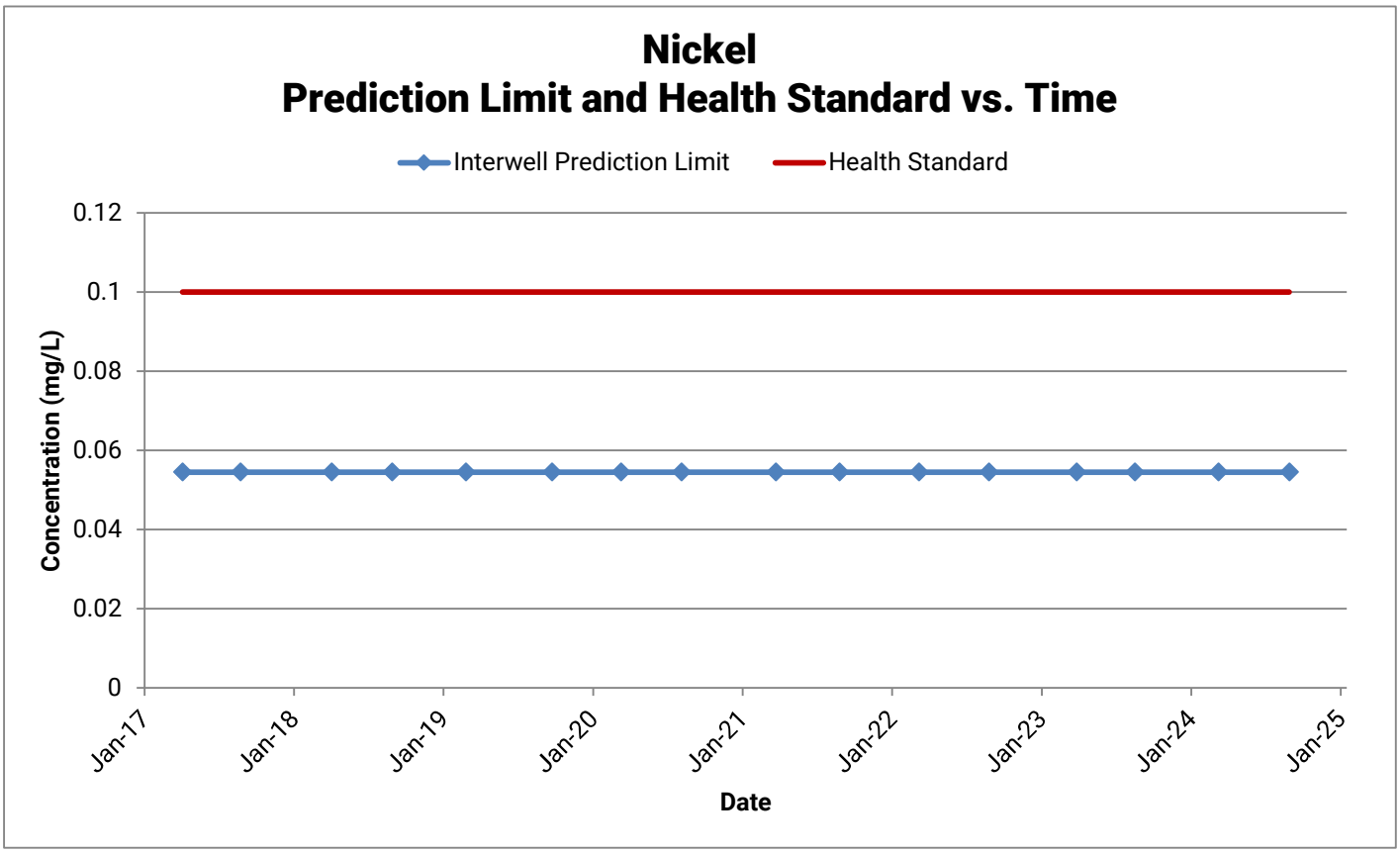

Cadmium
Prediction Limit and Health Standard vs. Time
Interwell Prediction Limit
Health Standard
0.006
0.005
0.004
0.003
0.002
0.001
0
Concentration (mg/L)
Jan-17
Jan-18
Jan-19
Jan-20
Jan-21
Jan-22
Jan-23
Jan-24
Jan-25
Date

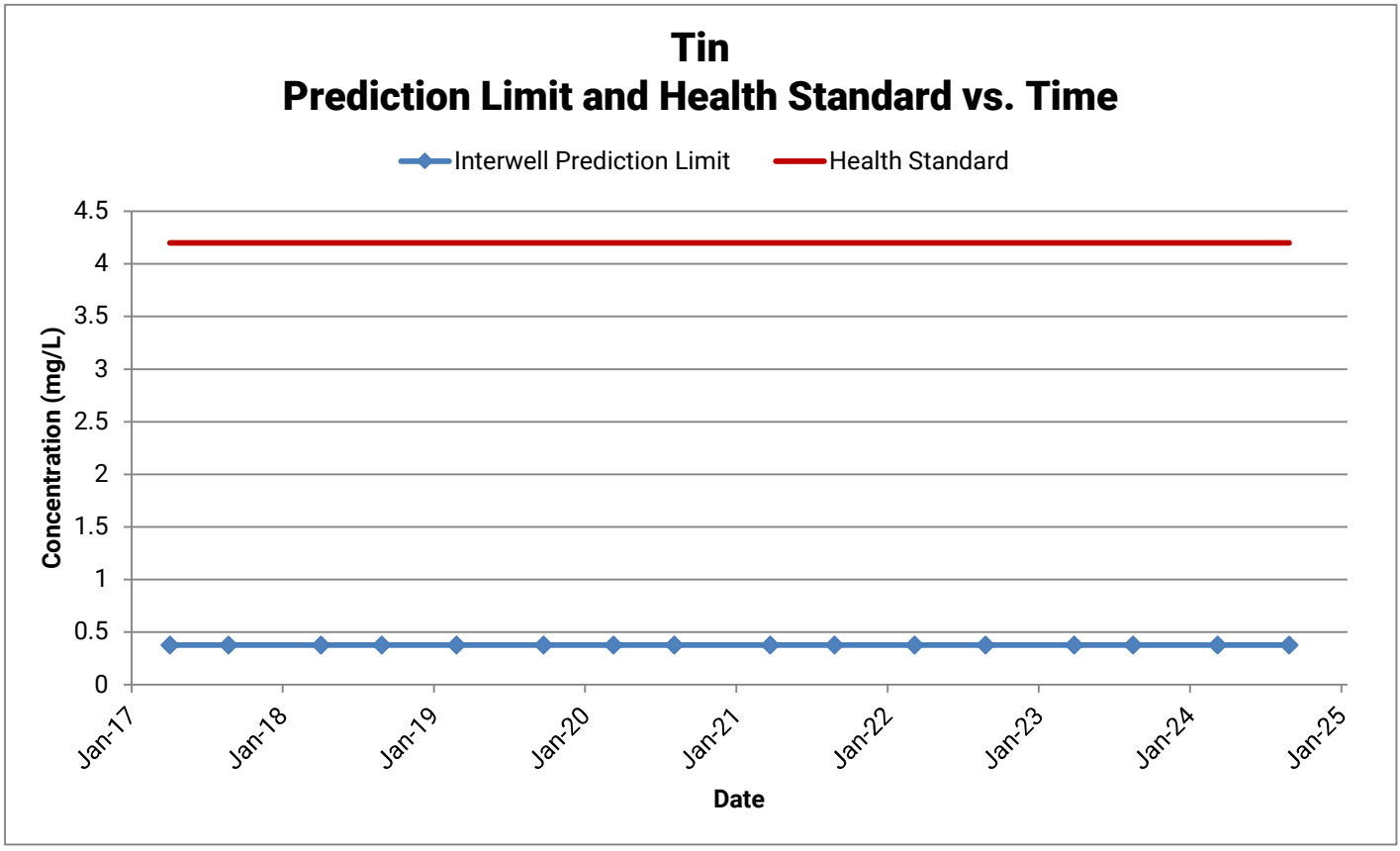

Chromium
Prediction Limit and Health Standard vs. Time
Interwell Prediction Limit
Health Standard
0.12
0.1
0.08
0.06
0.04
0.02
0
Concentration (mg/L)
Jan-17
Jan-18
Jan-19
Jan-20
Jan-21
Jan-22
Jan-23
Jan-24
Jan-25
Date

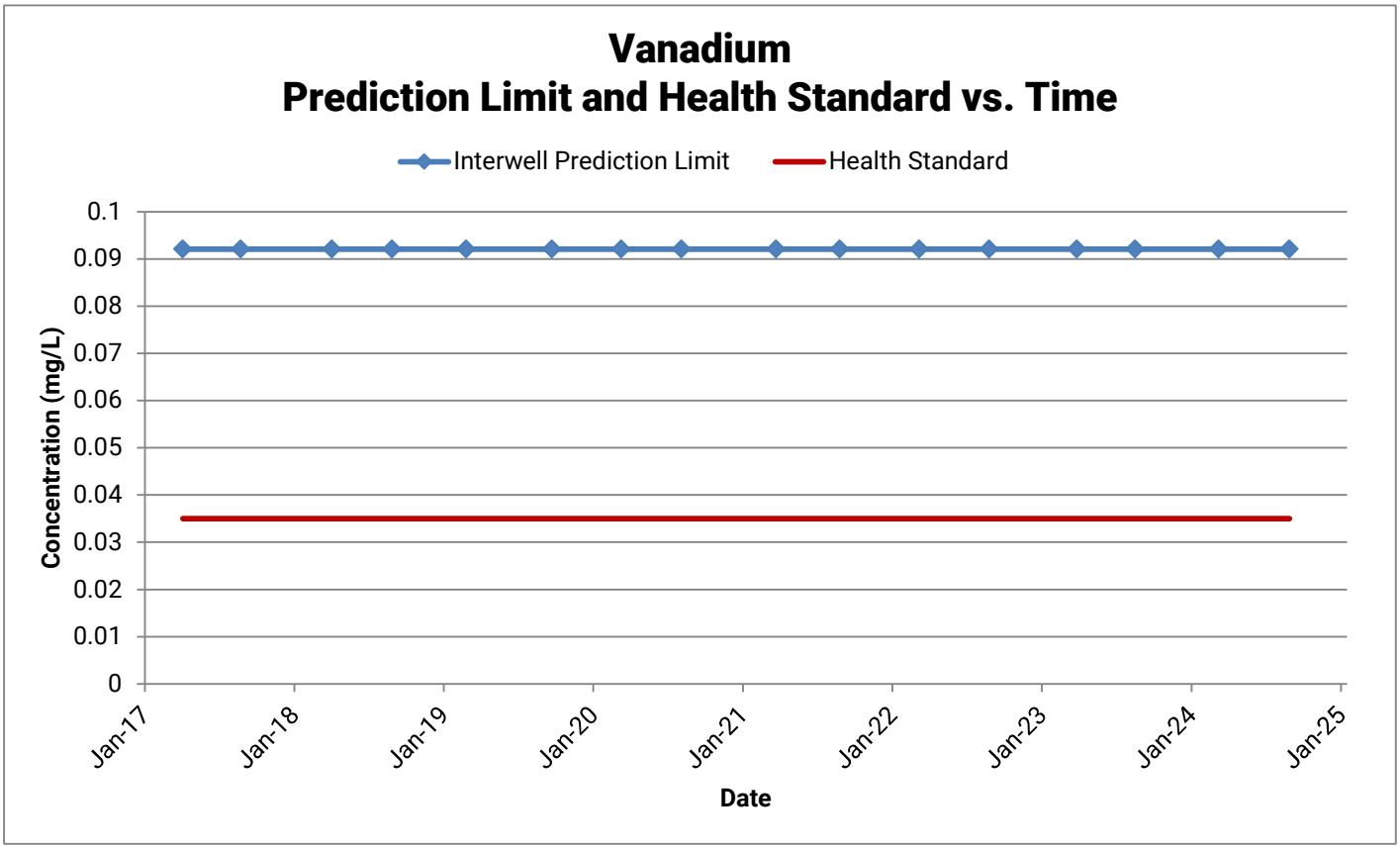

Cobalt
Prediction Limit and Health Standard vs. Time
Interwell Prediction Limit
Health Standard
0.03
0.025
0.02
0.015
0.01
0.005
0
Concentration (mg/L)
Jan-17
Jan-18
Jan-19
Jan-20
Jan-21
Jan-22
Jan-23
Jan-24
Jan-25
Date

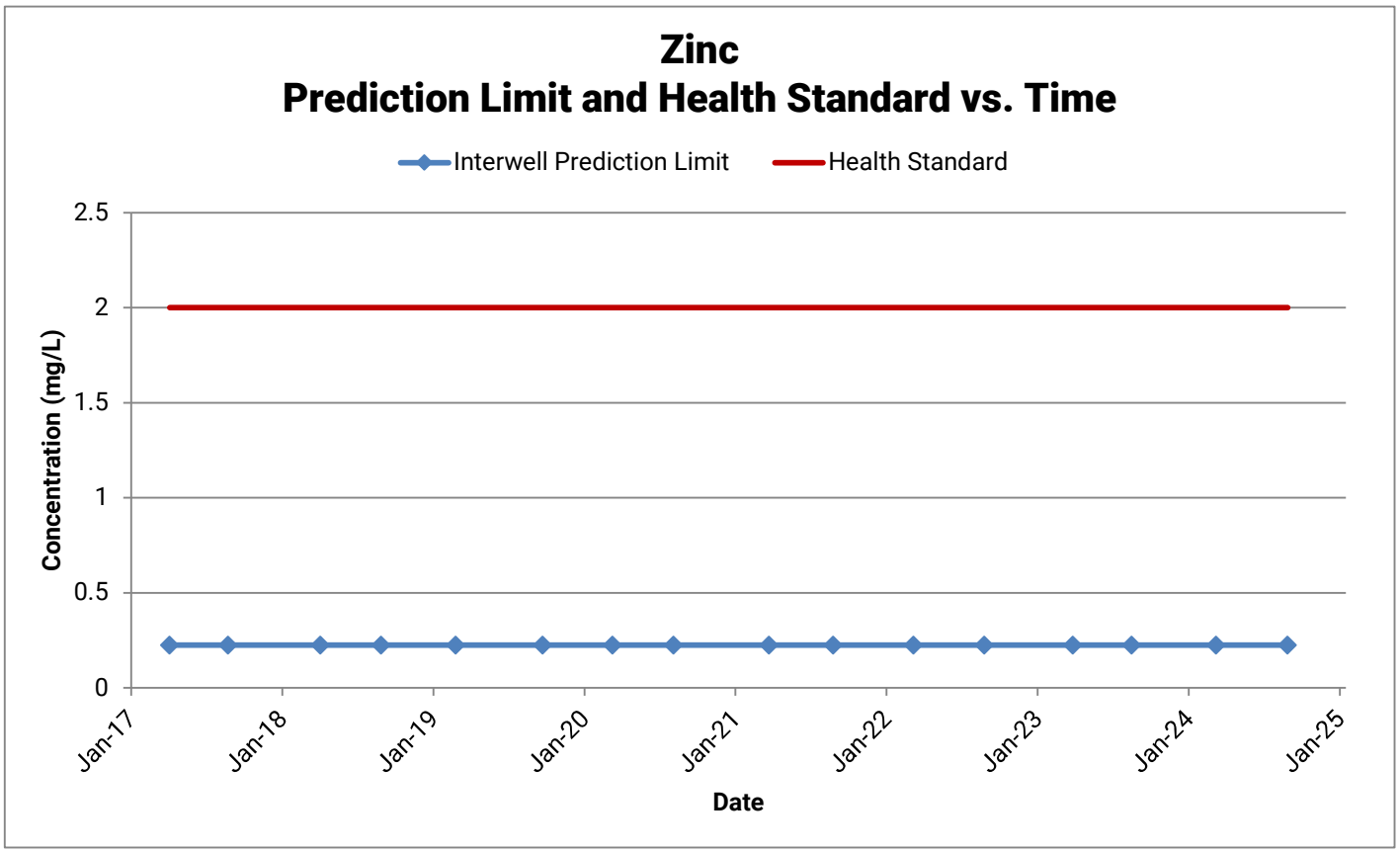

Copper
Prediction Limit and Health Standard vs. Time
Interwell Prediction Limit
Health Standard
Concentration (mg/L)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Jan-17
Jan-18
Jan-19
Jan-20
Jan-21
Jan-22
Jan-23
Jan-24
Jan-25
Date

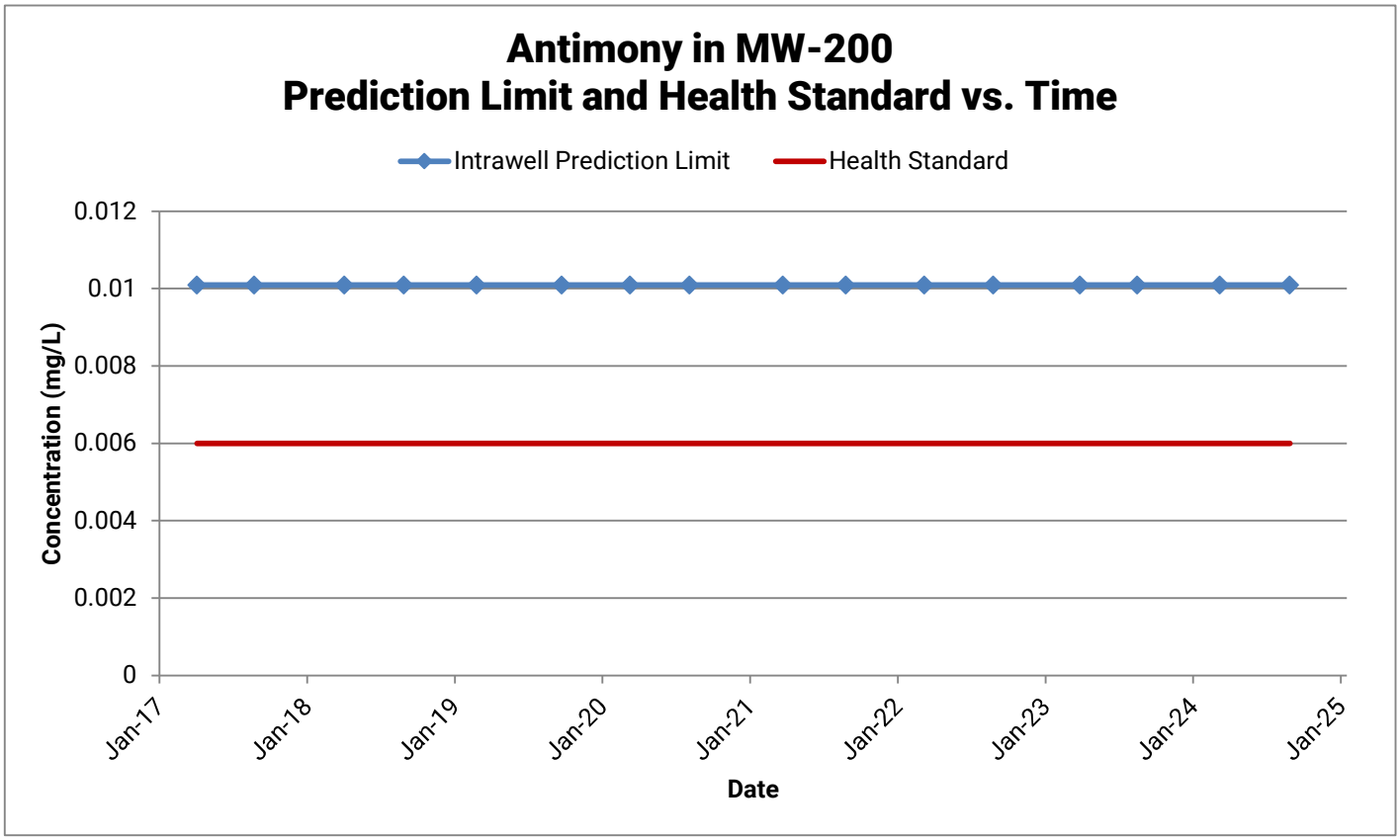

Lead
Prediction Limit and Health Standard vs. Time
Interwell Prediction Limit
Health Standard
Concentration (mg/L)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
Jan-17
Jan-18
Jan-19
Jan-20
Jan-21
Jan-22
Jan-23
Jan-24
Jan-25
Date

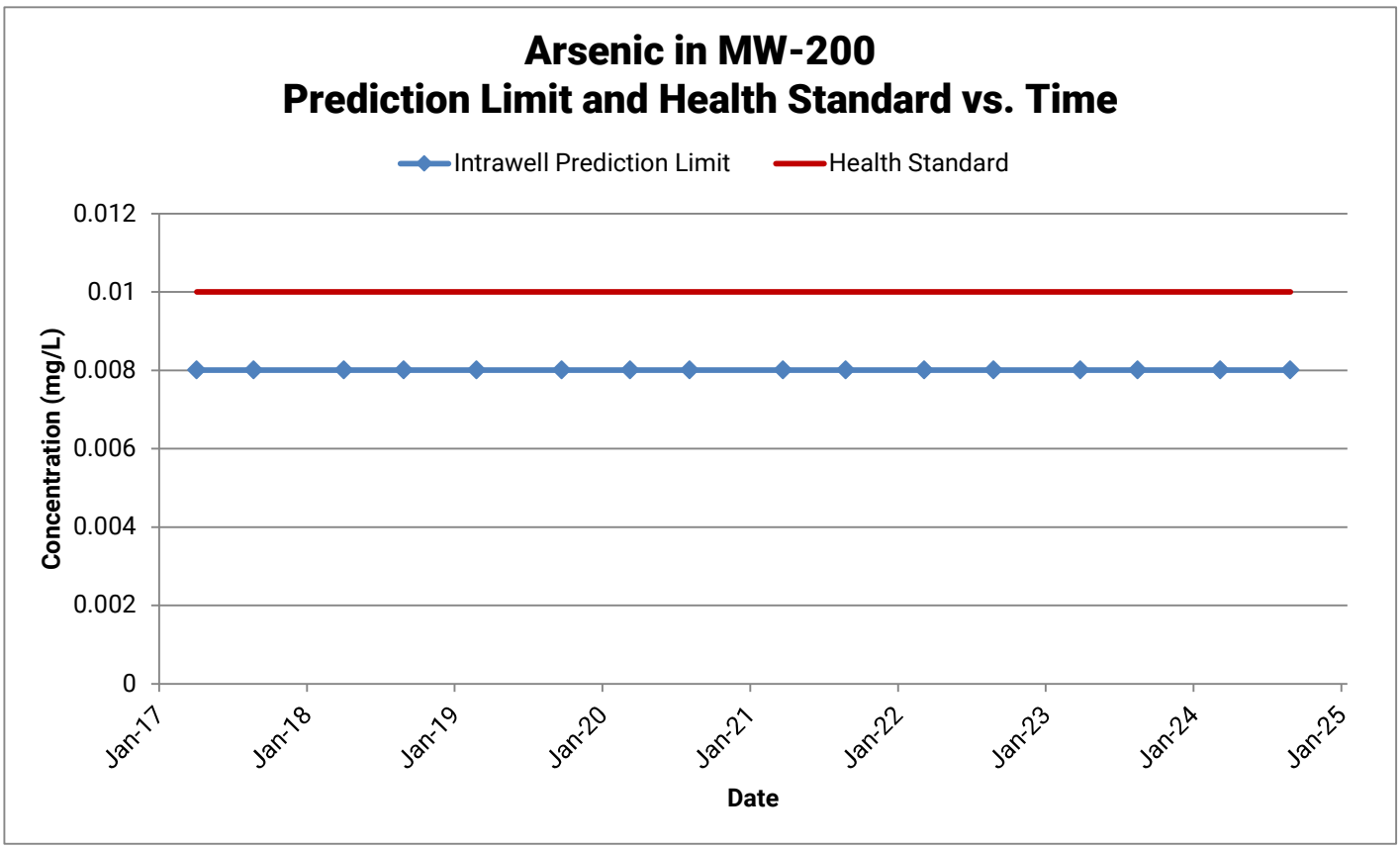

Nickel
Prediction Limit and Health Standard vs. Time
Interwell Prediction Limit
Health Standard
0.12
0.1
0.08
0.06
0.04
0.02
0
Concentration (mg/L)
Jan-17
Jan-18
Jan-19
Jan-20
Jan-21
Jan-22
Jan-23
Jan-24
Jan-25
Date

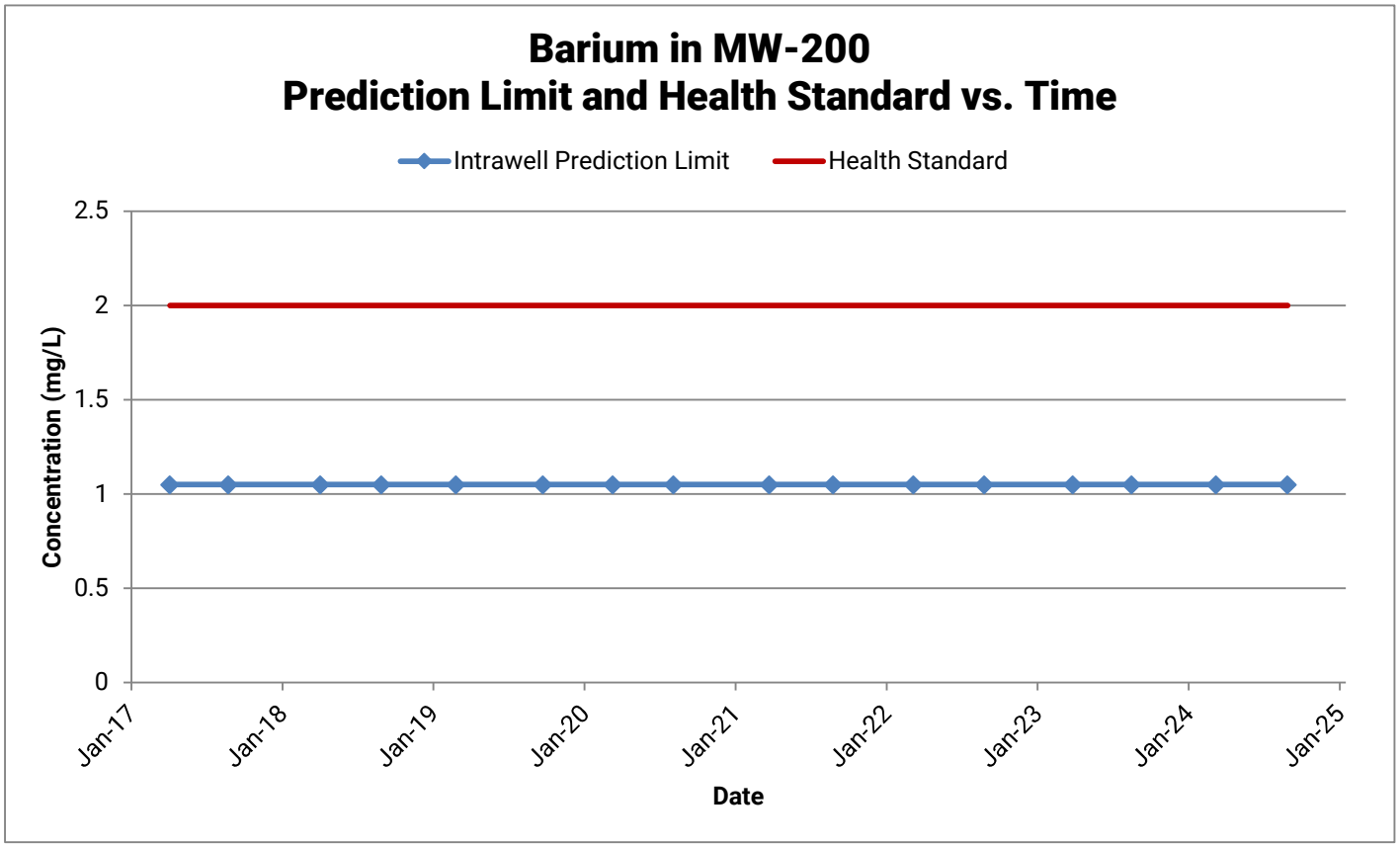

Tin
Prediction Limit and Health Standard vs. Time
Interwell Prediction Limit
Health Standard
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
Concentration (mg/L)
Jan-17
Jan-18
Jan-19
Jan-20
Jan-21
Jan-22
Jan-23
Jan-24
Jan-25
Date

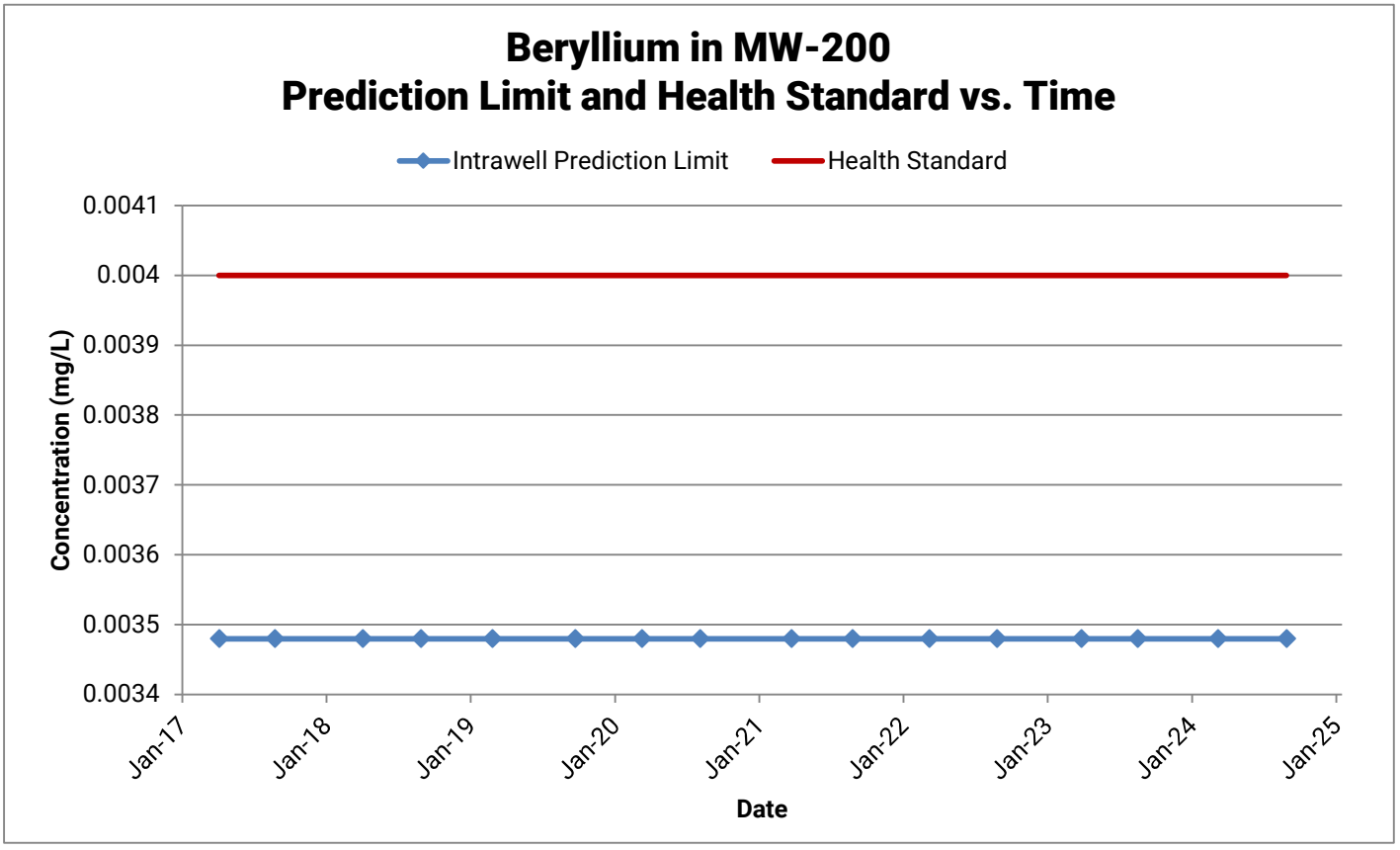

Vanadium
Prediction Limit and Health Standard vs. Time
Interwell Prediction Limit
Health Standard
Concentration (mg/L)
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
Jan-17
Jan-18
Jan-19
Jan-20
Jan-21
Jan-22
Jan-23
Jan-24
Jan-25
Date

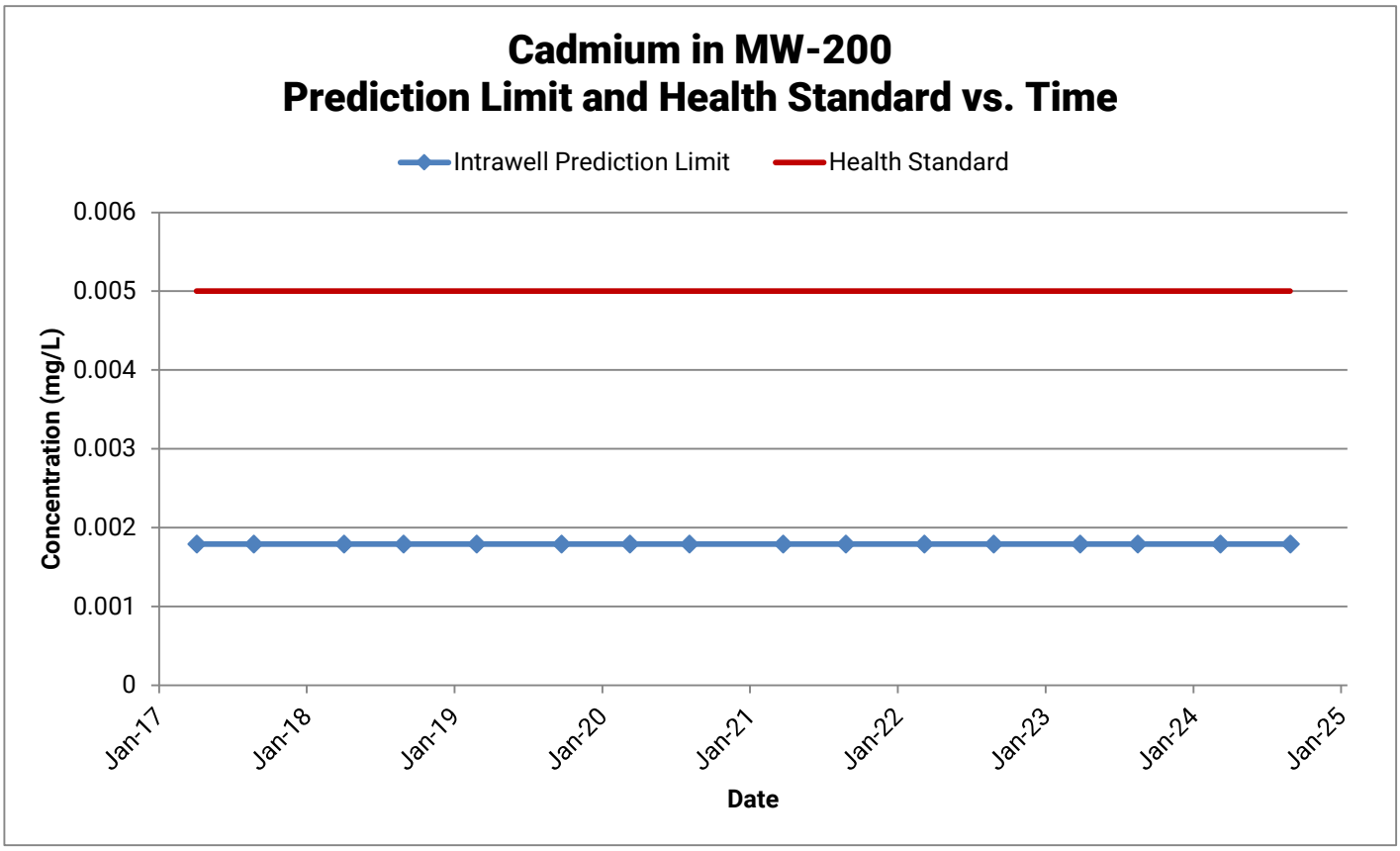

Zinc
Prediction Limit and Health Standard vs. Time
Interwell Prediction Limit
Health Standard
Concentration (mg/L)
2.5
2
1.5
1
0.5
0
Jan-17
Jan-18
Jan-19
Jan-20
Jan-21
Jan-22
Jan-23
Jan-24
Jan-25
Date

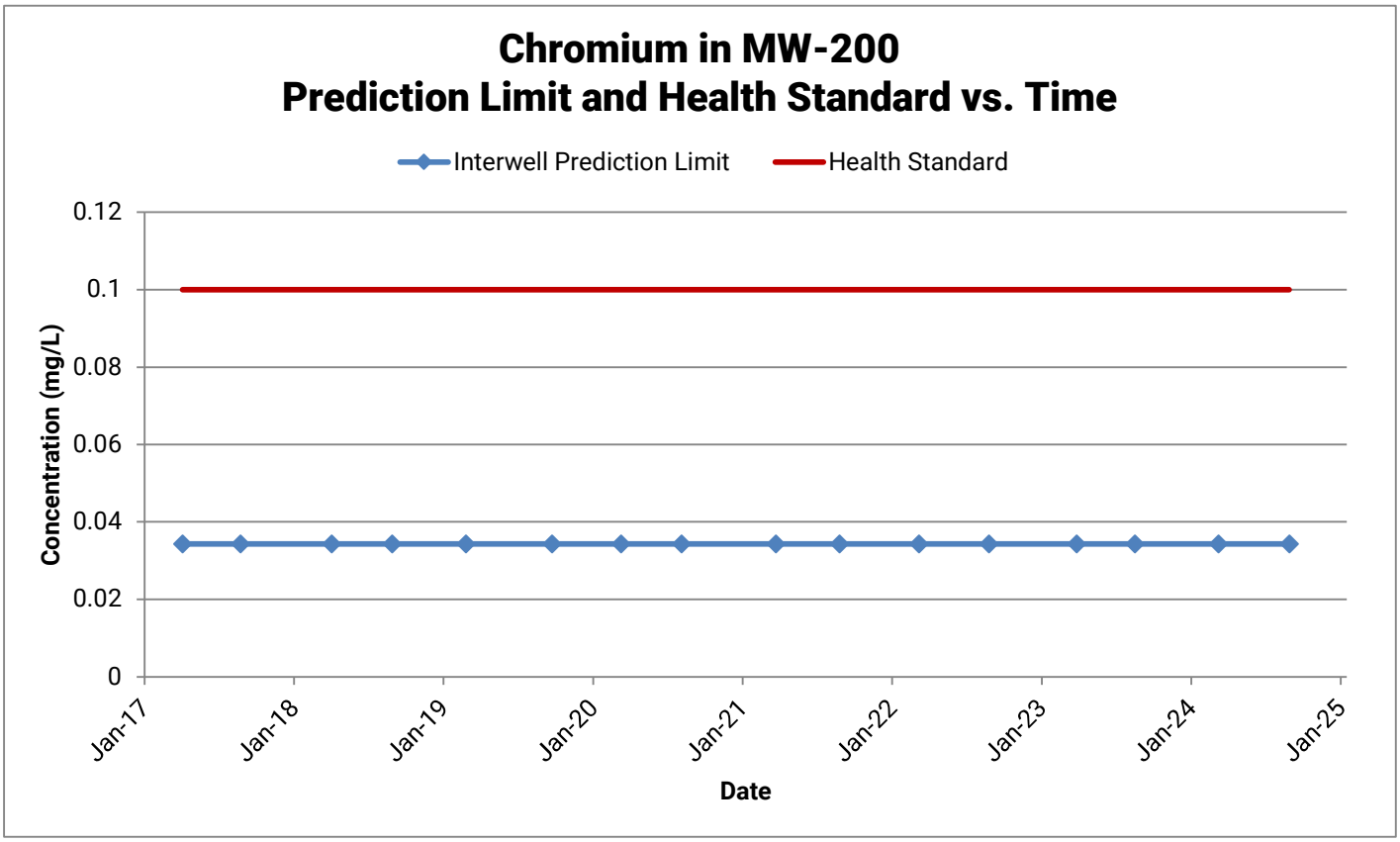

Antimony in MW-200
Prediction Limit and Health Standard vs. Time
Intrawell Prediction Limit
Health Standard
0.012
0.01
0.008
0.006
0.004
0.002
0
Concentration (mg/L)
Jan-17
Jan-18
Jan-19
Jan-20
Jan-21
Jan-22
Jan-23
Jan-24
Jan-25
Date

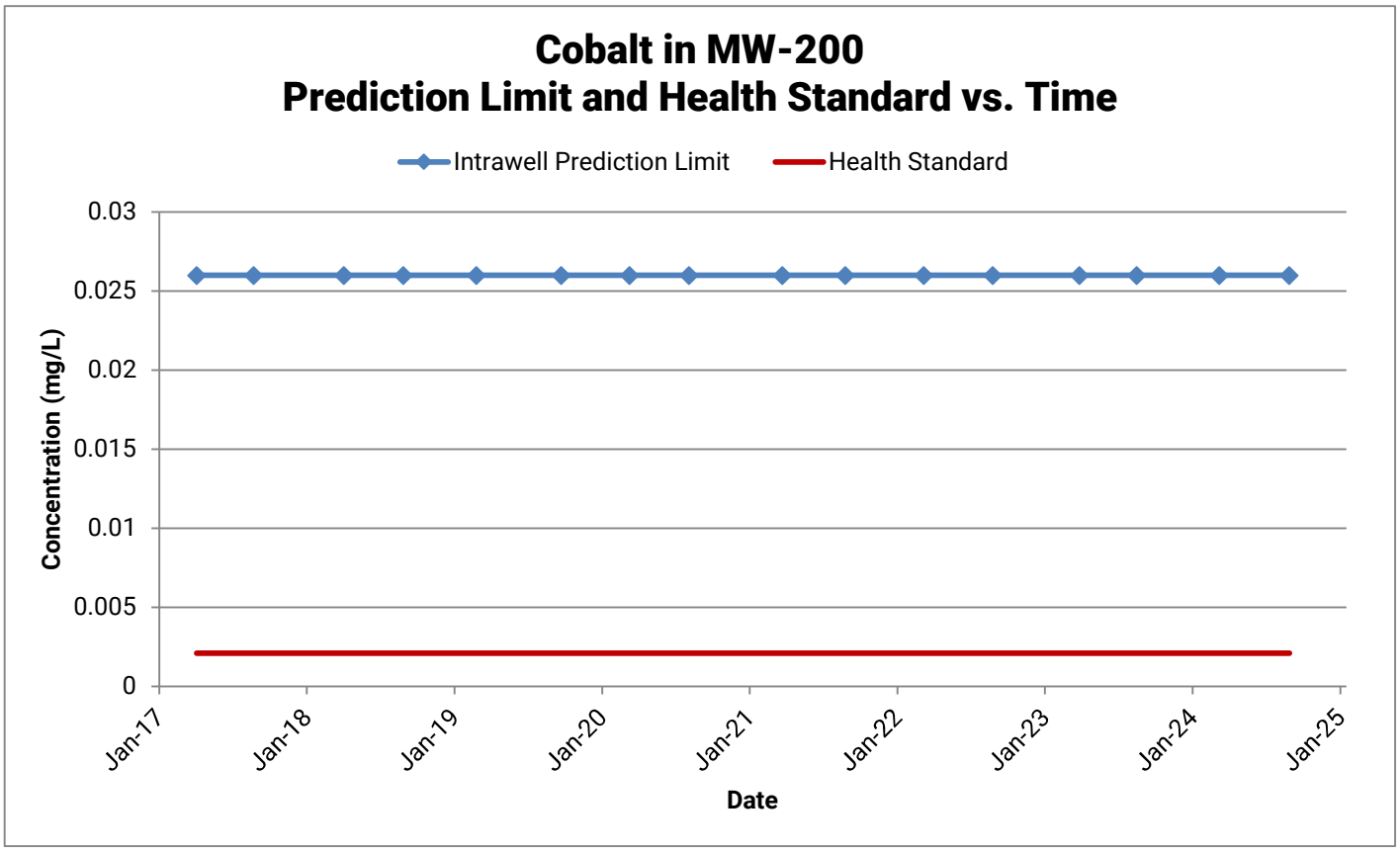

Arsenic in MW-200
Prediction Limit and Health Standard vs. Time
Intrawell Prediction Limit
Health Standard
0.012
0.01
0.008
0.006
0.004
0.002
0
Concentration (mg/L)
Jan-17
Jan-18
Jan-19
Jan-20
Jan-21
Jan-22
Jan-23
Jan-24
Jan-25
Date

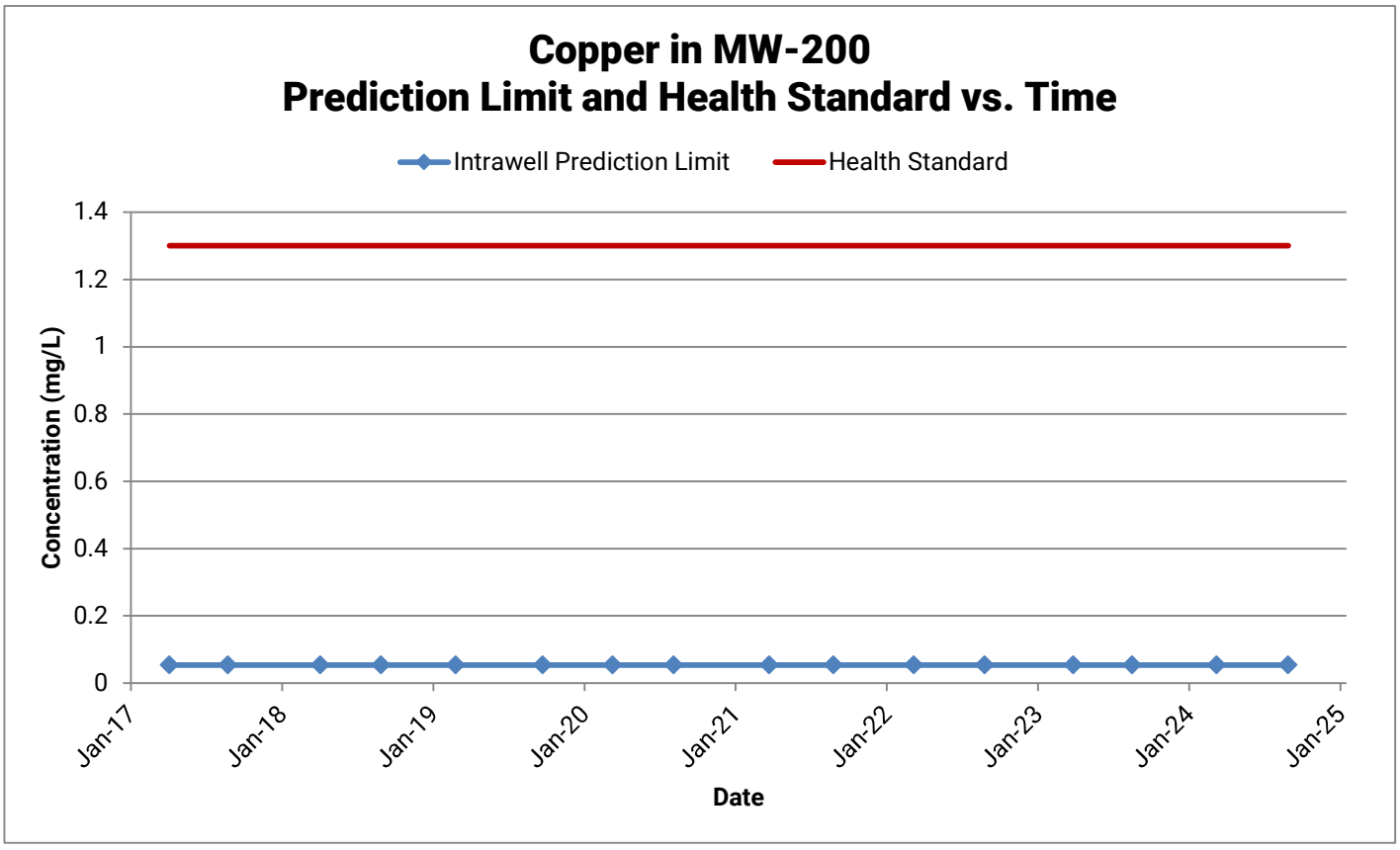

Barium in MW-200
Prediction Limit and Health Standard vs. Time
Intrawell Prediction Limit
Health Standard
2.5
2
1.5
1
0.5
0
Concentration (mg/L)
Jan-17
Jan-18
Jan-19
Jan-20
Jan-21
Jan-22
Jan-23
Jan-24
Jan-25
Date

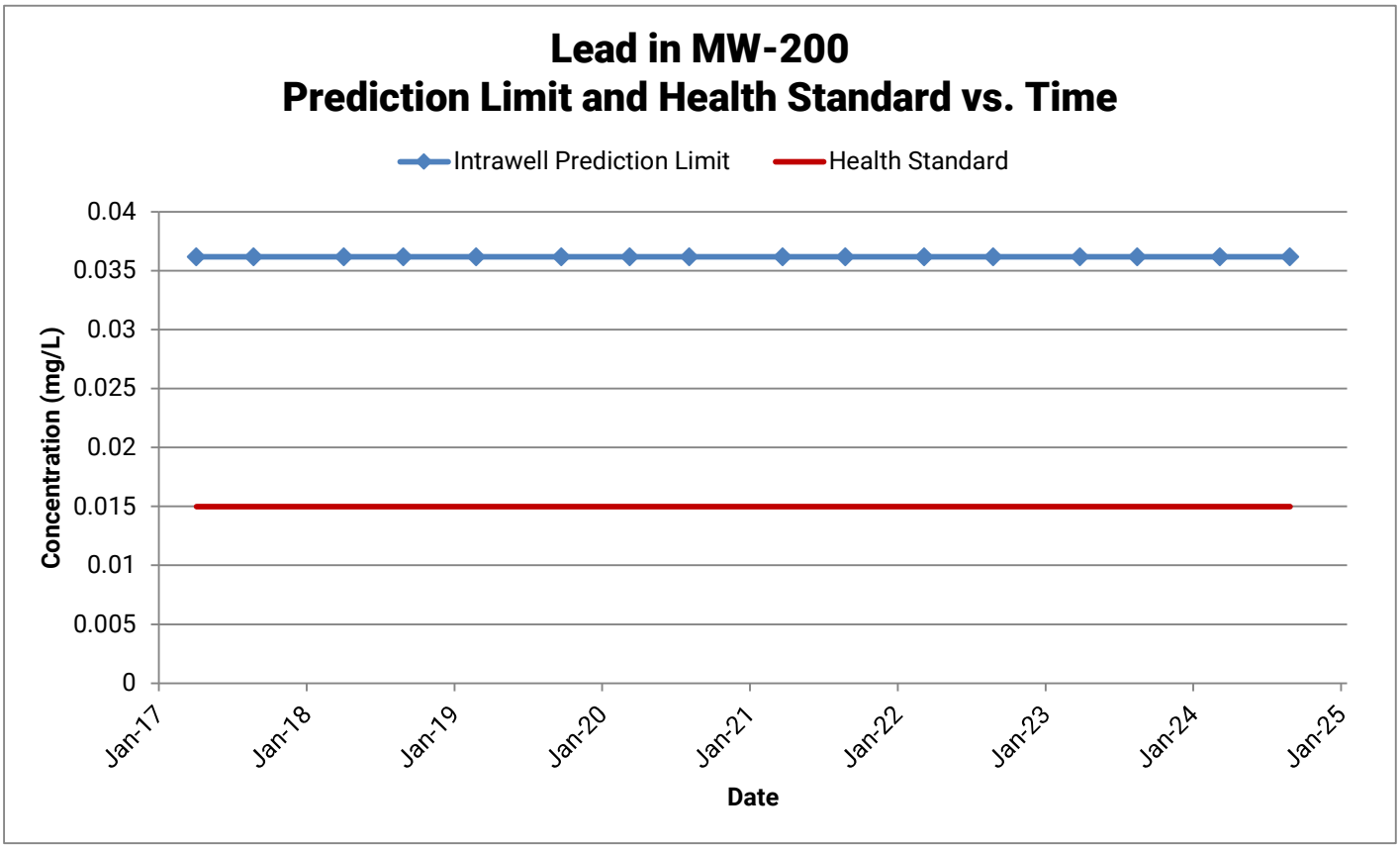

Beryllium in MW-200
Prediction Limit and Health Standard vs. Time
Intrawell Prediction Limit
Health Standard
0.0041
0.004
0.0039
0.0038
0.0037
0.0036
0.0035
0.0034
Concentration (mg/L)
Jan-17
Jan-18
Jan-19
Jan-20
Jan-21
Jan-22
Jan-23
Jan-24
Jan-25
Date

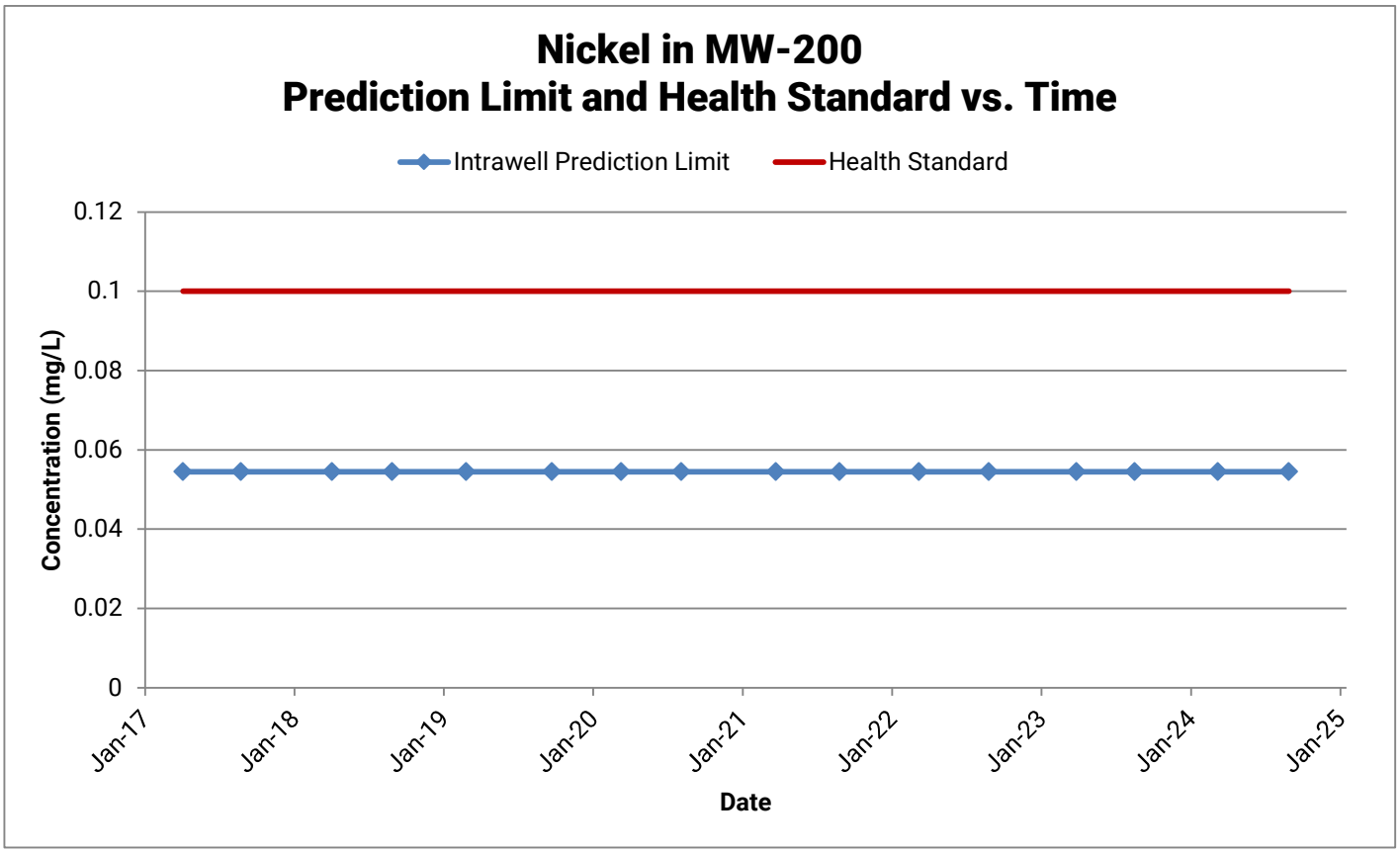

Cadmium in MW-200
Prediction Limit and Health Standard vs. Time
Intrawell Prediction Limit
Health Standard
0.006
0.005
0.004
0.003
0.002
0.001
0
Concentration (mg/L)
Jan-17
Jan-18
Jan-19
Jan-20
Jan-21
Jan-22
Jan-23
Jan-24
Jan-25
Date

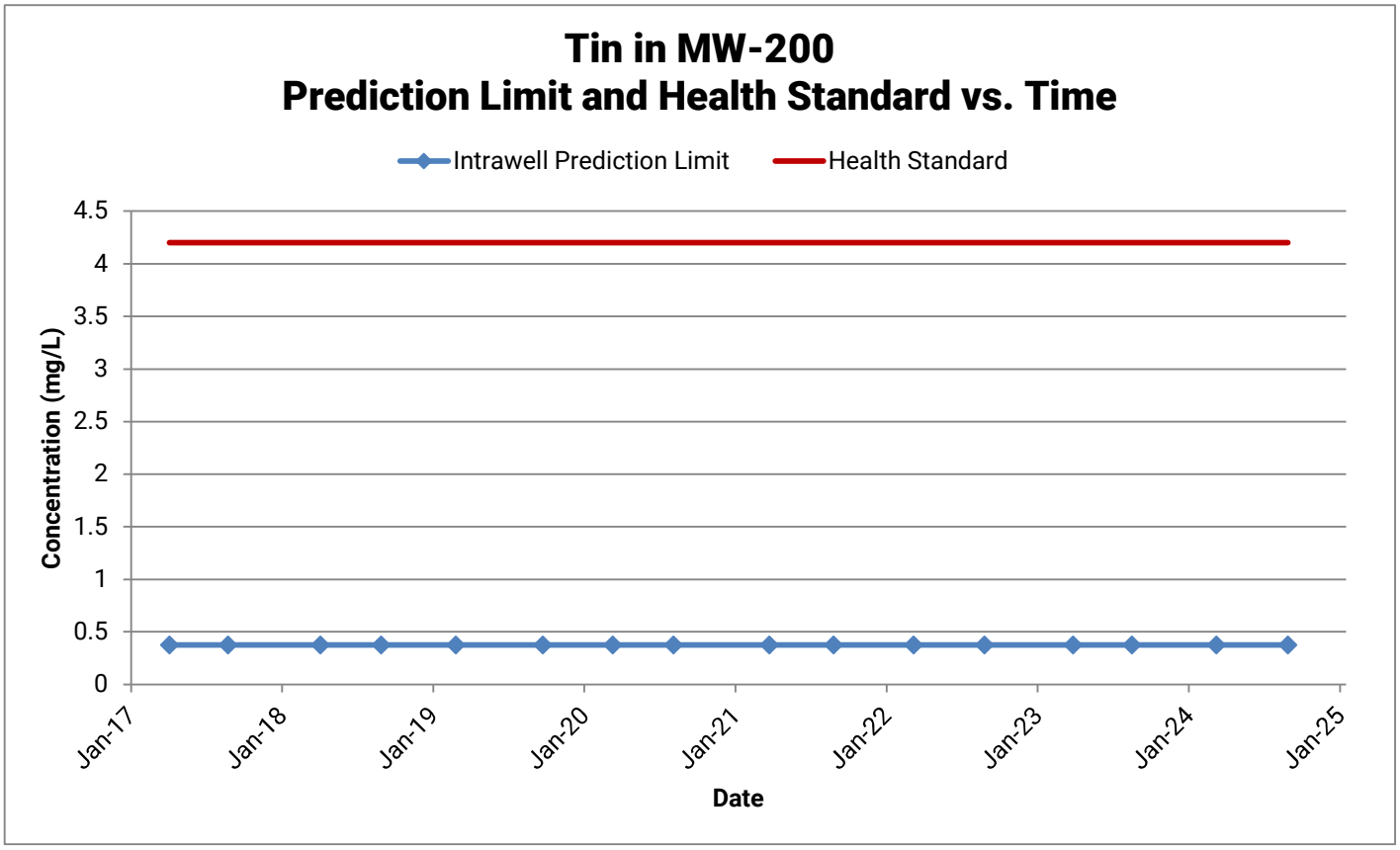

Chromium in MW-200
Prediction Limit and Health Standard vs. Time
Interwell Prediction Limit
Health Standard
0.12
0.1
0.08
0.06
0.04
0.02
0
Concentration (mg/L)
Jan-17
Jan-18
Jan-19
Jan-20
Jan-21
Jan-22
Jan-23
Jan-24
Jan-25
Date

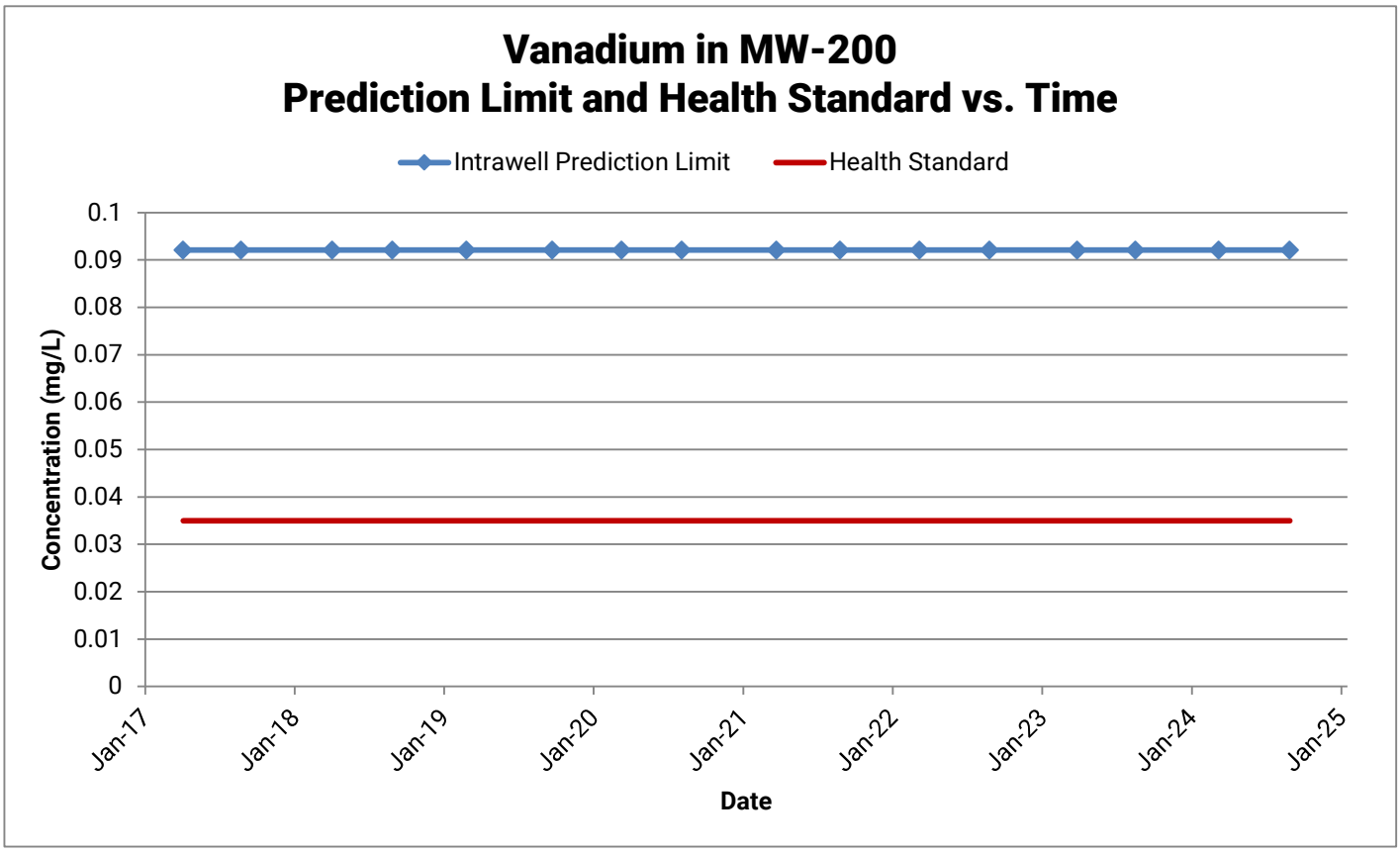

Cobalt in MW-200
Prediction Limit and Health Standard vs. Time
Intrawell Prediction Limit
Health Standard
0.03
0.025
0.02
0.015
0.01
0.005
0
Concentration (mg/L)
Jan-17
Jan-18
Jan-19
Jan-20
Jan-21
Jan-22
Jan-23
Jan-24
Jan-25
Date


Copper in MW-200
Prediction Limit and Health Standard vs. Time
Intrawell Prediction Limit
Health Standard
1.4
1.2
1
0.8
0.6
0.4
0.2
0
Concentration (mg/L)
Jan-17
Jan-18
Jan-19
Jan-20
Jan-21
Jan-22
Jan-23
Jan-24
Jan-25
Date


Lead in MW-200
Prediction Limit and Health Standard vs. Time
Intrawell Prediction Limit
Health Standard
Concentration (mg/L)
0.04
0.035
0.03
0.025
0.02
0.015
0.01
0.005
0
Jan-17
Jan-18
Jan-19
Jan-20
Jan-21
Jan-22
Jan-23
Jan-24
Jan-25
Date


Nickel in MW-200
Prediction Limit and Health Standard vs. Time
Intrawell Prediction Limit
Health Standard
Concentration (mg/L)
0.12
0.1
0.08
0.06
0.04
0.02
0
Jan-17
Jan-18
Jan-19
Jan-20
Jan-21
Jan-22
Jan-23
Jan-24
Jan-25
Date


Tin in MW-200
Prediction Limit and Health Standard vs. Time
Intrawell Prediction Limit
Health Standard
Concentration (mg/L)
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
Jan-17
Jan-18
Jan-19
Jan-20
Jan-21
Jan-22
Jan-23
Jan-24
Jan-25
Date


Vanadium in MW-200
Prediction Limit and Health Standard vs. Time
Intrawell Prediction Limit
Health Standard
Concentration (mg/L)
0.1
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
Jan-17
Jan-18
Jan-19
Jan-20
Jan-21
Jan-22
Jan-23
Jan-24
Jan-25
Date

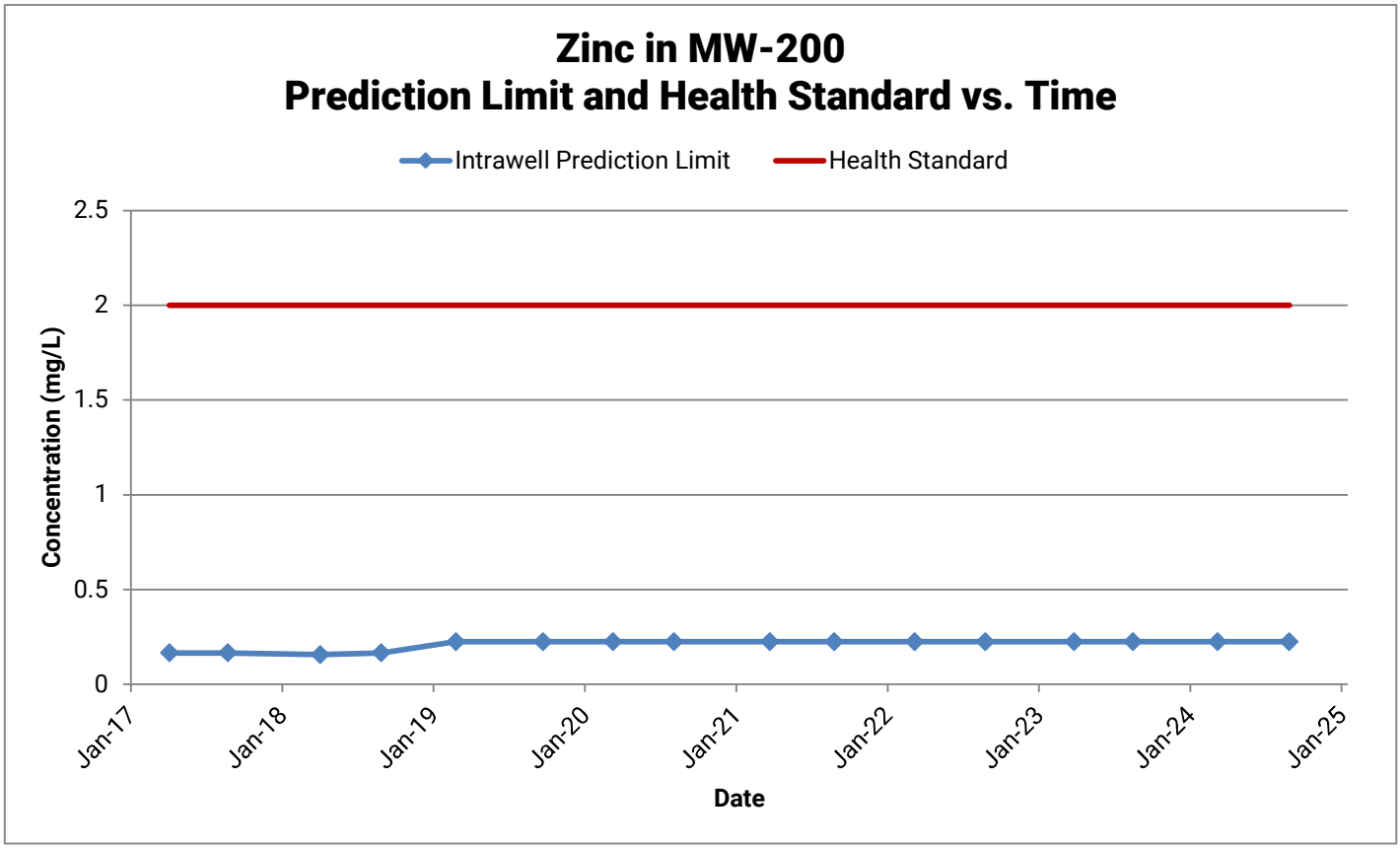

Zinc in MW-200
Prediction Limit and Health Standard vs. Time
Intrawell Prediction Limit
Health Standard
Concentration (mg/L)
2.5
2
1.5
1
0.5
0
Jan-17
Jan-18
Jan-19
Jan-20
Jan-21
Jan-22
Jan-23
Jan-24
Jan-25
Date

Table 8
Summary of Well/Detected Constituent Pairs With No Previous SSIs
2024 Annual Water Quality Report
Carroll County Landfill Western Expansion Area
Permit No. 14-SDP-01-74P

Well	Constituent [1]	Units	Most Recent Result (Sep. 2024)	Background Standard [2]
Detection Monitoring Locations				
GU-2A	Barium	mg/L	0.294	1.05
MW-119RR	Acetone	ug/L	3.73 J	10.0
	Arsenic	mg/L	0.00388	0.00801
	Barium	mg/L	0.667	1.05
	Cobalt	mg/L	0.00217	0.026
	Nickel	mg/L	0.00969	0.0545
	Total Suspended Solids	mg/L	6.00	N/A
MW-200	Barium	mg/L	0.492	1.05
	Benzyl Alcohol	mg/L	4.15 J	10.9
	Cadmium	mg/L	0.000436	0.00179
	Nickel	mg/L	0.00697	0.0545
MW-205	Arsenic	mg/L	0.00117 J	0.00801
	Barium	mg/L	0.0223	1.05
	Cobalt	mg/L	0.00582	0.026
	Lead	mg/L	0.000363 J	0.0362
	Nickel	mg/L	0.00871	0.0545
	Total Suspended Solids	mg/L	4.13	N/A
MW-206	Arsenic	mg/L	0.00326	0.00801
	Barium	mg/L	0.0216	1.05
	Cadmium	mg/L	0.000122 J	0.00179
	Cobalt	mg/L	0.00412	0.026
	Lead	mg/L	0.00361	0.0362
	Nickel	mg/L	0.00812	0.0545
	Total Suspended Solids	mg/L	28.6	N/A
	Zinc	mg/L	0.014 J	0.224

* Current result is above background, if confirmed by retest sample an SSI will be identified (1-of-2 retesting plan).

** Current result is a confirmed SSI. Appendix II sampling will be initiated within 90 days.

Comments:

N/A = Not Applicable

[1] List contains constituents detected above the laboratory method detection limit (MDL), including J-flagged concentrations.

[2] Source of background standards are presented in Table 7. Note that the detected metals in MW-200 were evaluated using intrawell prediction limits.

• No SSIs were identified at GU-2A, MW-119RR, MW-200, MW-205, and MW-206 during the Fall 2024 statistical evaluation. These locations will remain in the detection monitoring program in 2025. Details regarding the future sampling schedules are provided in Table 2.

Table 9
Summary of Ongoing and Newly Identified SSIs
2024 Annual Water Quality Report
Carroll County Landfill Western Expansion Area
Permit No. 14-SDP-01-74P

Well	Constituent [1]	Units	Most Recent Result (Sep. 2024)	Background Standard [2]	Lower Confidence Limit	GWPS [2]	Sample Dates		
							Initial Exceedance (above background)	Resample	5th Background Sample
Assessment Monitoring Locations									
MW-121R	Arsenic	mg/L	0.0183	0.00801	0.005	0.01	Spring 2015	N/S	Sep. 2012
	Benzene	ug/L	1.00	0.500	0.25	5	Spring 2016	N/S	Sep. 2012
	cis-1,2-Dichloroethene	ug/L	8.47	1.00	1.9	70	Spring 2014	N/S	Sep. 2012

* For assessment monitoring locations, all current results are below background. If confirmed by a second event, the location may return to detection monitoring in accordance with IAC 113.10(6)e. However, three consecutive events will be utilized to make the determination to return to detection monitoring to limit frequent fluctuation of wells moving between the detection and assessment monitoring program.

** LCL has exceeded the GWPS. This well/constituent pair is now identified as an SSL.

*** Non-MSWLF Unit source of the SSI identified.

Comments:

N/S = Not resampled; SSI was declared in lieu of conducting resample.

GWPS = groundwater protection standard

[1] List contains constituents identified as SSIs during the Fall 2024 statistical evaluation. Unless otherwise noted, all current results listed in this table are above background.

[2] Source of background standards and groundwater protection standard (GWPS) values are presented in Table 7. If the constituent isn't listed in Table 7, indicating the constituent hasn't been detected in background, then the background standard is the laboratory reporting limit (RL), and the GWPS is the maximum concentration limit (MCL) or the statewide standard (SS) if there's no MCL.

• SSIs continued to be identified for arsenic, benzene, and cis-1,2-dichloroethene at MW-121R in Fall 2024. No SSLs were identified at MW-121R.

• The Fall 2024 statistical evaluation did not identify all Appendix II constituents below the interwell prediction limit or laboratory reporting limit for three consecutive sampling events at MW-121R. As a result, MW-121R will not exit assessment monitoring at this time.

• No new Appendix II constituents (that are not in the Appendix I list) were detected at MW-121R during the 5-year resampling event. Therefore, no new Appendix II constituents will be added at MW-121R during the semiannual assessment monitoring events for the Appendix I and detected Appendix II. Details regarding the future sampling schedules for MW-121R are provided in Table 2.

Table 10
Historic SSIs and SSLs
2024 Annual Water Quality Report
Carroll County Landfill Western Expansion Area
Permit No. 14-SDP-01-74P

Key: gray = SSI black = SSL Well	Constituent	April 2017	September 2017	May 2018	September 2018	March 2019	October 2019	April 2020	June 2020	August/September 2020	December 2020	February 2021	April 2021	September 2021	April 2022	September 2022	April 2023	September 2023	April 2024	September 2024
Downgradient Monitoring Locations																				
GU-2A	No SSIs or SSLs																			
MW-119RR	No SSIs or SSLs																			
MW-121R	Arsenic								N.S.		N.S.	N.S.								
	Benzene								N.S.		N.S.	N.S.								
	cis-1,2-Dichloroethene								N.S.		N.S.	N.S.								
	Vinyl Chloride								N.S.		N.S.	N.S.								
MW-200	No SSIs or SSLs																			
MW-205	No SSIs or SSLs																			
MW-206	No SSIs or SSLs																			

Comments:

N.S. = Not sampled due to 1) well not installed yet; 2) location was dry or inaccessible; 3) location was not included in quarterly baseline/retesting event; or 4) only limited parameters analyzed during quarterly event.

Table 11
Leachate Management Summary
2024 Leachate Control System Performance Evaluation Report
Carroll County Landfill Western Expansion Area
Permit No. 14-SDP-01-74P

Month	Maximum Head on Liner (feet)							
	PZ-Leachate	LHMR-1B	LHMR-2B	LHMR-3	LHMR-4B	LHMR-5A	LHMR-5B [2]	LHMR-6
January	0.000	0.000	0.000	0.000	0.000	0.011	N/A	0.000
February	0.000	0.000	0.000	0.000	0.000	0.033	N/A	0.000
March	0.000	0.000	0.000	0.000	0.000	0.058	N/A	0.045
April	0.000	0.000	0.038	0.058	0.000	0.939	N/A	0.979
May	0.000	0.000	0.037	0.059	0.000	0.110	N/A	0.097
June	0.000	0.000	0.041	0.032	0.000	0.237	N/A	0.347
July	0.000	0.000	0.000	0.000	0.000	0.190	N/A	0.168
August	0.000	0.000	0.003	0.000	0.000	0.123	N/A	0.154
September	0.000	0.000	0.001	0.035	0.000	0.006	0.000	0.000
October	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
November	0.000	0.000	0.006	0.012	0.000	0.000	0.000	0.000
December	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Month	Leachate Collected [1] (gal)	Volume Recirculated (gal)	Discharged to Carroll WWTP (gal)	Precipitation (in)
January	71,200	0	71,200	1.36
February	132,700	0	132,700	0.34
March	104,600	0	104,600	3.34
April	139,900	0	139,900	1.83
May	279,600	0	279,600	8.00
June	152,200	0	152,200	3.06
July	119,100	0	119,100	4.06
August	83,000	0	83,000	2.20
September	66,700	0	66,700	0.20
October	58,800	0	58,800	1.16
November	83,600	0	83,600	3.29
December	64,300	0	64,300	0.74
2024 Annual Total	1,355,700	0	1,355,700	29.58

Grey highlighted cells indicate head levels in exceedance of 1 foot of head on the liner.

Comments:
gal = gallons
in = inches
N/A = not applicable
WWTP = wastewater treatment plant

[1] Leachate volumes are measured through a flow meter at the on-site lift station.

[2] At LHMR-5A, ongoing inssues with connecting to the transducer prevented access to recorded readings between Jan. and Aug. 2024. In Summer 2024, the transducer was replaced; however, the field supply company inadvertently shipped a barometric pressure transducer; therefore the readings were not represetnative of head levels. The transducer was replaced with a Rugged Troll 200 level transducer in Sep. 2024. The Jan. through Aug. 2024 levels at LHMR-5B can be interpolated from the readings at LHMR-5A and LHMR-6 given that that Phases 5A through 6 are contigous.

- The contents of this table are intended to satisfy the requirements set forth in 567 IAC 113.7(5)b and Special Provisions X.2.b and c.
- Leachate line cleaning and inspection of the on-site portions of the leachate collection system was conducted on Jul. 8-11 by Superior Jetting. A copy of the cleaning and inspection report is provided in Appendix C. The next line cleaning and inspection will be performed in 2027.
- Other maintenance activities performed in 2024 included semiannual cleaning and inspection of the lift station flow meter by Commission staff and annual jetting of the off-site portion of the force main by R&R Septic Services.
- The 2024 precipitation total of 29.58 inches was greater than 2020-2023 precipitation totals (20.10, 23.79, and 22.50 inches, respectively) and indicates a departure from the drought conditions that occurred from 2020-2023.
- In 2024, a correlation was not evident between precipitation and monthly leachate head levels in the Western Expansion Area. Some correlation was evident between precipitation and monthly leachate volumes, most notably in May 2024. A total of 1,355,700 gallons of leachate was discharged to the WWTP in 2024, compared to 796,400 gallons in 2023 and 925,400 gallons in 2022. Leachate generation has increased due to an increase in precipitation. Phases 5B and 6 remain relatively new cells (constructed in 2019). It is anticipated that the accumulation of waste and use of daily cover in Phases 5B and 6 will result in reductions in the volume of leachate generated at the Western Expansion Area over time.

Table 11
Leachate Management Summary
2024 Leachate Control System Performance Evaluation Report
Carroll County Landfill Western Expansion Area
Permit No. 14-SDP-01-74P

Comments Continued:

• For the Western Expansion Area, effective leachate control is defined in accordance with 567 IAC 113.7(5)b(3) as maintaining less than one foot of leachate head over the liner at the system's lowest point(s) within the waste unit. In 2024, head levels at PZ-Leachate, LHMR-1B, LHMR-2B, LHMR-3, LHMR-4B, LHMR-5A, LHMR-5B, and LHMR-6 were below one foot of head over the liner, indicating compliance with 567 IAC 113.7(5)b(3) for the Western Expansion Area.

• Laboratory analytical results for leachate disposal at the City of Carroll WWTP are included in Appendix C. In accordance with the Commission's Industrial User Agreement with the City of Carroll, leachate sample frequency, parameters, and collection are the responsibility of and conducted by the City of Carroll. The City of Carroll provides a copy of the analytical results to the Commission to include in the annual Leachate Control System Performance Evaluation Report (LCSPER).

Leachate Collection System Description:

• The active Western Expansion Area was constructed with a designed leachate collection system. Perforated gravity collection lines were installed in the drainage layer of each cell and transition to solid pipes, which penetrate the side walls of the cells through bootless pipe penetration components and terminate in maintenance holes. Leachate collected from Phases 1A through 3 gravity drain to maintenance holes located north of the Western Expansion Area. From those maintenance holes, leachate gravity flows east and connects with the leachate collection line on the north side of the Closed Eastern Area, where it continues to gravity flow to the on-site lift station. Leachate collected from Phases 4A through 6 gravity drain to maintenance holes located south of the Western Expansion Area. From the southern maintenance holes, leachate gravity flows east and connects with the leachate collection line on the south side of the Closed Eastern Area, where it continues to gravity flow to the on-site lift station. From the lift station, leachate that was collected from both the Closed Eastern Area and the Western Expansion Area is conveyed via force main to the City of Carroll sanitary sewer line.

• In 2016, the Commission replaced approximately 2,000 feet of the existing 2-inch diameter force main piping with 4-inch diameter transport piping, replaced approximately 3,000 feet of PVC gravity sanitary sewer pipe, installed or replaced 14 maintenance holes, and replaced one lift station and one valve vault maintenance hole with associated pumps, controls, valves, and fittings.

• In December 2018, JB Holland Construction replaced the entire section of leachate header between Manhole 5 and the lift station.

• Leachate head levels from the Western Expansion Area are monitored monthly via pressure transducers in the side-slope risers.

Table 12
Methane Monitoring Summary
2024 Methane Monitoring Report
Carroll County Landfill Western Expansion Area
Permit No. 14-SDP-01-74P

Monitoring Points			Methane Results (% LEL)							
Name	Type	Description	1/31/2024 - S (Y/N)		6/5/2024 - S (Y/N)		9/11/2024 - S (Y/N)		12/18/2024 - S (Y/N)	
GU-2A	Underdrain	Phases 2A, 2B, and 3	0		0		0		0	
GU-4A	Underdrain	Phases 4A, 4B, and 5A	0		0		0		0	
GP-3	Methane Monitoring Probe	Southeast of Phase 5A	0	N	0	N	0	N	0	N
MW-119RR	Monitoring Well	North of Phase 1B	0	N	0	N	0	N	0	N
MW-121R	Monitoring Well	North of Phase 1A	0	N	0	N	0	N	0	N
MW-122R	Monitoring Well	West of Phases 3 and 4A	0	N	0	N	0	N	0	N
MW-206	Monitoring Well	South of Phase 6	0	Y	0	Y	0	Y	0	Y
Western Maintenance Shop	Indoor	North of Phase 3	0		0		0		0	

S (Y/N) - Was screen submerged, yes or no or blank is non-applicable

Comments:

LEL = lower explosive limit

• The contents of this table are intended to satisfy the requirements set forth in 567 IAC 113.9(2) and Special Provision X.5.

• Evaluation of screen submergence is not applicable for GU-2A, GU-4A, and Western Maintenance Shop.

• At MW-206, the screen remained submerged in 2024. As previously reported, groundwater elevations have been steadily rising at MW-206 since Aug. 2019; however, they have reached static levels in 2024. The water table along the southeast portion of the Western Expansion Area (i.e., in the vicinity of MW-204RR, MW-205, and MW-206) exists within glacial till, and the horizontal hydraulic conductivity calculated for the till was 5.6x10-7 centimeters/second or 0.0016 feet/day (Foth, 2001). The natural confining conditions of the glacial till, which results in a low yield uppermost water-bearing unit, appears to have been exacerbated by the clay placement and compaction activities associated with the construction of Phases 5B and 6 (as well as ongoing drought conditions in Western Iowa from 2020-2023). As a result, it took several years for the static water levels to establish at MW-205 and MW-206. Currently, MW-205 and MW-206 both have submerged screens. These confining conditions, which result in very low hydraulic conductivity, will also limit the rate of methane migration, should it occur. GP-3 currently provides adequate coverage for methane migration. Since the screen is consistently submerged at MW-206, removal of MW-206 from the methane monitoring network is recommended.

• The quarterly methane results did not indicate concentrations in exceedance of 25% LEL for facility structures, 100% LEL at subsurface monitoring locations, and 100% LEL at the facility boundary. Based on 567 IAC 113.9(2), no action is required for this facility with regard to methane control at this time.

• Monitoring of potential methane emissions and migration will be conducted on a quarterly basis in 2025 in accordance with the 567 IAC 113.9(2) and Special Provision X.5.

Table 13
Analytical Data Summary
2024 Annual Water Quality Report
Carroll County Landfill Western Expansion Area
Permit No. 14-SDP-01-74P

Comments:

The following tables present the groundwater Appendix II analytical data collected since Apr. 2008.

Detections above the laboratory MDL are shown in **bold**.

Bkgrnd = background monitoring location

Delin = delineation monitoring location

DwnGrad = downgradient (compliance) monitoring location

• As discussed in the *2021 AWQR* (Foth, 2022), the MW-119RR data was not combined with the abandoned MW-119R data due to statistically significant differences between the two data sets. As a result, only the MW-119RR data is provided in Table 13.

• MW-200 primarily serves as a downgradient monitoring location; however, MW-200 is also used to supplement the background data set. As a result, MW-200 is listed in Table 13 as a downgradient monitoring location and also as a background monitoring location. As discussed in the *2021 AWQR* (Foth, 2022), the Sep. 2020 data at MW-200 has been removed from the intrawell and interwell background data sets. These results are listed as crossed-out concentrations under the MW-200 background monitoring location data in Table 13.

• As discussed in the Report Priority, Foth requests the removal of Appendix I metals data at MW-205 and MW-206 prior to achieving static water levels after well installation when higher total suspended solid (TSS) concentrations were observed. The following dataset adjustments are requested and are listed as crossed-off concentrations in Table 13:

- • Removal of antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, selenium, silver, thallium, vanadium, and zinc data at MW-205 from April 2020 through April 2021.
- • Removal of antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, selenium, silver, thallium, vanadium, and zinc data at aMW-206 from October 2019 through August 2020.

Table 13
Carroll County Landfill Western Expansion Area **Analytical Data Summary**
Permit No. 14-SDP-01-74P **2024 Annual Water Quality Report**

Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
1,1,1,2-Tetrachloroethane	2008-04	ug/l							< 1.00	
1,1,1,2-Tetrachloroethane	2008-06	ug/l							< 1.00	
1,1,1,2-Tetrachloroethane	2008-08	ug/l							< 1.00	
1,1,1,2-Tetrachloroethane	2008-09	ug/l							< 1.00	
1,1,1,2-Tetrachloroethane	2009-03	ug/l							< 1	
1,1,1,2-Tetrachloroethane	2009-06	ug/l							< 1.00	
1,1,1,2-Tetrachloroethane	2009-09	ug/l				< 1.00			< 1.00	< 1.00
1,1,1,2-Tetrachloroethane	2009-12	ug/l				< 1.00				< 1.00
1,1,1,2-Tetrachloroethane	2010-03	ug/l							< 5.00	
1,1,1,2-Tetrachloroethane	2010-04	ug/l				< 5.00				< 5.00
1,1,1,2-Tetrachloroethane	2010-06	ug/l				< 1.00				< 1.00
1,1,1,2-Tetrachloroethane	2010-09	ug/l				< 1.00			< 1.00	< 1.00
1,1,1,2-Tetrachloroethane	2011-03	ug/l				< 1.00			< 1.00	< 1.00
1,1,1,2-Tetrachloroethane	2011-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,1,1,2-Tetrachloroethane	2011-11	ug/l	< 1.00		< 1.00					
1,1,1,2-Tetrachloroethane	2012-03	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,1,1,2-Tetrachloroethane	2012-06	ug/l	< 1.00		< 1.00					
1,1,1,2-Tetrachloroethane	2012-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,1,1,2-Tetrachloroethane	2013-03	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,1,1,2-Tetrachloroethane	2013-06	ug/l			< 1.00	< 1.00			< 1.00	< 1.00
1,1,1,2-Tetrachloroethane	2013-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,1,1,2-Tetrachloroethane	2013-11	ug/L				< 1.00			< 1.00	< 1.00
1,1,1,2-Tetrachloroethane	2014-03	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,1,1,2-Tetrachloroethane	2014-06	ug/L			< 1.00	< 1.00			< 1.00	< 1.00
1,1,1,2-Tetrachloroethane	2014-08	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,1,1,2-Tetrachloroethane	2014-12	ug/L			< 1.00	< 1.00			< 1.00	< 1.00
1,1,1,2-Tetrachloroethane	2015-04	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,1,1,2-Tetrachloroethane	2015-09	ug/L			< 1					
1,1,1,2-Tetrachloroethane	2015-10	ug/L	< 1			< 1			< 1	< 1
1,1,1,2-Tetrachloroethane	2016-04	ug/L	< 1		< 1	< 1			< 1	< 1
1,1,1,2-Tetrachloroethane	2016-07	ug/L				< 1				< 1
1,1,1,2-Tetrachloroethane	2016-10	ug/L	< 1		< 1	< 1			< 1	< 1
1,1,1,2-Tetrachloroethane	2017-05	ug/L	< 1		< 1	< 1			< 1	< 1
1,1,1,2-Tetrachloroethane	2017-09	ug/L	< 1		< 1	< 1			< 1	< 1
1,1,1,2-Tetrachloroethane	2018-05	ug/L			< 1	< 1			< 1	< 1
1,1,1,2-Tetrachloroethane	2018-09	ug/L	< 1		< 1	< 1			< 1	< 1
1,1,1,2-Tetrachloroethane	2019-03	ug/L	< 1		< 1	< 1			< 1	< 1
1,1,1,2-Tetrachloroethane	2019-10	ug/L		< 1	< 1	< 1		< 1	< 1	< 1
1,1,1,2-Tetrachloroethane	2020-04	ug/L		< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1,2-Tetrachloroethane	2020-06	ug/L	< 1					< 1		
1,1,1,2-Tetrachloroethane	2020-08	ug/L	< 1				< 1	< 1		
1,1,1,2-Tetrachloroethane	2020-09	ug/L		< 1	< 1	< 1			< 1	~~< 1~~
1,1,1,2-Tetrachloroethane	2020-12	ug/L					< 1	< 1		
1,1,1,2-Tetrachloroethane	2021-02	ug/L					< 1			
1,1,1,2-Tetrachloroethane	2021-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1,2-Tetrachloroethane	2021-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1

Table 13
Carroll County Landfill Western Expansion Area **Analytical Data Summary**
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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
1,1,1,2-Tetrachloroethane	2022-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1,2-Tetrachloroethane	2022-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1,2-Tetrachloroethane	2023-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1,2-Tetrachloroethane	2023-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1,2-Tetrachloroethane	2024-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1,2-Tetrachloroethane	2024-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1-Trichloroethane	2008-04	ug/l							< 1.00	
1,1,1-Trichloroethane	2008-06	ug/l							< 1.00	
1,1,1-Trichloroethane	2008-08	ug/l							< 1.00	
1,1,1-Trichloroethane	2008-09	ug/l							< 1.00	
1,1,1-Trichloroethane	2009-03	ug/l							< 1	
1,1,1-Trichloroethane	2009-06	ug/l							< 1.00	
1,1,1-Trichloroethane	2009-09	ug/l				< 1.00			< 1.00	< 1.00
1,1,1-Trichloroethane	2009-12	ug/l				< 1.00				< 1.00
1,1,1-Trichloroethane	2010-03	ug/l							< 4.00	
1,1,1-Trichloroethane	2010-04	ug/l				< 4.00				< 4.00
1,1,1-Trichloroethane	2010-06	ug/l				< 1.00				< 1.00
1,1,1-Trichloroethane	2010-09	ug/l				< 1.00			< 1.00	< 1.00
1,1,1-Trichloroethane	2011-03	ug/l				< 1.00			< 1.00	< 1.00
1,1,1-Trichloroethane	2011-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,1,1-Trichloroethane	2011-11	ug/l	< 1.00		< 1.00					
1,1,1-Trichloroethane	2012-03	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,1,1-Trichloroethane	2012-06	ug/l	< 1.00		< 1.00					
1,1,1-Trichloroethane	2012-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,1,1-Trichloroethane	2013-03	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,1,1-Trichloroethane	2013-06	ug/l			< 1.00	< 1.00			< 1.00	< 1.00
1,1,1-Trichloroethane	2013-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,1,1-Trichloroethane	2013-11	ug/L				< 1.00			< 1.00	< 1.00
1,1,1-Trichloroethane	2014-03	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,1,1-Trichloroethane	2014-06	ug/L			< 1.00	< 1.00			< 1.00	< 1.00
1,1,1-Trichloroethane	2014-08	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,1,1-Trichloroethane	2014-12	ug/L			< 1.00	< 1.00			< 1.00	< 1.00
1,1,1-Trichloroethane	2015-04	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,1,1-Trichloroethane	2015-09	ug/L			< 1					
1,1,1-Trichloroethane	2015-10	ug/L	< 1			< 1			< 1	< 1
1,1,1-Trichloroethane	2016-04	ug/L	< 1		< 1	< 1			< 1	< 1
1,1,1-Trichloroethane	2016-07	ug/L				< 1				< 1
1,1,1-Trichloroethane	2016-10	ug/L	< 1		< 1	< 1			< 1	< 1
1,1,1-Trichloroethane	2017-05	ug/L	< 1		< 1	< 1			< 1	< 1
1,1,1-Trichloroethane	2017-09	ug/L	< 1		< 1	< 1			< 1	< 1
1,1,1-Trichloroethane	2018-05	ug/L			< 1	< 1			< 1	< 1
1,1,1-Trichloroethane	2018-09	ug/L	< 1		< 1	< 1			< 1	< 1
1,1,1-Trichloroethane	2019-03	ug/L	< 1		< 1	< 1			< 1	< 1
1,1,1-Trichloroethane	2019-10	ug/L		< 1	< 1	< 1		< 1	< 1	< 1
1,1,1-Trichloroethane	2020-04	ug/L		< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1-Trichloroethane	2020-06	ug/L	< 1					< 1		

Table 13
Carroll County Landfill Western Expansion Area **Analytical Data Summary**
Permit No. 14-SDP-01-74P **2024 Annual Water Quality Report**

Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
1,1,1-Trichloroethane	2020-08	ug/L	< 1				< 1	< 1		
1,1,1-Trichloroethane	2020-09	ug/L		< 1	< 1	< 1			< 1	~~< 1~~
1,1,1-Trichloroethane	2020-12	ug/L					< 1	< 1		
1,1,1-Trichloroethane	2021-02	ug/L					< 1			
1,1,1-Trichloroethane	2021-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1-Trichloroethane	2021-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1-Trichloroethane	2022-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1-Trichloroethane	2022-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1-Trichloroethane	2023-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1-Trichloroethane	2023-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1-Trichloroethane	2024-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,1-Trichloroethane	2024-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-Tetrachloroethane	2008-04	ug/l							< 1.00	
1,1,2,2-Tetrachloroethane	2008-06	ug/l							< 1.00	
1,1,2,2-Tetrachloroethane	2008-08	ug/l							< 1.00	
1,1,2,2-Tetrachloroethane	2008-09	ug/l							< 1.00	
1,1,2,2-Tetrachloroethane	2009-03	ug/l							< 1	
1,1,2,2-Tetrachloroethane	2009-06	ug/l							< 1.00	
1,1,2,2-Tetrachloroethane	2009-09	ug/l				< 1.00			< 1.00	< 1.00
1,1,2,2-Tetrachloroethane	2009-12	ug/l				< 1.00				< 1.00
1,1,2,2-Tetrachloroethane	2010-03	ug/l							< 1.00	
1,1,2,2-Tetrachloroethane	2010-04	ug/l				< 1.00				< 1.00
1,1,2,2-Tetrachloroethane	2010-06	ug/l				< 1.00				< 1.00
1,1,2,2-Tetrachloroethane	2010-09	ug/l				< 1.00			< 1.00	< 1.00
1,1,2,2-Tetrachloroethane	2011-03	ug/l				< 1.00			< 1.00	< 1.00
1,1,2,2-Tetrachloroethane	2011-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,1,2,2-Tetrachloroethane	2011-11	ug/l	< 1.00		< 1.00					
1,1,2,2-Tetrachloroethane	2012-03	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,1,2,2-Tetrachloroethane	2012-06	ug/l	< 1.00		< 1.00					
1,1,2,2-Tetrachloroethane	2012-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,1,2,2-Tetrachloroethane	2013-03	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,1,2,2-Tetrachloroethane	2013-06	ug/l			< 1.00	< 1.00			< 1.00	< 1.00
1,1,2,2-Tetrachloroethane	2013-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,1,2,2-Tetrachloroethane	2013-11	ug/L				< 1.00			< 1.00	< 1.00
1,1,2,2-Tetrachloroethane	2014-03	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,1,2,2-Tetrachloroethane	2014-06	ug/L			< 1.00	< 1.00			< 1.00	< 1.00
1,1,2,2-Tetrachloroethane	2014-08	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,1,2,2-Tetrachloroethane	2014-12	ug/L			< 1.00	< 1.00			< 1.00	< 1.00
1,1,2,2-Tetrachloroethane	2015-04	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,1,2,2-Tetrachloroethane	2015-09	ug/L			< 1					
1,1,2,2-Tetrachloroethane	2015-10	ug/L	< 1			< 1			< 1	< 1
1,1,2,2-Tetrachloroethane	2016-04	ug/L	< 1		< 1	< 1			< 1	< 1
1,1,2,2-Tetrachloroethane	2016-07	ug/L				< 1				< 1
1,1,2,2-Tetrachloroethane	2016-10	ug/L	< 1		< 1	< 1			< 1	< 1
1,1,2,2-Tetrachloroethane	2017-05	ug/L	< 1		< 1	< 1			< 1	< 1
1,1,2,2-Tetrachloroethane	2017-09	ug/L	< 1		< 1	< 1			< 1	< 1

Carroll County Landfill Western Expansion Area
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Table 13
Analytical Data Summary
2024 Annual Water Quality Report

Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
1,1,2,2-Tetrachloroethane	2018-05	ug/L			< 1	< 1			< 1	< 1
1,1,2,2-Tetrachloroethane	2018-09	ug/L	< 1		< 1	< 1			< 1	< 1
1,1,2,2-Tetrachloroethane	2019-03	ug/L	< 1		< 1	< 1			< 1	< 1
1,1,2,2-Tetrachloroethane	2019-10	ug/L		< 1	< 1	< 1		< 1	< 1	< 1
1,1,2,2-Tetrachloroethane	2020-04	ug/L		< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-Tetrachloroethane	2020-06	ug/L	< 1					< 1		
1,1,2,2-Tetrachloroethane	2020-08	ug/L	< 1				< 1	< 1		
1,1,2,2-Tetrachloroethane	2020-09	ug/L		< 1	< 1	< 1			< 1	~~< 1~~
1,1,2,2-Tetrachloroethane	2020-12	ug/L					< 1	< 1		
1,1,2,2-Tetrachloroethane	2021-02	ug/L					< 1			
1,1,2,2-Tetrachloroethane	2021-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-Tetrachloroethane	2021-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-Tetrachloroethane	2022-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-Tetrachloroethane	2022-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-Tetrachloroethane	2023-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-Tetrachloroethane	2023-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-Tetrachloroethane	2024-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-Tetrachloroethane	2024-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2-Trichloroethane	2008-04	ug/l							< 1.00	
1,1,2-Trichloroethane	2008-06	ug/l							< 1.00	
1,1,2-Trichloroethane	2008-08	ug/l							< 1.00	
1,1,2-Trichloroethane	2008-09	ug/l							< 1.00	
1,1,2-Trichloroethane	2009-03	ug/l							< 1	
1,1,2-Trichloroethane	2009-06	ug/l							< 1.00	
1,1,2-Trichloroethane	2009-09	ug/l				< 1.00			< 1.00	< 1.00
1,1,2-Trichloroethane	2009-12	ug/l				< 1.00				< 1.00
1,1,2-Trichloroethane	2010-03	ug/l							< 1.00	
1,1,2-Trichloroethane	2010-04	ug/l				< 1.00				< 1.00
1,1,2-Trichloroethane	2010-06	ug/l				< 1.00				< 1.00
1,1,2-Trichloroethane	2010-09	ug/l				< 1.00			< 1.00	< 1.00
1,1,2-Trichloroethane	2011-03	ug/l				< 1.00			< 1.00	< 1.00
1,1,2-Trichloroethane	2011-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,1,2-Trichloroethane	2011-11	ug/l	< 1.00		< 1.00					
1,1,2-Trichloroethane	2012-03	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,1,2-Trichloroethane	2012-06	ug/l	< 1.00		< 1.00					
1,1,2-Trichloroethane	2012-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,1,2-Trichloroethane	2013-03	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,1,2-Trichloroethane	2013-06	ug/l			< 1.00	< 1.00			< 1.00	< 1.00
1,1,2-Trichloroethane	2013-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,1,2-Trichloroethane	2013-11	ug/L				< 1.00			< 1.00	< 1.00
1,1,2-Trichloroethane	2014-03	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,1,2-Trichloroethane	2014-06	ug/L			< 1.00	< 1.00			< 1.00	< 1.00
1,1,2-Trichloroethane	2014-08	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,1,2-Trichloroethane	2014-12	ug/L			< 1.00	< 1.00			< 1.00	< 1.00
1,1,2-Trichloroethane	2015-04	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,1,2-Trichloroethane	2015-09	ug/L			< 1					

Table 13
Carroll County Landfill Western Expansion Area **Analytical Data Summary**
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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
1,1,2-Trichloroethane	2015-10	ug/L	< 1			< 1			< 1	< 1
1,1,2-Trichloroethane	2016-04	ug/L	< 1		< 1	< 1			< 1	< 1
1,1,2-Trichloroethane	2016-07	ug/L				< 1				< 1
1,1,2-Trichloroethane	2016-10	ug/L	< 1		< 1	< 1			< 1	< 1
1,1,2-Trichloroethane	2017-05	ug/L	< 1		< 1	< 1			< 1	< 1
1,1,2-Trichloroethane	2017-09	ug/L	< 1		< 1	< 1			< 1	< 1
1,1,2-Trichloroethane	2018-05	ug/L			< 1	< 1			< 1	< 1
1,1,2-Trichloroethane	2018-09	ug/L	< 1		< 1	< 1			< 1	< 1
1,1,2-Trichloroethane	2019-03	ug/L	< 1		< 1	< 1			< 1	< 1
1,1,2-Trichloroethane	2019-10	ug/L		< 1	< 1	< 1		< 1	< 1	< 1
1,1,2-Trichloroethane	2020-04	ug/L		< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2-Trichloroethane	2020-06	ug/L	< 1					< 1		
1,1,2-Trichloroethane	2020-08	ug/L	< 1				< 1	< 1		
1,1,2-Trichloroethane	2020-09	ug/L		< 1	< 1	< 1			< 1	~~< 1~~
1,1,2-Trichloroethane	2020-12	ug/L					< 1	< 1		
1,1,2-Trichloroethane	2021-02	ug/L					< 1			
1,1,2-Trichloroethane	2021-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2-Trichloroethane	2021-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2-Trichloroethane	2022-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2-Trichloroethane	2022-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2-Trichloroethane	2023-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2-Trichloroethane	2023-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2-Trichloroethane	2024-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2-Trichloroethane	2024-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloroethane	2008-04	ug/l							< 1.00	
1,1-Dichloroethane	2008-06	ug/l							< 1.00	
1,1-Dichloroethane	2008-08	ug/l							< 1.00	
1,1-Dichloroethane	2008-09	ug/l							< 1.00	
1,1-Dichloroethane	2009-03	ug/l							< 1	
1,1-Dichloroethane	2009-06	ug/l							< 1.00	
1,1-Dichloroethane	2009-09	ug/l				< 1.00			< 1.00	< 1.00
1,1-Dichloroethane	2009-12	ug/l				< 1.00				< 1.00
1,1-Dichloroethane	2010-03	ug/l							< 1.00	
1,1-Dichloroethane	2010-04	ug/l				< 1.00				< 1.00
1,1-Dichloroethane	2010-06	ug/l				< 1.00				< 1.00
1,1-Dichloroethane	2010-09	ug/l				< 1.00			< 1.00	< 1.00
1,1-Dichloroethane	2011-03	ug/l				< 1.00			< 1.00	< 1.00
1,1-Dichloroethane	2011-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,1-Dichloroethane	2011-11	ug/l	< 1.00		< 1.00					
1,1-Dichloroethane	2012-03	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,1-Dichloroethane	2012-06	ug/l	< 1.00		< 1.00					
1,1-Dichloroethane	2012-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,1-Dichloroethane	2013-03	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,1-Dichloroethane	2013-06	ug/l			< 1.00	< 1.00			< 1.00	< 1.00
1,1-Dichloroethane	2013-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,1-Dichloroethane	2013-11	ug/L				< 1.00			< 1.00	< 1.00

Table 13
Carroll County Landfill Western Expansion Area **Analytical Data Summary**
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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
1,1-Dichloroethane	2014-03	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,1-Dichloroethane	2014-06	ug/L			< 1.00	< 1.00			< 1.00	< 1.00
1,1-Dichloroethane	2014-08	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,1-Dichloroethane	2014-12	ug/L			< 1.00	< 1.00			< 1.00	< 1.00
1,1-Dichloroethane	2015-04	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,1-Dichloroethane	2015-09	ug/L			< 1					
1,1-Dichloroethane	2015-10	ug/L	< 1			< 1			< 1	< 1
1,1-Dichloroethane	2016-04	ug/L	< 1		< 1	< 1			< 1	< 1
1,1-Dichloroethane	2016-07	ug/L				< 1				< 1
1,1-Dichloroethane	2016-10	ug/L	< 1		< 1	< 1			< 1	< 1
1,1-Dichloroethane	2017-05	ug/L	< 1		< 1	< 1			< 1	< 1
1,1-Dichloroethane	2017-09	ug/L	< 1		< 1	< 1			< 1	< 1
1,1-Dichloroethane	2018-05	ug/L			< 1	< 1			< 1	< 1
1,1-Dichloroethane	2018-09	ug/L	< 1		< 1	< 1			< 1	< 1
1,1-Dichloroethane	2019-03	ug/L	< 1		< 1	< 1			< 1	< 1
1,1-Dichloroethane	2019-10	ug/L		< 1	< 1	< 1		< 1	< 1	< 1
1,1-Dichloroethane	2020-04	ug/L		< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloroethane	2020-06	ug/L	< 1					< 1		
1,1-Dichloroethane	2020-08	ug/L	< 1				< 1	< 1		
1,1-Dichloroethane	2020-09	ug/L		< 1	< 1	< 1			< 1	~~< 1~~
1,1-Dichloroethane	2020-12	ug/L					< 1	< 1		
1,1-Dichloroethane	2021-02	ug/L					< 1			
1,1-Dichloroethane	2021-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloroethane	2021-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloroethane	2022-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloroethane	2022-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloroethane	2023-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloroethane	2023-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloroethane	2024-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloroethane	2024-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloroethene	2008-04	ug/l							< 2.00	
1,1-Dichloroethene	2008-06	ug/l							< 2.00	
1,1-Dichloroethene	2008-08	ug/l							< 2.00	
1,1-Dichloroethene	2008-09	ug/l							< 2.00	
1,1-Dichloroethene	2009-03	ug/l							< 2	
1,1-Dichloroethene	2009-06	ug/l							< 2.00	
1,1-Dichloroethene	2009-09	ug/l				< 2.00			< 2.00	< 2.00
1,1-Dichloroethene	2009-12	ug/l				< 2.00				< 2.00
1,1-Dichloroethene	2010-03	ug/l							< 2.00	
1,1-Dichloroethene	2010-04	ug/l				< 2.00				< 2.00
1,1-Dichloroethene	2010-06	ug/l				< 2.00				< 2.00
1,1-Dichloroethene	2010-09	ug/l				< 2.00			< 2.00	< 2.00
1,1-Dichloroethene	2011-03	ug/l				< 2.00			< 2.00	< 2.00
1,1-Dichloroethene	2011-09	ug/l	< 2.00		< 2.00	< 2.00			< 2.00	< 2.00
1,1-Dichloroethene	2011-11	ug/l	< 2.00		< 2.00					
1,1-Dichloroethene	2012-03	ug/l	< 2.00		< 2.00	< 2.00			< 2.00	< 2.00

Table 13
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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
1,1-Dichloroethene	2012-06	ug/l	< 2.00		< 2.00					
1,1-Dichloroethene	2012-09	ug/l	< 2.00		< 2.00	< 2.00			< 2.00	< 2.00
1,1-Dichloroethene	2013-03	ug/l	< 2.00		< 2.00	< 2.00			< 2.00	< 2.00
1,1-Dichloroethene	2013-06	ug/l			< 2.00	< 2.00			< 2.00	< 2.00
1,1-Dichloroethene	2013-09	ug/l	< 2.00		< 2.00	< 2.00			< 2.00	< 2.00
1,1-Dichloroethene	2013-11	ug/L				< 2.00			< 2.00	< 2.00
1,1-Dichloroethene	2014-03	ug/L	< 2.00		< 2.00	< 2.00			< 2.00	< 2.00
1,1-Dichloroethene	2014-06	ug/L			< 2.00	< 2.00			< 2.00	< 2.00
1,1-Dichloroethene	2014-08	ug/L	< 2.00		< 2.00	< 2.00			< 2.00	< 2.00
1,1-Dichloroethene	2014-12	ug/L			< 2.00	< 2.00			< 2.00	< 2.00
1,1-Dichloroethene	2015-04	ug/L	< 2.00		< 2.00	< 2.00			< 2.00	< 2.00
1,1-Dichloroethene	2015-09	ug/L			< 2					
1,1-Dichloroethene	2015-10	ug/L	< 2			< 2			< 2	< 2
1,1-Dichloroethene	2016-04	ug/L	< 2		< 2	< 2			< 2	< 2
1,1-Dichloroethene	2016-07	ug/L				< 2				< 2
1,1-Dichloroethene	2016-10	ug/L	< 2		< 2	< 2			< 2	< 2
1,1-Dichloroethene	2017-05	ug/L	< 2		< 2	< 2			< 2	< 2
1,1-Dichloroethene	2017-09	ug/L	< 2		< 2	< 2			< 2	< 2
1,1-Dichloroethene	2018-05	ug/L			< 2	< 2			< 2	< 2
1,1-Dichloroethene	2018-09	ug/L	< 2		< 2	< 2			< 2	< 2
1,1-Dichloroethene	2019-03	ug/L	< 2		< 2	< 2			< 2	< 2
1,1-Dichloroethene	2019-10	ug/L		< 2	< 2	< 2		< 2	< 2	< 2
1,1-Dichloroethene	2020-04	ug/L		< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,1-Dichloroethene	2020-06	ug/L	< 2					< 2		
1,1-Dichloroethene	2020-08	ug/L	< 2				< 2	< 2		
1,1-Dichloroethene	2020-09	ug/L		< 2	< 2	< 2			< 2	~~< 2~~
1,1-Dichloroethene	2020-12	ug/L					< 2	< 2		
1,1-Dichloroethene	2021-02	ug/L					< 2			
1,1-Dichloroethene	2021-04	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,1-Dichloroethene	2021-09	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,1-Dichloroethene	2022-04	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,1-Dichloroethene	2022-09	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,1-Dichloroethene	2023-04	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,1-Dichloroethene	2023-09	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,1-Dichloroethene	2024-04	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,1-Dichloroethene	2024-09	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
1,1-Dichloropropene	2009-03	ug/l							< 1	
1,1-Dichloropropene	2009-06	ug/l							< 1.00	
1,1-Dichloropropene	2009-09	ug/l							< 1.00	
1,1-Dichloropropene	2010-03	ug/l							< 1.00	
1,1-Dichloropropene	2010-09	ug/l							< 1.00	
1,1-Dichloropropene	2011-03	ug/l							< 1.00	
1,1-Dichloropropene	2014-06	ug/L			< 1.00					
1,1-Dichloropropene	2014-08	ug/L			< 1.00				< 1.00	
1,1-Dichloropropene	2015-10	ug/L				< 1			< 1	< 1
1,1-Dichloropropene	2016-07	ug/L				< 1				< 1

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Table 13
Analytical Data Summary
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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
1,1-Dichloropropene	2019-10	ug/L			< 1	< 1			< 1	< 1
1,1-Dichloropropene	2020-04	ug/L			< 1	< 1			< 1	< 1
1,1-Dichloropropene	2020-09	ug/L				< 1			< 1	~~< 1~~
1,1-Dichloropropene	2024-09	ug/L			< 1	< 1			< 1	< 1
1,2,3-Trichloropropane	2008-04	ug/l							< 1.00	
1,2,3-Trichloropropane	2008-06	ug/l							< 1.00	
1,2,3-Trichloropropane	2008-08	ug/l							< 1.00	
1,2,3-Trichloropropane	2008-09	ug/l							< 1.00	
1,2,3-Trichloropropane	2009-03	ug/l							< 1	
1,2,3-Trichloropropane	2009-06	ug/l							< 1.00	
1,2,3-Trichloropropane	2009-09	ug/l				< 1.00			< 1.00	< 1.00
1,2,3-Trichloropropane	2009-12	ug/l				< 1.00				< 1.00
1,2,3-Trichloropropane	2010-03	ug/l							< 1.00	
1,2,3-Trichloropropane	2010-04	ug/l				< 1.00				< 1.00
1,2,3-Trichloropropane	2010-06	ug/l				< 1.00				< 1.00
1,2,3-Trichloropropane	2010-09	ug/l				< 1.00			< 1.00	< 1.00
1,2,3-Trichloropropane	2011-03	ug/l				< 1.00			< 1.00	< 1.00
1,2,3-Trichloropropane	2011-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,2,3-Trichloropropane	2011-11	ug/l	< 1.00		< 1.00					
1,2,3-Trichloropropane	2012-03	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,2,3-Trichloropropane	2012-06	ug/l	< 1.00		< 1.00					
1,2,3-Trichloropropane	2012-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,2,3-Trichloropropane	2013-03	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,2,3-Trichloropropane	2013-06	ug/l			< 1.00	< 1.00			< 1.00	< 1.00
1,2,3-Trichloropropane	2013-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,2,3-Trichloropropane	2013-11	ug/L				< 1.00			< 1.00	< 1.00
1,2,3-Trichloropropane	2014-03	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,2,3-Trichloropropane	2014-06	ug/L			< 1.00	< 1.00			< 1.00	< 1.00
1,2,3-Trichloropropane	2014-08	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,2,3-Trichloropropane	2014-12	ug/L			< 1.00	< 1.00			< 1.00	< 1.00
1,2,3-Trichloropropane	2015-04	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,2,3-Trichloropropane	2015-09	ug/L			< 1					
1,2,3-Trichloropropane	2015-10	ug/L	< 1			< 1			< 1	< 1
1,2,3-Trichloropropane	2016-04	ug/L	< 1		< 1	< 1			< 1	< 1
1,2,3-Trichloropropane	2016-07	ug/L				< 1				< 1
1,2,3-Trichloropropane	2016-10	ug/L	< 1		< 1	< 1			< 1	< 1
1,2,3-Trichloropropane	2017-05	ug/L	< 1		< 1	< 1			< 1	< 1
1,2,3-Trichloropropane	2017-09	ug/L	< 1		< 1	< 1			< 1	< 1
1,2,3-Trichloropropane	2018-05	ug/L			< 1	< 1			< 1	< 1
1,2,3-Trichloropropane	2018-09	ug/L	< 1		< 1	< 1			< 1	< 1
1,2,3-Trichloropropane	2019-03	ug/L	< 1		< 1	< 1			< 1	< 1
1,2,3-Trichloropropane	2019-10	ug/L		< 1	< 1	< 1		< 1	< 1	< 1
1,2,3-Trichloropropane	2020-04	ug/L		< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2,3-Trichloropropane	2020-06	ug/L	< 1					< 1		
1,2,3-Trichloropropane	2020-08	ug/L	< 1				< 1	< 1		
1,2,3-Trichloropropane	2020-09	ug/L		< 1	< 1	< 1			< 1	~~< 1~~

Carroll County Landfill Western Expansion Area
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Table 13
Analytical Data Summary
2024 Annual Water Quality Report

Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
1,2,3-Trichloropropane	2020-12	ug/L					< 1	< 1		
1,2,3-Trichloropropane	2021-02	ug/L					< 1			
1,2,3-Trichloropropane	2021-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2,3-Trichloropropane	2021-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2,3-Trichloropropane	2022-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2,3-Trichloropropane	2022-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2,3-Trichloropropane	2023-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2,3-Trichloropropane	2023-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2,3-Trichloropropane	2024-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2,3-Trichloropropane	2024-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2,4,5-Tetrachlorobenzene	2009-03	ug/l							< 10	
1,2,4,5-Tetrachlorobenzene	2009-06	ug/l							< 10.0	
1,2,4,5-Tetrachlorobenzene	2009-09	ug/l							< 10.0	
1,2,4,5-Tetrachlorobenzene	2010-03	ug/l							< 10.0	
1,2,4,5-Tetrachlorobenzene	2010-09	ug/l							< 10.0	
1,2,4,5-Tetrachlorobenzene	2011-03	ug/l							< 12.0	
1,2,4,5-Tetrachlorobenzene	2014-06	ug/L			< 10.5					
1,2,4,5-Tetrachlorobenzene	2014-08	ug/L			< 10.2				< 10.8	
1,2,4,5-Tetrachlorobenzene	2015-10	ug/L				< 10			< 10	< 10
1,2,4,5-Tetrachlorobenzene	2016-07	ug/L				< 10.4				< 10.4
1,2,4,5-Tetrachlorobenzene	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
1,2,4,5-Tetrachlorobenzene	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
1,2,4,5-Tetrachlorobenzene	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
1,2,4-Trichlorobenzene	2009-03	ug/l							< 5	
1,2,4-Trichlorobenzene	2009-06	ug/l							< 5.00	
1,2,4-Trichlorobenzene	2009-09	ug/l							< 5.00	
1,2,4-Trichlorobenzene	2009-09	ug/l							< 10.0	
1,2,4-Trichlorobenzene	2010-03	ug/l							< 5.00	
1,2,4-Trichlorobenzene	2010-03	ug/l							< 10.0	
1,2,4-Trichlorobenzene	2010-09	ug/l							< 5.00	
1,2,4-Trichlorobenzene	2010-09	ug/l							< 10.0	
1,2,4-Trichlorobenzene	2011-03	ug/l							< 5.00	
1,2,4-Trichlorobenzene	2011-03	ug/l							< 12.0	
1,2,4-Trichlorobenzene	2014-06	ug/L			< 5.00					
1,2,4-Trichlorobenzene	2014-08	ug/L			< 5.00				< 5.00	
1,2,4-Trichlorobenzene	2015-10	ug/L				< 5			< 5	< 5
1,2,4-Trichlorobenzene	2016-07	ug/L				< 5				< 5
1,2,4-Trichlorobenzene	2019-10	ug/L			< 5	< 5			< 5	< 5
1,2,4-Trichlorobenzene	2020-04	ug/L			< 5	< 5			< 5	< 5
1,2,4-Trichlorobenzene	2020-09	ug/L				< 5			< 5	~~< 5~~
1,2,4-Trichlorobenzene	2024-09	ug/L			< 5	< 5			< 5	< 5
1,2-Dibromo-3-chloropropane	2008-04	ug/l							< 10.0	
1,2-Dibromo-3-chloropropane	2008-06	ug/l							< 10.0	
1,2-Dibromo-3-chloropropane	2008-08	ug/l							< 10.0	
1,2-Dibromo-3-chloropropane	2008-09	ug/l							< 10.0	
1,2-Dibromo-3-chloropropane	2009-03	ug/l							< 10	

Table 13
Carroll County Landfill Western Expansion Area **Analytical Data Summary**
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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
1,2-Dibromo-3-chloropropane	2009-06	ug/l							< 10.0	
1,2-Dibromo-3-chloropropane	2009-09	ug/l				< 10.0			< 10.0	< 10.0
1,2-Dibromo-3-chloropropane	2009-12	ug/l				< 10.0				< 10.0
1,2-Dibromo-3-chloropropane	2010-03	ug/l							< 10.0	
1,2-Dibromo-3-chloropropane	2010-04	ug/l				< 10.0				< 10.0
1,2-Dibromo-3-chloropropane	2010-06	ug/l				< 10.0				< 10.0
1,2-Dibromo-3-chloropropane	2010-09	ug/l				< 20.0			< 20.0	< 20.0
1,2-Dibromo-3-chloropropane	2011-03	ug/l				< 10.0			< 10.0	< 10.0
1,2-Dibromo-3-chloropropane	2011-09	ug/l	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
1,2-Dibromo-3-chloropropane	2011-11	ug/l	< 10.0		< 10.0					
1,2-Dibromo-3-chloropropane	2012-03	ug/l	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
1,2-Dibromo-3-chloropropane	2012-06	ug/l	< 10.0		< 10.0					
1,2-Dibromo-3-chloropropane	2012-09	ug/l	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
1,2-Dibromo-3-chloropropane	2013-03	ug/l	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
1,2-Dibromo-3-chloropropane	2013-06	ug/l			< 10.0	< 10.0			< 10.0	< 10.0
1,2-Dibromo-3-chloropropane	2013-09	ug/l	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
1,2-Dibromo-3-chloropropane	2013-11	ug/L				< 10.0			< 10.0	< 10.0
1,2-Dibromo-3-chloropropane	2014-03	ug/L	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
1,2-Dibromo-3-chloropropane	2014-06	ug/L			< 10.0	< 10.0			< 10.0	< 10.0
1,2-Dibromo-3-chloropropane	2014-08	ug/L	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
1,2-Dibromo-3-chloropropane	2014-12	ug/L			< 10.0	< 10.0			< 10.0	< 10.0
1,2-Dibromo-3-chloropropane	2015-04	ug/L	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
1,2-Dibromo-3-chloropropane	2015-09	ug/L			< 10					
1,2-Dibromo-3-chloropropane	2015-10	ug/L	< 10			< 10			< 10	< 10
1,2-Dibromo-3-chloropropane	2016-04	ug/L	< 10		< 10	< 10			< 10	< 10
1,2-Dibromo-3-chloropropane	2016-07	ug/L				< 5				< 5
1,2-Dibromo-3-chloropropane	2016-10	ug/L	< 5		< 5	< 5			< 5	< 5
1,2-Dibromo-3-chloropropane	2017-05	ug/L	< 5		< 5	< 5			< 5	< 5
1,2-Dibromo-3-chloropropane	2017-09	ug/L	< 5		< 5	< 5			< 5	< 5
1,2-Dibromo-3-chloropropane	2018-05	ug/L			< 5	< 5			< 5	< 5
1,2-Dibromo-3-chloropropane	2018-09	ug/L	< 5		< 5	< 5			< 5	< 5
1,2-Dibromo-3-chloropropane	2019-03	ug/L	< 5		< 5	< 5			< 5	< 5
1,2-Dibromo-3-chloropropane	2019-10	ug/L		< 5	< 5	< 5		< 5	< 5	< 5
1,2-Dibromo-3-chloropropane	2020-04	ug/L		< 5	< 5	< 5	< 5	< 5	< 5	< 5
1,2-Dibromo-3-chloropropane	2020-06	ug/L	< 5					< 5		
1,2-Dibromo-3-chloropropane	2020-08	ug/L	< 5				< 5	< 5		
1,2-Dibromo-3-chloropropane	2020-09	ug/L		< 5	< 5	< 5			< 5	~~< 5~~
1,2-Dibromo-3-chloropropane	2020-12	ug/L					< 5	< 5		
1,2-Dibromo-3-chloropropane	2021-02	ug/L					< 5			
1,2-Dibromo-3-chloropropane	2021-04	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
1,2-Dibromo-3-chloropropane	2021-09	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
1,2-Dibromo-3-chloropropane	2022-04	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
1,2-Dibromo-3-chloropropane	2022-09	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
1,2-Dibromo-3-chloropropane	2023-04	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
1,2-Dibromo-3-chloropropane	2023-09	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
1,2-Dibromo-3-chloropropane	2024-04	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5

Table 13
Carroll County Landfill Western Expansion Area **Analytical Data Summary**
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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
1,2-Dibromo-3-chloropropane	2024-09	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
1,2-Dibromoethane	2008-04	ug/l							< 10.0	
1,2-Dibromoethane	2008-06	ug/l							< 10.0	
1,2-Dibromoethane	2008-08	ug/l							< 10.0	
1,2-Dibromoethane	2008-09	ug/l							< 10.0	
1,2-Dibromoethane	2009-03	ug/l							< 10	
1,2-Dibromoethane	2009-06	ug/l							< 10.0	
1,2-Dibromoethane	2009-09	ug/l				< 10.0			< 10.0	< 10.0
1,2-Dibromoethane	2009-12	ug/l				< 10.0				< 10.0
1,2-Dibromoethane	2010-03	ug/l							< 10.0	
1,2-Dibromoethane	2010-04	ug/l				< 10.0				< 10.0
1,2-Dibromoethane	2010-06	ug/l				< 10.0				< 10.0
1,2-Dibromoethane	2010-09	ug/l				< 10.0			< 10.0	< 10.0
1,2-Dibromoethane	2011-03	ug/l				< 10.0			< 10.0	< 10.0
1,2-Dibromoethane	2011-09	ug/l	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
1,2-Dibromoethane	2011-11	ug/l	< 10.0		< 10.0					
1,2-Dibromoethane	2012-03	ug/l	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
1,2-Dibromoethane	2012-06	ug/l	< 10.0		< 10.0					
1,2-Dibromoethane	2012-09	ug/l	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
1,2-Dibromoethane	2013-03	ug/l	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
1,2-Dibromoethane	2013-06	ug/l			< 10.0	< 10.0			< 10.0	< 10.0
1,2-Dibromoethane	2013-09	ug/l	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
1,2-Dibromoethane	2013-11	ug/L				< 10.0			< 10.0	< 10.0
1,2-Dibromoethane	2014-03	ug/L	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
1,2-Dibromoethane	2014-06	ug/L			< 10.0	< 10.0			< 10.0	< 10.0
1,2-Dibromoethane	2014-08	ug/L	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
1,2-Dibromoethane	2014-12	ug/L			< 10.0	< 10.0			< 10.0	< 10.0
1,2-Dibromoethane	2015-04	ug/L	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
1,2-Dibromoethane	2015-09	ug/L			< 10					
1,2-Dibromoethane	2015-10	ug/L	< 10			< 10			< 10	< 10
1,2-Dibromoethane	2016-04	ug/L	< 10		< 10	< 10			< 10	< 10
1,2-Dibromoethane	2016-07	ug/L				< 1				< 1
1,2-Dibromoethane	2016-10	ug/L	< 1		< 1	< 1			< 1	< 1
1,2-Dibromoethane	2017-05	ug/L	< 1		< 1	< 1			< 1	< 1
1,2-Dibromoethane	2017-09	ug/L	< 1		< 1	< 1			< 1	< 1
1,2-Dibromoethane	2018-05	ug/L			< 1	< 1			< 1	< 1
1,2-Dibromoethane	2018-09	ug/L	< 1		< 1	< 1			< 1	< 1
1,2-Dibromoethane	2019-03	ug/L	< 1		< 1	< 1			< 1	< 1
1,2-Dibromoethane	2019-10	ug/L		< 1	< 1	< 1		< 1	< 1	< 1
1,2-Dibromoethane	2020-04	ug/L		< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dibromoethane	2020-06	ug/L	< 1					< 1		
1,2-Dibromoethane	2020-08	ug/L	< 1				< 1	< 1		
1,2-Dibromoethane	2020-09	ug/L		< 1	< 1	< 1			< 1	~~< 1~~
1,2-Dibromoethane	2020-12	ug/L					< 1	< 1		
1,2-Dibromoethane	2021-02	ug/L					< 1			
1,2-Dibromoethane	2021-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1

Table 13
Carroll County Landfill Western Expansion Area **Analytical Data Summary**
Permit No. 14-SDP-01-74P **2024 Annual Water Quality Report**

Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
1,2-Dibromoethane	2021-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dibromoethane	2022-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dibromoethane	2022-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dibromoethane	2023-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dibromoethane	2023-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dibromoethane	2024-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dibromoethane	2024-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichlorobenzene	2008-04	ug/l							< 1.00	
1,2-Dichlorobenzene	2008-06	ug/l							< 1.00	
1,2-Dichlorobenzene	2008-08	ug/l							< 1.00	
1,2-Dichlorobenzene	2008-09	ug/l							< 1.00	
1,2-Dichlorobenzene	2009-03	ug/l							< 1	
1,2-Dichlorobenzene	2009-06	ug/l							< 1.00	
1,2-Dichlorobenzene	2009-09	ug/l				< 1.00			< 1.00	< 1.00
1,2-Dichlorobenzene	2009-12	ug/l				< 1.00				< 1.00
1,2-Dichlorobenzene	2010-03	ug/l							< 1.00	
1,2-Dichlorobenzene	2010-04	ug/l				< 1.00				< 1.00
1,2-Dichlorobenzene	2010-06	ug/l				< 1.00				< 1.00
1,2-Dichlorobenzene	2010-09	ug/l				< 1.00			< 1.00	< 1.00
1,2-Dichlorobenzene	2011-03	ug/l				< 1.00			< 1.00	< 1.00
1,2-Dichlorobenzene	2011-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,2-Dichlorobenzene	2011-11	ug/l	< 1.00		< 1.00					
1,2-Dichlorobenzene	2012-03	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,2-Dichlorobenzene	2012-06	ug/l	< 1.00		< 1.00					
1,2-Dichlorobenzene	2012-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,2-Dichlorobenzene	2013-03	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,2-Dichlorobenzene	2013-06	ug/l			< 1.00	< 1.00			< 1.00	< 1.00
1,2-Dichlorobenzene	2013-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,2-Dichlorobenzene	2013-11	ug/L				< 1.00			< 1.00	< 1.00
1,2-Dichlorobenzene	2014-03	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,2-Dichlorobenzene	2014-06	ug/L			< 1.00	< 1.00			< 1.00	< 1.00
1,2-Dichlorobenzene	2014-08	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,2-Dichlorobenzene	2014-12	ug/L			< 1.00	< 1.00			< 1.00	< 1.00
1,2-Dichlorobenzene	2015-04	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,2-Dichlorobenzene	2015-09	ug/L			< 1					
1,2-Dichlorobenzene	2015-10	ug/L	< 1			< 1			< 1	< 1
1,2-Dichlorobenzene	2016-04	ug/L	< 1		< 1	< 1			< 1	< 1
1,2-Dichlorobenzene	2016-07	ug/L				< 1				< 1
1,2-Dichlorobenzene	2016-10	ug/L	< 1		< 1	< 1			< 1	< 1
1,2-Dichlorobenzene	2017-05	ug/L	< 1		< 1	< 1			< 1	< 1
1,2-Dichlorobenzene	2017-09	ug/L	< 1		< 1	< 1			< 1	< 1
1,2-Dichlorobenzene	2018-05	ug/L			< 1	< 1			< 1	< 1
1,2-Dichlorobenzene	2018-09	ug/L	< 1		< 1	< 1			< 1	< 1
1,2-Dichlorobenzene	2019-03	ug/L	< 1		< 1	< 1			< 1	< 1
1,2-Dichlorobenzene	2019-10	ug/L		< 1	< 1	< 1		< 1	< 1	< 1
1,2-Dichlorobenzene	2020-04	ug/L		< 1	< 1	< 1	< 1	< 1	< 1	< 1

Table 13
Carroll County Landfill Western Expansion Area **Analytical Data Summary**
Permit No. 14-SDP-01-74P **2024 Annual Water Quality Report**

Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
1,2-Dichlorobenzene	2020-06	ug/L	< 1					< 1		
1,2-Dichlorobenzene	2020-08	ug/L	< 1				< 1	< 1		
1,2-Dichlorobenzene	2020-09	ug/L		< 1	< 1	< 1			< 1	~~< 1~~
1,2-Dichlorobenzene	2020-12	ug/L					< 1	< 1		
1,2-Dichlorobenzene	2021-02	ug/L					< 1			
1,2-Dichlorobenzene	2021-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichlorobenzene	2021-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichlorobenzene	2022-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichlorobenzene	2022-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichlorobenzene	2023-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichlorobenzene	2023-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichlorobenzene	2024-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichlorobenzene	2024-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloroethane	2008-04	ug/l							< 1.00	
1,2-Dichloroethane	2008-06	ug/l							< 1.00	
1,2-Dichloroethane	2008-08	ug/l							< 1.00	
1,2-Dichloroethane	2008-09	ug/l							< 1.00	
1,2-Dichloroethane	2009-03	ug/l							< 1	
1,2-Dichloroethane	2009-06	ug/l							< 1.00	
1,2-Dichloroethane	2009-09	ug/l				< 1.00			< 1.00	< 1.00
1,2-Dichloroethane	2009-12	ug/l				< 1.00				< 1.00
1,2-Dichloroethane	2010-03	ug/l							< 1.00	
1,2-Dichloroethane	2010-04	ug/l				< 1.00				< 1.00
1,2-Dichloroethane	2010-06	ug/l				< 1.00				< 1.00
1,2-Dichloroethane	2010-09	ug/l				< 1.00			< 1.00	< 1.00
1,2-Dichloroethane	2011-03	ug/l				< 1.00			< 1.00	< 1.00
1,2-Dichloroethane	2011-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,2-Dichloroethane	2011-11	ug/l	< 1.00		< 1.00					
1,2-Dichloroethane	2012-03	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,2-Dichloroethane	2012-06	ug/l	< 1.00		< 1.00					
1,2-Dichloroethane	2012-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,2-Dichloroethane	2013-03	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,2-Dichloroethane	2013-06	ug/l			< 1.00	< 1.00			< 1.00	< 1.00
1,2-Dichloroethane	2013-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,2-Dichloroethane	2013-11	ug/L				< 1.00			< 1.00	< 1.00
1,2-Dichloroethane	2014-03	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,2-Dichloroethane	2014-06	ug/L			< 1.00	< 1.00			< 1.00	< 1.00
1,2-Dichloroethane	2014-08	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,2-Dichloroethane	2014-12	ug/L			< 1.00	< 1.00			< 1.00	< 1.00
1,2-Dichloroethane	2015-04	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,2-Dichloroethane	2015-09	ug/L			< 1					
1,2-Dichloroethane	2015-10	ug/L	< 1			< 1			< 1	< 1
1,2-Dichloroethane	2016-04	ug/L	< 1		< 1	< 1			< 1	< 1
1,2-Dichloroethane	2016-07	ug/L				< 1				< 1
1,2-Dichloroethane	2016-10	ug/L	< 1		< 1	< 1			< 1	< 1
1,2-Dichloroethane	2017-05	ug/L	< 1		< 1	< 1			< 1	< 1

Carroll County Landfill Western Expansion Area
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Table 13
Analytical Data Summary
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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
1,2-Dichloroethane	2017-09	ug/L	< 1		< 1	< 1			< 1	< 1
1,2-Dichloroethane	2018-05	ug/L			< 1	< 1			< 1	< 1
1,2-Dichloroethane	2018-09	ug/L	< 1		< 1	< 1			< 1	< 1
1,2-Dichloroethane	2019-03	ug/L	< 1		< 1	< 1			< 1	< 1
1,2-Dichloroethane	2019-10	ug/L		< 1	< 1	< 1		< 1	< 1	< 1
1,2-Dichloroethane	2020-04	ug/L		< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloroethane	2020-06	ug/L	< 1					< 1		
1,2-Dichloroethane	2020-08	ug/L	< 1				< 1	< 1		
1,2-Dichloroethane	2020-09	ug/L		< 1	< 1	< 1			< 1	~~< 1~~
1,2-Dichloroethane	2020-12	ug/L					< 1	< 1		
1,2-Dichloroethane	2021-02	ug/L					< 1			
1,2-Dichloroethane	2021-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloroethane	2021-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloroethane	2022-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloroethane	2022-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloroethane	2023-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloroethane	2023-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloroethane	2024-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloroethane	2024-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloropropane	2008-04	ug/l							< 1.00	
1,2-Dichloropropane	2008-06	ug/l							< 1.00	
1,2-Dichloropropane	2008-08	ug/l							< 1.00	
1,2-Dichloropropane	2008-09	ug/l							< 1.00	
1,2-Dichloropropane	2009-03	ug/l							< 1	
1,2-Dichloropropane	2009-06	ug/l							< 1.00	
1,2-Dichloropropane	2009-09	ug/l				< 1.00			< 1.00	< 1.00
1,2-Dichloropropane	2009-12	ug/l				< 1.00				< 1.00
1,2-Dichloropropane	2010-03	ug/l							< 1.00	
1,2-Dichloropropane	2010-04	ug/l				< 1.00				< 1.00
1,2-Dichloropropane	2010-06	ug/l				< 1.00				< 1.00
1,2-Dichloropropane	2010-09	ug/l				< 1.00			< 1.00	< 1.00
1,2-Dichloropropane	2011-03	ug/l				< 1.00			< 1.00	< 1.00
1,2-Dichloropropane	2011-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,2-Dichloropropane	2011-11	ug/l	< 1.00		< 1.00					
1,2-Dichloropropane	2012-03	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,2-Dichloropropane	2012-06	ug/l	< 1.00		< 1.00					
1,2-Dichloropropane	2012-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,2-Dichloropropane	2013-03	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,2-Dichloropropane	2013-06	ug/l			< 1.00	< 1.00			< 1.00	< 1.00
1,2-Dichloropropane	2013-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,2-Dichloropropane	2013-11	ug/L				< 1.00			< 1.00	< 1.00
1,2-Dichloropropane	2014-03	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,2-Dichloropropane	2014-06	ug/L			< 1.00	< 1.00			< 1.00	< 1.00
1,2-Dichloropropane	2014-08	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,2-Dichloropropane	2014-12	ug/L			< 1.00	< 1.00			< 1.00	< 1.00
1,2-Dichloropropane	2015-04	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00

Table 13
Carroll County Landfill Western Expansion Area **Analytical Data Summary**
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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
1,2-Dichloropropane	2015-09	ug/L			< 1					
1,2-Dichloropropane	2015-10	ug/L	< 1			< 1			< 1	< 1
1,2-Dichloropropane	2016-04	ug/L	< 1		< 1	< 1			< 1	< 1
1,2-Dichloropropane	2016-07	ug/L				< 1				< 1
1,2-Dichloropropane	2016-10	ug/L	< 1		< 1	< 1			< 1	< 1
1,2-Dichloropropane	2017-05	ug/L	< 1		< 1	< 1			< 1	< 1
1,2-Dichloropropane	2017-09	ug/L	< 1		< 1	< 1			< 1	< 1
1,2-Dichloropropane	2018-05	ug/L			< 1	< 1			< 1	< 1
1,2-Dichloropropane	2018-09	ug/L	< 1		< 1	< 1			< 1	< 1
1,2-Dichloropropane	2019-03	ug/L	< 1		< 1	< 1			< 1	< 1
1,2-Dichloropropane	2019-10	ug/L		< 1	< 1	< 1		< 1	< 1	< 1
1,2-Dichloropropane	2020-04	ug/L		< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloropropane	2020-06	ug/L	< 1					< 1		
1,2-Dichloropropane	2020-08	ug/L	< 1				< 1	< 1		
1,2-Dichloropropane	2020-09	ug/L		< 1	< 1	< 1			< 1	~~< 1~~
1,2-Dichloropropane	2020-12	ug/L					< 1	< 1		
1,2-Dichloropropane	2021-02	ug/L					< 1			
1,2-Dichloropropane	2021-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloropropane	2021-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloropropane	2022-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloropropane	2022-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloropropane	2023-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloropropane	2023-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloropropane	2024-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloropropane	2024-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,3,5-Trinitrobenzene	2009-03	ug/l							< 10	
1,3,5-Trinitrobenzene	2009-06	ug/l							< 10.0	
1,3,5-Trinitrobenzene	2009-09	ug/l							< 10.0	
1,3,5-Trinitrobenzene	2010-03	ug/l							< 10.0	
1,3,5-Trinitrobenzene	2010-09	ug/l							< 10.0	
1,3,5-Trinitrobenzene	2011-03	ug/l							< 12.0	
1,3,5-Trinitrobenzene	2014-06	ug/L			< 10.5					
1,3,5-Trinitrobenzene	2014-08	ug/L			< 10.2				< 10.8	
1,3,5-Trinitrobenzene	2015-10	ug/L				< 10			< 10	< 10
1,3,5-Trinitrobenzene	2016-07	ug/L				< 10.4				< 10.4
1,3,5-Trinitrobenzene	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
1,3,5-Trinitrobenzene	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
1,3,5-Trinitrobenzene	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
1,3-Dichlorobenzene	2009-03	ug/l							< 1	
1,3-Dichlorobenzene	2009-06	ug/l							< 1.00	
1,3-Dichlorobenzene	2009-09	ug/l							< 1.00	
1,3-Dichlorobenzene	2010-03	ug/l							< 1.00	
1,3-Dichlorobenzene	2010-09	ug/l							< 1.00	
1,3-Dichlorobenzene	2011-03	ug/l							< 1.00	
1,3-Dichlorobenzene	2014-06	ug/L			< 1.00					
1,3-Dichlorobenzene	2014-08	ug/L			< 1.00				< 1.00	

Carroll County Landfill Western Expansion Area
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Table 13
Analytical Data Summary
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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
1,3-Dichlorobenzene	2015-10	ug/L				< 1			< 1	< 1
1,3-Dichlorobenzene	2016-07	ug/L				< 1				< 1
1,3-Dichlorobenzene	2019-10	ug/L			< 1	< 1			< 1	< 1
1,3-Dichlorobenzene	2020-04	ug/L			< 1	< 1			< 1	< 1
1,3-Dichlorobenzene	2020-09	ug/L				< 1			< 1	~~< 1~~
1,3-Dichlorobenzene	2024-09	ug/L			< 1	< 1			< 1	< 1
1,3-Dichloropropane	2009-03	ug/l							< 1	
1,3-Dichloropropane	2009-06	ug/l							< 1.00	
1,3-Dichloropropane	2009-09	ug/l							< 1.00	
1,3-Dichloropropane	2010-03	ug/l							< 1.00	
1,3-Dichloropropane	2010-09	ug/l							< 1.00	
1,3-Dichloropropane	2011-03	ug/l							< 1.00	
1,3-Dichloropropane	2014-06	ug/L			< 1.00					
1,3-Dichloropropane	2014-08	ug/L			< 1.00				< 1.00	
1,3-Dichloropropane	2015-10	ug/L				< 1			< 1	< 1
1,3-Dichloropropane	2016-07	ug/L				< 1				< 1
1,3-Dichloropropane	2019-10	ug/L			< 1	< 1			< 1	< 1
1,3-Dichloropropane	2020-04	ug/L			< 1	< 1			< 1	< 1
1,3-Dichloropropane	2020-09	ug/L				< 1			< 1	~~< 1~~
1,3-Dichloropropane	2024-09	ug/L			< 1	< 1			< 1	< 1
1,3-Dinitrobenzene	2009-03	ug/l							< 10	
1,3-Dinitrobenzene	2009-06	ug/l							< 10.0	
1,3-Dinitrobenzene	2009-09	ug/l							< 10.0	
1,3-Dinitrobenzene	2010-03	ug/l							< 10.0	
1,3-Dinitrobenzene	2010-09	ug/l							< 10.0	
1,3-Dinitrobenzene	2011-03	ug/l							< 12.0	
1,3-Dinitrobenzene	2014-06	ug/L			< 10.5					
1,3-Dinitrobenzene	2014-08	ug/L			< 10.2				< 10.8	
1,3-Dinitrobenzene	2015-10	ug/L				< 10			< 10	< 10
1,3-Dinitrobenzene	2016-07	ug/L				< 10.4				< 10.4
1,3-Dinitrobenzene	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
1,3-Dinitrobenzene	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
1,3-Dinitrobenzene	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
1,4-Dichlorobenzene	2008-04	ug/l							< 1.00	
1,4-Dichlorobenzene	2008-06	ug/l							< 1.00	
1,4-Dichlorobenzene	2008-08	ug/l							< 1.00	
1,4-Dichlorobenzene	2008-09	ug/l							< 1.00	
1,4-Dichlorobenzene	2009-03	ug/l							< 1	
1,4-Dichlorobenzene	2009-06	ug/l							< 1.00	
1,4-Dichlorobenzene	2009-09	ug/l				< 1.00			< 1.00	< 1.00
1,4-Dichlorobenzene	2009-12	ug/l				< 1.00				< 1.00
1,4-Dichlorobenzene	2010-03	ug/l							< 1.00	
1,4-Dichlorobenzene	2010-04	ug/l				< 1.00				< 1.00
1,4-Dichlorobenzene	2010-06	ug/l				< 1.00				< 1.00
1,4-Dichlorobenzene	2010-09	ug/l				< 1.00			< 1.00	< 1.00
1,4-Dichlorobenzene	2011-03	ug/l				< 1.00			< 1.00	< 1.00

Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
1,4-Dichlorobenzene	2011-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,4-Dichlorobenzene	2011-11	ug/l	< 1.00		< 1.00					
1,4-Dichlorobenzene	2012-03	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,4-Dichlorobenzene	2012-06	ug/l	< 1.00		< 1.00					
1,4-Dichlorobenzene	2012-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,4-Dichlorobenzene	2013-03	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,4-Dichlorobenzene	2013-06	ug/l			< 1.00	< 1.00			< 1.00	< 1.00
1,4-Dichlorobenzene	2013-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,4-Dichlorobenzene	2013-11	ug/L				< 1.00			< 1.00	< 1.00
1,4-Dichlorobenzene	2014-03	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,4-Dichlorobenzene	2014-06	ug/L			< 1.00	< 1.00			< 1.00	< 1.00
1,4-Dichlorobenzene	2014-08	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,4-Dichlorobenzene	2014-12	ug/L			< 1.00	< 1.00			< 1.00	< 1.00
1,4-Dichlorobenzene	2015-04	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
1,4-Dichlorobenzene	2015-09	ug/L			< 1					
1,4-Dichlorobenzene	2015-10	ug/L	< 1			< 1			< 1	< 1
1,4-Dichlorobenzene	2016-04	ug/L	< 1		< 1	< 1			< 1	< 1
1,4-Dichlorobenzene	2016-07	ug/L				< 1				< 1
1,4-Dichlorobenzene	2016-10	ug/L	< 1		< 1	< 1			< 1	< 1
1,4-Dichlorobenzene	2017-05	ug/L	< 1		< 1	< 1			< 1	< 1
1,4-Dichlorobenzene	2017-09	ug/L	< 1		< 1	< 1			< 1	< 1
1,4-Dichlorobenzene	2018-05	ug/L			< 1	< 1			< 1	< 1
1,4-Dichlorobenzene	2018-09	ug/L	< 1		< 1	< 1			< 1	< 1
1,4-Dichlorobenzene	2019-03	ug/L	< 1		< 1	< 1			< 1	< 1
1,4-Dichlorobenzene	2019-10	ug/L		< 1	< 1	< 1		< 1	< 1	< 1
1,4-Dichlorobenzene	2020-04	ug/L		< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,4-Dichlorobenzene	2020-06	ug/L	< 1					< 1		
1,4-Dichlorobenzene	2020-08	ug/L	< 1				< 1	< 1		
1,4-Dichlorobenzene	2020-09	ug/L		< 1	< 1	< 1			< 1	~~< 1~~
1,4-Dichlorobenzene	2020-12	ug/L					< 1	< 1		
1,4-Dichlorobenzene	2021-02	ug/L					< 1			
1,4-Dichlorobenzene	2021-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,4-Dichlorobenzene	2021-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,4-Dichlorobenzene	2022-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,4-Dichlorobenzene	2022-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,4-Dichlorobenzene	2023-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,4-Dichlorobenzene	2023-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,4-Dichlorobenzene	2024-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,4-Dichlorobenzene	2024-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,4-Naphthoquinone	2009-03	ug/l							< 10	
1,4-Naphthoquinone	2009-06	ug/l							< 10.0	
1,4-Naphthoquinone	2009-09	ug/l							< 10.0	
1,4-Naphthoquinone	2010-03	ug/l							< 10.0	
1,4-Naphthoquinone	2010-09	ug/l							< 10.0	
1,4-Naphthoquinone	2011-03	ug/l							< 12.0	
1,4-Naphthoquinone	2014-06	ug/L			< 10.5					

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Table 13
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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
1,4-Naphthoquinone	2014-08	ug/L			< 10.2				< 10.8	
1,4-Naphthoquinone	2015-10	ug/L				< 10			< 10	< 10
1,4-Naphthoquinone	2016-07	ug/L				< 10.4				< 10.4
1,4-Naphthoquinone	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
1,4-Naphthoquinone	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
1,4-Naphthoquinone	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
1-Naphthylamine	2009-03	ug/l							< 10	
1-Naphthylamine	2009-06	ug/l							< 10.0	
1-Naphthylamine	2009-09	ug/l							< 10.0	
1-Naphthylamine	2010-03	ug/l							< 10.0	
1-Naphthylamine	2010-09	ug/l							< 10.0	
1-Naphthylamine	2011-03	ug/l							< 12.0	
1-Naphthylamine	2014-06	ug/L			< 10.5					
1-Naphthylamine	2014-08	ug/L			< 10.2				< 10.8	
1-Naphthylamine	2015-10	ug/L				< 10			< 10	< 10
1-Naphthylamine	2016-07	ug/L				< 10.4				< 10.4
1-Naphthylamine	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
1-Naphthylamine	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
1-Naphthylamine	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
2,2-Dichloropropane	2009-03	ug/l							< 4	
2,2-Dichloropropane	2009-06	ug/l							< 4.00	
2,2-Dichloropropane	2009-09	ug/l							< 4.00	
2,2-Dichloropropane	2010-03	ug/l							< 4.00	
2,2-Dichloropropane	2010-09	ug/l							< 4.00	
2,2-Dichloropropane	2011-03	ug/l							< 4.00	
2,2-Dichloropropane	2014-06	ug/L			< 4.00					
2,2-Dichloropropane	2014-08	ug/L			< 4.00				< 4.00	
2,2-Dichloropropane	2015-10	ug/L				< 4			< 4	< 4
2,2-Dichloropropane	2016-07	ug/L				< 4				< 4
2,2-Dichloropropane	2019-10	ug/L			< 4	< 4			< 4	< 4
2,2-Dichloropropane	2020-04	ug/L			< 4	< 4			< 4	< 4
2,2-Dichloropropane	2020-09	ug/L				< 4			< 4	~~< 4~~
2,2-Dichloropropane	2024-09	ug/L			< 4	< 4			< 4	< 4
2,2'-oxybis(1-Chloropropane)	2009-03	ug/l							< 10	
2,2'-oxybis(1-Chloropropane)	2009-06	ug/l							< 10.0	
2,2'-oxybis(1-Chloropropane)	2009-09	ug/l							< 10.0	
2,2'-oxybis(1-Chloropropane)	2010-03	ug/l							< 10.0	
2,2'-oxybis(1-Chloropropane)	2010-09	ug/l							< 10.0	
2,2'-oxybis(1-Chloropropane)	2011-03	ug/l							< 12.0	
2,2'-oxybis(1-Chloropropane)	2014-06	ug/L			< 10.5					
2,2'-oxybis(1-Chloropropane)	2014-08	ug/L			< 10.2				< 10.8	
2,2'-oxybis(1-Chloropropane)	2015-10	ug/L				< 10			< 10	< 10
2,2'-oxybis(1-Chloropropane)	2016-07	ug/L				< 10.4				< 10.4
2,2'-oxybis(1-Chloropropane)	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
2,2'-oxybis(1-Chloropropane)	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
2,2'-oxybis(1-Chloropropane)	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9

Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
2,3,4,6-Tetrachlorophenol	2009-03	ug/l							< 10	
2,3,4,6-Tetrachlorophenol	2009-06	ug/l							< 10.0	
2,3,4,6-Tetrachlorophenol	2009-09	ug/l							< 10.0	
2,3,4,6-Tetrachlorophenol	2010-03	ug/l							< 10.0	
2,3,4,6-Tetrachlorophenol	2010-09	ug/l							< 10.0	
2,3,4,6-Tetrachlorophenol	2011-03	ug/l							< 12.0	
2,3,4,6-Tetrachlorophenol	2014-06	ug/L			< 10.5					
2,3,4,6-Tetrachlorophenol	2014-08	ug/L			< 10.2				< 10.8	
2,3,4,6-Tetrachlorophenol	2015-10	ug/L				< 10			< 10	< 10
2,3,4,6-Tetrachlorophenol	2016-07	ug/L				< 10.4				< 10.4
2,3,4,6-Tetrachlorophenol	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
2,3,4,6-Tetrachlorophenol	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
2,3,4,6-Tetrachlorophenol	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
2,4,5-T	2009-03	ug/l							< 0.22	
2,4,5-T	2009-06	ug/l							< 0.21	
2,4,5-T	2009-09	ug/l							< 0.21	
2,4,5-T	2010-03	ug/l							< 0.53	
2,4,5-T	2010-09	ug/l							< 0.51	
2,4,5-T	2011-03	ug/l							< 0.51	
2,4,5-T	2011-09	ug/l							< 1.0	
2,4,5-T	2012-03	ug/l							< 1.1	
2,4,5-T	2013-03	ug/l							< 1.48	
2,4,5-T	2013-09	ug/l							< 1.02	
2,4,5-T	2014-03	ug/L							< 1.12	
2,4,5-T	2014-06	ug/L			< 1.00					
2,4,5-T	2014-08	ug/L			< 1.07				< 1.05	
2,4,5-T	2015-04	ug/L							< 1.11	
2,4,5-T	2015-10	ug/L				< 1.05			< 1.06	< 1.05
2,4,5-T	2016-04	ug/L				< 1.04			< 1.03	< 1.04
2,4,5-T	2016-07	ug/L				< 1.06				< 1.06
2,4,5-T	2016-10	ug/L				< 1.13			< 1.05	< 1.13
2,4,5-T	2017-05	ug/L				< 1.2			< 1.17	< 1.2
2,4,5-T	2017-09	ug/L				< 1.01			< 1.09	< 1.01
2,4,5-T	2018-05	ug/L				< 1.01			< 1.01	< 1.01
2,4,5-T	2018-09	ug/L				< 1.05			< 1.21	< 1.05
2,4,5-T	2019-03	ug/L				< 1.18			< 1.17	< 1.18
2,4,5-T	2019-10	ug/L			< 1.07	< 1.11			< 1.16	< 1.11
2,4,5-T	2020-04	ug/L				< 1.36			< 1.09	< 1.36
2,4,5-T	2020-09	ug/L				< 0.154			< 0.152	~~< 0.154~~
2,4,5-T	2021-04	ug/L				< 1.17			< 1.23	< 1.17
2,4,5-T	2021-09	ug/L				< 1.2			< 1.03	< 1.2
2,4,5-T	2024-09	ug/L			< 0.166	< 0.159			< 0.176	< 0.159
2,4,5-TP (Silvex)	2009-03	ug/l							< 0.22	
2,4,5-TP (Silvex)	2009-06	ug/l							< 0.21	
2,4,5-TP (Silvex)	2009-09	ug/l							< 0.21	
2,4,5-TP (Silvex)	2010-03	ug/l							< 0.53	

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2,4,5-TP (Silvex)	2010-09	ug/l							< 0.51	
2,4,5-TP (Silvex)	2011-03	ug/l							< 0.51	
2,4,5-TP (Silvex)	2011-09	ug/l							< 1.0	
2,4,5-TP (Silvex)	2012-03	ug/l							< 1.1	
2,4,5-TP (Silvex)	2013-03	ug/l							< 1.48	
2,4,5-TP (Silvex)	2013-09	ug/l							< 1.02	
2,4,5-TP (Silvex)	2014-03	ug/L							< 1.12	
2,4,5-TP (Silvex)	2014-06	ug/L			< 1.00					
2,4,5-TP (Silvex)	2014-08	ug/L			< 1.07				< 1.05	
2,4,5-TP (Silvex)	2015-04	ug/L							< 1.11	
2,4,5-TP (Silvex)	2015-10	ug/L				< 1.05			< 1.06	< 1.05
2,4,5-TP (Silvex)	2016-04	ug/L				< 1.04			< 1.03	< 1.04
2,4,5-TP (Silvex)	2016-07	ug/L				< 1.06				< 1.06
2,4,5-TP (Silvex)	2016-10	ug/L				< 1.13			< 1.05	< 1.13
2,4,5-TP (Silvex)	2017-05	ug/L				< 1.2			< 1.17	< 1.2
2,4,5-TP (Silvex)	2017-09	ug/L				< 1.01			< 1.09	< 1.01
2,4,5-TP (Silvex)	2018-05	ug/L				< 1.01			< 1.01	< 1.01
2,4,5-TP (Silvex)	2018-09	ug/L				< 1.05			< 1.21	< 1.05
2,4,5-TP (Silvex)	2019-03	ug/L				< 1.18			< 1.17	< 1.18
2,4,5-TP (Silvex)	2019-10	ug/L			< 1.07	< 1.11			< 1.16	< 1.11
2,4,5-TP (Silvex)	2020-04	ug/L				< 1.36			< 1.09	< 1.36
2,4,5-TP (Silvex)	2020-09	ug/L				< 0.154			< 0.152	~~< 0.154~~
2,4,5-TP (Silvex)	2021-04	ug/L				< 1.17			< 1.23	< 1.17
2,4,5-TP (Silvex)	2021-09	ug/L				< 1.2			< 1.03	< 1.2
2,4,5-TP (Silvex)	2024-09	ug/L			< 0.0553	< 0.053			< 0.0585	< 0.053
2,4,5-Trichlorophenol	2009-03	ug/l							< 10	
2,4,5-Trichlorophenol	2009-06	ug/l							< 10.0	
2,4,5-Trichlorophenol	2009-09	ug/l							< 10.0	
2,4,5-Trichlorophenol	2010-03	ug/l							< 10.0	
2,4,5-Trichlorophenol	2010-09	ug/l							< 10.0	
2,4,5-Trichlorophenol	2011-03	ug/l							< 12.0	
2,4,5-Trichlorophenol	2014-06	ug/L			< 10.5					
2,4,5-Trichlorophenol	2014-08	ug/L			< 10.2				< 10.8	
2,4,5-Trichlorophenol	2015-10	ug/L				< 10			< 10	< 10
2,4,5-Trichlorophenol	2016-07	ug/L				< 10.4				< 10.4
2,4,5-Trichlorophenol	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
2,4,5-Trichlorophenol	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
2,4,5-Trichlorophenol	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
2,4,6-Trichlorophenol	2009-03	ug/l							< 10	
2,4,6-Trichlorophenol	2009-06	ug/l							< 10.0	
2,4,6-Trichlorophenol	2009-09	ug/l							< 10.0	
2,4,6-Trichlorophenol	2010-03	ug/l							< 10.0	
2,4,6-Trichlorophenol	2010-09	ug/l							< 10.0	
2,4,6-Trichlorophenol	2011-03	ug/l							< 12.0	
2,4,6-Trichlorophenol	2014-06	ug/L			< 10.5					
2,4,6-Trichlorophenol	2014-08	ug/L			< 10.2				< 10.8	

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2,4,6-Trichlorophenol	2015-10	ug/L				< 10			< 10	< 10
2,4,6-Trichlorophenol	2016-07	ug/L				< 10.4				< 10.4
2,4,6-Trichlorophenol	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
2,4,6-Trichlorophenol	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
2,4,6-Trichlorophenol	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
2,4-D	2009-03	ug/l							< 1.1	
2,4-D	2009-06	ug/l							< 1.0	
2,4-D	2009-09	ug/l							< 1.1	
2,4-D	2010-03	ug/l							< 1.1	
2,4-D	2010-09	ug/l							< 1.0	
2,4-D	2011-03	ug/l							< 1.0	
2,4-D	2014-06	ug/L			< 1.00					
2,4-D	2014-08	ug/L			< 1.07				< 1.05	
2,4-D	2015-10	ug/L				**0.655 J**			< 1.06	**0.655 J**
2,4-D	2016-07	ug/L				< 1.06				< 1.06
2,4-D	2019-10	ug/L			< 1.07	< 1.11			< 1.16	< 1.11
2,4-D	2020-09	ug/L				< 0.307			< 0.304	~~< 0.307~~
2,4-D	2021-04	ug/L				< 1.17			< 1.23	< 1.17
2,4-D	2021-09	ug/L				< 1.2			< 1.03	< 1.2
2,4-D	2024-09	ug/L			< 0.664	< 0.637			< 0.702	< 0.637
2,4-Dichlorophenol	2009-03	ug/l							< 10	
2,4-Dichlorophenol	2009-06	ug/l							< 10.0	
2,4-Dichlorophenol	2009-09	ug/l							< 10.0	
2,4-Dichlorophenol	2010-03	ug/l							< 10.0	
2,4-Dichlorophenol	2010-09	ug/l							< 10.0	
2,4-Dichlorophenol	2011-03	ug/l							< 12.0	
2,4-Dichlorophenol	2014-06	ug/L			< 10.5					
2,4-Dichlorophenol	2014-08	ug/L			< 10.2				< 10.8	
2,4-Dichlorophenol	2015-10	ug/L				< 10			< 10	< 10
2,4-Dichlorophenol	2016-07	ug/L				< 10.4				< 10.4
2,4-Dichlorophenol	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
2,4-Dichlorophenol	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
2,4-Dichlorophenol	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
2,4-Dimethylphenol	2009-03	ug/l							< 10	
2,4-Dimethylphenol	2009-06	ug/l							< 10.0	
2,4-Dimethylphenol	2009-09	ug/l							< 10.0	
2,4-Dimethylphenol	2010-03	ug/l							< 10.0	
2,4-Dimethylphenol	2010-09	ug/l							< 10.0	
2,4-Dimethylphenol	2011-03	ug/l							< 12.0	
2,4-Dimethylphenol	2014-06	ug/L			< 10.5					
2,4-Dimethylphenol	2014-08	ug/L			< 10.2				< 10.8	
2,4-Dimethylphenol	2015-10	ug/L				< 10			< 10	< 10
2,4-Dimethylphenol	2016-07	ug/L				< 10.4				< 10.4
2,4-Dimethylphenol	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
2,4-Dimethylphenol	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
2,4-Dimethylphenol	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9

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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
2,4-Dinitrophenol	2009-03	ug/l							< 20	
2,4-Dinitrophenol	2009-06	ug/l							< 20.0	
2,4-Dinitrophenol	2009-09	ug/l							< 20.0	
2,4-Dinitrophenol	2010-03	ug/l							< 20.0	
2,4-Dinitrophenol	2010-09	ug/l							< 20.0	
2,4-Dinitrophenol	2011-03	ug/l							< 24.1	
2,4-Dinitrophenol	2014-06	ug/L			< 21.1					
2,4-Dinitrophenol	2014-08	ug/L			< 20.4				< 21.5	
2,4-Dinitrophenol	2015-10	ug/L				< 20			< 20	< 20
2,4-Dinitrophenol	2016-07	ug/L				< 20.8				< 20.8
2,4-Dinitrophenol	2019-10	ug/L			< 21.1	< 20.3			< 20.9	< 20.3
2,4-Dinitrophenol	2020-09	ug/L				< 25.6			< 29.9	~~< 25.6~~
2,4-Dinitrophenol	2024-09	ug/L			< 20.8	< 21.7			< 21.7	< 21.7
2,4-Dinitrotoluene	2009-03	ug/l							< 10	
2,4-Dinitrotoluene	2009-06	ug/l							< 10.0	
2,4-Dinitrotoluene	2009-09	ug/l							< 10.0	
2,4-Dinitrotoluene	2010-03	ug/l							< 10.0	
2,4-Dinitrotoluene	2010-09	ug/l							< 10.0	
2,4-Dinitrotoluene	2011-03	ug/l							< 12.0	
2,4-Dinitrotoluene	2014-06	ug/L			< 10.5					
2,4-Dinitrotoluene	2014-08	ug/L			< 10.2				< 10.8	
2,4-Dinitrotoluene	2015-10	ug/L				< 10			< 10	< 10
2,4-Dinitrotoluene	2016-07	ug/L				< 10.4				< 10.4
2,4-Dinitrotoluene	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
2,4-Dinitrotoluene	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
2,4-Dinitrotoluene	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
2,6-Dichlorophenol	2009-03	ug/l							< 10	
2,6-Dichlorophenol	2009-06	ug/l							< 10.0	
2,6-Dichlorophenol	2009-09	ug/l							< 10.0	
2,6-Dichlorophenol	2010-03	ug/l							< 10.0	
2,6-Dichlorophenol	2010-09	ug/l							< 10.0	
2,6-Dichlorophenol	2011-03	ug/l							< 12.0	
2,6-Dichlorophenol	2014-06	ug/L			< 10.5					
2,6-Dichlorophenol	2014-08	ug/L			< 10.2				< 10.8	
2,6-Dichlorophenol	2015-10	ug/L				< 10			< 10	< 10
2,6-Dichlorophenol	2016-07	ug/L				< 10.4				< 10.4
2,6-Dichlorophenol	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
2,6-Dichlorophenol	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
2,6-Dichlorophenol	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
2,6-Dinitrotoluene	2009-03	ug/l							< 10	
2,6-Dinitrotoluene	2009-06	ug/l							< 10.0	
2,6-Dinitrotoluene	2009-09	ug/l							< 10.0	
2,6-Dinitrotoluene	2010-03	ug/l							< 10.0	
2,6-Dinitrotoluene	2010-09	ug/l							< 10.0	
2,6-Dinitrotoluene	2011-03	ug/l							< 12.0	
2,6-Dinitrotoluene	2014-06	ug/L			< 10.5					

Table 13
Carroll County Landfill Western Expansion Area **Analytical Data Summary**
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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
2,6-Dinitrotoluene	2014-08	ug/L			< 10.2				< 10.8	
2,6-Dinitrotoluene	2015-10	ug/L				< 10			< 10	< 10
2,6-Dinitrotoluene	2016-07	ug/L				< 10.4				< 10.4
2,6-Dinitrotoluene	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
2,6-Dinitrotoluene	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
2,6-Dinitrotoluene	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
2-Acetylaminofluorene	2009-03	ug/l							< 10	
2-Acetylaminofluorene	2009-06	ug/l							< 10.0	
2-Acetylaminofluorene	2009-09	ug/l							< 10.0	
2-Acetylaminofluorene	2010-03	ug/l							< 10.0	
2-Acetylaminofluorene	2010-09	ug/l							< 10.0	
2-Acetylaminofluorene	2011-03	ug/l							< 12.0	
2-Acetylaminofluorene	2014-06	ug/L			< 10.5					
2-Acetylaminofluorene	2014-08	ug/L			< 10.2				< 10.8	
2-Acetylaminofluorene	2015-10	ug/L				< 10			< 10	< 10
2-Acetylaminofluorene	2016-07	ug/L				< 10.4				< 10.4
2-Acetylaminofluorene	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
2-Acetylaminofluorene	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
2-Acetylaminofluorene	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
2-Butanone	2008-04	ug/l							< 10.0	
2-Butanone	2008-06	ug/l							< 10.0	
2-Butanone	2008-08	ug/l							< 10.0	
2-Butanone	2008-09	ug/l							< 10.0	
2-Butanone	2009-03	ug/l							< 10	
2-Butanone	2009-06	ug/l							< 10.0	
2-Butanone	2009-09	ug/l				< 10.0			< 10.0	< 10.0
2-Butanone	2009-12	ug/l				< 10.0				< 10.0
2-Butanone	2010-03	ug/l							< 10.0	
2-Butanone	2010-04	ug/l				< 10.0				< 10.0
2-Butanone	2010-06	ug/l				< 10.0				< 10.0
2-Butanone	2010-09	ug/l				< 10.0			< 10.0	< 10.0
2-Butanone	2011-03	ug/l				< 10.0			< 10.0	< 10.0
2-Butanone	2011-09	ug/l	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
2-Butanone	2011-11	ug/l	< 10.0		< 10.0					
2-Butanone	2012-03	ug/l	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
2-Butanone	2012-06	ug/l	< 10.0		< 10.0					
2-Butanone	2012-09	ug/l	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
2-Butanone	2013-03	ug/l	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
2-Butanone	2013-06	ug/l			< 10.0 J	< 10.0			< 10.0	< 10.0
2-Butanone	2013-09	ug/l	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
2-Butanone	2013-11	ug/L				< 10.0			< 10.0	< 10.0
2-Butanone	2014-03	ug/L	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
2-Butanone	2014-06	ug/L			< 10.0	< 10.0			< 10.0	< 10.0
2-Butanone	2014-08	ug/L	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
2-Butanone	2014-12	ug/L			< 10.0	< 10.0			< 10.0	< 10.0
2-Butanone	2015-04	ug/L	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0

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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
2-Butanone	2015-09	ug/L			< 10					
2-Butanone	2015-10	ug/L	< 10			< 10			< 10	< 10
2-Butanone	2016-04	ug/L	< 10		< 10	< 10			< 10	< 10
2-Butanone	2016-07	ug/L				< 10				< 10
2-Butanone	2016-10	ug/L	< 10		< 10	< 10			< 10	< 10
2-Butanone	2017-05	ug/L	< 10		< 10	< 10			< 10	< 10
2-Butanone	2017-09	ug/L	< 10		< 10	< 10			< 10	< 10
2-Butanone	2018-05	ug/L			< 10	< 10			**2.12 J**	< 10
2-Butanone	2018-09	ug/L	< 10		< 10	< 10			< 10	< 10
2-Butanone	2019-03	ug/L	< 10		< 10	< 10			< 10	< 10
2-Butanone	2019-10	ug/L		< 10	< 10	< 10		< 10	< 10	< 10
2-Butanone	2020-04	ug/L		< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-Butanone	2020-06	ug/L	< 10					< 10		
2-Butanone	2020-08	ug/L	< 10				< 10	< 10		
2-Butanone	2020-09	ug/L		< 10	< 10	< 10			< 10	~~< 10~~
2-Butanone	2020-12	ug/L					< 10	< 10		
2-Butanone	2021-02	ug/L					< 10			
2-Butanone	2021-04	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-Butanone	2021-09	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-Butanone	2022-04	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-Butanone	2022-09	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-Butanone	2023-04	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-Butanone	2023-09	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-Butanone	2024-04	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-Butanone	2024-09	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-Chloronaphthalene	2009-03	ug/l							< 10	
2-Chloronaphthalene	2009-06	ug/l							< 10.0	
2-Chloronaphthalene	2009-09	ug/l							< 10.0	
2-Chloronaphthalene	2010-03	ug/l							< 10.0	
2-Chloronaphthalene	2010-09	ug/l							< 10.0	
2-Chloronaphthalene	2011-03	ug/l							< 12.0	
2-Chloronaphthalene	2014-06	ug/L			< 10.5					
2-Chloronaphthalene	2014-08	ug/L			< 10.2				< 10.8	
2-Chloronaphthalene	2015-10	ug/L				< 10			< 10	< 10
2-Chloronaphthalene	2016-07	ug/L				< 10.4				< 10.4
2-Chloronaphthalene	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
2-Chloronaphthalene	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
2-Chloronaphthalene	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
2-Chlorophenol	2009-03	ug/l							< 10	
2-Chlorophenol	2009-06	ug/l							< 10.0	
2-Chlorophenol	2009-09	ug/l							< 10.0	
2-Chlorophenol	2010-03	ug/l							< 10.0	
2-Chlorophenol	2010-09	ug/l							< 10.0	
2-Chlorophenol	2011-03	ug/l							< 12.0	
2-Chlorophenol	2014-06	ug/L			< 10.5					
2-Chlorophenol	2014-08	ug/L			< 10.2				< 10.8	

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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
2-Chlorophenol	2015-10	ug/L				< 10			< 10	< 10
2-Chlorophenol	2016-07	ug/L				< 10.4				< 10.4
2-Chlorophenol	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
2-Chlorophenol	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
2-Chlorophenol	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
2-Hexanone	2008-04	ug/l							< 10.0	
2-Hexanone	2008-06	ug/l							< 10.0	
2-Hexanone	2008-08	ug/l							< 10.0	
2-Hexanone	2008-09	ug/l							< 10.0	
2-Hexanone	2009-03	ug/l							< 10	
2-Hexanone	2009-06	ug/l							< 10.0	
2-Hexanone	2009-09	ug/l				< 10.0			< 10.0	< 10.0
2-Hexanone	2009-12	ug/l				< 10.0				< 10.0
2-Hexanone	2010-03	ug/l							< 10.0	
2-Hexanone	2010-04	ug/l				< 10.0				< 10.0
2-Hexanone	2010-06	ug/l				< 10.0				< 10.0
2-Hexanone	2010-09	ug/l				< 10.0			< 10.0	< 10.0
2-Hexanone	2011-03	ug/l				< 10.0			< 10.0	< 10.0
2-Hexanone	2011-09	ug/l	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
2-Hexanone	2011-11	ug/l	< 10.0		< 10.0					
2-Hexanone	2012-03	ug/l	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
2-Hexanone	2012-06	ug/l	< 10.0		< 10.0					
2-Hexanone	2012-09	ug/l	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
2-Hexanone	2013-03	ug/l	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
2-Hexanone	2013-06	ug/l			< 10.0	< 10.0			< 10.0	< 10.0
2-Hexanone	2013-09	ug/l	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
2-Hexanone	2013-11	ug/L				< 10.0			< 10.0	< 10.0
2-Hexanone	2014-03	ug/L	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
2-Hexanone	2014-06	ug/L			< 10.0	< 10.0			< 10.0	< 10.0
2-Hexanone	2014-08	ug/L	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
2-Hexanone	2014-12	ug/L			< 10.0	< 10.0			< 10.0	< 10.0
2-Hexanone	2015-04	ug/L	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
2-Hexanone	2015-09	ug/L			< 10					
2-Hexanone	2015-10	ug/L	< 10			< 10			< 10	< 10
2-Hexanone	2016-04	ug/L	< 10		< 10	< 10			< 10	< 10
2-Hexanone	2016-07	ug/L				< 10				< 10
2-Hexanone	2016-10	ug/L	< 10		< 10	< 10			< 10	< 10
2-Hexanone	2017-05	ug/L	< 10		< 10	< 10			< 10	< 10
2-Hexanone	2017-09	ug/L	< 10		< 10	< 10			< 10	< 10
2-Hexanone	2018-05	ug/L			< 10	< 10			< 10	< 10
2-Hexanone	2018-09	ug/L	< 10		< 10	< 10			< 10	< 10
2-Hexanone	2019-03	ug/L	< 10		< 10	< 10			< 10	< 10
2-Hexanone	2019-10	ug/L		< 10	< 10	< 10		< 10	< 10	< 10
2-Hexanone	2020-04	ug/L		< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-Hexanone	2020-06	ug/L	< 10					< 10		
2-Hexanone	2020-08	ug/L	< 10				< 10	< 10		

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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
2-Hexanone	2020-09	ug/L		< 10	< 10	< 10			< 10	~~< 10~~
2-Hexanone	2020-12	ug/L					< 10	< 10		
2-Hexanone	2021-02	ug/L					< 10			
2-Hexanone	2021-04	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-Hexanone	2021-09	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-Hexanone	2022-04	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-Hexanone	2022-09	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-Hexanone	2023-04	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-Hexanone	2023-09	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-Hexanone	2024-04	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-Hexanone	2024-09	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-Methylnaphthalene	2009-03	ug/l							< 10	
2-Methylnaphthalene	2009-06	ug/l							< 10.0	
2-Methylnaphthalene	2009-09	ug/l							< 10.0	
2-Methylnaphthalene	2010-03	ug/l							< 10.0	
2-Methylnaphthalene	2010-09	ug/l							< 10.0	
2-Methylnaphthalene	2011-03	ug/l							< 12.0	
2-Methylnaphthalene	2014-06	ug/L			< 10.5					
2-Methylnaphthalene	2014-08	ug/L			< 10.2				< 10.8	
2-Methylnaphthalene	2015-10	ug/L				< 10			< 10	< 10
2-Methylnaphthalene	2016-07	ug/L				< 10.4				< 10.4
2-Methylnaphthalene	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
2-Methylnaphthalene	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
2-Methylnaphthalene	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
2-Methylphenol	2009-03	ug/l							< 10	
2-Methylphenol	2009-06	ug/l							< 10.0	
2-Methylphenol	2009-09	ug/l							< 10.0	
2-Methylphenol	2010-03	ug/l							< 10.0	
2-Methylphenol	2010-09	ug/l							< 10.0	
2-Methylphenol	2011-03	ug/l							< 12.0	
2-Methylphenol	2014-06	ug/L			< 10.5					
2-Methylphenol	2014-08	ug/L			< 10.2				< 10.8	
2-Methylphenol	2015-10	ug/L				< 10			< 10	< 10
2-Methylphenol	2016-07	ug/L				< 10.4				< 10.4
2-Methylphenol	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
2-Methylphenol	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
2-Methylphenol	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
2-Naphthylamine	2009-03	ug/l							< 10	
2-Naphthylamine	2009-06	ug/l							< 10.0	
2-Naphthylamine	2009-09	ug/l							< 10.0	
2-Naphthylamine	2010-03	ug/l							< 10.0	
2-Naphthylamine	2010-09	ug/l							< 10.0	
2-Naphthylamine	2011-03	ug/l							< 12.0	
2-Naphthylamine	2014-06	ug/L			< 10.5					
2-Naphthylamine	2014-08	ug/L			< 10.2				< 10.8	
2-Naphthylamine	2015-10	ug/L				< 10			< 10	< 10

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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
2-Naphthylamine	2016-07	ug/L				< 10.4				< 10.4
2-Naphthylamine	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
2-Naphthylamine	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
2-Naphthylamine	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
2-Nitroaniline	2009-03	ug/l							< 10	
2-Nitroaniline	2009-06	ug/l							< 10.0	
2-Nitroaniline	2009-09	ug/l							< 10.0	
2-Nitroaniline	2010-03	ug/l							< 10.0	
2-Nitroaniline	2010-09	ug/l							< 10.0	
2-Nitroaniline	2011-03	ug/l							< 12.0	
2-Nitroaniline	2014-06	ug/L			< 10.5					
2-Nitroaniline	2014-08	ug/L			< 10.2				< 10.8	
2-Nitroaniline	2015-10	ug/L				< 10			< 10	< 10
2-Nitroaniline	2016-07	ug/L				< 10.4				< 10.4
2-Nitroaniline	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
2-Nitroaniline	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
2-Nitroaniline	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
2-Nitrophenol	2009-03	ug/l							< 10	
2-Nitrophenol	2009-06	ug/l							< 10.0	
2-Nitrophenol	2009-09	ug/l							< 10.0	
2-Nitrophenol	2010-03	ug/l							< 10.0	
2-Nitrophenol	2010-09	ug/l							< 10.0	
2-Nitrophenol	2011-03	ug/l							< 12.0	
2-Nitrophenol	2014-06	ug/L			< 10.5					
2-Nitrophenol	2014-08	ug/L			< 10.2				< 10.8	
2-Nitrophenol	2015-10	ug/L				< 10			< 10	< 10
2-Nitrophenol	2016-07	ug/L				< 10.4				< 10.4
2-Nitrophenol	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
2-Nitrophenol	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
2-Nitrophenol	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
3,3-Dichlorobenzidine	2009-03	ug/l							< 85	
3,3-Dichlorobenzidine	2009-06	ug/l							< 10.0	
3,3-Dichlorobenzidine	2009-09	ug/l							< 10.0	
3,3-Dichlorobenzidine	2010-03	ug/l							< 10.0	
3,3-Dichlorobenzidine	2010-09	ug/l							< 10.0	
3,3-Dichlorobenzidine	2011-03	ug/l							< 12.0	
3,3-Dichlorobenzidine	2014-06	ug/L			< 52.6					
3,3-Dichlorobenzidine	2014-08	ug/L			< 51.0				< 53.8	
3,3-Dichlorobenzidine	2015-10	ug/L				< 50			< 50	< 50
3,3-Dichlorobenzidine	2016-07	ug/L				< 52.1				< 52.1
3,3-Dichlorobenzidine	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
3,3-Dichlorobenzidine	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
3,3-Dichlorobenzidine	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
3,3-Dimethylbenzidine	2009-03	ug/l							< 20	
3,3-Dimethylbenzidine	2009-06	ug/l							< 20.0	
3,3-Dimethylbenzidine	2009-09	ug/l							< 10.0	

Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
3,3-Dimethylbenzidine	2010-03	ug/l							< 10.0	
3,3-Dimethylbenzidine	2010-09	ug/l							< 10.0	
3,3-Dimethylbenzidine	2011-03	ug/l							< 12.0	
3,3-Dimethylbenzidine	2014-06	ug/L			< 10.5					
3,3-Dimethylbenzidine	2014-08	ug/L			< 10.2				< 10.8	
3,3-Dimethylbenzidine	2015-10	ug/L				< 10			< 10	< 10
3,3-Dimethylbenzidine	2016-07	ug/L				< 10.4				< 10.4
3,3-Dimethylbenzidine	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
3,3-Dimethylbenzidine	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
3,3-Dimethylbenzidine	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
3-Methylcholanthrene	2009-03	ug/l							< 10	
3-Methylcholanthrene	2009-06	ug/l							< 10.0	
3-Methylcholanthrene	2009-09	ug/l							< 10.0	
3-Methylcholanthrene	2010-03	ug/l							< 10.0	
3-Methylcholanthrene	2010-09	ug/l							< 10.0	
3-Methylcholanthrene	2011-03	ug/l							< 12.0	
3-Methylcholanthrene	2014-06	ug/L			< 10.5					
3-Methylcholanthrene	2014-08	ug/L			< 10.2				< 10.8	
3-Methylcholanthrene	2015-10	ug/L				< 10			< 10	< 10
3-Methylcholanthrene	2016-07	ug/L				**1.23 J**				**1.23 J**
3-Methylcholanthrene	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
3-Methylcholanthrene	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
3-Methylcholanthrene	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
3-Nitroaniline	2009-03	ug/l							< 10	
3-Nitroaniline	2009-06	ug/l							< 10.0	
3-Nitroaniline	2009-09	ug/l							< 10.0	
3-Nitroaniline	2010-03	ug/l							< 10.0	
3-Nitroaniline	2010-09	ug/l							< 10.0	
3-Nitroaniline	2011-03	ug/l							< 12.0	
3-Nitroaniline	2014-06	ug/L			< 10.5					
3-Nitroaniline	2014-08	ug/L			< 10.2				< 10.8	
3-Nitroaniline	2015-10	ug/L				< 10			< 10	< 10
3-Nitroaniline	2016-07	ug/L				< 10.4				< 10.4
3-Nitroaniline	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
3-Nitroaniline	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
3-Nitroaniline	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
4,4'-DDD	2009-03	ug/l							< 0.032	
4,4'-DDD	2009-06	ug/l							< 0.0320	
4,4'-DDD	2009-09	ug/l							< 0.0320	
4,4'-DDD	2010-03	ug/l							< 0.0320	
4,4'-DDD	2010-09	ug/l							< 0.0356	
4,4'-DDD	2011-03	ug/l							< 0.0320	
4,4'-DDD	2014-06	ug/L			< 0.0327					
4,4'-DDD	2014-08	ug/L			< 0.0320				< 0.0320	
4,4'-DDD	2015-10	ug/L				< 0.032			< 0.032	< 0.032
4,4'-DDD	2016-07	ug/L				< 0.032				< 0.032

Carroll County Landfill Western Expansion Area
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Table 13
Analytical Data Summary
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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
4,4'-DDD	2019-10	ug/L			< 0.0335	< 0.0333			< 0.0333	< 0.0333
4,4'-DDD	2020-09	ug/L				< 0.0348			< 0.0451	~~< 0.0348~~
4,4'-DDD	2024-09	ug/L			< 0.0696	< 0.0667			< 0.0667	< 0.0667
4,4'-DDE	2009-03	ug/l							< 0.032	
4,4'-DDE	2009-06	ug/l							< 0.0320	
4,4'-DDE	2009-09	ug/l							< 0.0320	
4,4'-DDE	2010-03	ug/l							< 0.0320	
4,4'-DDE	2010-09	ug/l							< 0.0356	
4,4'-DDE	2011-03	ug/l							< 0.0320	
4,4'-DDE	2014-06	ug/L			< 0.0327					
4,4'-DDE	2014-08	ug/L			< 0.0320				< 0.0320	
4,4'-DDE	2015-10	ug/L				< 0.032			< 0.032	< 0.032
4,4'-DDE	2016-07	ug/L				< 0.032				< 0.032
4,4'-DDE	2019-10	ug/L			< 0.0335	< 0.0333			< 0.0333	< 0.0333
4,4'-DDE	2020-09	ug/L				< 0.0348			< 0.0451	~~< 0.0348~~
4,4'-DDE	2024-09	ug/L			< 0.0696	< 0.0667			< 0.0667	< 0.0667
4,4'-DDT	2009-03	ug/l							< 0.032	
4,4'-DDT	2009-06	ug/l							< 0.0320	
4,4'-DDT	2009-09	ug/l							< 0.0320	
4,4'-DDT	2010-03	ug/l							< 0.0320	
4,4'-DDT	2010-09	ug/l							< 0.0356	
4,4'-DDT	2011-03	ug/l							< 0.0320	
4,4'-DDT	2014-06	ug/L			< 0.0327					
4,4'-DDT	2014-08	ug/L			< 0.0320				< 0.0320	
4,4'-DDT	2015-10	ug/L				< 0.032			< 0.032	< 0.032
4,4'-DDT	2016-07	ug/L				< 0.032				< 0.032
4,4'-DDT	2019-10	ug/L			< 0.0335	< 0.0333			< 0.0333	< 0.0333
4,4'-DDT	2020-09	ug/L				< 0.0348			< 0.0451	~~< 0.0348~~
4,4'-DDT	2024-09	ug/L			< 0.0696	< 0.0667			< 0.0667	< 0.0667
4,6-Dinitro-2-methylphenol	2009-03	ug/l							< 10	
4,6-Dinitro-2-methylphenol	2009-06	ug/l							< 10.0	
4,6-Dinitro-2-methylphenol	2009-09	ug/l							< 10.0	
4,6-Dinitro-2-methylphenol	2010-03	ug/l							< 10.0	
4,6-Dinitro-2-methylphenol	2010-09	ug/l							< 10.0	
4,6-Dinitro-2-methylphenol	2011-03	ug/l							< 12.0	
4,6-Dinitro-2-methylphenol	2014-06	ug/L			< 10.5					
4,6-Dinitro-2-methylphenol	2014-08	ug/L			< 10.2				< 10.8	
4,6-Dinitro-2-methylphenol	2015-10	ug/L				< 10			< 10	< 10
4,6-Dinitro-2-methylphenol	2016-07	ug/L				< 10.4				< 10.4
4,6-Dinitro-2-methylphenol	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
4,6-Dinitro-2-methylphenol	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
4,6-Dinitro-2-methylphenol	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
4-Aminobiphenyl	2009-03	ug/l							< 20	
4-Aminobiphenyl	2009-06	ug/l							< 20.0	
4-Aminobiphenyl	2009-09	ug/l							< 10.0	
4-Aminobiphenyl	2010-03	ug/l							< 10.0	

Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
4-Aminobiphenyl	2010-09	ug/l							< 10.0	
4-Aminobiphenyl	2011-03	ug/l							< 12.0	
4-Aminobiphenyl	2014-06	ug/L			< 10.5					
4-Aminobiphenyl	2014-08	ug/L			< 10.2				< 10.8	
4-Aminobiphenyl	2015-10	ug/L				< 10			< 10	< 10
4-Aminobiphenyl	2016-07	ug/L				< 10.4				< 10.4
4-Aminobiphenyl	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
4-Aminobiphenyl	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
4-Aminobiphenyl	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
4-Bromophenyl Phenyl Ether	2009-03	ug/l							< 10	
4-Bromophenyl Phenyl Ether	2009-06	ug/l							< 10.0	
4-Bromophenyl Phenyl Ether	2009-09	ug/l							< 10.0	
4-Bromophenyl Phenyl Ether	2010-03	ug/l							< 10.0	
4-Bromophenyl Phenyl Ether	2010-09	ug/l							< 10.0	
4-Bromophenyl Phenyl Ether	2011-03	ug/l							< 12.0	
4-Bromophenyl Phenyl Ether	2014-06	ug/L			< 10.5					
4-Bromophenyl Phenyl Ether	2014-08	ug/L			< 10.2				< 10.8	
4-Bromophenyl Phenyl Ether	2015-10	ug/L				< 10			< 10	< 10
4-Bromophenyl Phenyl Ether	2016-07	ug/L				< 10.4				< 10.4
4-Bromophenyl Phenyl Ether	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
4-Bromophenyl Phenyl Ether	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
4-Bromophenyl Phenyl Ether	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
4-Chloro-3-methylphenol	2009-03	ug/l							< 10	
4-Chloro-3-methylphenol	2009-06	ug/l							< 10.0	
4-Chloro-3-methylphenol	2009-09	ug/l							< 10.0	
4-Chloro-3-methylphenol	2010-03	ug/l							< 10.0	
4-Chloro-3-methylphenol	2010-09	ug/l							< 10.0	
4-Chloro-3-methylphenol	2011-03	ug/l							< 12.0	
4-Chloro-3-methylphenol	2014-06	ug/L			< 10.5					
4-Chloro-3-methylphenol	2014-08	ug/L			< 10.2				< 10.8	
4-Chloro-3-methylphenol	2015-10	ug/L				< 10			< 10	< 10
4-Chloro-3-methylphenol	2016-07	ug/L				< 10.4				< 10.4
4-Chloro-3-methylphenol	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
4-Chloro-3-methylphenol	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
4-Chloro-3-methylphenol	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
4-Chloroaniline	2009-03	ug/l							< 10	
4-Chloroaniline	2009-06	ug/l							< 10.0	
4-Chloroaniline	2009-09	ug/l							< 10.0	
4-Chloroaniline	2010-03	ug/l							< 10.0	
4-Chloroaniline	2010-09	ug/l							< 10.0	
4-Chloroaniline	2011-03	ug/l							< 12.0	
4-Chloroaniline	2014-06	ug/L			< 10.5					
4-Chloroaniline	2014-08	ug/L			< 10.2				< 10.8	
4-Chloroaniline	2015-10	ug/L				< 10			< 10	< 10
4-Chloroaniline	2016-07	ug/L				< 10.4				< 10.4
4-Chloroaniline	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2

Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
4-Chloroaniline	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
4-Chloroaniline	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
4-Chlorophenyl Phenyl Ether	2009-03	ug/l							< 10	
4-Chlorophenyl Phenyl Ether	2009-06	ug/l							< 10.0	
4-Chlorophenyl Phenyl Ether	2009-09	ug/l							< 10.0	
4-Chlorophenyl Phenyl Ether	2010-03	ug/l							< 10.0	
4-Chlorophenyl Phenyl Ether	2010-09	ug/l							< 10.0	
4-Chlorophenyl Phenyl Ether	2011-03	ug/l							< 12.0	
4-Chlorophenyl Phenyl Ether	2014-06	ug/L			< 10.5					
4-Chlorophenyl Phenyl Ether	2014-08	ug/L			< 10.2				< 10.8	
4-Chlorophenyl Phenyl Ether	2015-10	ug/L				< 10			< 10	< 10
4-Chlorophenyl Phenyl Ether	2016-07	ug/L				< 10.4				< 10.4
4-Chlorophenyl Phenyl Ether	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
4-Chlorophenyl Phenyl Ether	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
4-Chlorophenyl Phenyl Ether	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
4-Methyl-2-pentanone	2008-04	ug/l							< 10.0	
4-Methyl-2-pentanone	2008-06	ug/l							< 10.0	
4-Methyl-2-pentanone	2008-08	ug/l							< 10.0	
4-Methyl-2-pentanone	2008-09	ug/l							< 10.0	
4-Methyl-2-pentanone	2009-03	ug/l							< 10	
4-Methyl-2-pentanone	2009-06	ug/l							< 10.0	
4-Methyl-2-pentanone	2009-09	ug/l				< 10.0			< 10.0	< 10.0
4-Methyl-2-pentanone	2009-12	ug/l				< 10.0				< 10.0
4-Methyl-2-pentanone	2010-03	ug/l							< 10.0	
4-Methyl-2-pentanone	2010-04	ug/l				< 10.0				< 10.0
4-Methyl-2-pentanone	2010-06	ug/l				< 10.0				< 10.0
4-Methyl-2-pentanone	2010-09	ug/l				< 10.0			< 10.0	< 10.0
4-Methyl-2-pentanone	2011-03	ug/l				< 10.0			< 10.0	< 10.0
4-Methyl-2-pentanone	2011-09	ug/l	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
4-Methyl-2-pentanone	2011-11	ug/l	< 10.0		< 10.0					
4-Methyl-2-pentanone	2012-03	ug/l	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
4-Methyl-2-pentanone	2012-06	ug/l	< 10.0		< 10.0					
4-Methyl-2-pentanone	2012-09	ug/l	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
4-Methyl-2-pentanone	2013-03	ug/l	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
4-Methyl-2-pentanone	2013-06	ug/l			< 10.0	< 10.0			< 10.0	< 10.0
4-Methyl-2-pentanone	2013-09	ug/l	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
4-Methyl-2-pentanone	2013-11	ug/L				< 10.0			< 10.0	< 10.0
4-Methyl-2-pentanone	2014-03	ug/L	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
4-Methyl-2-pentanone	2014-06	ug/L			< 10.0	< 10.0			< 10.0	< 10.0
4-Methyl-2-pentanone	2014-08	ug/L	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
4-Methyl-2-pentanone	2014-12	ug/L			< 10.0	< 10.0			< 10.0	< 10.0
4-Methyl-2-pentanone	2015-04	ug/L	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
4-Methyl-2-pentanone	2015-09	ug/L			< 10					
4-Methyl-2-pentanone	2015-10	ug/L	< 10			< 10			< 10	< 10
4-Methyl-2-pentanone	2016-04	ug/L	< 10		< 10	< 10			< 10	< 10
4-Methyl-2-pentanone	2016-07	ug/L				< 10				< 10

Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
4-Methyl-2-pentanone	2016-10	ug/L	< 10		< 10	< 10			< 10	< 10
4-Methyl-2-pentanone	2017-05	ug/L	< 10		< 10	< 10			< 10	< 10
4-Methyl-2-pentanone	2017-09	ug/L	< 10		< 10	< 10			< 10	< 10
4-Methyl-2-pentanone	2018-05	ug/L			< 10	< 10			< 10	< 10
4-Methyl-2-pentanone	2018-09	ug/L	< 10		< 10	< 10			< 10	< 10
4-Methyl-2-pentanone	2019-03	ug/L	< 10		< 10	< 10			< 10	< 10
4-Methyl-2-pentanone	2019-10	ug/L		< 10	< 10	< 10		< 10	< 10	< 10
4-Methyl-2-pentanone	2020-04	ug/L		< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-Methyl-2-pentanone	2020-06	ug/L	< 10					< 10		
4-Methyl-2-pentanone	2020-08	ug/L	< 10				< 10	< 10		
4-Methyl-2-pentanone	2020-09	ug/L		< 10	< 10	< 10			< 10	~~< 10~~
4-Methyl-2-pentanone	2020-12	ug/L					< 10	< 10		
4-Methyl-2-pentanone	2021-02	ug/L					< 10			
4-Methyl-2-pentanone	2021-04	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-Methyl-2-pentanone	2021-09	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-Methyl-2-pentanone	2022-04	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-Methyl-2-pentanone	2022-09	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-Methyl-2-pentanone	2023-04	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-Methyl-2-pentanone	2023-09	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-Methyl-2-pentanone	2024-04	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-Methyl-2-pentanone	2024-09	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-Nitroaniline	2009-03	ug/l							< 10	
4-Nitroaniline	2009-06	ug/l							< 10.0	
4-Nitroaniline	2009-09	ug/l							< 10.0	
4-Nitroaniline	2010-03	ug/l							< 10.0	
4-Nitroaniline	2010-09	ug/l							< 10.0	
4-Nitroaniline	2011-03	ug/l							< 12.0	
4-Nitroaniline	2014-06	ug/L			< 10.5					
4-Nitroaniline	2014-08	ug/L			< 10.2				< 10.8	
4-Nitroaniline	2015-10	ug/L				< 10			< 10	< 10
4-Nitroaniline	2016-07	ug/L				< 10.4				< 10.4
4-Nitroaniline	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
4-Nitroaniline	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
4-Nitroaniline	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
4-Nitrophenol	2009-03	ug/l							< 10	
4-Nitrophenol	2009-06	ug/l							< 10.0	
4-Nitrophenol	2009-09	ug/l							< 10.0	
4-Nitrophenol	2010-03	ug/l							< 10.0	
4-Nitrophenol	2010-09	ug/l							< 10.0	
4-Nitrophenol	2011-03	ug/l							< 12.0	
4-Nitrophenol	2014-06	ug/L			< 10.5					
4-Nitrophenol	2014-08	ug/L			< 10.2				< 10.8	
4-Nitrophenol	2015-10	ug/L				< 10			< 10	< 10
4-Nitrophenol	2016-07	ug/L				< 10.4				< 10.4
4-Nitrophenol	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
4-Nitrophenol	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~

Carroll County Landfill Western Expansion Area
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2024 Annual Water Quality Report

Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
4-Nitrophenol	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
5-Nitro-o-toluidine	2009-03	ug/l							< 10	
5-Nitro-o-toluidine	2009-06	ug/l							< 10.0	
5-Nitro-o-toluidine	2009-09	ug/l							< 10.0	
5-Nitro-o-toluidine	2010-03	ug/l							< 10.0	
5-Nitro-o-toluidine	2010-09	ug/l							< 10.0	
5-Nitro-o-toluidine	2011-03	ug/l							< 12.0	
5-Nitro-o-toluidine	2014-06	ug/L			< 10.5					
5-Nitro-o-toluidine	2014-08	ug/L			< 10.2				< 10.8	
5-Nitro-o-toluidine	2015-10	ug/L				< 10			< 10	< 10
5-Nitro-o-toluidine	2016-07	ug/L				< 10.4				< 10.4
5-Nitro-o-toluidine	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
5-Nitro-o-toluidine	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
5-Nitro-o-toluidine	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
7,12-Dimethylbenz(a)anthracene	2009-03	ug/l							< 10	
7,12-Dimethylbenz(a)anthracene	2009-06	ug/l							< 10.0	
7,12-Dimethylbenz(a)anthracene	2009-09	ug/l							< 10.0	
7,12-Dimethylbenz(a)anthracene	2010-03	ug/l							< 10.0	
7,12-Dimethylbenz(a)anthracene	2010-09	ug/l							< 10.0	
7,12-Dimethylbenz(a)anthracene	2011-03	ug/l							< 12.0	
7,12-Dimethylbenz(a)anthracene	2014-06	ug/L			< 10.5					
7,12-Dimethylbenz(a)anthracene	2014-08	ug/L			< 10.2				< 10.8	
7,12-Dimethylbenz(a)anthracene	2015-10	ug/L				< 10			< 10	< 10
7,12-Dimethylbenz(a)anthracene	2016-07	ug/L				< 10.4				< 10.4
7,12-Dimethylbenz(a)anthracene	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
7,12-Dimethylbenz(a)anthracene	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
7,12-Dimethylbenz(a)anthracene	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Acenaphthene	2009-03	ug/l							< 10	
Acenaphthene	2009-06	ug/l							< 10.0	
Acenaphthene	2009-09	ug/l							< 10.0	
Acenaphthene	2010-03	ug/l							< 10.0	
Acenaphthene	2010-09	ug/l							< 10.0	
Acenaphthene	2011-03	ug/l							< 12.0	
Acenaphthene	2014-06	ug/L			< 10.5					
Acenaphthene	2014-08	ug/L			< 10.2				< 10.8	
Acenaphthene	2015-10	ug/L				< 10			< 10	< 10
Acenaphthene	2016-07	ug/L				< 10.4				< 10.4
Acenaphthene	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Acenaphthene	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Acenaphthene	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Acenaphthylene	2009-03	ug/l							< 10	
Acenaphthylene	2009-06	ug/l							< 10.0	
Acenaphthylene	2009-09	ug/l							< 10.0	
Acenaphthylene	2010-03	ug/l							< 10.0	
Acenaphthylene	2010-09	ug/l							< 10.0	
Acenaphthylene	2011-03	ug/l							< 12.0	

Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Acenaphthylene	2014-06	ug/L			< 10.5					
Acenaphthylene	2014-08	ug/L			< 10.2				< 10.8	
Acenaphthylene	2015-10	ug/L				< 10			< 10	< 10
Acenaphthylene	2016-07	ug/L				< 10.4				< 10.4
Acenaphthylene	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Acenaphthylene	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Acenaphthylene	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Acetone	2008-04	ug/l							< 10.0	
Acetone	2008-06	ug/l							< 10.0	
Acetone	2008-08	ug/l							< 10.0	
Acetone	2008-09	ug/l							< 10.0	
Acetone	2009-03	ug/l							< 10	
Acetone	2009-06	ug/l							< 10.0	
Acetone	2009-09	ug/l				< 10.0			< 10.0	< 10.0
Acetone	2009-12	ug/l				< 10.0				< 10.0
Acetone	2010-03	ug/l							< 10.0	
Acetone	2010-04	ug/l				< 10.0				< 10.0
Acetone	2010-06	ug/l				< 10.0				< 10.0
Acetone	2010-09	ug/l				< 10.0			< 10.0	< 10.0
Acetone	2011-03	ug/l				< 10.0			< 10.0	< 10.0
Acetone	2011-09	ug/l	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
Acetone	2011-11	ug/l	< 10.0		< 10.0					
Acetone	2012-03	ug/l	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
Acetone	2012-06	ug/l	< 10.0		< 10.0					
Acetone	2012-09	ug/l	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
Acetone	2013-03	ug/l	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
Acetone	2013-06	ug/l			< 10.0 J	< 10.0			< 10.0	< 10.0
Acetone	2013-09	ug/l	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
Acetone	2013-11	ug/L				< 10.0			< 10.0	< 10.0
Acetone	2014-03	ug/L	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
Acetone	2014-06	ug/L			< 10.0	< 10.0			< 10.0	< 10.0
Acetone	2014-08	ug/L	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
Acetone	2014-12	ug/L			< 10.0	< 10.0			< 10.0	< 10.0
Acetone	2015-04	ug/L	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
Acetone	2015-09	ug/L			< 10					
Acetone	2015-10	ug/L	< 10			< 10			< 10	< 10
Acetone	2016-04	ug/L	< 10 J		< 10	< 10			< 10	< 10
Acetone	2016-07	ug/L				< 10				< 10
Acetone	2016-10	ug/L	< 10		< 10	< 10			< 10	< 10
Acetone	2017-05	ug/L	< 10		< 10	< 10			< 10	< 10
Acetone	2017-09	ug/L	< 10		< 10	< 10			< 10	< 10
Acetone	2018-05	ug/L			< 10	< 10			< 10	< 10
Acetone	2018-09	ug/L	< 10		< 10	< 10			< 10	< 10
Acetone	2019-03	ug/L	< 10		< 10	< 10			< 10	< 10
Acetone	2019-10	ug/L		< 10	< 10	< 10		< 10	< 10	< 10
Acetone	2020-04	ug/L		< 10	< 10	< 10	< 10	**11**	< 10	< 10

Table 13
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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Acetone	2020-06	ug/L	< 10					< 10		
Acetone	2020-08	ug/L	< 10				< 10	< 10		
Acetone	2020-09	ug/L		< 10	< 10	< 10			< 10	~~< 10~~
Acetone	2020-12	ug/L					< 10	< 10		
Acetone	2021-02	ug/L					< 10			
Acetone	2021-04	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Acetone	2021-09	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Acetone	2022-04	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Acetone	2022-09	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Acetone	2023-04	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Acetone	2023-09	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Acetone	2024-04	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Acetone	2024-09	ug/L	< 10	**3.73 J**	< 10	< 10	< 10	< 10	< 10	< 10
Acetonitrile	2009-03	mg/l							< 10	
Acetonitrile	2009-06	mg/l							< 10.0	
Acetonitrile	2009-09	mg/l							< 10.0	
Acetonitrile	2010-09	mg/l							< 10.0	
Acetonitrile	2014-06	mg/L			< 10.0					
Acetonitrile	2014-08	mg/L			< 10.0				< 10.0	
Acetonitrile	2015-10	mg/L				< 10			< 10	< 10
Acetonitrile	2016-07	mg/L				< 10				< 10
Acetonitrile	2019-10	mg/L			< 10	< 10			< 10	< 10
Acetonitrile	2020-09	mg/L				< 10			< 10	~~< 10~~
Acetonitrile	2024-09	mg/L			< 10	< 10			< 10	< 10
Acetophenone	2009-03	ug/l							< 10	
Acetophenone	2009-06	ug/l							< 10.0	
Acetophenone	2009-09	ug/l							< 10.0	
Acetophenone	2010-03	ug/l							< 10.0	
Acetophenone	2010-09	ug/l							< 10.0	
Acetophenone	2011-03	ug/l							< 12.0	
Acetophenone	2014-06	ug/L			< 10.5					
Acetophenone	2014-08	ug/L			< 10.2				< 10.8	
Acetophenone	2015-10	ug/L				< 10			< 10	< 10
Acetophenone	2016-07	ug/L				< 10.4				< 10.4
Acetophenone	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Acetophenone	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Acetophenone	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Acrolein	2009-03	ug/l							< 10	
Acrolein	2009-06	ug/l							< 10.0	
Acrolein	2009-09	ug/l							< 10.0	
Acrolein	2010-03	ug/l							< 10.0	
Acrolein	2010-09	ug/l							< 10.0	
Acrolein	2011-03	ug/l							< 10.0	
Acrolein	2014-06	ug/L			< 10.0					
Acrolein	2014-08	ug/L			< 10.0				< 10.0	
Acrolein	2015-10	ug/L				< 10			< 10	< 10

Table 13
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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Acrolein	2016-07	ug/L				< 10				< 10
Acrolein	2019-10	ug/L			< 10	< 10			< 10	< 10
Acrolein	2020-04	ug/L			< 10	< 10			< 10	< 10
Acrolein	2020-09	ug/L				< 10			< 10	~~< 10~~
Acrolein	2024-09	ug/L			< 10	< 10			< 10	< 10
Acrylonitrile	2008-04	ug/l							< 10.0	
Acrylonitrile	2008-06	ug/l							< 10.0	
Acrylonitrile	2008-08	ug/l							< 10.0	
Acrylonitrile	2008-09	ug/l							< 10.0	
Acrylonitrile	2009-03	ug/l							< 10	
Acrylonitrile	2009-06	ug/l							< 10.0	
Acrylonitrile	2009-09	ug/l				< 10.0			< 10.0	< 10.0
Acrylonitrile	2009-12	ug/l				< 10.0				< 10.0
Acrylonitrile	2010-03	ug/l							< 10.0	
Acrylonitrile	2010-04	ug/l				< 10.0				< 10.0
Acrylonitrile	2010-06	ug/l				< 10.0				< 10.0
Acrylonitrile	2010-09	ug/l				< 10.0			< 10.0	< 10.0
Acrylonitrile	2011-03	ug/l				< 10.0			< 10.0	< 10.0
Acrylonitrile	2011-09	ug/l	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
Acrylonitrile	2011-11	ug/l	< 10.0		< 10.0					
Acrylonitrile	2012-03	ug/l	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
Acrylonitrile	2012-06	ug/l	< 10.0		< 10.0					
Acrylonitrile	2012-09	ug/l	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
Acrylonitrile	2013-03	ug/l	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
Acrylonitrile	2013-06	ug/l			< 10.0	< 10.0			< 10.0	< 10.0
Acrylonitrile	2013-09	ug/l	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
Acrylonitrile	2013-11	ug/L				< 10.0			< 10.0	< 10.0
Acrylonitrile	2014-03	ug/L	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
Acrylonitrile	2014-06	ug/L			< 10.0	< 10.0			< 10.0	< 10.0
Acrylonitrile	2014-08	ug/L	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
Acrylonitrile	2014-12	ug/L			< 10.0	< 10.0			< 10.0	< 10.0
Acrylonitrile	2015-04	ug/L	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
Acrylonitrile	2015-09	ug/L			< 10					
Acrylonitrile	2015-10	ug/L	< 10			< 10			< 10	< 10
Acrylonitrile	2016-04	ug/L	< 10		< 10	< 10			< 10	< 10
Acrylonitrile	2016-07	ug/L				< 10				< 10
Acrylonitrile	2016-10	ug/L	< 10		< 10	< 10			< 10	< 10
Acrylonitrile	2017-05	ug/L	< 5		< 5	< 5			< 5	< 5
Acrylonitrile	2017-09	ug/L	< 5		< 5	< 5			< 5	< 5
Acrylonitrile	2018-05	ug/L			< 5	< 5			< 5	< 5
Acrylonitrile	2018-09	ug/L	< 5		< 5	< 5			< 5	< 5
Acrylonitrile	2019-03	ug/L	< 5		< 5	< 5			< 5	< 5
Acrylonitrile	2019-10	ug/L		< 5	< 5	< 5		< 5	< 5	< 5
Acrylonitrile	2020-04	ug/L		< 5	< 5	< 5	< 5	< 5	< 5	< 5
Acrylonitrile	2020-06	ug/L	< 5					< 5		
Acrylonitrile	2020-08	ug/L	< 5				< 5	< 5		

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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Acrylonitrile	2020-09	ug/L		< 5	< 5	< 5			< 5	~~< 5~~
Acrylonitrile	2020-12	ug/L					< 5	< 5		
Acrylonitrile	2021-02	ug/L					< 5			
Acrylonitrile	2021-04	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Acrylonitrile	2021-09	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Acrylonitrile	2022-04	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Acrylonitrile	2022-09	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Acrylonitrile	2023-04	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Acrylonitrile	2023-09	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Acrylonitrile	2024-04	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Acrylonitrile	2024-09	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Aldrin	2009-03	ug/l							< 0.032	
Aldrin	2009-06	ug/l							< 0.0320	
Aldrin	2009-09	ug/l							< 0.0320	
Aldrin	2010-03	ug/l							< 0.0320	
Aldrin	2010-09	ug/l							< 0.0356	
Aldrin	2011-03	ug/l							< 0.0320	
Aldrin	2014-06	ug/L			< 0.0327					
Aldrin	2014-08	ug/L			< 0.0320				< 0.0320	
Aldrin	2015-10	ug/L				< 0.032			< 0.032	< 0.032
Aldrin	2016-07	ug/L				< 0.032				< 0.032
Aldrin	2019-10	ug/L			< 0.0335	< 0.0333			< 0.0333	< 0.0333
Aldrin	2020-09	ug/L				< 0.0348			< 0.0451	~~< 0.0348~~
Aldrin	2024-09	ug/L			< 0.0696	< 0.0667			< 0.0667	< 0.0667
Allyl Chloride	2009-03	ug/l							< 2	
Allyl Chloride	2009-06	ug/l							< 2.00	
Allyl Chloride	2009-09	ug/l							< 2.00	
Allyl Chloride	2010-03	ug/l							< 2.00	
Allyl Chloride	2010-09	ug/l							< 2.00	
Allyl Chloride	2011-03	ug/l							< 10.0	
Allyl Chloride	2014-06	ug/L			< 2.00					
Allyl Chloride	2014-08	ug/L			< 2.00				< 2.00	
Allyl Chloride	2015-10	ug/L				< 2			< 2	< 2
Allyl Chloride	2016-07	ug/L				< 2				< 2
Allyl Chloride	2019-10	ug/L			< 2	< 2			< 2	< 2
Allyl Chloride	2020-04	ug/L			< 2	< 2			< 2	< 2
Allyl Chloride	2020-09	ug/L				< 2			< 2	~~< 2~~
Allyl Chloride	2024-09	ug/L			< 2	< 2			< 2	< 2
alpha-BHC	2009-03	ug/l							< 0.032	
alpha-BHC	2009-06	ug/l							< 0.0320	
alpha-BHC	2009-09	ug/l							< 0.0320	
alpha-BHC	2010-03	ug/l							< 0.0320	
alpha-BHC	2010-09	ug/l							< 0.0356	
alpha-BHC	2011-03	ug/l							< 0.0320	
alpha-BHC	2011-09	ug/l							< 0.0320	
alpha-BHC	2012-03	ug/l							< 0.0320	

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alpha-BHC	2013-03	ug/l							**0.00556 J**	
alpha-BHC	2013-09	ug/l							< 0.0333	
alpha-BHC	2014-03	ug/L							< 0.0376	
alpha-BHC	2014-06	ug/L			< 0.0327					
alpha-BHC	2014-08	ug/L			< 0.0320				< 0.0320	
alpha-BHC	2015-04	ug/L							< 0.0323	
alpha-BHC	2015-10	ug/L				< 0.032			< 0.032	< 0.032
alpha-BHC	2016-04	ug/L				< 0.0327			**0.0046 J**	< 0.0327
alpha-BHC	2016-07	ug/L				< 0.032				< 0.032
alpha-BHC	2016-10	ug/L				< 0.0327			< 0.032	< 0.0327
alpha-BHC	2017-05	ug/L				< 0.0327			< 0.0344	< 0.0327
alpha-BHC	2017-09	ug/L				< 0.0344			< 0.034	< 0.0344
alpha-BHC	2018-05	ug/L				< 0.0344			< 0.0344	< 0.0344
alpha-BHC	2018-09	ug/L				< 0.0352			< 0.0352	< 0.0352
alpha-BHC	2019-03	ug/L				< 0.0356			< 0.00546	< 0.0356
alpha-BHC	2019-10	ug/L			< 0.0335	< 0.0333			< 0.0333	< 0.0333
alpha-BHC	2020-04	ug/L				< 0.0451			< 0.0427	< 0.0451
alpha-BHC	2020-09	ug/L				< 0.0348			< 0.0451	~~< 0.0348~~
alpha-BHC	2021-04	ug/L				< 0.0364			< 0.0427	< 0.0364
alpha-BHC	2021-09	ug/L				< 0.04			< 0.039	< 0.04
alpha-BHC	2024-09	ug/L			< 0.0696	< 0.0667			< 0.0667	< 0.0667
Anthracene	2009-03	ug/l							< 10	
Anthracene	2009-06	ug/l							< 10.0	
Anthracene	2009-09	ug/l							< 10.0	
Anthracene	2010-03	ug/l							< 10.0	
Anthracene	2010-09	ug/l							< 10.0	
Anthracene	2011-03	ug/l							< 12.0	
Anthracene	2014-06	ug/L			< 10.5					
Anthracene	2014-08	ug/L			< 10.2				< 10.8	
Anthracene	2015-10	ug/L				< 10			< 10	< 10
Anthracene	2016-07	ug/L				< 10.4				< 10.4
Anthracene	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Anthracene	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Anthracene	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Antimony	2008-04	mg/l							< 0.00600	
Antimony	2008-06	mg/l							< 0.00600	
Antimony	2008-08	mg/l							< 0.00600	
Antimony	2008-09	mg/l							< 0.00600	
Antimony	2009-03	mg/l							< 0.006	
Antimony	2009-06	mg/l							< 0.00600	
Antimony	2009-09	mg/l				< 0.00600			< 0.00600	< 0.00600
Antimony	2009-12	mg/l				< 0.00600				< 0.00600
Antimony	2010-03	mg/l							< 0.00600	
Antimony	2010-04	mg/l				< 0.00600				< 0.00600
Antimony	2010-06	mg/l				< 0.00600				< 0.00600
Antimony	2010-09	mg/l				**0.0101**			< 0.00600	**0.0101**

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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Antimony	2011-03	mg/l				< 0.00600			< 0.00600	< 0.00600
Antimony	2011-09	mg/l	< 0.00600		< 0.00600	< 0.00600			< 0.00600	< 0.00600
Antimony	2011-11	mg/l	< 0.00600		< 0.00600					
Antimony	2012-03	mg/l	< 0.00600		< 0.00600	< 0.00600			< 0.00600	< 0.00600
Antimony	2012-06	mg/l	< 0.00600		< 0.00600					
Antimony	2012-09	mg/l	< 0.00600		< 0.0120	< 0.00600			< 0.00600	< 0.00600
Antimony	2013-03	mg/l	**0.00434 J**		< 0.00600	< 0.00600			< 0.00600	< 0.00600
Antimony	2013-06	mg/l				< 0.00600				< 0.00600
Antimony	2013-09	mg/l	< 0.00600 J		< 0.00600 J	< 0.00600 J			< 0.00600 J	< 0.00600 J
Antimony	2013-11	mg/L				< 0.00600				< 0.00600
Antimony	2014-03	mg/L	< 0.00600		< 0.00600	< 0.00600			< 0.00600	< 0.00600
Antimony	2014-06	mg/L			< 0.00600	< 0.00600				< 0.00600
Antimony	2014-08	mg/L	< 0.00100		< 0.00100	< 0.00100			< 0.00100	< 0.00100
Antimony	2014-12	mg/L			< 0.00100	< 0.00100			< 0.00100	< 0.00100
Antimony	2015-04	mg/L	< 0.00100		< 0.00100	< 0.00100			< 0.00100	< 0.00100
Antimony	2015-09	mg/L			< 0.001					
Antimony	2015-10	mg/L	< 0.001			< 0.001			< 0.001	< 0.001
Antimony	2016-04	mg/L	< 0.001		< 0.001	< 0.001			< 0.001	< 0.001
Antimony	2016-07	mg/L				< 0.001				< 0.001
Antimony	2016-10	mg/L	< 0.001		< 0.001	< 0.001			< 0.001	< 0.001
Antimony	2017-05	mg/L	< 0.001		< 0.001	< 0.001			< 0.001	< 0.001
Antimony	2017-09	mg/L	**0.000227 J**		< 0.001	< 0.001			< 0.001	< 0.001
Antimony	2018-05	mg/L			< 0.001	< 0.001			< 0.001	< 0.001
Antimony	2018-09	mg/L	< 0.003		< 0.003	< 0.003			< 0.003	< 0.003
Antimony	2019-03	mg/L	< 0.001		< 0.001	< 0.001			< 0.001	< 0.001
Antimony	2019-10	mg/L		< 0.002	< 0.002	< 0.002		~~< 0.002~~	< 0.002	< 0.002
Antimony	2020-04	mg/L		< 0.001	< 0.001	< 0.001	~~< 0.001~~	~~< 0.001~~	< 0.001	< 0.001
Antimony	2020-06	mg/L	< 0.001					~~< 0.001~~		
Antimony	2020-08	mg/L	< 0.001				~~**0.000803 J**~~	~~**0.000966 J**~~		
Antimony	2020-09	mg/L		< 0.001	< 0.001	< 0.001			< 0.001	~~< 0.001~~
Antimony	2020-12	mg/L					~~**0.00055 J**~~	**0.00162**		
Antimony	2021-02	mg/L					~~**0.00148 J**~~			
Antimony	2021-04	mg/L	< 0.002	< 0.002	< 0.002	< 0.002	~~< 0.002~~	< 0.002	< 0.002	< 0.002
Antimony	2021-09	mg/L	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Antimony	2022-04	mg/L	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Antimony	2022-09	mg/L	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Antimony	2023-04	mg/L	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Antimony	2023-09	mg/L	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Antimony	2024-04	mg/L	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Antimony	2024-09	mg/L	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002
Arsenic	2008-04	mg/l							< 0.00100	
Arsenic	2008-06	mg/l							**0.00108**	
Arsenic	2008-08	mg/l							< 0.00200	
Arsenic	2008-09	mg/l							**0.00183**	
Arsenic	2009-03	mg/l							< 0.001	
Arsenic	2009-06	mg/l							< 0.00100	

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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Arsenic	2009-09	mg/l				< 0.00100			< 0.00100	< 0.00100
Arsenic	2009-12	mg/l				**0.00801**				**0.00801**
Arsenic	2010-03	mg/l							< 0.00100	
Arsenic	2010-04	mg/l				< 0.00200				< 0.00200
Arsenic	2010-06	mg/l				< 0.00100				< 0.00100
Arsenic	2010-09	mg/l				< 0.00100			< 0.00100	< 0.00100
Arsenic	2011-03	mg/l				< 0.00200			< 0.00100	< 0.00200
Arsenic	2011-09	mg/l	< 0.00400		**0.00755**	< 0.00100			< 0.00100	< 0.00100
Arsenic	2011-11	mg/l	< 0.00100		< 0.00100					
Arsenic	2012-03	mg/l	< 0.00100		**0.00142**	< 0.00100			< 0.00100	< 0.00100
Arsenic	2012-06	mg/l	< 0.00100		**0.0122**					
Arsenic	2012-09	mg/l	< 0.00100		< 0.00100	< 0.00200			< 0.00200	< 0.00200
Arsenic	2013-03	mg/l	< 0.00100		**0.00512**	**0.00146 J**			< 0.00100	**0.00146 J**
Arsenic	2013-06	mg/l				< 0.00100				< 0.00100
Arsenic	2013-09	mg/l	**0.000363 J**		**0.00384**	< 0.00100			**0.000737 J**	< 0.00100
Arsenic	2013-11	mg/L				< 0.00100				< 0.00100
Arsenic	2014-03	mg/L	< 0.00100		**0.000780 J**	< 0.00100			< 0.00100	< 0.00100
Arsenic	2014-06	mg/L			**0.00331**	< 0.00100 J				< 0.00100 J
Arsenic	2014-08	mg/L	< 0.00200		**0.00477**	< 0.00200			< 0.00200	< 0.00200
Arsenic	2014-12	mg/L			**0.00526**	< 0.00200			< 0.00200	< 0.00200
Arsenic	2015-04	mg/L	< 0.00200		**0.0108**	< 0.00200			< 0.00200	< 0.00200
Arsenic	2015-09	mg/L			**0.00382**					
Arsenic	2015-10	mg/L	< 0.002			< 0.002			< 0.002	< 0.002
Arsenic	2016-04	mg/L	< 0.002		**0.00496**	< 0.002			< 0.002	< 0.002
Arsenic	2016-07	mg/L				< 0.002				< 0.002
Arsenic	2016-10	mg/L	< 0.002		**0.00695**	< 0.002			< 0.002	< 0.002
Arsenic	2017-05	mg/L	**0.000791 J**		**0.0059**	**0.000858 J**			**0.000656 J**	**0.000858 J**
Arsenic	2017-09	mg/L	**0.000877 J**		**0.00669**	< 0.002			< 0.002	< 0.002
Arsenic	2018-05	mg/L			**0.0063**	< 0.002			< 0.002	< 0.002
Arsenic	2018-09	mg/L	**0.00255**		**0.00696**	< 0.001			< 0.001	< 0.001
Arsenic	2019-03	mg/L	**0.000967 J**		**0.0109**	< 0.002			< 0.002	< 0.002
Arsenic	2019-10	mg/L		< 0.004	**0.00867**	< 0.004		~~**0.00202 J**~~	< 0.004	< 0.004
Arsenic	2020-04	mg/L		< 0.002	**0.00765**	< 0.002	~~**0.00249**~~	~~**0.00319**~~	< 0.002	< 0.002
Arsenic	2020-06	mg/L	< 0.002					~~**0.00517**~~		
Arsenic	2020-08	mg/L	< 0.002				~~**0.00211**~~	~~**0.00343**~~		
Arsenic	2020-09	mg/L		< 0.002	**0.0103**	< 0.002			< 0.002	~~< 0.002~~
Arsenic	2020-12	mg/L					~~< 0.002~~	< 0.002		
Arsenic	2021-02	mg/L					~~< 0.002~~			
Arsenic	2021-04	mg/L	< 0.002	**0.00126 J**	**0.0114**	< 0.002	~~< 0.002~~	**0.00213**	< 0.002	< 0.002
Arsenic	2021-09	mg/L	< 0.002	**0.00142 J**	**0.00842**	< 0.002	< 0.002	**0.00165 J**	< 0.002	< 0.002
Arsenic	2022-04	mg/L	< 0.002	**0.00142 J**	**0.0193**	< 0.002	**0.000766 J**	**0.00284**	< 0.002	< 0.002
Arsenic	2022-09	mg/L	< 0.002	**0.00411**	**0.00973**	< 0.002	< 0.002	**0.00197 J**	< 0.002	< 0.002
Arsenic	2023-04	mg/L	**0.000758 J**	**0.0026**	**0.00869**	< 0.002	**0.000989 J**	**0.00224**	< 0.002	< 0.002
Arsenic	2023-09	mg/L	**0.000769 J**	**0.00155 J**	**0.0219**	< 0.002	**0.00107 J**	**0.0011 J**	< 0.002	< 0.002
Arsenic	2024-04	mg/L	**0.000535 J**	**0.00187 J**	**0.0222**	< 0.002	**0.00105 J**	**0.00271**	< 0.002	< 0.002
Arsenic	2024-09	mg/L	< 0.002	**0.00388**	**0.0183**	< 0.002	**0.00117 J**	**0.00326**	< 0.002	< 0.002

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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Barium	2008-04	mg/l							0.107	
Barium	2008-06	mg/l							0.123	
Barium	2008-08	mg/l							0.273	
Barium	2008-09	mg/l							0.386	
Barium	2009-03	mg/l							0.404	
Barium	2009-06	mg/l							0.425	
Barium	2009-09	mg/l				0.487			0.433	0.487
Barium	2009-12	mg/l				1.05				1.05
Barium	2010-03	mg/l							0.508	
Barium	2010-04	mg/l				0.462				0.462
Barium	2010-06	mg/l				0.435				0.435
Barium	2010-09	mg/l				0.429			0.498	0.429
Barium	2011-03	mg/l				0.433			0.568	0.433
Barium	2011-09	mg/l	0.185		1.07	0.410			0.520	0.410
Barium	2011-11	mg/l	0.213		0.909					
Barium	2012-03	mg/l	0.182		0.921	0.466			0.576	0.466
Barium	2012-06	mg/l	0.206		1.34					
Barium	2012-09	mg/l	0.223		0.703	0.406			0.496	0.406
Barium	2013-03	mg/l	0.166		0.699	0.838			0.489	0.838
Barium	2013-06	mg/l				0.434				0.434
Barium	2013-09	mg/l	0.222		0.766	0.423			0.561	0.423
Barium	2013-11	mg/L				0.487				0.487
Barium	2014-03	mg/L	0.208		0.711	0.452			0.522	0.452
Barium	2014-06	mg/L			0.641	0.435				0.435
Barium	2014-08	mg/L	0.229		0.674	0.435			0.570	0.435
Barium	2014-12	mg/L			0.767	0.423			0.576	0.423
Barium	2015-04	mg/L	0.220		0.729	0.430			0.619	0.430
Barium	2015-09	mg/L			0.864					
Barium	2015-10	mg/L	0.245			0.438			0.637	0.438
Barium	2016-04	mg/L	0.215		0.752	0.461			0.62	0.461
Barium	2016-07	mg/L				0.415				0.415
Barium	2016-10	mg/L	0.234		0.766	0.407			0.644	0.407
Barium	2017-05	mg/L	0.222		0.774	0.427			0.631	0.427
Barium	2017-09	mg/L	0.252		0.711	0.419			0.601	0.419
Barium	2018-05	mg/L			0.681	0.457			0.629	0.457
Barium	2018-09	mg/L	0.277		0.462	0.426			0.574	0.426
Barium	2019-03	mg/L	0.24		0.756	0.488			0.586	0.488
Barium	2019-10	mg/L		0.41	0.607	0.387		~~0.0483~~	0.571	0.387
Barium	2020-04	mg/L		0.441	0.697	0.385	~~0.0321~~	~~0.0351~~	0.553	0.385
Barium	2020-06	mg/L	0.243					~~0.0371~~		
Barium	2020-08	mg/L	0.278				~~0.0334~~	~~0.0323~~		
Barium	2020-09	mg/L		0.472	0.743	0.43			0.53	~~0.43~~
Barium	2020-12	mg/L					~~0.0275~~	0.0263		
Barium	2021-02	mg/L					~~0.0258~~			
Barium	2021-04	mg/L	0.229	0.528	0.737	0.43	~~0.0266~~	0.0348	0.682	0.43
Barium	2021-09	mg/L	0.241	0.505	0.562	0.37	0.0251	0.0255	0.503	0.37

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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Barium	2022-04	mg/L	**0.251**	**0.555**	**0.66**	**0.426**	**0.0287**	**0.0263**	**0.599**	**0.426**
Barium	2022-09	mg/L	**0.288**	**0.616**	**0.679**	**0.427**	**0.029**	**0.0269**	**0.651**	**0.427**
Barium	2023-04	mg/L	**0.242**	**0.642**	**0.714**	**0.459**	**0.0273**	**0.0254**	**0.694**	**0.459**
Barium	2023-09	mg/L	**0.31**	**0.588**	**0.663**	**0.433**	**0.0273**	**0.024**	**0.591**	**0.433**
Barium	2024-04	mg/L	**0.229**	**0.614**	**0.671**	**0.471**	**0.0244**	**0.0227**	**0.659**	**0.471**
Barium	2024-09	mg/L	**0.294**	**0.667**	**0.708**	**0.492**	**0.0223**	**0.0216**	**0.703**	**0.492**
Benzene	2008-04	ug/l							< 0.500	
Benzene	2008-06	ug/l							< 0.500	
Benzene	2008-08	ug/l							< 0.500	
Benzene	2008-09	ug/l							< 0.500	
Benzene	2009-03	ug/l							< 0.5	
Benzene	2009-06	ug/l							< 0.500	
Benzene	2009-09	ug/l				< 0.500			< 0.500	< 0.500
Benzene	2009-12	ug/l				< 0.500				< 0.500
Benzene	2010-03	ug/l							< 0.500	
Benzene	2010-04	ug/l				< 0.500				< 0.500
Benzene	2010-06	ug/l				< 0.500				< 0.500
Benzene	2010-09	ug/l				< 0.500			< 0.500	< 0.500
Benzene	2011-03	ug/l				< 0.500			< 0.500	< 0.500
Benzene	2011-09	ug/l	< 0.500		< 0.500	< 0.500			< 0.500	< 0.500
Benzene	2011-11	ug/l	< 0.500		< 0.500					
Benzene	2012-03	ug/l	< 0.500		< 0.500	< 0.500			< 0.500	< 0.500
Benzene	2012-06	ug/l	< 0.500		< 0.500					
Benzene	2012-09	ug/l	< 0.500		< 0.500	< 0.500			< 0.500	< 0.500
Benzene	2013-03	ug/l	< 0.500		< 0.500	< 0.500			< 0.500	< 0.500
Benzene	2013-06	ug/l			< 0.500	< 0.500			< 0.500	< 0.500
Benzene	2013-09	ug/l	< 0.500		< 0.500	< 0.500			< 0.500	< 0.500
Benzene	2013-11	ug/L				< 0.500			< 0.500	< 0.500
Benzene	2014-03	ug/L	< 0.500		< 0.500	< 0.500			< 0.500	< 0.500
Benzene	2014-06	ug/L			< 0.500	< 0.500			< 0.500	< 0.500
Benzene	2014-08	ug/L	< 0.500		< 0.500	< 0.500			< 0.500	< 0.500
Benzene	2014-12	ug/L			**0.183 J**	< 0.500			< 0.500	< 0.500
Benzene	2015-04	ug/L	< 0.500		**0.196 J**	< 0.500			< 0.500	< 0.500
Benzene	2015-09	ug/L			**0.781**					
Benzene	2015-10	ug/L	< 0.5			< 0.5			< 0.5	< 0.5
Benzene	2016-04	ug/L	< 0.5		**0.969**	< 0.5			< 0.5	< 0.5
Benzene	2016-07	ug/L				< 0.5				< 0.5
Benzene	2016-10	ug/L	< 0.5		**1.02**	< 0.5			< 0.5	< 0.5
Benzene	2017-05	ug/L	< 0.5		**0.833**	< 0.5			< 0.5	< 0.5
Benzene	2017-09	ug/L	< 0.5		**1.06**	< 0.5			< 0.5	< 0.5
Benzene	2018-05	ug/L			**0.798**	< 0.5			< 0.5	< 0.5
Benzene	2018-09	ug/L	< 0.5		**1.15**	< 0.5			< 0.5	< 0.5
Benzene	2019-03	ug/L	< 0.5		**1.13**	< 0.5			< 0.5	< 0.5
Benzene	2019-10	ug/L		< 0.5	**1.33**	< 0.5		< 0.5	< 0.5	< 0.5
Benzene	2020-04	ug/L		< 0.5	**1.25**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Benzene	2020-06	ug/L	< 0.5					< 0.5		

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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Benzene	2020-08	ug/L	< 0.5				< 0.5	< 0.5		
Benzene	2020-09	ug/L		< 0.5	**1.29**	< 0.5			< 0.5	~~< 0.5~~
Benzene	2020-12	ug/L					< 0.5	< 0.5		
Benzene	2021-02	ug/L					< 0.5			
Benzene	2021-04	ug/L	< 0.5	< 0.5	**0.994**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Benzene	2021-09	ug/L	< 0.5	< 0.5	**1.11**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Benzene	2022-04	ug/L	< 0.5	< 0.5	**0.622**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Benzene	2022-09	ug/L	< 0.5	< 0.5	**0.641 J+**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Benzene	2023-04	ug/L	< 0.5	< 0.5	**0.623**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Benzene	2023-09	ug/L	< 0.5	< 0.5	**1.04**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Benzene	2024-04	ug/L	< 0.5	< 0.5	**0.662**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Benzene	2024-09	ug/L	< 0.5	< 0.5	**1**	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)anthracene	2009-03	ug/l							< 10	
Benzo(a)anthracene	2009-06	ug/l							< 10.0	
Benzo(a)anthracene	2009-09	ug/l							< 10.0	
Benzo(a)anthracene	2010-03	ug/l							< 10.0	
Benzo(a)anthracene	2010-09	ug/l							< 10.0	
Benzo(a)anthracene	2011-03	ug/l							< 12.0	
Benzo(a)anthracene	2014-06	ug/L			< 10.5					
Benzo(a)anthracene	2014-08	ug/L			< 10.2				< 10.8	
Benzo(a)anthracene	2015-10	ug/L				< 10			< 10	< 10
Benzo(a)anthracene	2016-07	ug/L				< 10.4				< 10.4
Benzo(a)anthracene	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Benzo(a)anthracene	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Benzo(a)anthracene	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Benzo(a)pyrene	2009-03	ug/l							< 10	
Benzo(a)pyrene	2009-06	ug/l							< 10.0	
Benzo(a)pyrene	2009-09	ug/l							< 10.0	
Benzo(a)pyrene	2010-03	ug/l							< 10.0	
Benzo(a)pyrene	2010-09	ug/l							< 10.0	
Benzo(a)pyrene	2011-03	ug/l							< 12.0	
Benzo(a)pyrene	2014-06	ug/L			< 10.5					
Benzo(a)pyrene	2014-08	ug/L			< 10.2				< 10.8	
Benzo(a)pyrene	2015-10	ug/L				< 10			< 10	< 10
Benzo(a)pyrene	2016-07	ug/L				< 10.4				< 10.4
Benzo(a)pyrene	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Benzo(a)pyrene	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Benzo(a)pyrene	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Benzo(b)fluoranthene	2009-03	ug/l							< 10	
Benzo(b)fluoranthene	2009-06	ug/l							< 10.0	
Benzo(b)fluoranthene	2009-09	ug/l							< 10.0	
Benzo(b)fluoranthene	2010-03	ug/l							< 10.0	
Benzo(b)fluoranthene	2010-09	ug/l							< 10.0	
Benzo(b)fluoranthene	2011-03	ug/l							< 12.0	
Benzo(b)fluoranthene	2014-06	ug/L			< 10.5					
Benzo(b)fluoranthene	2014-08	ug/L			< 10.2				< 10.8	

Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Benzo(b)fluoranthene	2015-10	ug/L				< 10			< 10	< 10
Benzo(b)fluoranthene	2016-07	ug/L				< 10.4				< 10.4
Benzo(b)fluoranthene	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Benzo(b)fluoranthene	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Benzo(b)fluoranthene	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Benzo(ghi)perylene	2009-03	ug/l							< 10	
Benzo(ghi)perylene	2009-06	ug/l							< 10.0	
Benzo(ghi)perylene	2009-09	ug/l							< 10.0	
Benzo(ghi)perylene	2010-03	ug/l							< 10.0	
Benzo(ghi)perylene	2010-09	ug/l							< 10.0	
Benzo(ghi)perylene	2011-03	ug/l							< 12.0	
Benzo(ghi)perylene	2014-06	ug/L			< 10.5					
Benzo(ghi)perylene	2014-08	ug/L			< 10.2				< 10.8	
Benzo(ghi)perylene	2015-10	ug/L				< 10			< 10	< 10
Benzo(ghi)perylene	2016-07	ug/L				< 10.4				< 10.4
Benzo(ghi)perylene	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Benzo(ghi)perylene	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Benzo(ghi)perylene	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Benzo(k)fluoranthene	2009-03	ug/l							< 10	
Benzo(k)fluoranthene	2009-06	ug/l							< 10.0	
Benzo(k)fluoranthene	2009-09	ug/l							< 10.0	
Benzo(k)fluoranthene	2010-03	ug/l							< 10.0	
Benzo(k)fluoranthene	2010-09	ug/l							< 10.0	
Benzo(k)fluoranthene	2011-03	ug/l							< 12.0	
Benzo(k)fluoranthene	2014-06	ug/L			< 10.5					
Benzo(k)fluoranthene	2014-08	ug/L			< 10.2				< 10.8	
Benzo(k)fluoranthene	2015-10	ug/L				< 10			< 10	< 10
Benzo(k)fluoranthene	2016-07	ug/L				< 10.4				< 10.4
Benzo(k)fluoranthene	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Benzo(k)fluoranthene	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Benzo(k)fluoranthene	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Benzyl Alcohol	2009-03	ug/l							< 10	
Benzyl Alcohol	2009-06	ug/l							< 10.0	
Benzyl Alcohol	2009-09	ug/l							< 10.0	
Benzyl Alcohol	2010-03	ug/l							< 10.0	
Benzyl Alcohol	2010-09	ug/l							< 10.0	
Benzyl Alcohol	2011-03	ug/l							< 12.0	
Benzyl Alcohol	2014-06	ug/L			< 10.5					
Benzyl Alcohol	2014-08	ug/L			< 10.2				< 10.8	
Benzyl Alcohol	2015-10	ug/L				< 10			< 10	< 10
Benzyl Alcohol	2016-07	ug/L				< 10.4				< 10.4
Benzyl Alcohol	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Benzyl Alcohol	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Benzyl Alcohol	2024-09	ug/L			< 10.4	**4.15 J**			< 10.9	**4.15 J**
Beryllium	2008-04	mg/l							< 0.00100	
Beryllium	2008-06	mg/l							< 0.00100	

Table 13
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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Beryllium	2008-08	mg/l							< 0.00100	
Beryllium	2008-09	mg/l							< 0.00100	
Beryllium	2009-03	mg/l							< 0.001	
Beryllium	2009-06	mg/l							< 0.00100	
Beryllium	2009-09	mg/l				**0.00112**			< 0.00100	**0.00112**
Beryllium	2009-12	mg/l				< 0.00400				< 0.00400
Beryllium	2010-03	mg/l							< 0.00100	
Beryllium	2010-04	mg/l				< 0.00100				< 0.00100
Beryllium	2010-06	mg/l				< 0.00100				< 0.00100
Beryllium	2010-09	mg/l				< 0.00100			< 0.00100	< 0.00100
Beryllium	2011-03	mg/l				< 0.00100			< 0.00100	< 0.00100
Beryllium	2011-09	mg/l	< 0.00100		< 0.00100	< 0.00100			< 0.00100	< 0.00100
Beryllium	2011-11	mg/l	< 0.00100		< 0.00100					
Beryllium	2012-03	mg/l	< 0.00100		< 0.00100	< 0.00100			< 0.00100	< 0.00100
Beryllium	2012-06	mg/l	< 0.00100		**0.00255**					
Beryllium	2012-09	mg/l	< 0.00100		< 0.00100	< 0.00100			< 0.00100	< 0.00100
Beryllium	2013-03	mg/l	< 0.00100		**0.000195 J**	**0.00348**			< 0.00100	**0.00348**
Beryllium	2013-06	mg/l				< 0.00100				< 0.00100
Beryllium	2013-09	mg/l	< 0.00100		< 0.00100	< 0.00100			< 0.00100	< 0.00100
Beryllium	2013-11	mg/L				< 0.00100				< 0.00100
Beryllium	2014-03	mg/L	< 0.00100		< 0.00100	< 0.00100			< 0.00100	< 0.00100
Beryllium	2014-06	mg/L			< 0.00100	< 0.00100				< 0.00100
Beryllium	2014-08	mg/L	< 0.00100		< 0.00100	< 0.00100			< 0.00100	< 0.00100
Beryllium	2014-12	mg/L			< 0.00100	< 0.00100			< 0.00100	< 0.00100
Beryllium	2015-04	mg/L	< 0.00100		< 0.00100	< 0.00100			< 0.00100	< 0.00100
Beryllium	2015-09	mg/L			< 0.001					
Beryllium	2015-10	mg/L	< 0.001			< 0.001			< 0.001	< 0.001
Beryllium	2016-04	mg/L	< 0.001		< 0.001	< 0.001			< 0.001	< 0.001
Beryllium	2016-07	mg/L				< 0.001				< 0.001
Beryllium	2016-10	mg/L	< 0.001		< 0.001	< 0.001			< 0.001	< 0.001
Beryllium	2017-05	mg/L	< 0.001		< 0.001	< 0.001			< 0.001	< 0.001
Beryllium	2017-09	mg/L	< 0.001		< 0.001	< 0.001			< 0.001	< 0.001
Beryllium	2018-05	mg/L			< 0.001	< 0.001			< 0.001	< 0.001
Beryllium	2018-09	mg/L	< 0.001		< 0.001	< 0.001			< 0.001	< 0.001
Beryllium	2019-03	mg/L	< 0.001		< 0.001	< 0.001			< 0.001	< 0.001
Beryllium	2019-10	mg/L		< 0.002	< 0.002	< 0.002		~~< 0.002~~	< 0.002	< 0.002
Beryllium	2020-04	mg/L		< 0.001	< 0.001	< 0.001	~~< 0.001~~	~~< 0.001~~	< 0.001	< 0.001
Beryllium	2020-06	mg/L	< 0.001					~~**0.000276 J**~~		
Beryllium	2020-08	mg/L	< 0.001				~~< 0.001~~	~~< 0.001~~		
Beryllium	2020-09	mg/L		< 0.001	< 0.001	< 0.001			< 0.001	~~< 0.001~~
Beryllium	2020-12	mg/L					~~< 0.001~~	< 0.001		
Beryllium	2021-02	mg/L					~~< 0.001~~			
Beryllium	2021-04	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	~~< 0.001~~	< 0.001	< 0.001	< 0.001
Beryllium	2021-09	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium	2022-04	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.001	< 0.001
Beryllium	2022-09	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001

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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Beryllium	2023-04	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium	2023-09	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium	2024-04	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Beryllium	2024-09	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
beta-BHC	2009-03	ug/l							< 0.032	
beta-BHC	2009-06	ug/l							< 0.0320	
beta-BHC	2009-09	ug/l							< 0.0320	
beta-BHC	2010-03	ug/l							< 0.0320	
beta-BHC	2010-09	ug/l							< 0.0356	
beta-BHC	2011-03	ug/l							< 0.0320	
beta-BHC	2011-09	ug/l							< 0.0320	
beta-BHC	2012-03	ug/l							< 0.0320	
beta-BHC	2013-03	ug/l							< 0.0344	
beta-BHC	2013-09	ug/l							< 0.0333	
beta-BHC	2014-03	ug/L							< 0.0376	
beta-BHC	2014-06	ug/L			< 0.0327					
beta-BHC	2014-08	ug/L			< 0.0320				< 0.0320	
beta-BHC	2015-04	ug/L							< 0.0323	
beta-BHC	2015-10	ug/L				< 0.032			< 0.032	< 0.032
beta-BHC	2016-04	ug/L				< 0.0327			< 0.032	< 0.0327
beta-BHC	2016-07	ug/L				< 0.032				< 0.032
beta-BHC	2016-10	ug/L				< 0.0327			< 0.032	< 0.0327
beta-BHC	2017-05	ug/L				< 0.0327			< 0.0344	< 0.0327
beta-BHC	2017-09	ug/L				< 0.0344			< 0.034	< 0.0344
beta-BHC	2018-05	ug/L				< 0.0344			< 0.0344	< 0.0344
beta-BHC	2018-09	ug/L				< 0.0352			< 0.0352	< 0.0352
beta-BHC	2019-03	ug/L				< 0.0356			< 0.00546	< 0.0356
beta-BHC	2019-10	ug/L			< 0.0335	< 0.0333			< 0.0333	< 0.0333
beta-BHC	2020-04	ug/L				< 0.0451			< 0.0427	< 0.0451
beta-BHC	2020-09	ug/L				< 0.0348			< 0.0451	~~< 0.0348~~
beta-BHC	2021-04	ug/L				< 0.0364			< 0.0427	< 0.0364
beta-BHC	2021-09	ug/L				< 0.04			< 0.039	< 0.04
beta-BHC	2024-09	ug/L			< 0.0696	< 0.0667			< 0.0667	< 0.0667
bis(2-Chloroethoxy)methane	2009-03	ug/l							< 10	
bis(2-Chloroethoxy)methane	2009-06	ug/l							< 10.0	
bis(2-Chloroethoxy)methane	2009-09	ug/l							< 10.0	
bis(2-Chloroethoxy)methane	2010-03	ug/l							< 10.0	
bis(2-Chloroethoxy)methane	2010-09	ug/l							< 10.0	
bis(2-Chloroethoxy)methane	2011-03	ug/l							< 12.0	
bis(2-Chloroethoxy)methane	2014-06	ug/L			< 10.5					
bis(2-Chloroethoxy)methane	2014-08	ug/L			< 10.2				< 10.8	
bis(2-Chloroethoxy)methane	2015-10	ug/L				< 10			< 10	< 10
bis(2-Chloroethoxy)methane	2016-07	ug/L				< 10.4				< 10.4
bis(2-Chloroethoxy)methane	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
bis(2-Chloroethoxy)methane	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
bis(2-Chloroethoxy)methane	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9

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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
bis(2-Chloroethyl)ether	2009-03	ug/l							< 10	
bis(2-Chloroethyl)ether	2009-06	ug/l							< 10.0	
bis(2-Chloroethyl)ether	2009-09	ug/l							< 10.0	
bis(2-Chloroethyl)ether	2010-03	ug/l							< 10.0	
bis(2-Chloroethyl)ether	2010-09	ug/l							< 10.0	
bis(2-Chloroethyl)ether	2011-03	ug/l							< 12.0	
bis(2-Chloroethyl)ether	2014-06	ug/L			< 10.5					
bis(2-Chloroethyl)ether	2014-08	ug/L			< 10.2				< 10.8	
bis(2-Chloroethyl)ether	2015-10	ug/L				< 10			< 10	< 10
bis(2-Chloroethyl)ether	2016-07	ug/L				< 10.4				< 10.4
bis(2-Chloroethyl)ether	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
bis(2-Chloroethyl)ether	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
bis(2-Chloroethyl)ether	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
bis(2-Ethylhexyl)phthalate	2009-03	ug/l							< 10	
bis(2-Ethylhexyl)phthalate	2009-06	ug/l							< 10.0	
bis(2-Ethylhexyl)phthalate	2009-09	ug/l							< 10.0	
bis(2-Ethylhexyl)phthalate	2010-03	ug/l							< 10.0	
bis(2-Ethylhexyl)phthalate	2010-09	ug/l							< 10.0	
bis(2-Ethylhexyl)phthalate	2011-03	ug/l							< 12.0	
bis(2-Ethylhexyl)phthalate	2011-09	ug/l							< 10.0	
bis(2-Ethylhexyl)phthalate	2012-03	ug/l							< 10.0	
bis(2-Ethylhexyl)phthalate	2013-03	ug/l							< 12.3 J	
bis(2-Ethylhexyl)phthalate	2013-09	ug/l							< 10.1	
bis(2-Ethylhexyl)phthalate	2014-03	ug/L							< 11.0	
bis(2-Ethylhexyl)phthalate	2014-06	ug/L			< 10.5					
bis(2-Ethylhexyl)phthalate	2014-08	ug/L			< 10.2				< 10.8	
bis(2-Ethylhexyl)phthalate	2015-04	ug/L							< 10.2	
bis(2-Ethylhexyl)phthalate	2015-10	ug/L				< 10			< 10	< 10
bis(2-Ethylhexyl)phthalate	2016-04	ug/L				< 10.3 J			< 10 J	< 10.3 J
bis(2-Ethylhexyl)phthalate	2016-07	ug/L				< 10.4				< 10.4
bis(2-Ethylhexyl)phthalate	2016-10	ug/L				< 10.2			< 10.2	< 10.2
bis(2-Ethylhexyl)phthalate	2017-05	ug/L				< 10.2			< 10.4	< 10.2
bis(2-Ethylhexyl)phthalate	2017-09	ug/L				< 10			< 10.9	< 10
bis(2-Ethylhexyl)phthalate	2018-05	ug/L				< 11.1			< 10.9	< 11.1
bis(2-Ethylhexyl)phthalate	2018-09	ug/L				< 11.4			< 11.1	< 11.4
bis(2-Ethylhexyl)phthalate	2019-03	ug/L				< 10.9			< 11.6	< 10.9
bis(2-Ethylhexyl)phthalate	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
bis(2-Ethylhexyl)phthalate	2020-04	ug/L				< 12.2			< 10.5	< 12.2
bis(2-Ethylhexyl)phthalate	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
bis(2-Ethylhexyl)phthalate	2021-04	ug/L				< 10.8			< 13.5	< 10.8
bis(2-Ethylhexyl)phthalate	2021-09	ug/L				< 12.3			< 12.2	< 12.3
bis(2-Ethylhexyl)phthalate	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Bromochloromethane	2008-04	ug/l							< 5.00	
Bromochloromethane	2008-06	ug/l							< 5.00	
Bromochloromethane	2008-08	ug/l							< 5.00	
Bromochloromethane	2008-09	ug/l							< 5.00	

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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Bromochloromethane	2009-03	ug/l							< 5	
Bromochloromethane	2009-06	ug/l							< 5.00	
Bromochloromethane	2009-09	ug/l				< 5.00			< 5.00	< 5.00
Bromochloromethane	2009-12	ug/l				< 5.00				< 5.00
Bromochloromethane	2010-03	ug/l							< 5.00	
Bromochloromethane	2010-04	ug/l				< 5.00				< 5.00
Bromochloromethane	2010-06	ug/l				< 5.00				< 5.00
Bromochloromethane	2010-09	ug/l				< 5.00			< 5.00	< 5.00
Bromochloromethane	2011-03	ug/l				< 5.00			< 5.00	< 5.00
Bromochloromethane	2011-09	ug/l	< 5.00		< 5.00	< 5.00			< 5.00	< 5.00
Bromochloromethane	2011-11	ug/l	< 5.00		< 5.00					
Bromochloromethane	2012-03	ug/l	< 5.00		< 5.00	< 5.00			< 5.00	< 5.00
Bromochloromethane	2012-06	ug/l	< 5.00		< 5.00					
Bromochloromethane	2012-09	ug/l	< 5.00		< 5.00	< 5.00			< 5.00	< 5.00
Bromochloromethane	2013-03	ug/l	< 5.00		< 5.00	< 5.00			< 5.00	< 5.00
Bromochloromethane	2013-06	ug/l			< 5.00	< 5.00			< 5.00	< 5.00
Bromochloromethane	2013-09	ug/l	< 5.00		< 5.00	< 5.00			< 5.00	< 5.00
Bromochloromethane	2013-11	ug/L				< 5.00			< 5.00	< 5.00
Bromochloromethane	2014-03	ug/L	< 5.00		< 5.00	< 5.00			< 5.00	< 5.00
Bromochloromethane	2014-06	ug/L			< 5.00	< 5.00			< 5.00	< 5.00
Bromochloromethane	2014-08	ug/L	< 5.00		< 5.00	< 5.00			< 5.00	< 5.00
Bromochloromethane	2014-12	ug/L			< 5.00	< 5.00			< 5.00	< 5.00
Bromochloromethane	2015-04	ug/L	< 5.00		< 5.00	< 5.00			< 5.00	< 5.00
Bromochloromethane	2015-09	ug/L			< 5					
Bromochloromethane	2015-10	ug/L	< 5			< 5			< 5	< 5
Bromochloromethane	2016-04	ug/L	< 5		< 5	< 5			< 5	< 5
Bromochloromethane	2016-07	ug/L				< 5				< 5
Bromochloromethane	2016-10	ug/L	< 5		< 5	< 5			< 5	< 5
Bromochloromethane	2017-05	ug/L	< 5		< 5	< 5			< 5	< 5
Bromochloromethane	2017-09	ug/L	< 5		< 5	< 5			< 5	< 5
Bromochloromethane	2018-05	ug/L			< 5	< 5			< 5	< 5
Bromochloromethane	2018-09	ug/L	< 5		< 5	< 5			< 5	< 5
Bromochloromethane	2019-03	ug/L	< 5		< 5	< 5			< 5	< 5
Bromochloromethane	2019-10	ug/L		< 5	< 5	< 5		< 5	< 5	< 5
Bromochloromethane	2020-04	ug/L		< 5	< 5	< 5	< 5	< 5	< 5	< 5
Bromochloromethane	2020-06	ug/L	< 5					< 5		
Bromochloromethane	2020-08	ug/L	< 5				< 5	< 5		
Bromochloromethane	2020-09	ug/L		< 5	< 5	< 5			< 5	~~< 5~~
Bromochloromethane	2020-12	ug/L					< 5	< 5		
Bromochloromethane	2021-02	ug/L					< 5			
Bromochloromethane	2021-04	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Bromochloromethane	2021-09	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Bromochloromethane	2022-04	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Bromochloromethane	2022-09	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Bromochloromethane	2023-04	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Bromochloromethane	2023-09	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5

Table 13
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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Bromochloromethane	2024-04	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Bromochloromethane	2024-09	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Bromodichloromethane	2008-04	ug/l							< 1.00	
Bromodichloromethane	2008-06	ug/l							< 1.00	
Bromodichloromethane	2008-08	ug/l							< 1.00	
Bromodichloromethane	2008-09	ug/l							< 1.00	
Bromodichloromethane	2009-03	ug/l							< 1	
Bromodichloromethane	2009-06	ug/l							< 1.00	
Bromodichloromethane	2009-09	ug/l				< 1.00			< 1.00	< 1.00
Bromodichloromethane	2009-12	ug/l				< 1.00				< 1.00
Bromodichloromethane	2010-03	ug/l							< 10.0	
Bromodichloromethane	2010-04	ug/l				< 10.0				< 10.0
Bromodichloromethane	2010-06	ug/l				< 5.00				< 5.00
Bromodichloromethane	2010-09	ug/l				< 1.00			< 1.00	< 1.00
Bromodichloromethane	2011-03	ug/l				< 1.00			< 1.00	< 1.00
Bromodichloromethane	2011-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Bromodichloromethane	2011-11	ug/l	< 1.00		< 1.00					
Bromodichloromethane	2012-03	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Bromodichloromethane	2012-06	ug/l	< 1.00		< 1.00					
Bromodichloromethane	2012-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Bromodichloromethane	2013-03	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Bromodichloromethane	2013-06	ug/l			< 1.00	< 1.00			< 1.00	< 1.00
Bromodichloromethane	2013-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Bromodichloromethane	2013-11	ug/L				< 1.00			< 1.00	< 1.00
Bromodichloromethane	2014-03	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Bromodichloromethane	2014-06	ug/L			< 1.00	< 1.00			< 1.00	< 1.00
Bromodichloromethane	2014-08	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Bromodichloromethane	2014-12	ug/L			< 1.00	< 1.00			< 1.00	< 1.00
Bromodichloromethane	2015-04	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Bromodichloromethane	2015-09	ug/L			< 1					
Bromodichloromethane	2015-10	ug/L	< 1			< 1			< 1	< 1
Bromodichloromethane	2016-04	ug/L	< 1		< 1	< 1			< 1	< 1
Bromodichloromethane	2016-07	ug/L				< 1				< 1
Bromodichloromethane	2016-10	ug/L	< 1		< 1	< 1			< 1	< 1
Bromodichloromethane	2017-05	ug/L	< 1		< 1	< 1			< 1	< 1
Bromodichloromethane	2017-09	ug/L	< 1		< 1	< 1			< 1	< 1
Bromodichloromethane	2018-05	ug/L			< 1	< 1			< 1	< 1
Bromodichloromethane	2018-09	ug/L	< 1		< 1	< 1			< 1	< 1
Bromodichloromethane	2019-03	ug/L	< 1		< 1	< 1			< 1	< 1
Bromodichloromethane	2019-10	ug/L		< 1	< 1	< 1		< 1	< 1	< 1
Bromodichloromethane	2020-04	ug/L		< 1	< 1	< 1	< 1	< 1	< 1	< 1
Bromodichloromethane	2020-06	ug/L	< 1					< 1		
Bromodichloromethane	2020-08	ug/L	< 1				< 1	< 1		
Bromodichloromethane	2020-09	ug/L		< 1	< 1	< 1			< 1	~~< 1~~
Bromodichloromethane	2020-12	ug/L					< 1	< 1		
Bromodichloromethane	2021-02	ug/L					< 1			

Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Bromodichloromethane	2021-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Bromodichloromethane	2021-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Bromodichloromethane	2022-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Bromodichloromethane	2022-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Bromodichloromethane	2023-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Bromodichloromethane	2023-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Bromodichloromethane	2024-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Bromodichloromethane	2024-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Bromoform	2008-04	ug/l							< 5.00	
Bromoform	2008-06	ug/l							< 5.00	
Bromoform	2008-08	ug/l							< 5.00	
Bromoform	2008-09	ug/l							< 5.00	
Bromoform	2009-03	ug/l							< 5	
Bromoform	2009-06	ug/l							< 5.00	
Bromoform	2009-09	ug/l				< 5.00			< 5.00	< 5.00
Bromoform	2009-12	ug/l				< 20.0				< 20.0
Bromoform	2010-03	ug/l							< 50.0	
Bromoform	2010-04	ug/l				< 50.0				< 50.0
Bromoform	2010-06	ug/l				< 5.00				< 5.00
Bromoform	2010-09	ug/l				< 5.00			< 5.00	< 5.00
Bromoform	2011-03	ug/l				< 5.00			< 5.00	< 5.00
Bromoform	2011-09	ug/l	< 5.00		< 5.00	< 5.00			< 5.00	< 5.00
Bromoform	2011-11	ug/l	< 5.00		< 5.00					
Bromoform	2012-03	ug/l	< 5.00		< 5.00	< 5.00			< 5.00	< 5.00
Bromoform	2012-06	ug/l	< 5.00		< 5.00					
Bromoform	2012-09	ug/l	< 5.00		< 5.00	< 5.00			< 5.00	< 5.00
Bromoform	2013-03	ug/l	< 5.00		< 5.00	< 5.00			< 5.00	< 5.00
Bromoform	2013-06	ug/l			< 5.00	< 5.00			< 5.00	< 5.00
Bromoform	2013-09	ug/l	< 5.00		< 5.00	< 5.00			< 5.00	< 5.00
Bromoform	2013-11	ug/L				< 5.00			< 5.00	< 5.00
Bromoform	2014-03	ug/L	< 5.00		< 5.00	< 5.00			< 5.00	< 5.00
Bromoform	2014-06	ug/L			< 5.00	< 5.00			< 5.00	< 5.00
Bromoform	2014-08	ug/L	< 5.00		< 5.00	< 5.00			< 5.00	< 5.00
Bromoform	2014-12	ug/L			< 5.00	< 5.00			< 5.00	< 5.00
Bromoform	2015-04	ug/L	< 5.00		< 5.00	< 5.00			< 5.00	< 5.00
Bromoform	2015-09	ug/L			< 5					
Bromoform	2015-10	ug/L	< 5			< 5			< 5	< 5
Bromoform	2016-04	ug/L	< 5		< 5	< 5			< 5	< 5
Bromoform	2016-07	ug/L				< 5				< 5
Bromoform	2016-10	ug/L	< 5		< 5	< 5			< 5	< 5
Bromoform	2017-05	ug/L	< 5		< 5	< 5			< 5	< 5
Bromoform	2017-09	ug/L	< 5		< 5	< 5			< 5	< 5
Bromoform	2018-05	ug/L			< 5	< 5			< 5	< 5
Bromoform	2018-09	ug/L	< 5		< 5	< 5			< 5	< 5
Bromoform	2019-03	ug/L	< 5		< 5	< 5			< 5	< 5
Bromoform	2019-10	ug/L		< 5	< 5	< 5		< 5	< 5	< 5

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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Bromoform	2020-04	ug/L		< 5	< 5	< 5	< 5	< 5	< 5	< 5
Bromoform	2020-06	ug/L	< 5					< 5		
Bromoform	2020-08	ug/L	< 5				< 5	< 5		
Bromoform	2020-09	ug/L		< 5	< 5	< 5			< 5	~~< 5~~
Bromoform	2020-12	ug/L					< 5	< 5		
Bromoform	2021-02	ug/L					< 5			
Bromoform	2021-04	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Bromoform	2021-09	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Bromoform	2022-04	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Bromoform	2022-09	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Bromoform	2023-04	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Bromoform	2023-09	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Bromoform	2024-04	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Bromoform	2024-09	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Bromomethane	2008-04	ug/l							< 4.00	
Bromomethane	2008-06	ug/l							< 4.00	
Bromomethane	2008-08	ug/l							< 4.00	
Bromomethane	2008-09	ug/l							< 4.00	
Bromomethane	2009-03	ug/l							< 4	
Bromomethane	2009-06	ug/l							< 4.00	
Bromomethane	2009-09	ug/l				< 4.00			< 4.00	< 4.00
Bromomethane	2009-12	ug/l				< 4.00				< 4.00
Bromomethane	2010-03	ug/l							< 4.00	
Bromomethane	2010-04	ug/l				< 4.00				< 4.00
Bromomethane	2010-06	ug/l				< 4.00				< 4.00
Bromomethane	2010-09	ug/l				< 4.00			< 4.00	< 4.00
Bromomethane	2011-03	ug/l				< 5.00			< 5.00	< 5.00
Bromomethane	2011-09	ug/l	< 4.00		< 4.00	< 4.00			< 4.00	< 4.00
Bromomethane	2011-11	ug/l	< 4.00		< 4.00					
Bromomethane	2012-03	ug/l	< 4.00		< 4.00	< 4.00			< 4.00	< 4.00
Bromomethane	2012-06	ug/l	< 4.00		< 4.00					
Bromomethane	2012-09	ug/l	< 4.00		< 4.00	< 4.00			< 4.00	< 4.00
Bromomethane	2013-03	ug/l	< 4.00		< 4.00	< 4.00			< 4.00	< 4.00
Bromomethane	2013-06	ug/l			< 4.00	< 4.00			< 4.00	< 4.00
Bromomethane	2013-09	ug/l	< 4.00		< 4.00	< 4.00			< 4.00	< 4.00
Bromomethane	2013-11	ug/L				< 4.00			< 4.00	< 4.00
Bromomethane	2014-03	ug/L	< 4.00		< 4.00	< 4.00			< 4.00	< 4.00
Bromomethane	2014-06	ug/L			< 4.00	< 4.00			< 4.00	< 4.00
Bromomethane	2014-08	ug/L	< 4.00		< 4.00	< 4.00			< 4.00	< 4.00
Bromomethane	2014-12	ug/L			< 4.00	< 4.00			< 4.00	< 4.00
Bromomethane	2015-04	ug/L	< 4.00		< 4.00	< 4.00			< 4.00	< 4.00
Bromomethane	2015-09	ug/L			< 4					
Bromomethane	2015-10	ug/L	< 4			< 4			< 4	< 4
Bromomethane	2016-04	ug/L	< 4		< 4	< 4			< 4	< 4
Bromomethane	2016-07	ug/L				< 4				< 4
Bromomethane	2016-10	ug/L	< 4		< 4	< 4			< 4	< 4

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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Bromomethane	2017-05	ug/L	< 4		< 4	< 4			< 4	< 4
Bromomethane	2017-09	ug/L	< 4		< 4	< 4			< 4	< 4
Bromomethane	2018-05	ug/L			< 4	< 4			< 4	< 4
Bromomethane	2018-09	ug/L	< 4		< 4	< 4			< 4	< 4
Bromomethane	2019-03	ug/L	< 4		< 4	< 4			< 4	< 4
Bromomethane	2019-10	ug/L		< 4	< 4	< 4		< 4	< 4	< 4
Bromomethane	2020-04	ug/L		< 4	< 4	< 4	< 4	< 4	< 4	< 4
Bromomethane	2020-06	ug/L	< 4					< 4		
Bromomethane	2020-08	ug/L	< 4				< 4	< 4		
Bromomethane	2020-09	ug/L		< 4	< 4	< 4			< 4	~~< 4~~
Bromomethane	2020-12	ug/L					< 4	< 4		
Bromomethane	2021-02	ug/L					< 4			
Bromomethane	2021-04	ug/L	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4
Bromomethane	2021-09	ug/L	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4
Bromomethane	2022-04	ug/L	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4
Bromomethane	2022-09	ug/L	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4
Bromomethane	2023-04	ug/L	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4
Bromomethane	2023-09	ug/L	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4
Bromomethane	2024-04	ug/L	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4
Bromomethane	2024-09	ug/L	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4
Butylbenzylphthalate	2009-03	ug/l							< 10	
Butylbenzylphthalate	2009-06	ug/l							< 10.0	
Butylbenzylphthalate	2009-09	ug/l							< 10.0	
Butylbenzylphthalate	2010-03	ug/l							< 10.0	
Butylbenzylphthalate	2010-09	ug/l							< 10.0	
Butylbenzylphthalate	2011-03	ug/l							< 12.0	
Butylbenzylphthalate	2014-06	ug/L			< 10.5					
Butylbenzylphthalate	2014-08	ug/L			< 10.2				< 10.8	
Butylbenzylphthalate	2015-10	ug/L				< 10			< 10	< 10
Butylbenzylphthalate	2016-07	ug/L				< 10.4				< 10.4
Butylbenzylphthalate	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Butylbenzylphthalate	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Butylbenzylphthalate	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Cadmium	2008-04	mg/l							< 0.000500	
Cadmium	2008-06	mg/l							< 0.000500	
Cadmium	2008-08	mg/l							< 0.000500	
Cadmium	2008-09	mg/l							< 0.000500	
Cadmium	2009-03	mg/l							< 0.0005	
Cadmium	2009-06	mg/l							< 0.000500	
Cadmium	2009-09	mg/l				**0.000556**			< 0.000500	**0.000556**
Cadmium	2009-12	mg/l				**0.00170**				**0.00170**
Cadmium	2010-03	mg/l							< 0.000500	
Cadmium	2010-04	mg/l				< 0.000500				< 0.000500
Cadmium	2010-06	mg/l				< 0.000500				< 0.000500
Cadmium	2010-09	mg/l				< 0.000500			< 0.000500	< 0.000500
Cadmium	2011-03	mg/l				< 0.000500			< 0.000500	< 0.000500

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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Cadmium	2011-09	mg/l	< 0.000500		< 0.000500	< 0.000500			< 0.000500	< 0.000500
Cadmium	2011-11	mg/l	< 0.000500		< 0.000500					
Cadmium	2012-03	mg/l	< 0.000500		< 0.000500	< 0.000500			< 0.000500	< 0.000500
Cadmium	2012-06	mg/l	< 0.000500		**0.00286**					
Cadmium	2012-09	mg/l	< 0.000500		< 0.000500	< 0.000500			< 0.000500	< 0.000500
Cadmium	2013-03	mg/l	< 0.000500		**0.000313 J**	**0.00179**			< 0.000500	**0.00179**
Cadmium	2013-06	mg/l				**0.000216 J**				**0.000216 J**
Cadmium	2013-09	mg/l	< 0.000500		< 0.000500	< 0.000500			< 0.000500	< 0.000500
Cadmium	2013-11	mg/L				**0.000133 J**				**0.000133 J**
Cadmium	2014-03	mg/L	< 0.000500		< 0.000500	**0.000132 J**			< 0.000500	**0.000132 J**
Cadmium	2014-06	mg/L			**0.000149 J**	**0.000111 J**				**0.000111 J**
Cadmium	2014-08	mg/L	< 0.000500		**0.000173 J**	**0.000224 J**			< 0.000500	**0.000224 J**
Cadmium	2014-12	mg/L			**0.000145 J**	**0.000193 J**			< 0.000500	**0.000193 J**
Cadmium	2015-04	mg/L	< 0.000500		< 0.000500	**0.000121 J**			< 0.000500	**0.000121 J**
Cadmium	2015-09	mg/L			**0.000289 J**					
Cadmium	2015-10	mg/L	< 0.0005			**0.000122 J**			< 0.0005	**0.000122 J**
Cadmium	2016-04	mg/L	**0.000052 J**		< 0.0005	**0.000118 J**			< 0.0005	**0.000118 J**
Cadmium	2016-07	mg/L				**0.000152 J**				**0.000152 J**
Cadmium	2016-10	mg/L	< 0.0005		< 0.0005	**0.000184 J**			< 0.0005	**0.000184 J**
Cadmium	2017-05	mg/L	< 0.0005		< 0.0005	**0.000139 J**			< 0.0005	**0.000139 J**
Cadmium	2017-09	mg/L	< 0.0005		< 0.0005	**0.000226 J**			< 0.0005	**0.000226 J**
Cadmium	2018-05	mg/L			< 0.0005	**0.000232 J**			< 0.0005	**0.000232 J**
Cadmium	2018-09	mg/L	**0.000205 J**		< 0.0005	**0.000296 J**			< 0.0005	**0.000296 J**
Cadmium	2019-03	mg/L	< 0.0005		< 0.0005	**0.000218 J**			< 0.0005	**0.000218 J**
Cadmium	2019-10	mg/L		**0.000109**	< 0.0001	**0.000404**		~~< 0.0001~~	< 0.0001	**0.000404**
Cadmium	2020-04	mg/L		**0.000113**	< 0.0001	**0.000075 J**	~~**0.000133**~~	~~< 0.0001~~	< 0.0001	**0.000075 J**
Cadmium	2020-06	mg/L	< 0.0001					~~**0.000115**~~		
Cadmium	2020-08	mg/L	< 0.0001				~~**0.000383**~~	~~**0.000223**~~		
Cadmium	2020-09	mg/L		**0.000117**	< 0.0001	**0.000208**			< 0.0001	~~**0.000208**~~
Cadmium	2020-12	mg/L					~~**0.00018**~~	**0.000115**		
Cadmium	2021-02	mg/L					~~**0.000171**~~			
Cadmium	2021-04	mg/L	< 0.0001	< 0.0001	< 0.0001	**0.000143**	~~**0.000222**~~	**0.000065 J**	< 0.0001	**0.000143**
Cadmium	2021-09	mg/L	< 0.0001	< 0.0001	< 0.0001	**0.000256**	**0.000089 J**	**0.000051 J**	< 0.0001	**0.000256**
Cadmium	2022-04	mg/L	< 0.0001	< 0.0001	< 0.0001	**0.000196**	< 0.0001	< 0.001	< 0.0001	**0.000196**
Cadmium	2022-09	mg/L	< 0.0001	< 0.0001	< 0.0001	**0.000524**	**0.000076 J**	< 0.0001	< 0.0001	**0.000524**
Cadmium	2023-04	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Cadmium	2023-09	mg/L	< 0.0002	< 0.0002	< 0.0002	**0.000473**	< 0.0002	< 0.0002	< 0.0002	**0.000473**
Cadmium	2024-04	mg/L	< 0.0002	< 0.0002	< 0.0002	**0.000184 J**	< 0.0002	< 0.0002	< 0.0002	**0.000184 J**
Cadmium	2024-09	mg/L	< 0.0002	< 0.0002	< 0.0002	**0.000436**	< 0.0002	**0.000122 J**	< 0.0002	**0.000436**
Carbon Disulfide	2008-04	ug/l							< 1.00	
Carbon Disulfide	2008-06	ug/l							< 1.00	
Carbon Disulfide	2008-08	ug/l							< 1.00	
Carbon Disulfide	2008-09	ug/l							< 1.00	
Carbon Disulfide	2009-03	ug/l							< 1	
Carbon Disulfide	2009-06	ug/l							< 1.00	
Carbon Disulfide	2009-09	ug/l				< 1.00			< 1.00	< 1.00

Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Carbon Disulfide	2009-12	ug/l				< 1.00				< 1.00
Carbon Disulfide	2010-03	ug/l							< 1.00	
Carbon Disulfide	2010-04	ug/l				< 1.00				< 1.00
Carbon Disulfide	2010-06	ug/l				< 5.00				< 5.00
Carbon Disulfide	2010-09	ug/l				< 4.00			< 4.00	< 4.00
Carbon Disulfide	2011-03	ug/l				< 1.00			< 1.00	< 1.00
Carbon Disulfide	2011-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Carbon Disulfide	2011-11	ug/l	< 1.00		< 1.00					
Carbon Disulfide	2012-03	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Carbon Disulfide	2012-06	ug/l	< 1.00		< 1.00					
Carbon Disulfide	2012-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Carbon Disulfide	2013-03	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Carbon Disulfide	2013-06	ug/l			< 1.00	< 1.00			< 1.00	< 1.00
Carbon Disulfide	2013-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Carbon Disulfide	2013-11	ug/L				< 1.00			< 1.00	< 1.00
Carbon Disulfide	2014-03	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Carbon Disulfide	2014-06	ug/L			< 1.00	< 1.00			< 1.00	< 1.00
Carbon Disulfide	2014-08	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Carbon Disulfide	2014-12	ug/L			< 1.00	< 1.00			< 1.00	< 1.00
Carbon Disulfide	2015-04	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Carbon Disulfide	2015-09	ug/L			< 1					
Carbon Disulfide	2015-10	ug/L	< 1			< 1			< 1	< 1
Carbon Disulfide	2016-04	ug/L	< 1		< 1	< 1			< 1	< 1
Carbon Disulfide	2016-07	ug/L				< 1				< 1
Carbon Disulfide	2016-10	ug/L	< 1		< 1	< 1			< 1	< 1
Carbon Disulfide	2017-05	ug/L	< 1		< 1	< 1			< 1	< 1
Carbon Disulfide	2017-09	ug/L	< 1		< 1	< 1			< 1	< 1
Carbon Disulfide	2018-05	ug/L			< 1	< 1			< 1	< 1
Carbon Disulfide	2018-09	ug/L	< 1		< 1	< 1			< 1	< 1
Carbon Disulfide	2019-03	ug/L	< 1		< 1	< 1			< 1	< 1
Carbon Disulfide	2019-10	ug/L		< 1	< 1	< 1		< 1	< 1	< 1
Carbon Disulfide	2020-04	ug/L		< 1	< 1	< 1	< 1	< 1	< 1	< 1
Carbon Disulfide	2020-06	ug/L	< 1					< 1		
Carbon Disulfide	2020-08	ug/L	< 1				< 1	< 1		
Carbon Disulfide	2020-09	ug/L		< 1	< 1	< 1			< 1	~~< 1~~
Carbon Disulfide	2020-12	ug/L					< 1	< 1		
Carbon Disulfide	2021-02	ug/L					< 1			
Carbon Disulfide	2021-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Carbon Disulfide	2021-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Carbon Disulfide	2022-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Carbon Disulfide	2022-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Carbon Disulfide	2023-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Carbon Disulfide	2023-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Carbon Disulfide	2024-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Carbon Disulfide	2024-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Carbon Tetrachloride	2008-04	ug/l							< 2.00	

Table 13
Carroll County Landfill Western Expansion Area **Analytical Data Summary**
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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Carbon Tetrachloride	2008-06	ug/l							< 2.00	
Carbon Tetrachloride	2008-08	ug/l							< 2.00	
Carbon Tetrachloride	2008-09	ug/l							< 2.00	
Carbon Tetrachloride	2009-03	ug/l							< 2	
Carbon Tetrachloride	2009-06	ug/l							< 2.00	
Carbon Tetrachloride	2009-09	ug/l							< 2.00	
Carbon Tetrachloride	2009-12	ug/l				< 2.00				< 2.00
Carbon Tetrachloride	2010-03	ug/l							< 4.00	
Carbon Tetrachloride	2010-04	ug/l				< 4.00				< 4.00
Carbon Tetrachloride	2010-06	ug/l				< 4.00				< 4.00
Carbon Tetrachloride	2010-09	ug/l				< 5.00			< 5.00	< 5.00
Carbon Tetrachloride	2011-03	ug/l				< 2.00			< 2.00	< 2.00
Carbon Tetrachloride	2011-09	ug/l	< 4.00		< 4.00	< 4.00			< 4.00	< 4.00
Carbon Tetrachloride	2011-11	ug/l	< 2.00		< 2.00					
Carbon Tetrachloride	2012-03	ug/l	< 2.00		< 2.00	< 2.00			< 2.00	< 2.00
Carbon Tetrachloride	2012-06	ug/l	< 2.00		< 2.00					
Carbon Tetrachloride	2012-09	ug/l	< 2.00		< 2.00	< 2.00			< 2.00	< 2.00
Carbon Tetrachloride	2013-03	ug/l	< 2.00		< 2.00	< 2.00			< 2.00	< 2.00
Carbon Tetrachloride	2013-06	ug/l			< 2.00	< 2.00			< 2.00	< 2.00
Carbon Tetrachloride	2013-09	ug/l	< 2.00		< 2.00	< 2.00			< 2.00	< 2.00
Carbon Tetrachloride	2013-11	ug/L				< 2.00			< 2.00	< 2.00
Carbon Tetrachloride	2014-03	ug/L	< 2.00		< 2.00	< 2.00			< 2.00	< 2.00
Carbon Tetrachloride	2014-06	ug/L			< 2.00	< 2.00			< 2.00	< 2.00
Carbon Tetrachloride	2014-08	ug/L	< 2.00		< 2.00	< 2.00			< 2.00	< 2.00
Carbon Tetrachloride	2014-12	ug/L			< 2.00	< 2.00			< 2.00	< 2.00
Carbon Tetrachloride	2015-04	ug/L	< 2.00		< 2.00	< 2.00			< 2.00	< 2.00
Carbon Tetrachloride	2015-09	ug/L			< 2					
Carbon Tetrachloride	2015-10	ug/L	< 2			< 2			< 2	< 2
Carbon Tetrachloride	2016-04	ug/L	< 2		< 2	< 2			< 2	< 2
Carbon Tetrachloride	2016-07	ug/L				< 2				< 2
Carbon Tetrachloride	2016-10	ug/L	< 2		< 2	< 2			< 2	< 2
Carbon Tetrachloride	2017-05	ug/L	< 2		< 2	< 2			< 2	< 2
Carbon Tetrachloride	2017-09	ug/L	< 2		< 2	< 2			< 2	< 2
Carbon Tetrachloride	2018-05	ug/L			< 2	< 2			< 2	< 2
Carbon Tetrachloride	2018-09	ug/L	< 2		< 2	< 2			< 2	< 2
Carbon Tetrachloride	2019-03	ug/L	< 2		< 2	< 2			< 2	< 2
Carbon Tetrachloride	2019-10	ug/L		< 2	< 2	< 2		< 2	< 2	< 2
Carbon Tetrachloride	2020-04	ug/L		< 2	< 2	< 2	< 2	< 2	< 2	< 2
Carbon Tetrachloride	2020-06	ug/L	< 2					< 2		
Carbon Tetrachloride	2020-08	ug/L	< 2				< 2	< 2		
Carbon Tetrachloride	2020-09	ug/L		< 2	< 2	< 2			< 2	~~< 2~~
Carbon Tetrachloride	2020-12	ug/L					< 2	< 2		
Carbon Tetrachloride	2021-02	ug/L					< 2			
Carbon Tetrachloride	2021-04	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Carbon Tetrachloride	2021-09	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Carbon Tetrachloride	2022-04	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2

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Table 13
Analytical Data Summary
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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Carbon Tetrachloride	2022-09	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Carbon Tetrachloride	2023-04	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Carbon Tetrachloride	2023-09	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Carbon Tetrachloride	2024-04	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Carbon Tetrachloride	2024-09	ug/L	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Chlorobenzene	2008-04	ug/l							< 1.00	
Chlorobenzene	2008-06	ug/l							< 1.00	
Chlorobenzene	2008-08	ug/l							< 1.00	
Chlorobenzene	2008-09	ug/l							< 1.00	
Chlorobenzene	2009-03	ug/l							< 1	
Chlorobenzene	2009-06	ug/l							< 1.00	
Chlorobenzene	2009-09	ug/l				< 1.00			< 1.00	< 1.00
Chlorobenzene	2009-12	ug/l				< 1.00				< 1.00
Chlorobenzene	2010-03	ug/l							< 1.00	
Chlorobenzene	2010-04	ug/l				< 1.00				< 1.00
Chlorobenzene	2010-06	ug/l				< 1.00				< 1.00
Chlorobenzene	2010-09	ug/l				< 1.00			< 1.00	< 1.00
Chlorobenzene	2011-03	ug/l				< 1.00			< 1.00	< 1.00
Chlorobenzene	2011-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Chlorobenzene	2011-11	ug/l	< 1.00		< 1.00					
Chlorobenzene	2012-03	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Chlorobenzene	2012-06	ug/l	< 1.00		< 1.00					
Chlorobenzene	2012-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Chlorobenzene	2013-03	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Chlorobenzene	2013-06	ug/l			< 1.00	< 1.00			< 1.00	< 1.00
Chlorobenzene	2013-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Chlorobenzene	2013-11	ug/L				< 1.00			< 1.00	< 1.00
Chlorobenzene	2014-03	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Chlorobenzene	2014-06	ug/L			< 1.00	< 1.00			< 1.00	< 1.00
Chlorobenzene	2014-08	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Chlorobenzene	2014-12	ug/L			< 1.00	< 1.00			< 1.00	< 1.00
Chlorobenzene	2015-04	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Chlorobenzene	2015-09	ug/L			< 1					
Chlorobenzene	2015-10	ug/L	< 1			< 1			< 1	< 1
Chlorobenzene	2016-04	ug/L	< 1		< 1	< 1			< 1	< 1
Chlorobenzene	2016-07	ug/L				< 1				< 1
Chlorobenzene	2016-10	ug/L	< 1		< 1	< 1			< 1	< 1
Chlorobenzene	2017-05	ug/L	< 1		< 1	< 1			< 1	< 1
Chlorobenzene	2017-09	ug/L	< 1		< 1	< 1			< 1	< 1
Chlorobenzene	2018-05	ug/L			< 1	< 1			< 1	< 1
Chlorobenzene	2018-09	ug/L	< 1		< 1	< 1			< 1	< 1
Chlorobenzene	2019-03	ug/L	< 1		< 1	< 1			< 1	< 1
Chlorobenzene	2019-10	ug/L		< 1	< 1	< 1		< 1	< 1	< 1
Chlorobenzene	2020-04	ug/L		< 1	< 1	< 1	< 1	< 1	< 1	< 1
Chlorobenzene	2020-06	ug/L	< 1					< 1		
Chlorobenzene	2020-08	ug/L	< 1				< 1	< 1		

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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Chlorobenzene	2020-09	ug/L		< 1	< 1	< 1			< 1	~~< 1~~
Chlorobenzene	2020-12	ug/L					< 1	< 1		
Chlorobenzene	2021-02	ug/L					< 1			
Chlorobenzene	2021-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Chlorobenzene	2021-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Chlorobenzene	2022-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Chlorobenzene	2022-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Chlorobenzene	2023-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Chlorobenzene	2023-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Chlorobenzene	2024-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Chlorobenzene	2024-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Chlorobenzilate	2009-03	ug/l							< 10	
Chlorobenzilate	2009-06	ug/l							< 10.0	
Chlorobenzilate	2009-09	ug/l							< 10.0	
Chlorobenzilate	2010-03	ug/l							< 10.0	
Chlorobenzilate	2010-09	ug/l							< 10.0	
Chlorobenzilate	2011-03	ug/l							< 12.0	
Chlorobenzilate	2014-06	ug/L			< 10.5					
Chlorobenzilate	2014-08	ug/L			< 10.2				< 10.8	
Chlorobenzilate	2015-10	ug/L				< 10			< 10	< 10
Chlorobenzilate	2016-07	ug/L				< 10.4				< 10.4
Chlorobenzilate	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Chlorobenzilate	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Chlorobenzilate	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Chlorodibromomethane	2008-04	ug/l							< 5.00	
Chlorodibromomethane	2008-06	ug/l							< 5.00	
Chlorodibromomethane	2008-08	ug/l							< 5.00	
Chlorodibromomethane	2008-09	ug/l							< 5.00	
Chlorodibromomethane	2009-03	ug/l							< 5	
Chlorodibromomethane	2009-06	ug/l							< 5.00	
Chlorodibromomethane	2009-09	ug/l				< 5.00			< 5.00	< 5.00
Chlorodibromomethane	2009-12	ug/l				< 5.00				< 5.00
Chlorodibromomethane	2010-03	ug/l							< 20.0	
Chlorodibromomethane	2010-04	ug/l				< 20.0				< 20.0
Chlorodibromomethane	2010-06	ug/l				< 5.00				< 5.00
Chlorodibromomethane	2010-09	ug/l				< 10.0			< 10.0	< 10.0
Chlorodibromomethane	2011-03	ug/l				< 5.00			< 5.00	< 5.00
Chlorodibromomethane	2011-09	ug/l	< 5.00		< 5.00	< 5.00			< 5.00	< 5.00
Chlorodibromomethane	2011-11	ug/l	< 5.00		< 5.00					
Chlorodibromomethane	2012-03	ug/l	< 5.00		< 5.00	< 5.00			< 5.00	< 5.00
Chlorodibromomethane	2012-06	ug/l	< 5.00		< 5.00					
Chlorodibromomethane	2012-09	ug/l	< 5.00		< 5.00	< 5.00			< 5.00	< 5.00
Chlorodibromomethane	2013-03	ug/l	< 5.00		< 5.00	< 5.00			< 5.00	< 5.00
Chlorodibromomethane	2013-06	ug/l			< 5.00	< 5.00			< 5.00	< 5.00
Chlorodibromomethane	2013-09	ug/l	< 5.00		< 5.00	< 5.00			< 5.00	< 5.00
Chlorodibromomethane	2013-11	ug/L				< 5.00			< 5.00	< 5.00

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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Chlorodibromomethane	2014-03	ug/L	< 5.00		< 5.00	< 5.00			< 5.00	< 5.00
Chlorodibromomethane	2014-06	ug/L			< 5.00	< 5.00			< 5.00	< 5.00
Chlorodibromomethane	2014-08	ug/L	< 5.00		< 5.00	< 5.00			< 5.00	< 5.00
Chlorodibromomethane	2014-12	ug/L			< 5.00	< 5.00			< 5.00	< 5.00
Chlorodibromomethane	2015-04	ug/L	< 5.00		< 5.00	< 5.00			< 5.00	< 5.00
Chlorodibromomethane	2015-09	ug/L			< 5					
Chlorodibromomethane	2015-10	ug/L	< 5			< 5			< 5	< 5
Chlorodibromomethane	2016-04	ug/L	< 5		< 5	< 5			< 5	< 5
Chlorodibromomethane	2016-07	ug/L				< 5				< 5
Chlorodibromomethane	2016-10	ug/L	< 5		< 5	< 5			< 5	< 5
Chlorodibromomethane	2017-05	ug/L	< 5		< 5	< 5			< 5	< 5
Chlorodibromomethane	2017-09	ug/L	< 5		< 5	< 5			< 5	< 5
Chlorodibromomethane	2018-05	ug/L			< 5	< 5			< 5	< 5
Chlorodibromomethane	2018-09	ug/L	< 5		< 5	< 5			< 5	< 5
Chlorodibromomethane	2019-03	ug/L	< 5		< 5	< 5			< 5	< 5
Chlorodibromomethane	2019-10	ug/L		< 5	< 5	< 5		< 5	< 5	< 5
Chlorodibromomethane	2020-04	ug/L		< 5	< 5	< 5	< 5	< 5	< 5	< 5
Chlorodibromomethane	2020-06	ug/L	< 5					< 5		
Chlorodibromomethane	2020-08	ug/L	< 5				< 5	< 5		
Chlorodibromomethane	2020-09	ug/L		< 5	< 5	< 5			< 5	~~< 5~~
Chlorodibromomethane	2020-12	ug/L					< 5	< 5		
Chlorodibromomethane	2021-02	ug/L					< 5			
Chlorodibromomethane	2021-04	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Chlorodibromomethane	2021-09	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Chlorodibromomethane	2022-04	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Chlorodibromomethane	2022-09	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Chlorodibromomethane	2023-04	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Chlorodibromomethane	2023-09	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Chlorodibromomethane	2024-04	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Chlorodibromomethane	2024-09	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Chloroethane	2008-04	ug/l							< 4.00	
Chloroethane	2008-06	ug/l							< 4.00	
Chloroethane	2008-08	ug/l							< 4.00	
Chloroethane	2008-09	ug/l							< 4.00	
Chloroethane	2009-03	ug/l							< 4	
Chloroethane	2009-06	ug/l							< 4.00	
Chloroethane	2009-09	ug/l				< 4.00			< 4.00	< 4.00
Chloroethane	2009-12	ug/l				< 4.00				< 4.00
Chloroethane	2010-03	ug/l							< 4.00	
Chloroethane	2010-04	ug/l				< 4.00				< 4.00
Chloroethane	2010-06	ug/l				< 4.00				< 4.00
Chloroethane	2010-09	ug/l				< 4.00			< 4.00	< 4.00
Chloroethane	2011-03	ug/l				< 4.00			< 4.00	< 4.00
Chloroethane	2011-09	ug/l	< 4.00		< 4.00	< 4.00			< 4.00	< 4.00
Chloroethane	2011-11	ug/l	< 4.00		< 4.00					
Chloroethane	2012-03	ug/l	< 4.00		< 4.00	< 4.00			< 4.00	< 4.00

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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Chloroethane	2012-06	ug/l	< 4.00		< 4.00					
Chloroethane	2012-09	ug/l	< 4.00		< 4.00	< 4.00			< 4.00	< 4.00
Chloroethane	2013-03	ug/l	< 4.00		< 4.00	< 4.00			< 4.00	< 4.00
Chloroethane	2013-06	ug/l			**0.340 J**	< 4.00			< 4.00	< 4.00
Chloroethane	2013-09	ug/l	< 4.00		**0.761 J**	< 4.00			< 4.00	< 4.00
Chloroethane	2013-11	ug/L				< 4.00			< 4.00	< 4.00
Chloroethane	2014-03	ug/L	< 4.00		< 4.00	< 4.00			< 4.00	< 4.00
Chloroethane	2014-06	ug/L			< 4.00	< 4.00			< 4.00	< 4.00
Chloroethane	2014-08	ug/L	< 4.00		< 4.00	< 4.00			< 4.00	< 4.00
Chloroethane	2014-12	ug/L			**0.888 J**	< 4.00			< 4.00	< 4.00
Chloroethane	2015-04	ug/L	< 4.00		< 4.00	< 4.00			< 4.00	< 4.00
Chloroethane	2015-09	ug/L			**1.26 J**					
Chloroethane	2015-10	ug/L	< 4			< 4			< 4	< 4
Chloroethane	2016-04	ug/L	< 4		**1.17 J**	< 4			< 4	< 4
Chloroethane	2016-07	ug/L				< 4				< 4
Chloroethane	2016-10	ug/L	< 4		**1.01 J**	< 4			< 4	< 4
Chloroethane	2017-05	ug/L	< 4		**1.19 J**	< 4			< 4	< 4
Chloroethane	2017-09	ug/L	< 4		**1.23 J**	< 4			< 4	< 4
Chloroethane	2018-05	ug/L			**0.665 J**	< 4			< 4	< 4
Chloroethane	2018-09	ug/L	< 4		**0.834 J**	< 4			< 4	< 4
Chloroethane	2019-03	ug/L	< 4		< 4	< 4			< 4	< 4
Chloroethane	2019-10	ug/L		< 4	< 4	< 4		< 4	< 4	< 4
Chloroethane	2020-04	ug/L		< 4	< 4	< 4	< 4	< 4	< 4	< 4
Chloroethane	2020-06	ug/L	< 4					< 4		
Chloroethane	2020-08	ug/L	< 4				< 4	< 4		
Chloroethane	2020-09	ug/L		< 4	< 4	< 4			< 4	~~< 4~~
Chloroethane	2020-12	ug/L					< 4	< 4		
Chloroethane	2021-02	ug/L					< 4			
Chloroethane	2021-04	ug/L	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4
Chloroethane	2021-09	ug/L	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4
Chloroethane	2022-04	ug/L	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4
Chloroethane	2022-09	ug/L	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4
Chloroethane	2023-04	ug/L	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4
Chloroethane	2023-09	ug/L	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4
Chloroethane	2024-04	ug/L	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4
Chloroethane	2024-09	ug/L	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4
Chloroform	2008-04	ug/l							< 1.00	
Chloroform	2008-06	ug/l							< 1.00	
Chloroform	2008-08	ug/l							< 1.00	
Chloroform	2008-09	ug/l							< 1.00	
Chloroform	2009-03	ug/l							< 1	
Chloroform	2009-06	ug/l							< 1.00	
Chloroform	2009-09	ug/l				< 1.00			< 1.00	< 1.00
Chloroform	2009-12	ug/l				< 1.00				< 1.00
Chloroform	2010-03	ug/l							< 2.00	
Chloroform	2010-04	ug/l				< 2.00				< 2.00

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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Chloroform	2010-06	ug/l				< 1.00				< 1.00
Chloroform	2010-09	ug/l				< 1.00			< 1.00	< 1.00
Chloroform	2011-03	ug/l				< 1.00			< 1.00	< 1.00
Chloroform	2011-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Chloroform	2011-11	ug/l	< 1.00		< 1.00					
Chloroform	2012-03	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Chloroform	2012-06	ug/l	< 1.00		< 1.00					
Chloroform	2012-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Chloroform	2013-03	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Chloroform	2013-06	ug/l			< 1.00	< 1.00			< 1.00	< 1.00
Chloroform	2013-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Chloroform	2013-11	ug/L				< 1.00			< 1.00	< 1.00
Chloroform	2014-03	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Chloroform	2014-06	ug/L			< 1.00	< 1.00			< 1.00	< 1.00
Chloroform	2014-08	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Chloroform	2014-12	ug/L			< 1.00	< 1.00			< 1.00	< 1.00
Chloroform	2015-04	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Chloroform	2015-09	ug/L			< 1					
Chloroform	2015-10	ug/L	< 1			< 1			< 1	< 1
Chloroform	2016-04	ug/L	< 1		< 1	< 1			< 1	< 1
Chloroform	2016-07	ug/L				< 1				< 1
Chloroform	2016-10	ug/L	< 1		< 1	< 1			< 1	< 1
Chloroform	2017-05	ug/L	< 1		< 1	< 1			< 1	< 1
Chloroform	2017-09	ug/L	< 1		< 1	< 1			< 1	< 1
Chloroform	2018-05	ug/L			< 1	< 1			< 1	< 1
Chloroform	2018-09	ug/L	< 3		< 3	< 3			< 3	< 3
Chloroform	2019-03	ug/L	< 3		< 3	< 3			< 3	< 3
Chloroform	2019-10	ug/L		< 3	< 3	< 3		< 3	< 3	< 3
Chloroform	2020-04	ug/L		< 3	< 3	< 3	< 3	< 3	< 3	< 3
Chloroform	2020-06	ug/L	< 3					< 3		
Chloroform	2020-08	ug/L	< 3				< 3	< 3		
Chloroform	2020-09	ug/L		< 3	< 3	< 3			< 3	~~< 3~~
Chloroform	2020-12	ug/L					< 3	< 3		
Chloroform	2021-02	ug/L					< 3			
Chloroform	2021-04	ug/L	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
Chloroform	2021-09	ug/L	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
Chloroform	2022-04	ug/L	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
Chloroform	2022-09	ug/L	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
Chloroform	2023-04	ug/L	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
Chloroform	2023-09	ug/L	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
Chloroform	2024-04	ug/L	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
Chloroform	2024-09	ug/L	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
Chloromethane	2008-04	ug/l							< 3.00	
Chloromethane	2008-06	ug/l							< 3.00	
Chloromethane	2008-08	ug/l							< 3.00	
Chloromethane	2008-09	ug/l							< 3.00	

Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Chloromethane	2009-03	ug/l							< 3	
Chloromethane	2009-06	ug/l							< 3.00	
Chloromethane	2009-09	ug/l				< 3.00			< 3.00	< 3.00
Chloromethane	2009-12	ug/l				< 3.00				< 3.00
Chloromethane	2010-03	ug/l							< 3.00	
Chloromethane	2010-04	ug/l				< 3.00				< 3.00
Chloromethane	2010-06	ug/l				< 3.00				< 3.00
Chloromethane	2010-09	ug/l				< 3.00			< 3.00	< 3.00
Chloromethane	2011-03	ug/l				< 3.00			< 3.00	< 3.00
Chloromethane	2011-09	ug/l	< 3.00		< 3.00	< 3.00			< 3.00	< 3.00
Chloromethane	2011-11	ug/l	< 3.00		< 3.00					
Chloromethane	2012-03	ug/l	< 3.00		< 3.00	< 3.00			< 3.00	< 3.00
Chloromethane	2012-06	ug/l	< 3.00		< 3.00					
Chloromethane	2012-09	ug/l	< 3.00		< 3.00	< 3.00			< 3.00	< 3.00
Chloromethane	2013-03	ug/l	< 3.00		< 3.00	< 3.00			< 3.00	< 3.00
Chloromethane	2013-06	ug/l			< 3.00	< 3.00			< 3.00	< 3.00
Chloromethane	2013-09	ug/l	< 3.00		< 3.00	< 3.00			< 3.00	< 3.00
Chloromethane	2013-11	ug/L				< 3.00			< 3.00	< 3.00
Chloromethane	2014-03	ug/L	< 3.00		< 3.00	< 3.00			< 3.00	< 3.00
Chloromethane	2014-06	ug/L			< 3.00	< 3.00			< 3.00	< 3.00
Chloromethane	2014-08	ug/L	< 3.00		< 3.00	< 3.00			< 3.00	< 3.00
Chloromethane	2014-12	ug/L			< 3.00	< 3.00			< 3.00	< 3.00
Chloromethane	2015-04	ug/L	< 3.00		< 3.00	< 3.00			< 3.00	< 3.00
Chloromethane	2015-09	ug/L			< 3					
Chloromethane	2015-10	ug/L	< 3			< 3 J			< 3	< 3 J
Chloromethane	2016-04	ug/L	< 3		< 3	< 3			< 3	< 3
Chloromethane	2016-07	ug/L				< 3				< 3
Chloromethane	2016-10	ug/L	< 3		< 3	< 3			< 3	< 3
Chloromethane	2017-05	ug/L	< 3		< 3	< 3			< 3	< 3
Chloromethane	2017-09	ug/L	< 3		< 3	< 3			< 3	< 3
Chloromethane	2018-05	ug/L			< 3	< 3			< 3	< 3
Chloromethane	2018-09	ug/L	< 3		< 3	< 3			< 3	< 3
Chloromethane	2019-03	ug/L	< 3		< 3	< 3			< 3	< 3
Chloromethane	2019-10	ug/L		< 3	< 3	< 3		< 3	< 3	< 3
Chloromethane	2020-04	ug/L		< 3	< 3	< 3	< 3	< 3	< 3	< 3
Chloromethane	2020-06	ug/L	< 3					< 3		
Chloromethane	2020-08	ug/L	< 3				< 3	< 3		
Chloromethane	2020-09	ug/L		< 3	< 3	< 3			< 3	~~< 3~~
Chloromethane	2020-12	ug/L					< 3	< 3		
Chloromethane	2021-02	ug/L					< 3			
Chloromethane	2021-04	ug/L	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
Chloromethane	2021-09	ug/L	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
Chloromethane	2022-04	ug/L	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
Chloromethane	2022-09	ug/L	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
Chloromethane	2023-04	ug/L	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
Chloromethane	2023-09	ug/L	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3

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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Chloromethane	2024-04	ug/L	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
Chloromethane	2024-09	ug/L	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
Chloroprene	2009-03	ug/l							< 1	
Chloroprene	2009-06	ug/l							< 1.00	
Chloroprene	2009-09	ug/l							< 1.00	
Chloroprene	2010-03	ug/l							< 1.00	
Chloroprene	2010-09	ug/l							< 1.00	
Chloroprene	2011-03	ug/l							< 1.00	
Chloroprene	2014-06	ug/L			< 1.00					
Chloroprene	2014-08	ug/L			< 1.00				< 1.00	
Chloroprene	2015-10	ug/L				< 1			< 1	< 1
Chloroprene	2016-07	ug/L				< 1				< 1
Chloroprene	2019-10	ug/L			< 1	< 1			< 1	< 1
Chloroprene	2020-04	ug/L			< 1	< 1			< 1	< 1
Chloroprene	2020-09	ug/L				< 1			< 1	~~< 1~~
Chloroprene	2024-09	ug/L			< 1	< 1			< 1	< 1
Chromium	2008-04	mg/l							< 0.0200	
Chromium	2008-06	mg/l							< 0.0200	
Chromium	2008-08	mg/l							< 0.0200	
Chromium	2008-09	mg/l							< 0.0200	
Chromium	2009-03	mg/l							< 0.02	
Chromium	2009-06	mg/l							< 0.0200	
Chromium	2009-09	mg/l				< 0.0200			< 0.0200	< 0.0200
Chromium	2009-12	mg/l				**0.0343**				**0.0343**
Chromium	2010-03	mg/l							< 0.0200	
Chromium	2010-04	mg/l				< 0.0200				< 0.0200
Chromium	2010-06	mg/l				< 0.0200				< 0.0200
Chromium	2010-09	mg/l				< 0.0200			< 0.0200	< 0.0200
Chromium	2011-03	mg/l				< 0.0200			< 0.0200	< 0.0200
Chromium	2011-09	mg/l	< 0.0200		< 0.0200	< 0.0200			< 0.0200	< 0.0200
Chromium	2011-11	mg/l	< 0.0200		< 0.0200					
Chromium	2012-03	mg/l	< 0.0200		< 0.0200	< 0.0200			< 0.0200	< 0.0200
Chromium	2012-06	mg/l	< 0.0200		< 0.0200					
Chromium	2012-09	mg/l	< 0.0200		< 0.0200	< 0.0200			< 0.0200	< 0.0200
Chromium	2013-03	mg/l	< 0.0200		< 0.0200	**0.00212 J**			< 0.0200	**0.00212 J**
Chromium	2013-06	mg/l				**0.00188 J**				**0.00188 J**
Chromium	2013-09	mg/l	< 0.0200		< 0.0200	< 0.0200			< 0.0200	< 0.0200
Chromium	2013-11	mg/L				**0.00328 J**				**0.00328 J**
Chromium	2014-03	mg/L	< 0.0200		< 0.0200	< 0.0200			< 0.0200	< 0.0200
Chromium	2014-06	mg/L			< 0.0200	< 0.0200				< 0.0200
Chromium	2014-08	mg/L	< 0.00500		< 0.00500	< 0.00500			**0.00198 J**	< 0.00500
Chromium	2014-12	mg/L			< 0.00500	< 0.00500			**0.00248 J**	< 0.00500
Chromium	2015-04	mg/L	< 0.00500		< 0.00500	< 0.00500			**0.00286 J**	< 0.00500
Chromium	2015-09	mg/L			< 0.005					
Chromium	2015-10	mg/L	< 0.005			< 0.005			**0.00309 J**	< 0.005
Chromium	2016-04	mg/L	< 0.005 J		< 0.005	< 0.005			< 0.005 J	< 0.005

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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Chromium	2016-07	mg/L				< 0.005				< 0.005
Chromium	2016-10	mg/L	**0.000585 J**		< 0.005	< 0.005			**0.00291 J**	< 0.005
Chromium	2017-05	mg/L	**0.00129 J**		< 0.005	< 0.005			**0.00358 J**	< 0.005
Chromium	2017-09	mg/L	< 0.005		< 0.005	< 0.005			**0.0031 J**	< 0.005
Chromium	2018-05	mg/L			< 0.005	< 0.005			**0.00322 J**	< 0.005
Chromium	2018-09	mg/L	**0.00762**		< 0.005	< 0.005			< 0.005	< 0.005
Chromium	2019-03	mg/L	< 0.005		< 0.005	< 0.005			**0.00271 J**	< 0.005
Chromium	2019-10	mg/L		< 0.01	< 0.01	< 0.01		~~< 0.01~~	**0.00209 J**	< 0.01
Chromium	2020-04	mg/L		< 0.005	< 0.005	< 0.005	~~**0.00809**~~	~~**0.00117 J**~~	**0.00264 J**	< 0.005
Chromium	2020-06	mg/L	< 0.005					~~**0.01**~~		
Chromium	2020-08	mg/L	< 0.005				~~**0.00905**~~	~~**0.00903**~~		
Chromium	2020-09	mg/L		< 0.005	< 0.005	< 0.005			**0.00239 J**	~~< 0.005~~
Chromium	2020-12	mg/L					~~**0.00137 J**~~	< 0.005		
Chromium	2021-02	mg/L					~~< 0.005~~			
Chromium	2021-04	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	~~< 0.005~~	< 0.005	**0.00334 J**	< 0.005
Chromium	2021-09	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	**0.00243 J**	< 0.005
Chromium	2022-04	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	**0.00313 J**	< 0.005
Chromium	2022-09	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	**0.00258 J**	< 0.005
Chromium	2023-04	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	**0.00285 J**	< 0.005
Chromium	2023-09	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	**0.00271 J**	< 0.005
Chromium	2024-04	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	**0.00232 J**	< 0.005
Chromium	2024-09	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	**0.00214 J**	< 0.005
Chrysene	2009-03	ug/l							< 10	
Chrysene	2009-06	ug/l							< 10.0	
Chrysene	2009-09	ug/l							< 10.0	
Chrysene	2010-03	ug/l							< 10.0	
Chrysene	2010-09	ug/l							< 10.0	
Chrysene	2011-03	ug/l							< 12.0	
Chrysene	2014-06	ug/L			< 10.5					
Chrysene	2014-08	ug/L			< 10.2				< 10.8	
Chrysene	2015-10	ug/L				< 10			< 10	< 10
Chrysene	2016-07	ug/L				< 10.4				< 10.4
Chrysene	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Chrysene	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Chrysene	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
cis-1,2-Dichloroethene	2008-04	ug/l							< 1.00	
cis-1,2-Dichloroethene	2008-06	ug/l							< 1.00	
cis-1,2-Dichloroethene	2008-08	ug/l							< 1.00	
cis-1,2-Dichloroethene	2008-09	ug/l							< 1.00	
cis-1,2-Dichloroethene	2009-03	ug/l							< 1	
cis-1,2-Dichloroethene	2009-06	ug/l							< 1.00	
cis-1,2-Dichloroethene	2009-09	ug/l				< 1.00			< 1.00	< 1.00
cis-1,2-Dichloroethene	2009-12	ug/l				< 1.00				< 1.00
cis-1,2-Dichloroethene	2010-03	ug/l							< 1.00	
cis-1,2-Dichloroethene	2010-04	ug/l				< 1.00				< 1.00
cis-1,2-Dichloroethene	2010-06	ug/l				< 1.00				< 1.00

Carroll County Landfill Western Expansion Area
Permit No. 14-SDP-01-74P

Table 13
Analytical Data Summary
2024 Annual Water Quality Report

Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
cis-1,2-Dichloroethene	2010-09	ug/l				< 1.00			< 1.00	< 1.00
cis-1,2-Dichloroethene	2011-03	ug/l				< 1.00			< 1.00	< 1.00
cis-1,2-Dichloroethene	2011-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
cis-1,2-Dichloroethene	2011-11	ug/l	< 1.00		< 1.00					
cis-1,2-Dichloroethene	2012-03	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
cis-1,2-Dichloroethene	2012-06	ug/l	< 1.00		< 1.00					
cis-1,2-Dichloroethene	2012-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
cis-1,2-Dichloroethene	2013-03	ug/l	< 1.00		**1.38**	< 1.00			< 1.00	< 1.00
cis-1,2-Dichloroethene	2013-06	ug/l			**0.598 J**	< 1.00			< 1.00	< 1.00
cis-1,2-Dichloroethene	2013-09	ug/l	< 1.00		**2.70**	< 1.00			< 1.00	< 1.00
cis-1,2-Dichloroethene	2013-11	ug/L				< 1.00			< 1.00	< 1.00
cis-1,2-Dichloroethene	2014-03	ug/L	< 1.00		**2.77**	< 1.00			< 1.00	< 1.00
cis-1,2-Dichloroethene	2014-06	ug/L			**1.21**	< 1.00			< 1.00	< 1.00
cis-1,2-Dichloroethene	2014-08	ug/L	< 1.00		**1.88**	< 1.00			< 1.00	< 1.00
cis-1,2-Dichloroethene	2014-12	ug/L			**8.45**	< 1.00			< 1.00	< 1.00
cis-1,2-Dichloroethene	2015-04	ug/L	**0.264 J**		**7.83**	< 1.00			< 1.00	< 1.00
cis-1,2-Dichloroethene	2015-09	ug/L			**22.4**					
cis-1,2-Dichloroethene	2015-10	ug/L	< 1			< 1			< 1	< 1
cis-1,2-Dichloroethene	2016-04	ug/L	< 1		**22.8**	< 1			< 1	< 1
cis-1,2-Dichloroethene	2016-07	ug/L				< 1				< 1
cis-1,2-Dichloroethene	2016-10	ug/L	< 1		**22.9**	< 1			< 1	< 1
cis-1,2-Dichloroethene	2017-05	ug/L	< 1		**18**	< 1			< 1	< 1
cis-1,2-Dichloroethene	2017-09	ug/L	< 1		**23.5**	< 1			< 1	< 1
cis-1,2-Dichloroethene	2018-05	ug/L			**18.1**	< 1			< 1	< 1
cis-1,2-Dichloroethene	2018-09	ug/L	< 1		**21.8**	< 1			< 1	< 1
cis-1,2-Dichloroethene	2019-03	ug/L	< 1		**21.2**	< 1			< 1	< 1
cis-1,2-Dichloroethene	2019-10	ug/L		< 1	**23.4**	< 1		< 1	< 1	< 1
cis-1,2-Dichloroethene	2020-04	ug/L		< 1	**21.8**	< 1	< 1	< 1	< 1	< 1
cis-1,2-Dichloroethene	2020-06	ug/L	< 1					< 1		
cis-1,2-Dichloroethene	2020-08	ug/L	< 1				< 1	< 1		
cis-1,2-Dichloroethene	2020-09	ug/L		< 1	**18.8**	< 1			< 1	~~< 1~~
cis-1,2-Dichloroethene	2020-12	ug/L					< 1	< 1		
cis-1,2-Dichloroethene	2021-02	ug/L					< 1			
cis-1,2-Dichloroethene	2021-04	ug/L	< 1	< 1	**15.3**	< 1	< 1	< 1	< 1	< 1
cis-1,2-Dichloroethene	2021-09	ug/L	< 1	**0.422 J**	**16.6**	< 1	< 1	< 1	< 1	< 1
cis-1,2-Dichloroethene	2022-04	ug/L	< 1	< 1	**11.3**	< 1	< 1	< 1	< 1	< 1
cis-1,2-Dichloroethene	2022-09	ug/L	< 1	< 1	**11.8**	< 1	< 1	< 1	< 1	< 1
cis-1,2-Dichloroethene	2023-04	ug/L	< 1	< 1	**10.3**	< 1	< 1	< 1	< 1	< 1
cis-1,2-Dichloroethene	2023-09	ug/L	< 1	< 1	**10.1**	< 1	< 1	< 1	< 1	< 1
cis-1,2-Dichloroethene	2024-04	ug/L	< 1	< 1	**6**	< 1	< 1	< 1	< 1	< 1
cis-1,2-Dichloroethene	2024-09	ug/L	< 1	< 1	**8.47**	< 1	< 1	< 1	< 1	< 1
cis-1,3-Dichloropropene	2008-04	ug/l							< 5.00	
cis-1,3-Dichloropropene	2008-06	ug/l							< 5.00	
cis-1,3-Dichloropropene	2008-08	ug/l							< 5.00	
cis-1,3-Dichloropropene	2008-09	ug/l							< 5.00	
cis-1,3-Dichloropropene	2009-03	ug/l							< 5	

Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
cis-1,3-Dichloropropene	2009-06	ug/l							< 5.00	
cis-1,3-Dichloropropene	2009-09	ug/l				< 5.00			< 5.00	< 5.00
cis-1,3-Dichloropropene	2009-12	ug/l				< 5.00				< 5.00
cis-1,3-Dichloropropene	2010-03	ug/l							< 20.0	
cis-1,3-Dichloropropene	2010-04	ug/l				< 20.0				< 20.0
cis-1,3-Dichloropropene	2010-06	ug/l				< 5.00				< 5.00
cis-1,3-Dichloropropene	2010-09	ug/l				< 10.0			< 10.0	< 10.0
cis-1,3-Dichloropropene	2011-03	ug/l				< 5.00			< 5.00	< 5.00
cis-1,3-Dichloropropene	2011-09	ug/l	< 5.00		< 5.00	< 5.00			< 5.00	< 5.00
cis-1,3-Dichloropropene	2011-11	ug/l	< 5.00		< 5.00					
cis-1,3-Dichloropropene	2012-03	ug/l	< 5.00		< 5.00	< 5.00			< 5.00	< 5.00
cis-1,3-Dichloropropene	2012-06	ug/l	< 5.00		< 5.00					
cis-1,3-Dichloropropene	2012-09	ug/l	< 5.00		< 5.00	< 5.00			< 5.00	< 5.00
cis-1,3-Dichloropropene	2013-03	ug/l	< 5.00		< 5.00	< 5.00			< 5.00	< 5.00
cis-1,3-Dichloropropene	2013-06	ug/l			< 5.00	< 5.00			< 5.00	< 5.00
cis-1,3-Dichloropropene	2013-09	ug/l	< 5.00		< 5.00	< 5.00			< 5.00	< 5.00
cis-1,3-Dichloropropene	2013-11	ug/L				< 5.00			< 5.00	< 5.00
cis-1,3-Dichloropropene	2014-03	ug/L	< 5.00		< 5.00	< 5.00			< 5.00	< 5.00
cis-1,3-Dichloropropene	2014-06	ug/L			< 5.00	< 5.00			< 5.00	< 5.00
cis-1,3-Dichloropropene	2014-08	ug/L	< 5.00		< 5.00	< 5.00			< 5.00	< 5.00
cis-1,3-Dichloropropene	2014-12	ug/L			< 5.00	< 5.00			< 5.00	< 5.00
cis-1,3-Dichloropropene	2015-04	ug/L	< 5.00		< 5.00	< 5.00			< 5.00	< 5.00
cis-1,3-Dichloropropene	2015-09	ug/L			< 5					
cis-1,3-Dichloropropene	2015-10	ug/L	< 5			< 5			< 5	< 5
cis-1,3-Dichloropropene	2016-04	ug/L	< 5		< 5	< 5			< 5	< 5
cis-1,3-Dichloropropene	2016-07	ug/L				< 5				< 5
cis-1,3-Dichloropropene	2016-10	ug/L	< 5		< 5	< 5			< 5	< 5
cis-1,3-Dichloropropene	2017-05	ug/L	< 5		< 5	< 5			< 5	< 5
cis-1,3-Dichloropropene	2017-09	ug/L	< 5		< 5	< 5			< 5	< 5
cis-1,3-Dichloropropene	2018-05	ug/L			< 5	< 5			< 5	< 5
cis-1,3-Dichloropropene	2018-09	ug/L	< 5		< 5	< 5			< 5	< 5
cis-1,3-Dichloropropene	2019-03	ug/L	< 5		< 5	< 5			< 5	< 5
cis-1,3-Dichloropropene	2019-10	ug/L		< 5	< 5	< 5		< 5	< 5	< 5
cis-1,3-Dichloropropene	2020-04	ug/L		< 5	< 5	< 5	< 5	< 5	< 5	< 5
cis-1,3-Dichloropropene	2020-06	ug/L	< 5					< 5		
cis-1,3-Dichloropropene	2020-08	ug/L	< 5				< 5	< 5		
cis-1,3-Dichloropropene	2020-09	ug/L		< 5	< 5	< 5			< 5	~~< 5~~
cis-1,3-Dichloropropene	2020-12	ug/L					< 5	< 5		
cis-1,3-Dichloropropene	2021-02	ug/L					< 5			
cis-1,3-Dichloropropene	2021-04	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
cis-1,3-Dichloropropene	2021-09	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
cis-1,3-Dichloropropene	2022-04	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
cis-1,3-Dichloropropene	2022-09	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
cis-1,3-Dichloropropene	2023-04	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
cis-1,3-Dichloropropene	2023-09	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
cis-1,3-Dichloropropene	2024-04	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5

Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
cis-1,3-Dichloropropene	2024-09	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Cobalt	2008-04	mg/l							< 0.0200	
Cobalt	2008-06	mg/l							< 0.0200	
Cobalt	2008-08	mg/l							< 0.0200	
Cobalt	2008-09	mg/l							< 0.0200	
Cobalt	2009-03	mg/l							< 0.02	
Cobalt	2009-06	mg/l							< 0.0200	
Cobalt	2009-09	mg/l				< 0.0200			< 0.0200	< 0.0200
Cobalt	2009-12	mg/l				**0.0260**				**0.0260**
Cobalt	2010-03	mg/l							< 0.0200	
Cobalt	2010-04	mg/l				< 0.0200				< 0.0200
Cobalt	2010-06	mg/l				< 0.0200				< 0.0200
Cobalt	2010-09	mg/l				< 0.0200			< 0.0200	< 0.0200
Cobalt	2011-03	mg/l				< 0.0200			< 0.0200	< 0.0200
Cobalt	2011-09	mg/l	< 0.0200		**0.00535 J**	< 0.0200			< 0.0200	< 0.0200
Cobalt	2011-11	mg/l	< 0.0200		**0.00461 J**					
Cobalt	2012-03	mg/l	< 0.0200		**0.00896 J**	< 0.0200			< 0.0200	< 0.0200
Cobalt	2012-06	mg/l	< 0.0200		**0.0198 J**					
Cobalt	2012-09	mg/l	< 0.0200		**0.00214 J**	< 0.0200			< 0.0200	< 0.0200
Cobalt	2013-03	mg/l	< 0.0200		**0.00366 J**	**0.00627 J**			**0.00148 J**	**0.00627 J**
Cobalt	2013-06	mg/l				< 0.00700				< 0.00700
Cobalt	2013-09	mg/l	< 0.00700		**0.00159 J**	< 0.00700			< 0.00700	< 0.00700
Cobalt	2013-11	mg/L				< 0.00700				< 0.00700
Cobalt	2014-03	mg/L	< 0.00700		< 0.00700	< 0.00700			< 0.00700	< 0.00700
Cobalt	2014-06	mg/L			< 0.00700	< 0.00700				< 0.00700
Cobalt	2014-08	mg/L	< 0.000500		**0.00131**	**0.000107 J**			< 0.000500	**0.000107 J**
Cobalt	2014-12	mg/L			**0.00121**	**0.000483 J**			< 0.000500	**0.000483 J**
Cobalt	2015-04	mg/L	< 0.000500		**0.00201**	< 0.000500			< 0.000500	< 0.000500
Cobalt	2015-09	mg/L			**0.00159**					
Cobalt	2015-10	mg/L	< 0.0005			**0.000062 J**			< 0.0005	**0.000062 J**
Cobalt	2016-04	mg/L	**0.000071 J**		**0.00187**	**0.00003 J**			**0.000036 J**	**0.00003 J**
Cobalt	2016-07	mg/L				**0.000036 J**				**0.000036 J**
Cobalt	2016-10	mg/L	**0.000048 J**		**0.00212**	**0.000045 J**			**0.000033 J**	**0.000045 J**
Cobalt	2017-05	mg/L	< 0.0005		**0.00247**	< 0.0005			< 0.0005	< 0.0005
Cobalt	2017-09	mg/L	**0.00006 J**		**0.00256**	< 0.0005			< 0.0005	< 0.0005
Cobalt	2018-05	mg/L			**0.00253**	< 0.0005			< 0.0005	< 0.0005
Cobalt	2018-09	mg/L	**0.00168**		**0.00184**	< 0.001			< 0.001	< 0.001
Cobalt	2019-03	mg/L	< 0.0005		**0.00331**	< 0.0005			< 0.0005	< 0.0005
Cobalt	2019-10	mg/L		**0.000736 J**	**0.00274**	< 0.001		~~**0.00837**~~	< 0.001	< 0.001
Cobalt	2020-04	mg/L		**0.00334**	**0.00307**	< 0.0005	~~**0.00674**~~	~~**0.0192**~~	< 0.0005	< 0.0005
Cobalt	2020-06	mg/L	< 0.0005					~~**0.0125**~~		
Cobalt	2020-08	mg/L	< 0.0005				~~**0.00331**~~	~~**0.0122**~~		
Cobalt	2020-09	mg/L		**0.0014**	**0.00341**	< 0.0005			< 0.0005	~~< 0.0005~~
Cobalt	2020-12	mg/L					~~**0.00145**~~	**0.00766**		
Cobalt	2021-02	mg/L					~~**0.00158**~~			
Cobalt	2021-04	mg/L	**0.000111 J**	**0.00381**	**0.00369**	< 0.0005	~~**0.00132**~~	**0.0091**	< 0.0005	< 0.0005

Table 13
Carroll County Landfill Western Expansion Area **Analytical Data Summary**
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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Cobalt	2021-09	mg/L	< 0.0005	**0.00281**	**0.00227**	< 0.0005	**0.00295**	**0.00852**	< 0.0005	< 0.0005
Cobalt	2022-04	mg/L	< 0.0005	**0.00225**	**0.00326**	< 0.0005	**0.00665**	**0.00813**	< 0.0005	< 0.0005
Cobalt	2022-09	mg/L	< 0.0005	**0.00359**	**0.00233**	< 0.0005	**0.00823**	**0.00746**	< 0.0005	< 0.0005
Cobalt	2023-04	mg/L	< 0.0005	**0.00314**	**0.00319**	< 0.0005	**0.0102**	**0.00691**	< 0.0005	< 0.0005
Cobalt	2023-09	mg/L	< 0.0005	**0.00187**	**0.00215**	< 0.0005	**0.00807**	**0.00672**	< 0.0005	< 0.0005
Cobalt	2024-04	mg/L	< 0.0005	**0.00216**	**0.00384**	< 0.0005	**0.00755**	**0.00522**	< 0.0005	< 0.0005
Cobalt	2024-09	mg/L	< 0.0005	**0.00217**	**0.00206**	< 0.0005	**0.00582**	**0.00412**	< 0.0005	< 0.0005
Copper	2008-04	mg/l							< 0.0200	
Copper	2008-06	mg/l							< 0.0200	
Copper	2008-08	mg/l							< 0.0200	
Copper	2008-09	mg/l							< 0.0200	
Copper	2009-03	mg/l							< 0.02	
Copper	2009-06	mg/l							< 0.0200	
Copper	2009-09	mg/l				< 0.0200			< 0.0200	< 0.0200
Copper	2009-12	mg/l				**0.0536**				**0.0536**
Copper	2010-03	mg/l							< 0.0200	
Copper	2010-04	mg/l				< 0.0200				< 0.0200
Copper	2010-06	mg/l				< 0.0200				< 0.0200
Copper	2010-09	mg/l				< 0.0200			< 0.0200	< 0.0200
Copper	2011-03	mg/l				< 0.0200			< 0.0200	< 0.0200
Copper	2011-09	mg/l	< 0.0200		< 0.0200	< 0.0200			< 0.0200	< 0.0200
Copper	2011-11	mg/l	< 0.0200		< 0.0200					
Copper	2012-03	mg/l	< 0.0200		**0.0338**	< 0.0200			< 0.0200	< 0.0200
Copper	2012-06	mg/l	< 0.0200		**0.0343**					
Copper	2012-09	mg/l	< 0.0200		< 0.0200	< 0.0200			< 0.0200	< 0.0200
Copper	2013-03	mg/l	< 0.0200		**0.00504 J**	**0.0176 J**			< 0.0200	**0.0176 J**
Copper	2013-06	mg/l				< 0.0200 J				< 0.0200 J
Copper	2013-09	mg/l	< 0.0200		< 0.0200	< 0.0200			< 0.0200	< 0.0200
Copper	2013-11	mg/L				< 0.0200				< 0.0200
Copper	2014-03	mg/L	< 0.0200		< 0.0200 J	< 0.0200			< 0.0200	< 0.0200
Copper	2014-06	mg/L			< 0.0200	< 0.0200				< 0.0200
Copper	2014-08	mg/L	< 0.00200		< 0.00200 J	< 0.00200 J			< 0.00200 J	< 0.00200 J
Copper	2014-12	mg/L			< 0.00200	< 0.00200 J			< 0.00200	< 0.00200 J
Copper	2015-04	mg/L	< 0.00200		< 0.00200	**0.00472**			**0.000866 J**	**0.00472**
Copper	2015-09	mg/L			< 0.002 J					
Copper	2015-10	mg/L	< 0.002 J			< 0.002 J			< 0.002	< 0.002 J
Copper	2016-04	mg/L	< 0.005		< 0.005	< 0.005			< 0.005	< 0.005
Copper	2016-07	mg/L				< 0.005				< 0.005
Copper	2016-10	mg/L	< 0.005		< 0.005	< 0.005			< 0.005	< 0.005
Copper	2017-05	mg/L	< 0.005		< 0.005	< 0.005			< 0.005	< 0.005
Copper	2017-09	mg/L	< 0.005		< 0.005	< 0.005			< 0.005	< 0.005
Copper	2018-05	mg/L			< 0.005	< 0.005			< 0.005	< 0.005
Copper	2018-09	mg/L	**0.00428**		< 0.002	< 0.002			< 0.002	< 0.002
Copper	2019-03	mg/L	< 0.005		< 0.005	< 0.005			< 0.005	< 0.005
Copper	2019-10	mg/L		< 0.01	< 0.01	< 0.01 J		~~< 0.01~~	< 0.01	< 0.01 J
Copper	2020-04	mg/L		< 0.005	< 0.005	< 0.005	~~< 0.005~~	~~< 0.005~~	< 0.005	< 0.005

Table 13
Carroll County Landfill Western Expansion Area **Analytical Data Summary**
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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Copper	2020-06	mg/L	< 0.005					~~**0.00379 J**~~		
Copper	2020-08	mg/L	< 0.005				~~**0.00507**~~	~~**0.00798**~~		
Copper	2020-09	mg/L		< 0.005	< 0.005	< 0.005			< 0.005	~~< 0.005~~
Copper	2020-12	mg/L					~~< 0.005~~	< 0.005		
Copper	2021-02	mg/L					~~< 0.005~~			
Copper	2021-04	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	~~< 0.005~~	< 0.005	< 0.005	< 0.005
Copper	2021-09	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Copper	2022-04	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Copper	2022-09	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Copper	2023-04	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Copper	2023-09	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Copper	2024-04	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Copper	2024-09	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Cyanide	2009-03	mg/l							< 0.01	
Cyanide	2009-06	mg/l							< 0.0100	
Cyanide	2009-09	mg/l							< 0.0100	
Cyanide	2010-09	mg/l							< 0.0100	
Cyanide	2014-06	mg/L			< 0.0100					
Cyanide	2014-08	mg/L			< 0.0100				< 0.0100	
Cyanide	2015-10	mg/L				< 0.01			< 0.01	< 0.01
Cyanide	2016-07	mg/L				< 0.01				< 0.01
Cyanide	2019-10	mg/L			< 0.01	< 0.01			< 0.01	< 0.01
Cyanide	2020-04	mg/L			< 0.01					
Cyanide	2020-09	mg/L				**0.0796**			< 0.01	~~**0.0796**~~
Cyanide	2021-02	mg/L				< 0.01				< 0.01
Cyanide	2021-04	mg/L				< 0.01			< 0.01	< 0.01
Cyanide	2021-09	mg/L				< 0.01			< 0.01	< 0.01
Cyanide	2024-09	mg/L			< 0.01	< 0.01			< 0.01	< 0.01
delta-BHC	2009-03	ug/l							< 0.032	
delta-BHC	2009-06	ug/l							< 0.0320	
delta-BHC	2009-09	ug/l							< 0.0320	
delta-BHC	2010-03	ug/l							< 0.0320	
delta-BHC	2010-09	ug/l							< 0.0356	
delta-BHC	2011-03	ug/l							< 0.0320	
delta-BHC	2014-06	ug/L			< 0.0327					
delta-BHC	2014-08	ug/L			< 0.0320				< 0.0320	
delta-BHC	2015-10	ug/L				< 0.032			< 0.032	< 0.032
delta-BHC	2016-07	ug/L				< 0.032				< 0.032
delta-BHC	2019-10	ug/L			< 0.0335	< 0.0333			< 0.0333	< 0.0333
delta-BHC	2020-09	ug/L				< 0.0348			< 0.0451	~~< 0.0348~~
delta-BHC	2024-09	ug/L			< 0.0696	< 0.0667			< 0.0667	< 0.0667
Diallate	2009-03	ug/l							< 10	
Diallate	2009-06	ug/l							< 10.0	
Diallate	2009-09	ug/l							< 10.0	
Diallate	2010-03	ug/l							< 10.0	
Diallate	2010-09	ug/l							< 10.0	

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Table 13
Analytical Data Summary
2024 Annual Water Quality Report

Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Diallate	2011-03	ug/l							< 12.0	
Diallate	2014-06	ug/L			< 10.5					
Diallate	2014-08	ug/L			< 10.2				< 10.8	
Diallate	2015-10	ug/L				< 10			< 10	< 10
Diallate	2016-07	ug/L				< 10.4				< 10.4
Diallate	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Diallate	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Diallate	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Dibenzo(a,h)anthracene	2009-03	ug/l							< 10	
Dibenzo(a,h)anthracene	2009-06	ug/l							< 10.0	
Dibenzo(a,h)anthracene	2009-09	ug/l							< 10.0	
Dibenzo(a,h)anthracene	2010-03	ug/l							< 10.0	
Dibenzo(a,h)anthracene	2010-09	ug/l							< 10.0	
Dibenzo(a,h)anthracene	2011-03	ug/l							< 12.0	
Dibenzo(a,h)anthracene	2014-06	ug/L			< 10.5					
Dibenzo(a,h)anthracene	2014-08	ug/L			< 10.2				< 10.8	
Dibenzo(a,h)anthracene	2015-10	ug/L				< 10			< 10	< 10
Dibenzo(a,h)anthracene	2016-07	ug/L				< 10.4				< 10.4
Dibenzo(a,h)anthracene	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Dibenzo(a,h)anthracene	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Dibenzo(a,h)anthracene	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Dibenzofuran	2009-03	ug/l							< 10	
Dibenzofuran	2009-06	ug/l							< 10.0	
Dibenzofuran	2009-09	ug/l							< 10.0	
Dibenzofuran	2010-03	ug/l							< 10.0	
Dibenzofuran	2010-09	ug/l							< 10.0	
Dibenzofuran	2011-03	ug/l							< 12.0	
Dibenzofuran	2014-06	ug/L			< 10.5					
Dibenzofuran	2014-08	ug/L			< 10.2				< 10.8	
Dibenzofuran	2015-10	ug/L				< 10			< 10	< 10
Dibenzofuran	2016-07	ug/L				< 10.4				< 10.4
Dibenzofuran	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Dibenzofuran	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Dibenzofuran	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Dibromomethane	2008-04	ug/l							< 1.00	
Dibromomethane	2008-06	ug/l							< 1.00	
Dibromomethane	2008-08	ug/l							< 1.00	
Dibromomethane	2008-09	ug/l							< 1.00	
Dibromomethane	2009-03	ug/l							< 1	
Dibromomethane	2009-06	ug/l							< 1.00	
Dibromomethane	2009-09	ug/l				< 1.00			< 1.00	< 1.00
Dibromomethane	2009-12	ug/l				< 1.00				< 1.00
Dibromomethane	2010-03	ug/l							< 1.00	
Dibromomethane	2010-04	ug/l				< 1.00				< 1.00
Dibromomethane	2010-06	ug/l				< 1.00				< 1.00
Dibromomethane	2010-09	ug/l				< 1.00			< 1.00	< 1.00

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Table 13
Analytical Data Summary
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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Dibromomethane	2011-03	ug/l				< 1.00			< 1.00	< 1.00
Dibromomethane	2011-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Dibromomethane	2011-11	ug/l	< 1.00		< 1.00					
Dibromomethane	2012-03	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Dibromomethane	2012-06	ug/l	< 1.00		< 1.00					
Dibromomethane	2012-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Dibromomethane	2013-03	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Dibromomethane	2013-06	ug/l			< 1.00	< 1.00			< 1.00	< 1.00
Dibromomethane	2013-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Dibromomethane	2013-11	ug/L				< 1.00			< 1.00	< 1.00
Dibromomethane	2014-03	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Dibromomethane	2014-06	ug/L			< 1.00	< 1.00			< 1.00	< 1.00
Dibromomethane	2014-08	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Dibromomethane	2014-12	ug/L			< 1.00	< 1.00			< 1.00	< 1.00
Dibromomethane	2015-04	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Dibromomethane	2015-09	ug/L			< 1					
Dibromomethane	2015-10	ug/L	< 1			< 1			< 1	< 1
Dibromomethane	2016-04	ug/L	< 1		< 1	< 1			< 1	< 1
Dibromomethane	2016-07	ug/L				< 1				< 1
Dibromomethane	2016-10	ug/L	< 1		< 1	< 1			< 1	< 1
Dibromomethane	2017-05	ug/L	< 1		< 1	< 1			< 1	< 1
Dibromomethane	2017-09	ug/L	< 1		< 1	< 1			< 1	< 1
Dibromomethane	2018-05	ug/L			< 1	< 1			< 1	< 1
Dibromomethane	2018-09	ug/L	< 1		< 1	< 1			< 1	< 1
Dibromomethane	2019-03	ug/L	< 1		< 1	< 1			< 1	< 1
Dibromomethane	2019-10	ug/L		< 1	< 1	< 1		< 1	< 1	< 1
Dibromomethane	2020-04	ug/L		< 1	< 1	< 1	< 1	< 1	< 1	< 1
Dibromomethane	2020-06	ug/L	< 1					< 1		
Dibromomethane	2020-08	ug/L	< 1				< 1	< 1		
Dibromomethane	2020-09	ug/L		< 1	< 1	< 1			< 1	~~< 1~~
Dibromomethane	2020-12	ug/L					< 1	< 1		
Dibromomethane	2021-02	ug/L					< 1			
Dibromomethane	2021-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Dibromomethane	2021-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Dibromomethane	2022-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Dibromomethane	2022-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Dibromomethane	2023-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Dibromomethane	2023-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Dibromomethane	2024-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Dibromomethane	2024-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Dichlorodifluoromethane	2009-03	ug/l							< 3	
Dichlorodifluoromethane	2009-06	ug/l							< 3.00	
Dichlorodifluoromethane	2009-09	ug/l							< 3.00	
Dichlorodifluoromethane	2010-03	ug/l							< 3.00	
Dichlorodifluoromethane	2010-09	ug/l							< 3.00	
Dichlorodifluoromethane	2011-03	ug/l							< 3.00	

Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Dichlorodifluoromethane	2011-09	ug/l							< 3.00	
Dichlorodifluoromethane	2012-03	ug/l							< 3.00	
Dichlorodifluoromethane	2013-03	ug/l							< 3.00	
Dichlorodifluoromethane	2013-09	ug/l							< 3.00	
Dichlorodifluoromethane	2014-03	ug/L							< 3.00	
Dichlorodifluoromethane	2014-06	ug/L			< 3.00					
Dichlorodifluoromethane	2014-08	ug/L			< 3.00				< 3.00	
Dichlorodifluoromethane	2015-04	ug/L							< 3.00	
Dichlorodifluoromethane	2015-10	ug/L				< 3			< 3	< 3
Dichlorodifluoromethane	2016-04	ug/L				< 3			< 3	< 3
Dichlorodifluoromethane	2016-07	ug/L				< 3				< 3
Dichlorodifluoromethane	2016-10	ug/L				< 3			< 3	< 3
Dichlorodifluoromethane	2017-05	ug/L				< 3			< 3	< 3
Dichlorodifluoromethane	2018-05	ug/L				< 3			< 3	< 3
Dichlorodifluoromethane	2018-09	ug/L				< 3			< 3	< 3
Dichlorodifluoromethane	2019-03	ug/L				< 3			< 3	< 3
Dichlorodifluoromethane	2019-10	ug/L			< 3	< 3			< 3	< 3
Dichlorodifluoromethane	2020-04	ug/L				< 3			< 3	< 3
Dichlorodifluoromethane	2020-09	ug/L				< 3			< 3	~~< 3~~
Dichlorodifluoromethane	2021-04	ug/L				< 3			< 3	< 3
Dichlorodifluoromethane	2021-09	ug/L				< 3			< 3	< 3
Dichlorodifluoromethane	2024-09	ug/L			< 3	< 3			< 3	< 3
Dieldrin	2009-03	ug/l							< 0.032	
Dieldrin	2009-06	ug/l							< 0.0320	
Dieldrin	2009-09	ug/l							< 0.0320	
Dieldrin	2010-03	ug/l							< 0.0320	
Dieldrin	2010-09	ug/l							< 0.0356	
Dieldrin	2011-03	ug/l							< 0.0320	
Dieldrin	2014-06	ug/L			< 0.0327					
Dieldrin	2014-08	ug/L			< 0.0320				< 0.0320	
Dieldrin	2015-10	ug/L				< 0.032			< 0.032	< 0.032
Dieldrin	2016-07	ug/L				< 0.032				< 0.032
Dieldrin	2019-10	ug/L			< 0.0335	< 0.0333			< 0.0333	< 0.0333
Dieldrin	2020-09	ug/L				< 0.0348			**0.00321 J**	~~< 0.0348~~
Dieldrin	2024-09	ug/L			< 0.0696	< 0.0667			< 0.0667	< 0.0667
Diethylphthalate	2009-03	ug/l							< 10	
Diethylphthalate	2009-06	ug/l							< 10.0	
Diethylphthalate	2009-09	ug/l							< 10.0	
Diethylphthalate	2010-03	ug/l							< 10.0	
Diethylphthalate	2010-09	ug/l							< 10.0	
Diethylphthalate	2011-03	ug/l							< 12.0	
Diethylphthalate	2011-09	ug/l							< 10.0	
Diethylphthalate	2012-03	ug/l							< 10.0	
Diethylphthalate	2013-03	ug/l							< 12.3	
Diethylphthalate	2013-09	ug/l							< 10.1	
Diethylphthalate	2014-06	ug/L			< 10.5					

Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Diethylphthalate	2014-08	ug/L			< 10.2				< 10.8	
Diethylphthalate	2015-10	ug/L				< 10			< 10	< 10
Diethylphthalate	2016-07	ug/L				< 10.4				< 10.4
Diethylphthalate	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Diethylphthalate	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Diethylphthalate	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Dimethoate	2009-03	ug/l							< 10	
Dimethoate	2009-06	ug/l							< 10.0	
Dimethoate	2009-09	ug/l							< 10.0	
Dimethoate	2010-03	ug/l							< 10.0	
Dimethoate	2010-09	ug/l							< 10.0	
Dimethoate	2011-03	ug/l							< 12.0	
Dimethoate	2014-06	ug/L			< 10.5					
Dimethoate	2014-08	ug/L			< 10.2				< 10.8	
Dimethoate	2015-10	ug/L				< 10			< 10	< 10
Dimethoate	2016-07	ug/L				< 10.4				< 10.4
Dimethoate	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Dimethoate	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Dimethoate	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Dimethylphthalate	2009-03	ug/l							< 10	
Dimethylphthalate	2009-06	ug/l							< 10.0	
Dimethylphthalate	2009-09	ug/l							< 10.0	
Dimethylphthalate	2010-03	ug/l							< 10.0	
Dimethylphthalate	2010-09	ug/l							< 10.0	
Dimethylphthalate	2011-03	ug/l							< 12.0	
Dimethylphthalate	2014-06	ug/L			< 10.5					
Dimethylphthalate	2014-08	ug/L			< 10.2				< 10.8	
Dimethylphthalate	2015-10	ug/L				< 10			< 10	< 10
Dimethylphthalate	2016-07	ug/L				< 10.4				< 10.4
Dimethylphthalate	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Dimethylphthalate	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Dimethylphthalate	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Di-n-butylphthalate	2009-03	ug/l							< 10	
Di-n-butylphthalate	2009-06	ug/l							< 10.0	
Di-n-butylphthalate	2009-09	ug/l							< 10.0	
Di-n-butylphthalate	2010-03	ug/l							< 10.0	
Di-n-butylphthalate	2010-09	ug/l							< 10.0	
Di-n-butylphthalate	2011-03	ug/l							< 12.0	
Di-n-butylphthalate	2014-06	ug/L			< 10.5					
Di-n-butylphthalate	2014-08	ug/L			**0.623 J**				< 10.8	
Di-n-butylphthalate	2014-12	ug/L			< 10.4				< 10.4	
Di-n-butylphthalate	2015-04	ug/L			< 11.1				< 10.2	
Di-n-butylphthalate	2015-09	ug/L			< 10					
Di-n-butylphthalate	2015-10	ug/L				< 10 J			< 10	< 10 J
Di-n-butylphthalate	2016-07	ug/L				< 10.4				< 10.4
Di-n-butylphthalate	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2

Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Di-n-butylphthalate	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Di-n-butylphthalate	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Di-n-octylphthalate	2009-03	ug/l							< 10	
Di-n-octylphthalate	2009-06	ug/l							< 10.0	
Di-n-octylphthalate	2009-09	ug/l							< 10.0	
Di-n-octylphthalate	2010-03	ug/l							< 10.0	
Di-n-octylphthalate	2010-09	ug/l							< 10.0	
Di-n-octylphthalate	2011-03	ug/l							< 12.0	
Di-n-octylphthalate	2014-06	ug/L			< 21.1					
Di-n-octylphthalate	2014-08	ug/L			< 20.4				< 21.5	
Di-n-octylphthalate	2015-10	ug/L				< 20			< 20	< 20
Di-n-octylphthalate	2016-07	ug/L				< 20.8				< 20.8
Di-n-octylphthalate	2019-10	ug/L			< 21.1	< 20.3			< 20.9	< 20.3
Di-n-octylphthalate	2020-09	ug/L				< 25.6			< 29.9	~~< 25.6~~
Di-n-octylphthalate	2024-09	ug/L			< 20.8	< 21.7			< 21.7	< 21.7
Dinoseb	2009-03	ug/l							< 10	
Dinoseb	2009-06	ug/l							< 10.0	
Dinoseb	2009-09	ug/l							< 10.0	
Dinoseb	2010-03	ug/l							< 10.0	
Dinoseb	2010-09	ug/l							< 10.0	
Dinoseb	2011-03	ug/l							< 12.0	
Dinoseb	2014-06	ug/L			< 10.5					
Dinoseb	2014-08	ug/L			< 10.2				< 10.8	
Dinoseb	2015-10	ug/L				< 10			< 10	< 10
Dinoseb	2016-07	ug/L				< 10.4				< 10.4
Dinoseb	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Dinoseb	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Dinoseb	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Diphenylamine	2009-03	ug/l							< 10	
Diphenylamine	2009-06	ug/l							< 10.0	
Diphenylamine	2009-09	ug/l							< 10.0	
Diphenylamine	2010-03	ug/l							< 10.0	
Diphenylamine	2010-09	ug/l							< 10.0	
Diphenylamine	2011-03	ug/l							< 12.0	
Diphenylamine	2014-06	ug/L			< 10.5					
Diphenylamine	2014-08	ug/L			< 10.2				< 10.8	
Diphenylamine	2015-10	ug/L				< 10			< 10	< 10
Diphenylamine	2016-07	ug/L				< 10.4				< 10.4
Diphenylamine	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Diphenylamine	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Diphenylamine	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Disulfoton	2009-03	ug/l							< 70	
Disulfoton	2009-06	ug/l							< 70.0	
Disulfoton	2009-09	ug/l							< 10.0	
Disulfoton	2010-03	ug/l							< 10.0	
Disulfoton	2010-09	ug/l							< 10.0	

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Table 13
Analytical Data Summary
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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Disulfoton	2011-03	ug/l							< 12.0	
Disulfoton	2014-06	ug/L			< 10.5					
Disulfoton	2014-08	ug/L			< 10.2				< 10.8	
Disulfoton	2015-10	ug/L				< 10			< 10	< 10
Disulfoton	2016-07	ug/L				< 10.4				< 10.4
Disulfoton	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Disulfoton	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Disulfoton	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Endosulfan I	2009-03	ug/l							< 0.032	
Endosulfan I	2009-06	ug/l							< 0.0320	
Endosulfan I	2009-09	ug/l							< 0.0320	
Endosulfan I	2010-03	ug/l							< 0.0320	
Endosulfan I	2010-09	ug/l							< 0.0356	
Endosulfan I	2011-03	ug/l							< 0.0320	
Endosulfan I	2014-06	ug/L			< 0.0327					
Endosulfan I	2014-08	ug/L			< 0.0320				< 0.0320	
Endosulfan I	2015-10	ug/L				**10.3**			< 0.032 J	**10.3**
Endosulfan I	2016-04	ug/L				**2.05**			< 0.032	**2.05**
Endosulfan I	2016-07	ug/L				**0.153**				**0.153**
Endosulfan I	2016-10	ug/L				**0.0525**			< 0.032	**0.0525**
Endosulfan I	2017-05	ug/L				**0.0269 J**			**0.00252 J**	**0.0269 J**
Endosulfan I	2017-09	ug/L				**0.0213 J**			< 0.034	**0.0213 J**
Endosulfan I	2018-05	ug/L				< 0.0344			< 0.0344	< 0.0344
Endosulfan I	2018-09	ug/L				**0.0179 J**			< 0.0352	**0.0179 J**
Endosulfan I	2019-03	ug/L				**0.0198 J**			< 0.00546	**0.0198 J**
Endosulfan I	2019-10	ug/L			**0.00817 J**	**0.0141 J**			< 0.0333	**0.0141 J**
Endosulfan I	2020-04	ug/L				**0.00875 J**			< 0.0427	**0.00875 J**
Endosulfan I	2020-09	ug/L				< 0.0348			< 0.0451	~~< 0.0348~~
Endosulfan I	2021-04	ug/L				**0.00966 J**			< 0.0427	**0.00966 J**
Endosulfan I	2021-09	ug/L				< 0.04			< 0.039	< 0.04
Endosulfan I	2024-09	ug/L			< 0.0696	< 0.0667			< 0.0667	< 0.0667
Endosulfan II	2009-03	ug/l							< 0.032	
Endosulfan II	2009-06	ug/l							< 0.0320	
Endosulfan II	2009-09	ug/l							< 0.0320	
Endosulfan II	2010-03	ug/l							< 0.0320	
Endosulfan II	2010-09	ug/l							< 0.0356	
Endosulfan II	2011-03	ug/l							< 0.0320	
Endosulfan II	2014-06	ug/L			< 0.0327					
Endosulfan II	2014-08	ug/L			< 0.0320				< 0.0320	
Endosulfan II	2015-10	ug/L				< 0.032			< 0.032	< 0.032
Endosulfan II	2016-07	ug/L				< 0.032				< 0.032
Endosulfan II	2019-10	ug/L			< 0.0335	< 0.0333			< 0.0333	< 0.0333
Endosulfan II	2020-09	ug/L				< 0.0348			< 0.0451	~~< 0.0348~~
Endosulfan II	2024-09	ug/L			< 0.0696	< 0.0667			< 0.0667	< 0.0667
Endosulfan Sulfate	2009-03	ug/l							< 0.032	
Endosulfan Sulfate	2009-06	ug/l							< 0.0320	

Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Endosulfan Sulfate	2009-09	ug/l							< 0.0320	
Endosulfan Sulfate	2010-03	ug/l							< 0.0320	
Endosulfan Sulfate	2010-09	ug/l							< 0.0356	
Endosulfan Sulfate	2011-03	ug/l							< 0.0320	
Endosulfan Sulfate	2011-09	ug/l							< 0.0320	
Endosulfan Sulfate	2012-03	ug/l							< 0.0320	
Endosulfan Sulfate	2013-03	ug/l							< 0.0344	
Endosulfan Sulfate	2013-09	ug/l							< 0.0333	
Endosulfan Sulfate	2014-03	ug/L							< 0.0376	
Endosulfan Sulfate	2014-06	ug/L			< 0.0327					
Endosulfan Sulfate	2014-08	ug/L			< 0.0320				< 0.0320	
Endosulfan Sulfate	2015-04	ug/L							< 0.0323	
Endosulfan Sulfate	2015-10	ug/L				< 0.032			< 0.032	< 0.032
Endosulfan Sulfate	2016-04	ug/L				< 0.0327			< 0.032	< 0.0327
Endosulfan Sulfate	2016-07	ug/L				< 0.032				< 0.032
Endosulfan Sulfate	2016-10	ug/L				< 0.0327			< 0.032	< 0.0327
Endosulfan Sulfate	2017-05	ug/L				< 0.0327			< 0.0344	< 0.0327
Endosulfan Sulfate	2017-09	ug/L				< 0.0344			< 0.034	< 0.0344
Endosulfan Sulfate	2018-05	ug/L				< 0.0344			< 0.0344	< 0.0344
Endosulfan Sulfate	2018-09	ug/L				< 0.0352			< 0.0352	< 0.0352
Endosulfan Sulfate	2019-03	ug/L				< 0.0356			< 0.00546	< 0.0356
Endosulfan Sulfate	2019-10	ug/L			< 0.0335	< 0.0333			< 0.0333	< 0.0333
Endosulfan Sulfate	2020-04	ug/L				< 0.0451			< 0.0427	< 0.0451
Endosulfan Sulfate	2020-09	ug/L				< 0.0348			< 0.0451	~~< 0.0348~~
Endosulfan Sulfate	2021-04	ug/L				< 0.0364			< 0.0427	< 0.0364
Endosulfan Sulfate	2021-09	ug/L				< 0.04			< 0.039	< 0.04
Endosulfan Sulfate	2024-09	ug/L			< 0.0696	< 0.0667			< 0.0667	< 0.0667
Endrin	2009-03	ug/l							< 0.032	
Endrin	2009-06	ug/l							< 0.0320	
Endrin	2009-09	ug/l							< 0.0320	
Endrin	2010-03	ug/l							< 0.0320	
Endrin	2010-09	ug/l							< 0.0356	
Endrin	2011-03	ug/l							< 0.0320	
Endrin	2014-06	ug/L			< 0.0327					
Endrin	2014-08	ug/L			< 0.0320				< 0.0320	
Endrin	2015-10	ug/L				< 0.032			< 0.032	< 0.032
Endrin	2016-07	ug/L				< 0.032				< 0.032
Endrin	2019-10	ug/L			< 0.0335	< 0.0333			< 0.0333	< 0.0333
Endrin	2020-09	ug/L				< 0.0348			< 0.0451	~~< 0.0348~~
Endrin	2024-09	ug/L			< 0.0696	< 0.0667			< 0.0667	< 0.0667
Endrin Aldehyde	2009-03	ug/l							< 0.032	
Endrin Aldehyde	2009-06	ug/l							< 0.0320	
Endrin Aldehyde	2009-09	ug/l							< 0.0320	
Endrin Aldehyde	2010-03	ug/l							< 0.0320	
Endrin Aldehyde	2010-09	ug/l							< 0.0356	
Endrin Aldehyde	2011-03	ug/l							< 0.0320	

Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Endrin Aldehyde	2014-06	ug/L			< 0.0327					
Endrin Aldehyde	2014-08	ug/L			< 0.0320				< 0.0320	
Endrin Aldehyde	2015-10	ug/L				< 0.032			< 0.032	< 0.032
Endrin Aldehyde	2016-07	ug/L				< 0.032				< 0.032
Endrin Aldehyde	2019-10	ug/L			< 0.0335	< 0.0333			< 0.0333	< 0.0333
Endrin Aldehyde	2020-09	ug/L				< 0.0348			< 0.0451	~~< 0.0348~~
Endrin Aldehyde	2024-09	ug/L			< 0.0696	< 0.0667			< 0.0667	< 0.0667
Ethyl Methacrylate	2009-03	ug/l							< 2	
Ethyl Methacrylate	2009-06	ug/l							< 2.00	
Ethyl Methacrylate	2009-09	ug/l							< 2.00	
Ethyl Methacrylate	2010-03	ug/l							< 10.0	
Ethyl Methacrylate	2010-09	ug/l							< 20.0	
Ethyl Methacrylate	2011-03	ug/l							< 2.00	
Ethyl Methacrylate	2014-06	ug/L			< 2.00					
Ethyl Methacrylate	2014-08	ug/L			< 2.00				< 2.00	
Ethyl Methacrylate	2015-10	ug/L				< 2			< 2	< 2
Ethyl Methacrylate	2016-07	ug/L				< 2				< 2
Ethyl Methacrylate	2019-10	ug/L			< 2	< 2			< 2	< 2
Ethyl Methacrylate	2020-04	ug/L			< 2	< 2			< 2	< 2
Ethyl Methacrylate	2020-09	ug/L				< 2			< 2	~~< 2~~
Ethyl Methacrylate	2024-09	ug/L			< 2	< 2			< 2	< 2
Ethyl Methanesulfonate	2009-03	ug/l							< 10	
Ethyl Methanesulfonate	2009-06	ug/l							< 10.0	
Ethyl Methanesulfonate	2009-09	ug/l							< 10.0	
Ethyl Methanesulfonate	2010-03	ug/l							< 10.0	
Ethyl Methanesulfonate	2010-09	ug/l							< 10.0	
Ethyl Methanesulfonate	2011-03	ug/l							< 12.0	
Ethyl Methanesulfonate	2014-06	ug/L			< 10.5					
Ethyl Methanesulfonate	2014-08	ug/L			< 10.2				< 10.8	
Ethyl Methanesulfonate	2015-10	ug/L				< 10			< 10	< 10
Ethyl Methanesulfonate	2016-07	ug/L				< 10.4				< 10.4
Ethyl Methanesulfonate	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Ethyl Methanesulfonate	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Ethyl Methanesulfonate	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Ethylbenzene	2008-04	ug/l							< 1.00	
Ethylbenzene	2008-06	ug/l							< 1.00	
Ethylbenzene	2008-08	ug/l							< 1.00	
Ethylbenzene	2008-09	ug/l							< 1.00	
Ethylbenzene	2009-03	ug/l							< 1	
Ethylbenzene	2009-06	ug/l							< 1.00	
Ethylbenzene	2009-09	ug/l				< 1.00			< 1.00	< 1.00
Ethylbenzene	2009-12	ug/l				< 1.00				< 1.00
Ethylbenzene	2010-03	ug/l							< 1.00	
Ethylbenzene	2010-04	ug/l				< 1.00				< 1.00
Ethylbenzene	2010-06	ug/l				< 1.00				< 1.00
Ethylbenzene	2010-09	ug/l				< 1.00			< 1.00	< 1.00

Table 13
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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Ethylbenzene	2011-03	ug/l				< 1.00			< 1.00	< 1.00
Ethylbenzene	2011-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Ethylbenzene	2011-11	ug/l	< 1.00		< 1.00					
Ethylbenzene	2012-03	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Ethylbenzene	2012-06	ug/l	< 1.00		< 1.00					
Ethylbenzene	2012-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Ethylbenzene	2013-03	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Ethylbenzene	2013-06	ug/l			< 1.00	< 1.00			< 1.00	< 1.00
Ethylbenzene	2013-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Ethylbenzene	2013-11	ug/L				< 1.00			< 1.00	< 1.00
Ethylbenzene	2014-03	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Ethylbenzene	2014-06	ug/L			< 1.00	< 1.00			< 1.00	< 1.00
Ethylbenzene	2014-08	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Ethylbenzene	2014-12	ug/L			< 1.00	< 1.00			< 1.00	< 1.00
Ethylbenzene	2015-04	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Ethylbenzene	2015-09	ug/L			< 1					
Ethylbenzene	2015-10	ug/L	< 1			< 1			< 1	< 1
Ethylbenzene	2016-04	ug/L	< 1		< 1	< 1			< 1	< 1
Ethylbenzene	2016-07	ug/L				< 1				< 1
Ethylbenzene	2016-10	ug/L	< 1		< 1	< 1			< 1	< 1
Ethylbenzene	2017-05	ug/L	< 1		< 1	< 1			< 1	< 1
Ethylbenzene	2017-09	ug/L	< 1		< 1	< 1			< 1	< 1
Ethylbenzene	2018-05	ug/L			< 1	< 1			< 1	< 1
Ethylbenzene	2018-09	ug/L	< 1		< 1	< 1			< 1	< 1
Ethylbenzene	2019-03	ug/L	< 1		< 1	< 1			< 1	< 1
Ethylbenzene	2019-10	ug/L		< 1	< 1	< 1		< 1	< 1	< 1
Ethylbenzene	2020-04	ug/L		< 1	< 1	< 1	< 1	< 1	< 1	< 1
Ethylbenzene	2020-06	ug/L	< 1					< 1		
Ethylbenzene	2020-08	ug/L	< 1				< 1	< 1		
Ethylbenzene	2020-09	ug/L		< 1	< 1	< 1			< 1	~~< 1~~
Ethylbenzene	2020-12	ug/L					< 1	< 1		
Ethylbenzene	2021-02	ug/L					< 1			
Ethylbenzene	2021-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Ethylbenzene	2021-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Ethylbenzene	2022-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Ethylbenzene	2022-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Ethylbenzene	2023-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Ethylbenzene	2023-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Ethylbenzene	2024-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Ethylbenzene	2024-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Famphur	2009-03	ug/l							< 20	
Famphur	2009-06	ug/l							< 20.0	
Famphur	2009-09	ug/l							< 20.0	
Famphur	2010-03	ug/l							< 20.0	
Famphur	2010-09	ug/l							< 20.0	
Famphur	2011-03	ug/l							< 24.1	

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Table 13
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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Famphur	2014-06	ug/L			< 21.1					
Famphur	2014-08	ug/L			< 20.4				< 21.5	
Famphur	2015-10	ug/L				< 20			< 20	< 20
Famphur	2016-07	ug/L				< 20.8				< 20.8
Famphur	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Famphur	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Famphur	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Fluoranthene	2009-03	ug/l							< 10	
Fluoranthene	2009-06	ug/l							< 10.0	
Fluoranthene	2009-09	ug/l							< 10.0	
Fluoranthene	2010-03	ug/l							< 10.0	
Fluoranthene	2010-09	ug/l							< 10.0	
Fluoranthene	2011-03	ug/l							< 12.0	
Fluoranthene	2014-06	ug/L			< 10.5					
Fluoranthene	2014-08	ug/L			< 10.2				< 10.8	
Fluoranthene	2015-10	ug/L				< 10			< 10	< 10
Fluoranthene	2016-07	ug/L				< 10.4				< 10.4
Fluoranthene	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Fluoranthene	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Fluoranthene	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Fluorene	2009-03	ug/l							< 10	
Fluorene	2009-06	ug/l							< 10.0	
Fluorene	2009-09	ug/l							< 10.0	
Fluorene	2010-03	ug/l							< 10.0	
Fluorene	2010-09	ug/l							< 10.0	
Fluorene	2011-03	ug/l							< 12.0	
Fluorene	2014-06	ug/L			< 10.5					
Fluorene	2014-08	ug/L			< 10.2				< 10.8	
Fluorene	2015-10	ug/L				< 10			< 10	< 10
Fluorene	2016-07	ug/L				< 10.4				< 10.4
Fluorene	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Fluorene	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Fluorene	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Fluorotrichloromethane	2008-04	ug/l							< 4.00	
Fluorotrichloromethane	2008-06	ug/l							< 4.00	
Fluorotrichloromethane	2008-08	ug/l							< 4.00	
Fluorotrichloromethane	2008-09	ug/l							< 4.00	
Fluorotrichloromethane	2009-03	ug/l							< 4	
Fluorotrichloromethane	2009-06	ug/l							< 4.00	
Fluorotrichloromethane	2009-09	ug/l				< 4.00			< 4.00	< 4.00
Fluorotrichloromethane	2009-12	ug/l				< 4.00				< 4.00
Fluorotrichloromethane	2010-03	ug/l							< 4.00	
Fluorotrichloromethane	2010-04	ug/l				< 4.00				< 4.00
Fluorotrichloromethane	2010-06	ug/l				< 4.00				< 4.00
Fluorotrichloromethane	2010-09	ug/l				< 4.00			< 4.00	< 4.00
Fluorotrichloromethane	2011-03	ug/l				< 4.00			< 4.00	< 4.00

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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Fluorotrichloromethane	2011-09	ug/l	< 4.00		< 4.00	< 4.00			< 4.00	< 4.00
Fluorotrichloromethane	2011-11	ug/l	< 4.00		< 4.00					
Fluorotrichloromethane	2012-03	ug/l	< 4.00		< 4.00	< 4.00			< 4.00	< 4.00
Fluorotrichloromethane	2012-06	ug/l	< 4.00		< 4.00					
Fluorotrichloromethane	2012-09	ug/l	< 4.00		< 4.00	< 4.00			< 4.00	< 4.00
Fluorotrichloromethane	2013-03	ug/l	< 4.00		< 4.00	< 4.00			< 4.00	< 4.00
Fluorotrichloromethane	2013-06	ug/l			< 4.00	< 4.00			< 4.00	< 4.00
Fluorotrichloromethane	2013-09	ug/l	< 4.00		< 4.00	< 4.00			< 4.00	< 4.00
Fluorotrichloromethane	2013-11	ug/L				< 4.00			< 4.00	< 4.00
Fluorotrichloromethane	2014-03	ug/L	< 4.00		< 4.00	< 4.00			< 4.00	< 4.00
Fluorotrichloromethane	2014-06	ug/L			< 4.00	< 4.00			< 4.00	< 4.00
Fluorotrichloromethane	2014-08	ug/L	< 4.00		< 4.00	< 4.00			< 4.00	< 4.00
Fluorotrichloromethane	2014-12	ug/L			< 4.00	< 4.00			< 4.00	< 4.00
Fluorotrichloromethane	2015-04	ug/L	< 4.00		< 4.00	< 4.00			< 4.00	< 4.00
Fluorotrichloromethane	2015-09	ug/L			< 4					
Fluorotrichloromethane	2015-10	ug/L	< 4			< 4			< 4	< 4
Fluorotrichloromethane	2016-04	ug/L	< 4		< 4	< 4			< 4	< 4
Fluorotrichloromethane	2016-07	ug/L				< 4				< 4
Fluorotrichloromethane	2016-10	ug/L	< 4		< 4	< 4			< 4	< 4
Fluorotrichloromethane	2017-05	ug/L	< 4		< 4	< 4			< 4	< 4
Fluorotrichloromethane	2017-09	ug/L	< 4		< 4	< 4			< 4	< 4
Fluorotrichloromethane	2018-05	ug/L			< 4	< 4			< 4	< 4
Fluorotrichloromethane	2018-09	ug/L	< 4		< 4	< 4			< 4	< 4
Fluorotrichloromethane	2019-03	ug/L	< 4		< 4	< 4			< 4	< 4
Fluorotrichloromethane	2019-10	ug/L		< 4	< 4	< 4		< 4	< 4	< 4
Fluorotrichloromethane	2020-04	ug/L		< 4	< 4	< 4	< 4	< 4	< 4	< 4
Fluorotrichloromethane	2020-06	ug/L	< 4					< 4		
Fluorotrichloromethane	2020-08	ug/L	< 4				< 4	< 4		
Fluorotrichloromethane	2020-09	ug/L		< 4	< 4	< 4			< 4	~~< 4~~
Fluorotrichloromethane	2020-12	ug/L					< 4	< 4		
Fluorotrichloromethane	2021-02	ug/L					< 4			
Fluorotrichloromethane	2021-04	ug/L	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4
Fluorotrichloromethane	2021-09	ug/L	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4
Fluorotrichloromethane	2022-04	ug/L	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4
Fluorotrichloromethane	2022-09	ug/L	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4
Fluorotrichloromethane	2023-04	ug/L	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4
Fluorotrichloromethane	2023-09	ug/L	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4
Fluorotrichloromethane	2024-04	ug/L	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4
Fluorotrichloromethane	2024-09	ug/L	< 4	< 4	< 4	< 4	< 4	< 4	< 4	< 4
Heptachlor	2009-03	ug/l							< 0.032	
Heptachlor	2009-06	ug/l							< 0.0320	
Heptachlor	2009-09	ug/l							< 0.0320	
Heptachlor	2010-03	ug/l							< 0.0320	
Heptachlor	2010-09	ug/l							< 0.0356	
Heptachlor	2011-03	ug/l							< 0.0320	
Heptachlor	2014-06	ug/L			< 0.0327					

Table 13
Carroll County Landfill Western Expansion Area **Analytical Data Summary**
Permit No. 14-SDP-01-74P **2024 Annual Water Quality Report**

Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Heptachlor	2014-08	ug/L			< 0.0320				< 0.0320	
Heptachlor	2015-10	ug/L				< 0.032			< 0.032	< 0.032
Heptachlor	2016-07	ug/L				< 0.032				< 0.032
Heptachlor	2019-10	ug/L			< 0.0335	< 0.0333			< 0.0333	< 0.0333
Heptachlor	2020-09	ug/L				< 0.0348			< 0.0451	~~< 0.0348~~
Heptachlor	2024-09	ug/L			< 0.0696	< 0.0667			< 0.0667	< 0.0667
Heptachlor Epoxide	2009-03	ug/l							< 0.032	
Heptachlor Epoxide	2009-06	ug/l							< 0.0320	
Heptachlor Epoxide	2009-09	ug/l							< 0.0320	
Heptachlor Epoxide	2010-03	ug/l							< 0.0320	
Heptachlor Epoxide	2010-09	ug/l							< 0.0356	
Heptachlor Epoxide	2011-03	ug/l							< 0.0320	
Heptachlor Epoxide	2011-09	ug/l							< 0.0320	
Heptachlor Epoxide	2012-03	ug/l							< 0.0320	
Heptachlor Epoxide	2013-03	ug/l							< 0.0344	
Heptachlor Epoxide	2013-09	ug/l							< 0.0333	
Heptachlor Epoxide	2014-03	ug/L							< 0.0376	
Heptachlor Epoxide	2014-06	ug/L			< 0.0327					
Heptachlor Epoxide	2014-08	ug/L			< 0.0320				**0.0115 J**	
Heptachlor Epoxide	2015-04	ug/L							< 0.0323	
Heptachlor Epoxide	2015-10	ug/L				< 0.032			< 0.032	< 0.032
Heptachlor Epoxide	2016-04	ug/L				< 0.0327			< 0.032	< 0.0327
Heptachlor Epoxide	2016-07	ug/L				< 0.032				< 0.032
Heptachlor Epoxide	2016-10	ug/L				< 0.0327			< 0.032	< 0.0327
Heptachlor Epoxide	2017-05	ug/L				< 0.0327			< 0.0344	< 0.0327
Heptachlor Epoxide	2017-09	ug/L				< 0.0344			**0.00912 J**	< 0.0344
Heptachlor Epoxide	2018-05	ug/L				< 0.0344			**0.00792 J**	< 0.0344
Heptachlor Epoxide	2018-09	ug/L				< 0.0352			< 0.0352	< 0.0352
Heptachlor Epoxide	2019-03	ug/L				< 0.0356			< 0.00546	< 0.0356
Heptachlor Epoxide	2019-10	ug/L			< 0.0335	< 0.0333			< 0.0333	< 0.0333
Heptachlor Epoxide	2020-04	ug/L				< 0.0451			< 0.0427	< 0.0451
Heptachlor Epoxide	2020-09	ug/L				< 0.0348			< 0.0451	~~< 0.0348~~
Heptachlor Epoxide	2021-04	ug/L				< 0.0364			< 0.0427	< 0.0364
Heptachlor Epoxide	2021-09	ug/L				< 0.04			< 0.039	< 0.04
Heptachlor Epoxide	2024-09	ug/L			< 0.0696	< 0.0667			< 0.0667	< 0.0667
Hexachlorobenzene	2009-03	ug/l							< 10	
Hexachlorobenzene	2009-06	ug/l							< 10.0	
Hexachlorobenzene	2009-09	ug/l							< 10.0	
Hexachlorobenzene	2010-03	ug/l							< 10.0	
Hexachlorobenzene	2010-09	ug/l							< 10.0	
Hexachlorobenzene	2011-03	ug/l							< 12.0	
Hexachlorobenzene	2014-06	ug/L			< 10.5					
Hexachlorobenzene	2014-08	ug/L			< 10.2				< 10.8	
Hexachlorobenzene	2015-10	ug/L				< 10			< 10	< 10
Hexachlorobenzene	2016-07	ug/L				< 10.4				< 10.4
Hexachlorobenzene	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2

Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Hexachlorobenzene	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Hexachlorobenzene	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Hexachlorobutadiene	2009-03	ug/l							< 10	
Hexachlorobutadiene	2009-06	ug/l							< 10.0	
Hexachlorobutadiene	2009-09	ug/l							< 10.0	
Hexachlorobutadiene	2010-03	ug/l							< 10.0	
Hexachlorobutadiene	2010-09	ug/l							< 10.0	
Hexachlorobutadiene	2011-03	ug/l							< 12.0	
Hexachlorobutadiene	2014-06	ug/L			< 10.5					
Hexachlorobutadiene	2014-08	ug/L			< 10.2				< 10.8	
Hexachlorobutadiene	2015-10	ug/L				< 10			< 10	< 10
Hexachlorobutadiene	2016-07	ug/L				< 10.4				< 10.4
Hexachlorobutadiene	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Hexachlorobutadiene	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Hexachlorobutadiene	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Hexachlorocyclopentadiene	2009-03	ug/l							< 10	
Hexachlorocyclopentadiene	2009-06	ug/l							< 10.0	
Hexachlorocyclopentadiene	2009-09	ug/l							< 10.0	
Hexachlorocyclopentadiene	2010-03	ug/l							< 10.0	
Hexachlorocyclopentadiene	2010-09	ug/l							< 10.0	
Hexachlorocyclopentadiene	2011-03	ug/l							< 12.0	
Hexachlorocyclopentadiene	2014-06	ug/L			< 21.1					
Hexachlorocyclopentadiene	2014-08	ug/L			< 20.4				< 21.5	
Hexachlorocyclopentadiene	2015-10	ug/L				< 20			< 20	< 20
Hexachlorocyclopentadiene	2016-07	ug/L				< 20.8				< 20.8
Hexachlorocyclopentadiene	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Hexachlorocyclopentadiene	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Hexachlorocyclopentadiene	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Hexachloroethane	2009-03	ug/l							< 10	
Hexachloroethane	2009-06	ug/l							< 10.0	
Hexachloroethane	2009-09	ug/l							< 10.0	
Hexachloroethane	2010-03	ug/l							< 10.0	
Hexachloroethane	2010-09	ug/l							< 10.0	
Hexachloroethane	2011-03	ug/l							< 12.0	
Hexachloroethane	2014-06	ug/L			< 10.5					
Hexachloroethane	2014-08	ug/L			< 10.2				< 10.8	
Hexachloroethane	2015-10	ug/L				< 10			< 10	< 10
Hexachloroethane	2016-07	ug/L				< 10.4				< 10.4
Hexachloroethane	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Hexachloroethane	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Hexachloroethane	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Hexachloropropene	2009-03	ug/l							< 10	
Hexachloropropene	2009-06	ug/l							< 10.0	
Hexachloropropene	2009-09	ug/l							< 10.0	
Hexachloropropene	2010-03	ug/l							< 10.0	
Hexachloropropene	2010-09	ug/l							< 10.0	

Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Hexachloropropene	2011-03	ug/l							< 12.0	
Hexachloropropene	2014-06	ug/L			< 10.5					
Hexachloropropene	2014-08	ug/L			< 10.2				< 10.8	
Hexachloropropene	2015-10	ug/L				< 10			< 10	< 10
Hexachloropropene	2016-07	ug/L				< 10.4				< 10.4
Hexachloropropene	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Hexachloropropene	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Hexachloropropene	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Indeno(1,2,3-cd)pyrene	2009-03	ug/l							< 10	
Indeno(1,2,3-cd)pyrene	2009-06	ug/l							< 10.0	
Indeno(1,2,3-cd)pyrene	2009-09	ug/l							< 10.0	
Indeno(1,2,3-cd)pyrene	2010-03	ug/l							< 10.0	
Indeno(1,2,3-cd)pyrene	2010-09	ug/l							< 10.0	
Indeno(1,2,3-cd)pyrene	2011-03	ug/l							< 12.0	
Indeno(1,2,3-cd)pyrene	2014-06	ug/L			< 10.5					
Indeno(1,2,3-cd)pyrene	2014-08	ug/L			< 10.2				< 10.8	
Indeno(1,2,3-cd)pyrene	2015-10	ug/L				< 10			< 10	< 10
Indeno(1,2,3-cd)pyrene	2016-07	ug/L				< 10.4				< 10.4
Indeno(1,2,3-cd)pyrene	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Indeno(1,2,3-cd)pyrene	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Indeno(1,2,3-cd)pyrene	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Iodomethane	2008-04	ug/l							< 10.0	
Iodomethane	2008-06	ug/l							< 10.0	
Iodomethane	2008-08	ug/l							< 10.0	
Iodomethane	2008-09	ug/l							< 10.0	
Iodomethane	2009-03	ug/l							< 10	
Iodomethane	2009-06	ug/l							< 20.0	
Iodomethane	2009-09	ug/l				< 20.0			< 20.0	< 20.0
Iodomethane	2009-12	ug/l				< 20.0				< 20.0
Iodomethane	2010-03	ug/l							< 10.0	
Iodomethane	2010-04	ug/l				< 10.0				< 10.0
Iodomethane	2010-06	ug/l				< 50.0				< 50.0
Iodomethane	2010-09	ug/l				< 10.0			< 10.0	< 10.0
Iodomethane	2011-03	ug/l				< 10.0			< 10.0	< 10.0
Iodomethane	2011-09	ug/l	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
Iodomethane	2011-11	ug/l	< 20.0		< 20.0					
Iodomethane	2012-03	ug/l	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
Iodomethane	2012-06	ug/l	< 10.0		< 10.0					
Iodomethane	2012-09	ug/l	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
Iodomethane	2013-03	ug/l	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
Iodomethane	2013-06	ug/l			< 10.0	< 10.0			< 10.0	< 10.0
Iodomethane	2013-09	ug/l	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
Iodomethane	2013-11	ug/L				< 10.0			< 10.0	< 10.0
Iodomethane	2014-03	ug/L	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
Iodomethane	2014-06	ug/L			< 10.0	< 10.0			< 10.0	< 10.0
Iodomethane	2014-08	ug/L	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0

Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Iodomethane	2014-12	ug/L			< 10.0	< 10.0			< 10.0	< 10.0
Iodomethane	2015-04	ug/L	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
Iodomethane	2015-09	ug/L			< 10					
Iodomethane	2015-10	ug/L	< 10			< 10			< 10	< 10
Iodomethane	2016-04	ug/L	< 10		< 10	< 10			< 10	< 10
Iodomethane	2016-07	ug/L				< 10				< 10
Iodomethane	2016-10	ug/L	< 10		< 10	< 10			< 10	< 10
Iodomethane	2017-05	ug/L	< 10		< 10	< 10			< 10	< 10
Iodomethane	2017-09	ug/L	< 10		< 10	< 10			< 10	< 10
Iodomethane	2018-05	ug/L			< 10	< 10			< 10	< 10
Iodomethane	2018-09	ug/L	< 10		< 10	< 10			< 10	< 10
Iodomethane	2019-03	ug/L	< 10		< 10	< 10			< 10	< 10
Iodomethane	2019-10	ug/L		< 10	< 10	< 10		< 10	< 10	< 10
Iodomethane	2020-04	ug/L		< 10	< 10	< 10	< 10	< 10	< 10	< 10
Iodomethane	2020-06	ug/L	< 10					< 10		
Iodomethane	2020-08	ug/L	< 10				< 10	< 10		
Iodomethane	2020-09	ug/L		< 10	< 10	< 10			< 10	~~< 10~~
Iodomethane	2020-12	ug/L					< 10	< 10		
Iodomethane	2021-02	ug/L					< 10			
Iodomethane	2021-04	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Iodomethane	2021-09	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Iodomethane	2022-04	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Iodomethane	2022-09	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Iodomethane	2023-04	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Iodomethane	2023-09	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Iodomethane	2024-04	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Iodomethane	2024-09	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Isobutanol	2009-03	mg/l							< 10	
Isobutanol	2009-06	mg/l							< 10.0	
Isobutanol	2009-09	mg/l							< 10.0	
Isobutanol	2010-09	mg/l							< 10.0	
Isobutanol	2014-06	mg/L			< 10.0					
Isobutanol	2014-08	mg/L			< 10.0				< 10.0	
Isobutanol	2015-10	mg/L				< 10			< 10	< 10
Isobutanol	2016-07	mg/L				< 10				< 10
Isobutanol	2019-10	mg/L			< 10	< 10			< 10	< 10
Isobutanol	2020-09	mg/L				< 10			< 10	~~< 10~~
Isobutanol	2024-09	mg/L			< 10	< 10			< 10	< 10
Isodrin	2009-03	ug/l							< 10	
Isodrin	2009-06	ug/l							< 10.0	
Isodrin	2009-09	ug/l							< 10.0	
Isodrin	2010-03	ug/l							< 10.0	
Isodrin	2010-09	ug/l							< 10.0	
Isodrin	2011-03	ug/l							< 12.0	
Isodrin	2014-06	ug/L			< 10.5					
Isodrin	2014-08	ug/L			< 10.2				< 10.8	

Carroll County Landfill Western Expansion Area
Permit No. 14-SDP-01-74P

Table 13
Analytical Data Summary
2024 Annual Water Quality Report

Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Isodrin	2015-10	ug/L				< 10			< 10	< 10
Isodrin	2016-07	ug/L				< 10.4				< 10.4
Isodrin	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Isodrin	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Isodrin	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Isophorone	2009-03	ug/l							< 10	
Isophorone	2009-06	ug/l							< 10.0	
Isophorone	2009-09	ug/l							< 10.0	
Isophorone	2010-03	ug/l							< 10.0	
Isophorone	2010-09	ug/l							< 10.0	
Isophorone	2011-03	ug/l							< 12.0	
Isophorone	2014-06	ug/L			< 10.5					
Isophorone	2014-08	ug/L			< 10.2				< 10.8	
Isophorone	2015-10	ug/L				< 10			< 10	< 10
Isophorone	2016-07	ug/L				< 10.4				< 10.4
Isophorone	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Isophorone	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Isophorone	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Isosafrole	2009-03	ug/l							< 10	
Isosafrole	2009-06	ug/l							< 10.0	
Isosafrole	2009-09	ug/l							< 10.0	
Isosafrole	2010-03	ug/l							< 10.0	
Isosafrole	2010-09	ug/l							< 10.0	
Isosafrole	2011-03	ug/l							< 12.0	
Isosafrole	2014-06	ug/L			< 10.5					
Isosafrole	2014-08	ug/L			< 10.2				< 10.8	
Isosafrole	2015-10	ug/L				< 10			< 10	< 10
Isosafrole	2016-07	ug/L				< 10.4				< 10.4
Isosafrole	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Isosafrole	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Isosafrole	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Kepone	2009-03	ug/l							< 10	
Kepone	2009-06	ug/l							< 10.0	
Kepone	2009-09	ug/l							< 10.0	
Kepone	2010-03	ug/l							< 10.0	
Kepone	2010-09	ug/l							< 10.0	
Kepone	2011-03	ug/l							< 12.0	
Kepone	2014-06	ug/L			< 10.5					
Kepone	2014-08	ug/L			< 10.2				< 10.8	
Kepone	2015-10	ug/L				< 10			< 10	< 10
Kepone	2016-07	ug/L				< 10.4				< 10.4
Kepone	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Kepone	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Kepone	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Lead	2008-04	mg/l							< 0.00400	
Lead	2008-06	mg/l							< 0.00400	

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Table 13
Analytical Data Summary
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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Lead	2008-08	mg/l							< 0.00400	
Lead	2008-09	mg/l							< 0.00400	
Lead	2009-03	mg/l							< 0.004	
Lead	2009-06	mg/l							< 0.00400	
Lead	2009-09	mg/l				**0.00868**			< 0.00400	**0.00868**
Lead	2009-12	mg/l				**0.0362**				**0.0362**
Lead	2010-03	mg/l							< 0.00400	
Lead	2010-04	mg/l				< 0.00400				< 0.00400
Lead	2010-06	mg/l				< 0.00400				< 0.00400
Lead	2010-09	mg/l				< 0.00400			< 0.00400	< 0.00400
Lead	2011-03	mg/l				< 0.00400			< 0.00400	< 0.00400
Lead	2011-09	mg/l	< 0.00400		< 0.00400	< 0.00400			< 0.00400	< 0.00400
Lead	2011-11	mg/l	< 0.00400		< 0.00400					
Lead	2012-03	mg/l	< 0.00400		< 0.00400	< 0.00400			< 0.00400	< 0.00400
Lead	2012-06	mg/l	< 0.00400		**0.0392**					
Lead	2012-09	mg/l	< 0.00400		< 0.00400	< 0.00400			< 0.00400	< 0.00400
Lead	2013-03	mg/l	**0.00148 J**		**0.00514**	**0.0127**			**0.00120 J**	**0.0127**
Lead	2013-06	mg/l				< 0.00400				< 0.00400
Lead	2013-09	mg/l	< 0.00400		< 0.00400	< 0.00400			< 0.00400	< 0.00400
Lead	2013-11	mg/L				< 0.00400				< 0.00400
Lead	2014-03	mg/L	< 0.00400		< 0.00400	< 0.00400			< 0.00400	< 0.00400
Lead	2014-06	mg/L			< 0.00400	< 0.00400				< 0.00400
Lead	2014-08	mg/L	< 0.000500		**0.000542**	**0.000173 J**			< 0.000500	**0.000173 J**
Lead	2014-12	mg/L			< 0.000500	**0.000935**			< 0.000500	**0.000935**
Lead	2015-04	mg/L	< 0.000500		**0.000198 J**	< 0.000500			**0.000616**	< 0.000500
Lead	2015-09	mg/L			**0.000534**					
Lead	2015-10	mg/L	< 0.0005			< 0.0005			< 0.0005	< 0.0005
Lead	2016-04	mg/L	**0.000244 J**		< 0.0005	< 0.0005			< 0.0005	< 0.0005
Lead	2016-07	mg/L				< 0.0005				< 0.0005
Lead	2016-10	mg/L	< 0.0005		< 0.0005	< 0.0005			< 0.0005	< 0.0005
Lead	2017-05	mg/L	< 0.0005		< 0.0005	< 0.0005			< 0.0005	< 0.0005
Lead	2017-09	mg/L	< 0.0005		**0.000394 J**	< 0.0005			< 0.0005	< 0.0005
Lead	2018-05	mg/L			< 0.0005	< 0.0005			< 0.0005	< 0.0005
Lead	2018-09	mg/L	**0.00234**		< 0.0005	< 0.0005			< 0.0005	< 0.0005
Lead	2019-03	mg/L	< 0.0005		< 0.0005	< 0.0005			< 0.0005	< 0.0005
Lead	2019-10	mg/L		< 0.0005	< 0.0005	< 0.001		~~< 0.0005~~	< 0.0005	< 0.001
Lead	2020-04	mg/L		< 0.0005	< 0.0005	< 0.0005	~~**0.0035**~~	~~**0.000418 J**~~	< 0.0005	< 0.0005
Lead	2020-06	mg/L	< 0.0005					~~**0.00398**~~		
Lead	2020-08	mg/L	< 0.0005				~~**0.00385**~~	~~**0.00644**~~		
Lead	2020-09	mg/L		< 0.0005	< 0.0005	**0.000145 J**			< 0.0005	~~**0.000145 J**~~
Lead	2020-12	mg/L					~~**0.000429 J**~~	**0.000861**		
Lead	2021-02	mg/L					~~< 0.0005~~			
Lead	2021-04	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005	~~< 0.0005~~	**0.000515**	< 0.0005	< 0.0005
Lead	2021-09	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005	**0.000322 J**	**0.000971**	< 0.0005	< 0.0005
Lead	2022-04	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	**0.00118**	< 0.0005	< 0.0005
Lead	2022-09	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	**0.000532**	< 0.0005	< 0.0005

Table 13
Carroll County Landfill Western Expansion Area **Analytical Data Summary**
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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Lead	2023-04	mg/L	< 0.0005	< 0.0005	< 0.0005	**0.000378 J**	< 0.0005	**0.000809**	< 0.0005	**0.000378 J**
Lead	2023-09	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005	**0.000669**	**0.00429**	< 0.0005	< 0.0005
Lead	2024-04	mg/L	< 0.0005	**0.0003 J**	< 0.0005	< 0.0005	**0.000637**	**0.00299**	< 0.0005	< 0.0005
Lead	2024-09	mg/L	< 0.0005	< 0.0005	< 0.0005	< 0.0005	**0.000363 J**	**0.00361**	< 0.0005	< 0.0005
Lindane (BHC, Gamma-)	2009-03	ug/l							< 0.032	
Lindane (BHC, Gamma-)	2009-06	ug/l							< 0.0320	
Lindane (BHC, Gamma-)	2009-09	ug/l							< 0.0320	
Lindane (BHC, Gamma-)	2010-03	ug/l							< 0.0320	
Lindane (BHC, Gamma-)	2010-09	ug/l							< 0.0356	
Lindane (BHC, Gamma-)	2011-03	ug/l							< 0.0320	
Lindane (BHC, Gamma-)	2014-06	ug/L			< 0.0327					
Lindane (BHC, Gamma-)	2014-08	ug/L			< 0.0320				< 0.0320	
Lindane (BHC, Gamma-)	2015-10	ug/L				< 0.032			< 0.032	< 0.032
Lindane (BHC, Gamma-)	2016-07	ug/L				< 0.032				< 0.032
Lindane (BHC, Gamma-)	2019-10	ug/L			**0.00373 J**	< 0.0333			**0.00317 J**	< 0.0333
Lindane (BHC, Gamma-)	2020-09	ug/L				< 0.0348			< 0.0451	~~< 0.0348~~
Lindane (BHC, Gamma-)	2024-09	ug/L			< 0.0696	< 0.0667			< 0.0667	< 0.0667
m/p-Cresol	2009-03	ug/l							< 10	
m/p-Cresol	2009-06	ug/l							< 10.0	
m/p-Cresol	2009-09	ug/l							< 10.0	
m/p-Cresol	2010-03	ug/l							< 10.0	
m/p-Cresol	2010-09	ug/l							< 10.0	
m/p-Cresol	2011-03	ug/l							< 12.0	
m/p-Cresol	2014-06	ug/L			< 10.5					
m/p-Cresol	2014-08	ug/L			< 10.2				< 10.8	
m/p-Cresol	2015-10	ug/L				< 10			< 10	< 10
m/p-Cresol	2016-07	ug/L				< 10.4				< 10.4
m/p-Cresol	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
m/p-Cresol	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
m/p-Cresol	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Mercury	2009-03	mg/l							< 0.0002	
Mercury	2009-06	mg/l							< 0.000200	
Mercury	2009-09	mg/l							< 0.000200	
Mercury	2010-09	mg/l							< 0.000200	
Mercury	2011-03	mg/l							< 0.000200	
Mercury	2013-06	mg/l				< 0.000200				< 0.000200
Mercury	2013-09	mg/l				< 0.000200				< 0.000200
Mercury	2013-11	mg/L				< 0.000200				< 0.000200
Mercury	2014-03	mg/L				< 0.000200			< 0.000200	< 0.000200
Mercury	2014-06	mg/L			< 0.000200	< 0.000200				< 0.000200
Mercury	2014-08	mg/L			< 0.000200				< 0.000200	
Mercury	2015-10	mg/L				< 0.0002			< 0.0002	< 0.0002
Mercury	2016-07	mg/L				< 0.0002				< 0.0002
Mercury	2019-10	mg/L			< 0.0002	< 0.0002			< 0.0002	< 0.0002
Mercury	2020-09	mg/L				< 0.0002			< 0.0002	~~< 0.0002~~
Mercury	2024-09	mg/L			< 0.0002	< 0.0002			< 0.0002	< 0.0002

Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Methacrylonitrile	2009-03	ug/l							< 1	
Methacrylonitrile	2009-06	ug/l							< 1.00	
Methacrylonitrile	2009-09	ug/l							< 1.00	
Methacrylonitrile	2010-03	ug/l							< 1.00	
Methacrylonitrile	2010-09	ug/l							< 1.00	
Methacrylonitrile	2011-03	ug/l							< 1.00	
Methacrylonitrile	2014-06	ug/L			< 1.00					
Methacrylonitrile	2014-08	ug/L			< 10.0				< 10.0	
Methacrylonitrile	2015-10	ug/L				< 10			< 10	< 10
Methacrylonitrile	2016-07	ug/L				< 10				< 10
Methacrylonitrile	2019-10	ug/L			< 10	< 10			< 10	< 10
Methacrylonitrile	2020-04	ug/L			< 10	< 10			< 10	< 10
Methacrylonitrile	2020-09	ug/L				< 10			< 10	~~< 10~~
Methacrylonitrile	2024-09	ug/L			< 10	< 10			< 10	< 10
Methapyrilene	2009-03	ug/l							< 10	
Methapyrilene	2009-06	ug/l							< 10.0	
Methapyrilene	2009-09	ug/l							< 10.0	
Methapyrilene	2010-03	ug/l							< 10.0	
Methapyrilene	2010-09	ug/l							< 10.0	
Methapyrilene	2011-03	ug/l							< 12.0	
Methapyrilene	2014-06	ug/L			< 10.5					
Methapyrilene	2014-08	ug/L			< 10.2				< 10.8	
Methapyrilene	2015-10	ug/L				< 10			< 10	< 10
Methapyrilene	2016-07	ug/L				< 10.4				< 10.4
Methapyrilene	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Methapyrilene	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Methapyrilene	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Methoxychlor	2009-03	ug/l							< 0.032	
Methoxychlor	2009-06	ug/l							< 0.0320	
Methoxychlor	2009-09	ug/l							< 0.0320	
Methoxychlor	2010-03	ug/l							< 0.0320	
Methoxychlor	2010-09	ug/l							< 0.0356	
Methoxychlor	2011-03	ug/l							< 0.0320	
Methoxychlor	2011-09	ug/l							< 0.0320	
Methoxychlor	2012-03	ug/l							< 0.0320	
Methoxychlor	2013-03	ug/l							< 0.0344	
Methoxychlor	2013-09	ug/l							< 0.0333	
Methoxychlor	2014-03	ug/L							< 0.0376	
Methoxychlor	2014-06	ug/L			< 0.0327					
Methoxychlor	2014-08	ug/L			< 0.0320				< 0.0320	
Methoxychlor	2015-04	ug/L							< 0.0323	
Methoxychlor	2015-10	ug/L				< 0.032			< 0.032	< 0.032
Methoxychlor	2016-04	ug/L				< 0.0327			< 0.032	< 0.0327
Methoxychlor	2016-07	ug/L				< 0.032				< 0.032
Methoxychlor	2016-10	ug/L				< 0.0327			< 0.032	< 0.0327
Methoxychlor	2017-05	ug/L				< 0.0327			< 0.0344	< 0.0327

Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Methoxychlor	2017-09	ug/L				< 0.0344			< 0.034	< 0.0344
Methoxychlor	2018-05	ug/L				< 0.0344			< 0.0344	< 0.0344
Methoxychlor	2018-09	ug/L				< 0.0352			< 0.0352	< 0.0352
Methoxychlor	2019-03	ug/L				< 0.0356			< 0.00546	< 0.0356
Methoxychlor	2019-10	ug/L			< 0.0335	< 0.0333			< 0.0333	< 0.0333
Methoxychlor	2020-04	ug/L				< 0.0451			< 0.0427	< 0.0451
Methoxychlor	2020-09	ug/L				< 0.0348			< 0.0451	~~< 0.0348~~
Methoxychlor	2021-04	ug/L				< 0.0364			**0.00642 J**	< 0.0364
Methoxychlor	2021-09	ug/L				< 0.04			< 0.039	< 0.04
Methoxychlor	2024-09	ug/L			< 0.0696	< 0.0667			< 0.0667	< 0.0667
Methyl Methacrylate	2009-03	ug/l							< 2	
Methyl Methacrylate	2009-06	ug/l							< 2.00	
Methyl Methacrylate	2009-09	ug/l							< 2.00	
Methyl Methacrylate	2010-03	ug/l							< 2.00	
Methyl Methacrylate	2010-09	ug/l							< 20.0	
Methyl Methacrylate	2011-03	ug/l							< 2.00	
Methyl Methacrylate	2014-06	ug/L			< 2.00					
Methyl Methacrylate	2014-08	ug/L			< 2.00				< 2.00	
Methyl Methacrylate	2015-10	ug/L				< 2			< 2	< 2
Methyl Methacrylate	2016-07	ug/L				< 2				< 2
Methyl Methacrylate	2019-10	ug/L			< 2	< 2			< 2	< 2
Methyl Methacrylate	2020-04	ug/L			< 2	< 2			< 2	< 2
Methyl Methacrylate	2020-09	ug/L				< 2			< 2	~~< 2~~
Methyl Methacrylate	2024-09	ug/L			< 2	< 2			< 2	< 2
Methyl Methanesulfonate	2009-03	ug/l							< 10	
Methyl Methanesulfonate	2009-06	ug/l							< 10.0	
Methyl Methanesulfonate	2009-09	ug/l							< 10.0	
Methyl Methanesulfonate	2010-03	ug/l							< 10.0	
Methyl Methanesulfonate	2010-09	ug/l							< 10.0	
Methyl Methanesulfonate	2011-03	ug/l							< 12.0	
Methyl Methanesulfonate	2014-06	ug/L			< 10.5					
Methyl Methanesulfonate	2014-08	ug/L			< 10.2				< 10.8	
Methyl Methanesulfonate	2015-10	ug/L				< 10			< 10	< 10
Methyl Methanesulfonate	2016-07	ug/L				< 10.4				< 10.4
Methyl Methanesulfonate	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Methyl Methanesulfonate	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Methyl Methanesulfonate	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Methyl Parathion	2009-03	ug/l							< 10	
Methyl Parathion	2009-06	ug/l							< 10.0	
Methyl Parathion	2009-09	ug/l							< 10.0	
Methyl Parathion	2010-03	ug/l							< 10.0	
Methyl Parathion	2010-09	ug/l							< 10.0	
Methyl Parathion	2011-03	ug/l							< 12.0	
Methyl Parathion	2014-06	ug/L			< 10.5					
Methyl Parathion	2014-08	ug/L			< 10.2				< 10.8	
Methyl Parathion	2015-10	ug/L				< 10			< 10	< 10

Table 13
Carroll County Landfill Western Expansion Area **Analytical Data Summary**
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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Methyl Parathion	2016-07	ug/L				< 10.4				< 10.4
Methyl Parathion	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Methyl Parathion	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Methyl Parathion	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Methylene Chloride	2008-04	ug/l							< 5.00	
Methylene Chloride	2008-06	ug/l							< 10.0	
Methylene Chloride	2008-08	ug/l							< 5.00	
Methylene Chloride	2008-09	ug/l							< 5.00	
Methylene Chloride	2009-03	ug/l							**0.71 J**	
Methylene Chloride	2009-06	ug/l							< 5.00	
Methylene Chloride	2009-09	ug/l				< 5.00			< 5.00	< 5.00
Methylene Chloride	2009-12	ug/l				< 5.00				< 5.00
Methylene Chloride	2010-03	ug/l							< 5.00	
Methylene Chloride	2010-04	ug/l				< 5.00				< 5.00
Methylene Chloride	2010-06	ug/l				< 5.00				< 5.00
Methylene Chloride	2010-09	ug/l				< 5.00			< 5.00	< 5.00
Methylene Chloride	2011-03	ug/l				< 5.00			< 5.00	< 5.00
Methylene Chloride	2011-09	ug/l	< 5.00		< 5.00	< 5.00			< 5.00	< 5.00
Methylene Chloride	2011-11	ug/l	< 5.00		< 5.00					
Methylene Chloride	2012-03	ug/l	< 5.00		< 5.00	< 5.00			< 5.00	< 5.00
Methylene Chloride	2012-06	ug/l	< 5.00		< 5.00					
Methylene Chloride	2012-09	ug/l	< 5.00		< 5.00	< 5.00			< 5.00	< 5.00
Methylene Chloride	2013-03	ug/l	< 5.00		< 5.00	< 5.00			< 5.00	< 5.00
Methylene Chloride	2013-06	ug/l			**0.229 J**	**0.188 J**			< 5.00	**0.188 J**
Methylene Chloride	2013-09	ug/l	< 5.00		< 5.00	< 5.00			< 5.00	< 5.00
Methylene Chloride	2013-11	ug/L				< 5.00			< 5.00	< 5.00
Methylene Chloride	2014-03	ug/L	< 5.00		< 5.00	< 5.00			< 5.00	< 5.00
Methylene Chloride	2014-06	ug/L			< 5.00	< 5.00 J			< 5.00 J	< 5.00 J
Methylene Chloride	2014-08	ug/L	< 5.00		< 5.00 J	< 5.00			< 5.00	< 5.00
Methylene Chloride	2014-12	ug/L			< 5.00	< 5.00			< 5.00	< 5.00
Methylene Chloride	2015-04	ug/L	< 5.00		< 5.00 J	< 5.00			< 5.00 J	< 5.00
Methylene Chloride	2015-09	ug/L			< 5					
Methylene Chloride	2015-10	ug/L	< 5 J			< 5 J			< 5 J	< 5 J
Methylene Chloride	2016-04	ug/L	< 5 J		< 5	< 5			< 5	< 5
Methylene Chloride	2016-07	ug/L				< 5				< 5
Methylene Chloride	2016-10	ug/L	< 5		< 5	< 5			< 5	< 5
Methylene Chloride	2017-05	ug/L	< 5		< 5	< 5			< 5	< 5
Methylene Chloride	2017-09	ug/L	< 5		**0.176 J**	< 5			**0.22 J**	< 5
Methylene Chloride	2018-05	ug/L			< 5	< 5			< 5	< 5
Methylene Chloride	2018-09	ug/L	< 5		< 5	< 5			< 5	< 5
Methylene Chloride	2019-03	ug/L	< 5		< 5	< 5			< 5	< 5
Methylene Chloride	2019-10	ug/L		< 5	< 5	< 5		< 5	< 5	< 5
Methylene Chloride	2020-04	ug/L		< 5	< 5	< 5	< 5	< 5	< 5	< 5
Methylene Chloride	2020-06	ug/L	< 5					< 5		
Methylene Chloride	2020-08	ug/L	< 5				< 5	< 5		
Methylene Chloride	2020-09	ug/L		< 5	< 5	< 5			< 5	~~< 5~~

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Carroll County Landfill Western Expansion Area **Analytical Data Summary**
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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Methylene Chloride	2020-12	ug/L					< 5	< 5		
Methylene Chloride	2021-02	ug/L					< 5			
Methylene Chloride	2021-04	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Methylene Chloride	2021-09	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Methylene Chloride	2022-04	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Methylene Chloride	2022-09	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Methylene Chloride	2023-04	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Methylene Chloride	2023-09	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Methylene Chloride	2024-04	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Methylene Chloride	2024-09	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Naphthalene	2009-03	ug/l							< 5	
Naphthalene	2009-06	ug/l							< 5.00	
Naphthalene	2009-09	ug/l							< 5.00	
Naphthalene	2010-03	ug/l							< 10.0	
Naphthalene	2010-09	ug/l							< 5.00	
Naphthalene	2011-03	ug/l							< 5.00	
Naphthalene	2014-06	ug/L			< 5.00					
Naphthalene	2014-08	ug/L			< 5.00				< 5.00	
Naphthalene	2015-10	ug/L				< 5			< 5	< 5
Naphthalene	2016-07	ug/L				< 5				< 5
Naphthalene	2019-10	ug/L			< 5	< 5			< 5	< 5
Naphthalene	2020-04	ug/L			< 5	< 5			< 5	< 5
Naphthalene	2020-09	ug/L				< 5			< 5	~~< 5~~
Naphthalene	2024-09	ug/L			< 5	< 5			< 5	< 5
Nickel	2008-04	mg/l							< 0.0500	
Nickel	2008-06	mg/l							< 0.0500	
Nickel	2008-08	mg/l							< 0.0500	
Nickel	2008-09	mg/l							< 0.0500	
Nickel	2009-03	mg/l							< 0.05	
Nickel	2009-06	mg/l							< 0.0500	
Nickel	2009-09	mg/l				< 0.0500			< 0.0500	< 0.0500
Nickel	2009-12	mg/l				**0.0545**				**0.0545**
Nickel	2010-03	mg/l							< 0.0500	
Nickel	2010-04	mg/l				< 0.0500				< 0.0500
Nickel	2010-06	mg/l				< 0.0500				< 0.0500
Nickel	2010-09	mg/l				< 0.0500			< 0.0500	< 0.0500
Nickel	2011-03	mg/l				< 0.0500			< 0.0500	< 0.0500
Nickel	2011-09	mg/l	< 0.0500		< 0.0500	< 0.0500			< 0.0500	< 0.0500
Nickel	2011-11	mg/l	< 0.0500		< 0.0500					
Nickel	2012-03	mg/l	< 0.0500		< 0.0500	< 0.0500			< 0.0500	< 0.0500
Nickel	2012-06	mg/l	< 0.0500		**0.0680**					
Nickel	2012-09	mg/l	< 0.0500		< 0.0500	< 0.0500			< 0.0500	< 0.0500
Nickel	2013-03	mg/l	< 0.0500		**0.0134 J**	**0.0118 J**			< 0.0500	**0.0118 J**
Nickel	2013-06	mg/l				**0.00447 J**				**0.00447 J**
Nickel	2013-09	mg/l	< 0.0500		< 0.0500 J	< 0.0500			< 0.0500	< 0.0500
Nickel	2013-11	mg/L				**0.00294 J**				**0.00294 J**

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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Nickel	2014-03	mg/L	< 0.0500		**0.0158 J**	< 0.0500			< 0.0500	< 0.0500
Nickel	2014-06	mg/L			**0.0136 J**	< 0.0500				< 0.0500
Nickel	2014-08	mg/L	< 0.00500		**0.0156**	**0.00426 J**			< 0.00500	**0.00426 J**
Nickel	2014-12	mg/L			**0.0205**	< 0.00500 J			< 0.00500	< 0.00500 J
Nickel	2015-04	mg/L	< 0.00500		**0.0219**	**0.00337 J**			< 0.00500	**0.00337 J**
Nickel	2015-09	mg/L			**0.0274**					
Nickel	2015-10	mg/L	< 0.005			**0.00247 J**			< 0.005	**0.00247 J**
Nickel	2016-04	mg/L	< 0.005		**0.0296**	**0.00352 J**			< 0.005	**0.00352 J**
Nickel	2016-07	mg/L				**0.00232 J**				**0.00232 J**
Nickel	2016-10	mg/L	< 0.005		**0.0319**	**0.00413 J**			< 0.005	**0.00413 J**
Nickel	2017-05	mg/L	< 0.005		**0.0367**	**0.00328 J**			< 0.005	**0.00328 J**
Nickel	2017-09	mg/L	< 0.005		**0.0342**	**0.00388 J**			< 0.005	**0.00388 J**
Nickel	2018-05	mg/L			**0.0354**	**0.00336 J**			< 0.005	**0.00336 J**
Nickel	2018-09	mg/L	**0.00475**		**0.0268**	**0.00491**			< 0.002	**0.00491**
Nickel	2019-03	mg/L	< 0.005		**0.0495**	**0.00439 J**			< 0.005	**0.00439 J**
Nickel	2019-10	mg/L		**0.00457 J**	**0.0448**	**0.005 J**		~~**0.0178**~~	< 0.01	**0.005 J**
Nickel	2020-04	mg/L		**0.00794**	**0.0453**	**0.00247 J**	~~**0.0191**~~	~~**0.0347**~~	< 0.005	**0.00247 J**
Nickel	2020-06	mg/L	< 0.005					~~**0.0318**~~		
Nickel	2020-08	mg/L	< 0.005				~~**0.0275**~~	~~**0.0342**~~		
Nickel	2020-09	mg/L		**0.00685**	**0.0487**	**0.0028 J**			< 0.005	~~**0.0028 J**~~
Nickel	2020-12	mg/L					~~**0.0202**~~	**0.0211**		
Nickel	2021-02	mg/L					~~**0.018**~~			
Nickel	2021-04	mg/L	< 0.005	**0.0106**	**0.0495**	**0.00416 J**	~~**0.0189**~~	**0.0198**	< 0.005	**0.00416 J**
Nickel	2021-09	mg/L	< 0.005	**0.0108**	**0.038**	**0.00439 J**	**0.015**	**0.0129**	< 0.005	**0.00439 J**
Nickel	2022-04	mg/L	< 0.005	**0.0144**	**0.0424**	**0.00431 J**	**0.0154**	**0.0127**	< 0.005	**0.00431 J**
Nickel	2022-09	mg/L	< 0.005	**0.0112**	**0.0423**	**0.00631**	**0.0146**	**0.0117**	< 0.005	**0.00631**
Nickel	2023-04	mg/L	< 0.005	**0.0154**	**0.0448**	**0.00235 J**	**0.0145**	**0.0114**	< 0.005	**0.00235 J**
Nickel	2023-09	mg/L	< 0.005	**0.0131**	**0.0412**	**0.00582**	**0.0135**	**0.011**	< 0.005	**0.00582**
Nickel	2024-04	mg/L	< 0.005	**0.0168**	**0.0359**	**0.00429 J**	**0.0106**	**0.0082**	< 0.005	**0.00429 J**
Nickel	2024-09	mg/L	< 0.005	**0.00969**	**0.0422**	**0.00697**	**0.00871**	**0.00812**	< 0.005	**0.00697**
Nitrobenzene	2009-03	ug/l							< 10	
Nitrobenzene	2009-06	ug/l							< 10.0	
Nitrobenzene	2009-09	ug/l							< 10.0	
Nitrobenzene	2010-03	ug/l							< 10.0	
Nitrobenzene	2010-09	ug/l							< 10.0	
Nitrobenzene	2011-03	ug/l							< 12.0	
Nitrobenzene	2014-06	ug/L			< 10.5					
Nitrobenzene	2014-08	ug/L			< 10.2				< 10.8	
Nitrobenzene	2015-10	ug/L				< 10			< 10	< 10
Nitrobenzene	2016-07	ug/L				< 10.4				< 10.4
Nitrobenzene	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Nitrobenzene	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Nitrobenzene	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
N-Nitrosodiethylamine	2009-03	ug/l							< 10	
N-Nitrosodiethylamine	2009-06	ug/l							< 10.0	
N-Nitrosodiethylamine	2009-09	ug/l							< 10.0	

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N-Nitrosodiethylamine	2010-03	ug/l							< 10.0	
N-Nitrosodiethylamine	2010-09	ug/l							< 10.0	
N-Nitrosodiethylamine	2011-03	ug/l							< 12.0	
N-Nitrosodiethylamine	2014-06	ug/L			< 10.5					
N-Nitrosodiethylamine	2014-08	ug/L			< 10.2				< 10.8	
N-Nitrosodiethylamine	2015-10	ug/L				< 10			< 10	< 10
N-Nitrosodiethylamine	2016-07	ug/L				< 10.4				< 10.4
N-Nitrosodiethylamine	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
N-Nitrosodiethylamine	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
N-Nitrosodiethylamine	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
N-Nitrosodimethylamine	2009-03	ug/l							< 10	
N-Nitrosodimethylamine	2009-06	ug/l							< 10.0	
N-Nitrosodimethylamine	2009-09	ug/l							< 10.0	
N-Nitrosodimethylamine	2010-03	ug/l							< 10.0	
N-Nitrosodimethylamine	2010-09	ug/l							< 10.0	
N-Nitrosodimethylamine	2011-03	ug/l							< 12.0	
N-Nitrosodimethylamine	2014-06	ug/L			< 10.5					
N-Nitrosodimethylamine	2014-08	ug/L			< 10.2				< 10.8	
N-Nitrosodimethylamine	2015-10	ug/L				< 10			< 10	< 10
N-Nitrosodimethylamine	2016-07	ug/L				< 10.4				< 10.4
N-Nitrosodimethylamine	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
N-Nitrosodimethylamine	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
N-Nitrosodimethylamine	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
N-Nitrosodi-n-butylamine	2009-03	ug/l							< 10	
N-Nitrosodi-n-butylamine	2009-06	ug/l							< 10.0	
N-Nitrosodi-n-butylamine	2009-09	ug/l							< 10.0	
N-Nitrosodi-n-butylamine	2010-03	ug/l							< 10.0	
N-Nitrosodi-n-butylamine	2010-09	ug/l							< 10.0	
N-Nitrosodi-n-butylamine	2011-03	ug/l							< 12.0	
N-Nitrosodi-n-butylamine	2014-06	ug/L			< 10.5					
N-Nitrosodi-n-butylamine	2014-08	ug/L			< 10.2				< 10.8	
N-Nitrosodi-n-butylamine	2015-10	ug/L				< 10			< 10	< 10
N-Nitrosodi-n-butylamine	2016-07	ug/L				< 10.4				< 10.4
N-Nitrosodi-n-butylamine	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
N-Nitrosodi-n-butylamine	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
N-Nitrosodi-n-butylamine	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
N-Nitrosodi-n-propylamine	2009-03	ug/l							< 10	
N-Nitrosodi-n-propylamine	2009-06	ug/l							< 10.0	
N-Nitrosodi-n-propylamine	2009-09	ug/l							< 10.0	
N-Nitrosodi-n-propylamine	2010-03	ug/l							< 10.0	
N-Nitrosodi-n-propylamine	2010-09	ug/l							< 10.0	
N-Nitrosodi-n-propylamine	2011-03	ug/l							< 12.0	
N-Nitrosodi-n-propylamine	2014-06	ug/L			< 10.5					
N-Nitrosodi-n-propylamine	2014-08	ug/L			< 10.2				< 10.8	
N-Nitrosodi-n-propylamine	2015-10	ug/L				< 10			< 10	< 10
N-Nitrosodi-n-propylamine	2016-07	ug/L				< 10.4				< 10.4

Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
N-Nitrosodi-n-propylamine	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
N-Nitrosodi-n-propylamine	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
N-Nitrosodi-n-propylamine	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
N-Nitrosodiphenylamine	2009-03	ug/l							< 10	
N-Nitrosodiphenylamine	2009-06	ug/l							< 10.0	
N-Nitrosodiphenylamine	2009-09	ug/l							< 10.0	
N-Nitrosodiphenylamine	2010-03	ug/l							< 10.0	
N-Nitrosodiphenylamine	2010-09	ug/l							< 10.0	
N-Nitrosodiphenylamine	2011-03	ug/l							< 12.0	
N-Nitrosodiphenylamine	2014-06	ug/L			< 10.5					
N-Nitrosodiphenylamine	2014-08	ug/L			< 10.2				< 10.8	
N-Nitrosodiphenylamine	2015-10	ug/L				< 10			< 10	< 10
N-Nitrosodiphenylamine	2016-07	ug/L				< 10.4				< 10.4
N-Nitrosodiphenylamine	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
N-Nitrosodiphenylamine	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
N-Nitrosodiphenylamine	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
N-Nitrosomethylethylamine	2009-03	ug/l							< 10	
N-Nitrosomethylethylamine	2009-06	ug/l							< 10.0	
N-Nitrosomethylethylamine	2009-09	ug/l							< 10.0	
N-Nitrosomethylethylamine	2010-03	ug/l							< 10.0	
N-Nitrosomethylethylamine	2010-09	ug/l							< 10.0	
N-Nitrosomethylethylamine	2011-03	ug/l							< 12.0	
N-Nitrosomethylethylamine	2014-06	ug/L			< 10.5					
N-Nitrosomethylethylamine	2014-08	ug/L			< 10.2				< 10.8	
N-Nitrosomethylethylamine	2015-10	ug/L				< 10			< 10	< 10
N-Nitrosomethylethylamine	2016-07	ug/L				< 10.4				< 10.4
N-Nitrosomethylethylamine	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
N-Nitrosomethylethylamine	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
N-Nitrosomethylethylamine	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
N-Nitrosopiperidine	2009-03	ug/l							< 10	
N-Nitrosopiperidine	2009-06	ug/l							< 10.0	
N-Nitrosopiperidine	2009-09	ug/l							< 10.0	
N-Nitrosopiperidine	2010-03	ug/l							< 10.0	
N-Nitrosopiperidine	2010-09	ug/l							< 10.0	
N-Nitrosopiperidine	2011-03	ug/l							< 12.0	
N-Nitrosopiperidine	2014-06	ug/L			< 10.5					
N-Nitrosopiperidine	2014-08	ug/L			< 10.2				< 10.8	
N-Nitrosopiperidine	2015-10	ug/L				< 10			< 10	< 10
N-Nitrosopiperidine	2016-07	ug/L				< 10.4				< 10.4
N-Nitrosopiperidine	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
N-Nitrosopiperidine	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
N-Nitrosopiperidine	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
N-Nitrosopyrrolidine	2009-03	ug/l							< 10	
N-Nitrosopyrrolidine	2009-06	ug/l							< 10.0	
N-Nitrosopyrrolidine	2009-09	ug/l							< 10.0	
N-Nitrosopyrrolidine	2010-03	ug/l							< 10.0	

Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
N-Nitrosopyrrolidine	2010-09	ug/l							< 10.0	
N-Nitrosopyrrolidine	2011-03	ug/l							< 12.0	
N-Nitrosopyrrolidine	2014-06	ug/L			< 10.5					
N-Nitrosopyrrolidine	2014-08	ug/L			< 10.2				< 10.8	
N-Nitrosopyrrolidine	2015-10	ug/L				< 10			< 10	< 10
N-Nitrosopyrrolidine	2016-07	ug/L				< 10.4				< 10.4
N-Nitrosopyrrolidine	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
N-Nitrosopyrrolidine	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
N-Nitrosopyrrolidine	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
o,o,o-Triethylphosphorothioate	2009-03	ug/l							< 30	
o,o,o-Triethylphosphorothioate	2009-06	ug/l							< 30.0	
o,o,o-Triethylphosphorothioate	2009-09	ug/l							< 10.0	
o,o,o-Triethylphosphorothioate	2010-03	ug/l							< 10.0	
o,o,o-Triethylphosphorothioate	2010-09	ug/l							< 10.0	
o,o,o-Triethylphosphorothioate	2011-03	ug/l							< 12.0	
o,o,o-Triethylphosphorothioate	2014-06	ug/L			< 10.5					
o,o,o-Triethylphosphorothioate	2014-08	ug/L			< 10.2				< 10.8	
o,o,o-Triethylphosphorothioate	2015-10	ug/L				< 10			< 10	< 10
o,o,o-Triethylphosphorothioate	2016-07	ug/L				< 10.4				< 10.4
o,o,o-Triethylphosphorothioate	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
o,o,o-Triethylphosphorothioate	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
o,o,o-Triethylphosphorothioate	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
o-Toluidine	2009-03	ug/l							< 10	
o-Toluidine	2009-06	ug/l							< 10.0	
o-Toluidine	2009-09	ug/l							< 10.0	
o-Toluidine	2010-03	ug/l							< 10.0	
o-Toluidine	2010-09	ug/l							< 10.0	
o-Toluidine	2011-03	ug/l							< 12.0	
o-Toluidine	2014-06	ug/L			< 10.5					
o-Toluidine	2014-08	ug/L			< 10.2				< 10.8	
o-Toluidine	2015-10	ug/L				< 10			< 10	< 10
o-Toluidine	2016-07	ug/L				< 10.4				< 10.4
o-Toluidine	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
o-Toluidine	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
o-Toluidine	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
p-(Dimethylamino)azobenzene	2009-03	ug/l							< 10	
p-(Dimethylamino)azobenzene	2009-06	ug/l							< 10.0	
p-(Dimethylamino)azobenzene	2009-09	ug/l							< 10.0	
p-(Dimethylamino)azobenzene	2010-03	ug/l							< 10.0	
p-(Dimethylamino)azobenzene	2010-09	ug/l							< 10.0	
p-(Dimethylamino)azobenzene	2011-03	ug/l							< 12.0	
p-(Dimethylamino)azobenzene	2014-06	ug/L			< 10.5					
p-(Dimethylamino)azobenzene	2014-08	ug/L			< 10.2				< 10.8	
p-(Dimethylamino)azobenzene	2015-10	ug/L				< 10			< 10	< 10
p-(Dimethylamino)azobenzene	2016-07	ug/L				< 10.4				< 10.4
p-(Dimethylamino)azobenzene	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2

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p-(Dimethylamino)azobenzene	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
p-(Dimethylamino)azobenzene	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Parathion	2009-03	ug/l							< 10	
Parathion	2009-06	ug/l							< 10.0	
Parathion	2009-09	ug/l							< 10.0	
Parathion	2010-03	ug/l							< 10.0	
Parathion	2010-09	ug/l							< 10.0	
Parathion	2011-03	ug/l							< 12.0	
Parathion	2014-06	ug/L			< 10.5					
Parathion	2014-08	ug/L			< 10.2				< 10.8	
Parathion	2015-10	ug/L				< 10			< 10	< 10
Parathion	2016-07	ug/L				< 10.4				< 10.4
Parathion	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Parathion	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Parathion	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
PCBs - Aroclor 1016	2009-03	ug/l							< 0.8	
PCBs - Aroclor 1016	2009-06	ug/l							< 0.800	
PCBs - Aroclor 1016	2009-09	ug/l							< 0.800	
PCBs - Aroclor 1016	2010-09	ug/l							< 0.800	
PCBs - Aroclor 1016	2014-06	ug/L			< 0.816					
PCBs - Aroclor 1016	2014-08	ug/L			< 0.825				< 0.800	
PCBs - Aroclor 1016	2015-10	ug/L				< 0.8			< 0.8	< 0.8
PCBs - Aroclor 1016	2016-07	ug/L				< 0.816				< 0.816
PCBs - Aroclor 1016	2019-10	ug/L			< 0.816	< 0.833			< 0.829	< 0.833
PCBs - Aroclor 1016	2020-09	ug/L				< 0.87			< 1.13	~~< 0.87~~
PCBs - Aroclor 1016	2024-09	ug/L			< 0.833	< 0.833			< 0.87	< 0.833
PCBs - Aroclor 1221	2009-03	ug/l							< 0.8	
PCBs - Aroclor 1221	2009-06	ug/l							< 0.800	
PCBs - Aroclor 1221	2009-09	ug/l							< 0.800	
PCBs - Aroclor 1221	2010-09	ug/l							< 0.800	
PCBs - Aroclor 1221	2014-06	ug/L			< 0.816					
PCBs - Aroclor 1221	2014-08	ug/L			< 0.825				< 0.800	
PCBs - Aroclor 1221	2015-10	ug/L				< 0.8			< 0.8	< 0.8
PCBs - Aroclor 1221	2016-07	ug/L				< 0.816				< 0.816
PCBs - Aroclor 1221	2019-10	ug/L			< 0.816	< 0.833			< 0.829	< 0.833
PCBs - Aroclor 1221	2020-09	ug/L				< 0.87			< 1.13	~~< 0.87~~
PCBs - Aroclor 1221	2024-09	ug/L			< 0.833	< 0.833			< 0.87	< 0.833
PCBs - Aroclor 1232	2009-03	ug/l							< 0.8	
PCBs - Aroclor 1232	2009-06	ug/l							< 0.800	
PCBs - Aroclor 1232	2009-09	ug/l							< 0.800	
PCBs - Aroclor 1232	2010-09	ug/l							< 0.800	
PCBs - Aroclor 1232	2014-06	ug/L			< 0.816					
PCBs - Aroclor 1232	2014-08	ug/L			< 0.825				< 0.800	
PCBs - Aroclor 1232	2015-10	ug/L				< 0.8			< 0.8	< 0.8
PCBs - Aroclor 1232	2016-07	ug/L				< 0.816				< 0.816
PCBs - Aroclor 1232	2019-10	ug/L			< 0.816	< 0.833			< 0.829	< 0.833

Table 13
Carroll County Landfill Western Expansion Area **Analytical Data Summary**
Permit No. 14-SDP-01-74P **2024 Annual Water Quality Report**

Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
PCBs - Aroclor 1232	2020-09	ug/L				< 0.87			< 1.13	~~< 0.87~~
PCBs - Aroclor 1232	2024-09	ug/L			< 0.833	< 0.833			< 0.87	< 0.833
PCBs - Aroclor 1242	2009-03	ug/l							< 0.8	
PCBs - Aroclor 1242	2009-06	ug/l							< 0.800	
PCBs - Aroclor 1242	2009-09	ug/l							< 0.800	
PCBs - Aroclor 1242	2010-09	ug/l							< 0.800	
PCBs - Aroclor 1242	2014-06	ug/L			< 0.816					
PCBs - Aroclor 1242	2014-08	ug/L			< 0.825				< 0.800	
PCBs - Aroclor 1242	2015-10	ug/L				< 0.8			< 0.8	< 0.8
PCBs - Aroclor 1242	2016-07	ug/L				< 0.816				< 0.816
PCBs - Aroclor 1242	2019-10	ug/L			< 0.816	< 0.833			< 0.829	< 0.833
PCBs - Aroclor 1242	2020-09	ug/L				< 0.87			< 1.13	~~< 0.87~~
PCBs - Aroclor 1242	2024-09	ug/L			< 0.833	< 0.833			< 0.87	< 0.833
PCBs - Aroclor 1248	2009-03	ug/l							< 0.8	
PCBs - Aroclor 1248	2009-06	ug/l							< 0.800	
PCBs - Aroclor 1248	2009-09	ug/l							< 0.800	
PCBs - Aroclor 1248	2010-09	ug/l							< 0.800	
PCBs - Aroclor 1248	2014-06	ug/L			< 0.816					
PCBs - Aroclor 1248	2014-08	ug/L			< 0.825				< 0.800	
PCBs - Aroclor 1248	2015-10	ug/L				< 0.8			< 0.8	< 0.8
PCBs - Aroclor 1248	2016-07	ug/L				< 0.816				< 0.816
PCBs - Aroclor 1248	2019-10	ug/L			< 0.816	< 0.833			< 0.829	< 0.833
PCBs - Aroclor 1248	2020-09	ug/L				< 0.87			< 1.13	~~< 0.87~~
PCBs - Aroclor 1248	2024-09	ug/L			< 0.833	< 0.833			< 0.87	< 0.833
PCBs - Aroclor 1254	2009-03	ug/l							< 0.8	
PCBs - Aroclor 1254	2009-06	ug/l							< 0.800	
PCBs - Aroclor 1254	2009-09	ug/l							< 0.800	
PCBs - Aroclor 1254	2010-09	ug/l							< 0.800	
PCBs - Aroclor 1254	2014-06	ug/L			< 0.816					
PCBs - Aroclor 1254	2014-08	ug/L			< 0.825				< 0.800	
PCBs - Aroclor 1254	2015-10	ug/L				< 0.8			< 0.8	< 0.8
PCBs - Aroclor 1254	2016-07	ug/L				< 0.816				< 0.816
PCBs - Aroclor 1254	2019-10	ug/L			< 0.816	< 0.833			< 0.829	< 0.833
PCBs - Aroclor 1254	2020-09	ug/L				< 0.87			< 1.13	~~< 0.87~~
PCBs - Aroclor 1254	2024-09	ug/L			< 0.833	< 0.833			< 0.87	< 0.833
PCBs - Aroclor 1260	2009-03	ug/l							< 0.8	
PCBs - Aroclor 1260	2009-06	ug/l							< 0.800	
PCBs - Aroclor 1260	2009-09	ug/l							< 0.800	
PCBs - Aroclor 1260	2010-09	ug/l							< 0.800	
PCBs - Aroclor 1260	2014-06	ug/L			< 0.816					
PCBs - Aroclor 1260	2014-08	ug/L			< 0.825				< 0.800	
PCBs - Aroclor 1260	2015-10	ug/L				< 0.8			< 0.8	< 0.8
PCBs - Aroclor 1260	2016-07	ug/L				< 0.816				< 0.816
PCBs - Aroclor 1260	2019-10	ug/L			< 0.816	< 0.833			< 0.829	< 0.833
PCBs - Aroclor 1260	2020-09	ug/L				< 0.87			< 1.13	~~< 0.87~~
PCBs - Aroclor 1260	2024-09	ug/L			< 0.833	< 0.833			< 0.87	< 0.833

Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Pentachlorobenzene	2009-03	ug/l							< 10	
Pentachlorobenzene	2009-06	ug/l							< 10.0	
Pentachlorobenzene	2009-09	ug/l							< 10.0	
Pentachlorobenzene	2010-03	ug/l							< 10.0	
Pentachlorobenzene	2010-09	ug/l							< 10.0	
Pentachlorobenzene	2011-03	ug/l							< 12.0	
Pentachlorobenzene	2014-06	ug/L			< 10.5					
Pentachlorobenzene	2014-08	ug/L			< 10.2				< 10.8	
Pentachlorobenzene	2015-10	ug/L				< 10			< 10	< 10
Pentachlorobenzene	2016-07	ug/L				< 10.4				< 10.4
Pentachlorobenzene	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Pentachlorobenzene	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Pentachlorobenzene	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Pentachloronitrobenzene	2009-03	ug/l							< 10	
Pentachloronitrobenzene	2009-06	ug/l							< 10.0	
Pentachloronitrobenzene	2009-09	ug/l							< 10.0	
Pentachloronitrobenzene	2010-03	ug/l							< 10.0	
Pentachloronitrobenzene	2010-09	ug/l							< 10.0	
Pentachloronitrobenzene	2011-03	ug/l							< 12.0	
Pentachloronitrobenzene	2014-06	ug/L			< 10.5					
Pentachloronitrobenzene	2014-08	ug/L			< 10.2				< 10.8	
Pentachloronitrobenzene	2015-10	ug/L				< 10			< 10	< 10
Pentachloronitrobenzene	2016-07	ug/L				< 10.4				< 10.4
Pentachloronitrobenzene	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Pentachloronitrobenzene	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Pentachloronitrobenzene	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Pentachlorophenol	2009-03	ug/l							< 10	
Pentachlorophenol	2009-06	ug/l							< 10.0	
Pentachlorophenol	2009-09	ug/l							< 10.0	
Pentachlorophenol	2010-03	ug/l							< 10.0	
Pentachlorophenol	2010-09	ug/l							< 10.0	
Pentachlorophenol	2011-03	ug/l							< 12.0	
Pentachlorophenol	2014-06	ug/L			< 10.5					
Pentachlorophenol	2014-08	ug/L			< 10.2				< 10.8	
Pentachlorophenol	2015-10	ug/L				< 10			< 10	< 10
Pentachlorophenol	2016-07	ug/L				< 10.4				< 10.4
Pentachlorophenol	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Pentachlorophenol	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Pentachlorophenol	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Phenacetin	2009-03	ug/l							< 10	
Phenacetin	2009-06	ug/l							< 10.0	
Phenacetin	2009-09	ug/l							< 10.0	
Phenacetin	2010-03	ug/l							< 10.0	
Phenacetin	2010-09	ug/l							< 10.0	
Phenacetin	2011-03	ug/l							< 12.0	
Phenacetin	2014-06	ug/L			< 10.5					

Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Phenacetin	2014-08	ug/L			< 10.2				< 10.8	
Phenacetin	2015-10	ug/L				< 10			< 10	< 10
Phenacetin	2016-07	ug/L				< 10.4				< 10.4
Phenacetin	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Phenacetin	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Phenacetin	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Phenanthrene	2009-03	ug/l							< 10	
Phenanthrene	2009-06	ug/l							< 10.0	
Phenanthrene	2009-09	ug/l							< 10.0	
Phenanthrene	2010-03	ug/l							< 10.0	
Phenanthrene	2010-09	ug/l							< 10.0	
Phenanthrene	2011-03	ug/l							< 12.0	
Phenanthrene	2014-06	ug/L			< 10.5					
Phenanthrene	2014-08	ug/L			< 10.2				< 10.8	
Phenanthrene	2015-10	ug/L				< 10			< 10	< 10
Phenanthrene	2016-07	ug/L				< 10.4				< 10.4
Phenanthrene	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Phenanthrene	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Phenanthrene	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Phenol	2009-03	ug/l							< 20	
Phenol	2009-06	ug/l							< 20.0	
Phenol	2009-09	mg/l							< 0.0180	
Phenol	2009-09	ug/l							< 10.0	
Phenol	2010-03	ug/l							< 10.0	
Phenol	2010-09	ug/l							< 10.0	
Phenol	2011-03	ug/l							< 12.0	
Phenol	2014-06	ug/L			< 10.5					
Phenol	2014-08	ug/L			< 10.2				< 10.8	
Phenol	2015-10	ug/L				< 10			< 10	< 10
Phenol	2016-07	ug/L				< 10.4				< 10.4
Phenol	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Phenol	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Phenol	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Phorate	2009-03	ug/l							< 60	
Phorate	2009-06	ug/l							< 60.0	
Phorate	2009-09	ug/l							< 10.0	
Phorate	2010-03	ug/l							< 10.0	
Phorate	2010-09	ug/l							< 10.0	
Phorate	2011-03	ug/l							< 12.0	
Phorate	2014-06	ug/L			< 10.5					
Phorate	2014-08	ug/L			< 10.2				< 10.8	
Phorate	2015-10	ug/L				< 10			< 10	< 10
Phorate	2016-07	ug/L				< 10.4				< 10.4
Phorate	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Phorate	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Phorate	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9

Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
p-Phenylenediamine	2009-03	ug/l							< 10	
p-Phenylenediamine	2009-06	ug/l							< 10.0	
p-Phenylenediamine	2009-09	ug/l							< 10.0	
p-Phenylenediamine	2010-03	ug/l							< 10.0	
p-Phenylenediamine	2010-09	ug/l							< 10.0	
p-Phenylenediamine	2011-03	ug/l							< 12.0	
p-Phenylenediamine	2014-06	ug/L			< 10.5					
p-Phenylenediamine	2014-08	ug/L			< 10.2				< 10.8	
p-Phenylenediamine	2015-10	ug/L				< 10			< 10	< 10
p-Phenylenediamine	2016-07	ug/L				< 10.4				< 10.4
p-Phenylenediamine	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
p-Phenylenediamine	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
p-Phenylenediamine	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Pronamide	2009-03	ug/l							< 10	
Pronamide	2009-06	ug/l							< 10.0	
Pronamide	2009-09	ug/l							< 10.0	
Pronamide	2010-03	ug/l							< 10.0	
Pronamide	2010-09	ug/l							< 10.0	
Pronamide	2011-03	ug/l							< 12.0	
Pronamide	2014-06	ug/L			< 10.5					
Pronamide	2014-08	ug/L			< 10.2				< 10.8	
Pronamide	2015-10	ug/L				< 10			< 10	< 10
Pronamide	2016-07	ug/L				< 10.4				< 10.4
Pronamide	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Pronamide	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Pronamide	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Propionitrile	2009-03	ug/l							< 10	
Propionitrile	2009-06	ug/l							< 10.0	
Propionitrile	2009-09	ug/l							< 10.0	
Propionitrile	2010-03	ug/l							< 10.0	
Propionitrile	2010-09	ug/l							< 10.0	
Propionitrile	2011-03	ug/l							< 10.0	
Propionitrile	2014-06	ug/L			< 10.0					
Propionitrile	2014-08	ug/L			< 10.0				< 10.0	
Propionitrile	2015-10	ug/L				< 10			< 10	< 10
Propionitrile	2016-07	ug/L				< 10				< 10
Propionitrile	2019-10	ug/L			< 10	< 10			< 10	< 10
Propionitrile	2020-04	ug/L			< 10	< 10			< 10	< 10
Propionitrile	2020-09	ug/L				< 10			< 10	~~< 10~~
Propionitrile	2024-09	ug/L			< 10	< 10			< 10	< 10
Pyrene	2009-03	ug/l							< 10	
Pyrene	2009-06	ug/l							< 10.0	
Pyrene	2009-09	ug/l							< 10.0	
Pyrene	2010-03	ug/l							< 10.0	
Pyrene	2010-09	ug/l							< 10.0	
Pyrene	2011-03	ug/l							< 12.0	

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Table 13
Analytical Data Summary
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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Pyrene	2014-06	ug/L			< 10.5					
Pyrene	2014-08	ug/L			< 10.2				< 10.8	
Pyrene	2015-10	ug/L				< 10			< 10	< 10
Pyrene	2016-07	ug/L				< 10.4				< 10.4
Pyrene	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Pyrene	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Pyrene	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Safrole	2009-03	ug/l							< 10	
Safrole	2009-06	ug/l							< 10.0	
Safrole	2009-09	ug/l							< 10.0	
Safrole	2010-03	ug/l							< 10.0	
Safrole	2010-09	ug/l							< 10.0	
Safrole	2011-03	ug/l							< 12.0	
Safrole	2014-06	ug/L			< 10.5					
Safrole	2014-08	ug/L			< 10.2				< 10.8	
Safrole	2015-10	ug/L				< 10			< 10	< 10
Safrole	2016-07	ug/L				< 10.4				< 10.4
Safrole	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2
Safrole	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Safrole	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Selenium	2008-04	mg/l							< 0.00500	
Selenium	2008-06	mg/l							< 0.00500	
Selenium	2008-08	mg/l							< 0.00500	
Selenium	2008-09	mg/l							< 0.00500	
Selenium	2009-03	mg/l							< 0.005	
Selenium	2009-06	mg/l							< 0.00500	
Selenium	2009-09	mg/l				< 0.00500			< 0.00500	< 0.00500
Selenium	2009-12	mg/l				< 0.00500				< 0.00500
Selenium	2010-03	mg/l							< 0.00500	
Selenium	2010-04	mg/l				< 0.00500				< 0.00500
Selenium	2010-06	mg/l				< 0.00500				< 0.00500
Selenium	2010-09	mg/l				< 0.00500			< 0.00500	< 0.00500
Selenium	2011-03	mg/l				< 0.00500			< 0.00500	< 0.00500
Selenium	2011-09	mg/l	< 0.00500		< 0.00500	< 0.00500			< 0.00500	< 0.00500
Selenium	2011-11	mg/l	< 0.00500		< 0.00500					
Selenium	2012-03	mg/l	< 0.00500		< 0.00500	< 0.00500			< 0.00500	< 0.00500
Selenium	2012-06	mg/l	< 0.00500		< 0.00500					
Selenium	2012-09	mg/l	< 0.00500		< 0.00500	< 0.00500			< 0.00500	< 0.00500
Selenium	2013-03	mg/l	< 0.00500		< 0.00500	< 0.00500			< 0.00500	< 0.00500
Selenium	2013-06	mg/l				< 0.00500				< 0.00500
Selenium	2013-09	mg/l	< 0.00500		< 0.00500	< 0.00500			< 0.00500	< 0.00500
Selenium	2013-11	mg/L				< 0.00500				< 0.00500
Selenium	2014-03	mg/L	< 0.00500		< 0.00500	< 0.00500			< 0.00500	< 0.00500
Selenium	2014-06	mg/L			< 0.00500 J	< 0.00500 J				< 0.00500 J
Selenium	2014-08	mg/L	< 0.00500		< 0.00500	< 0.00500			< 0.00500	< 0.00500
Selenium	2014-12	mg/L			< 0.00500	< 0.00500			< 0.00500	< 0.00500

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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Selenium	2015-04	mg/L	< 0.00500		< 0.00500	< 0.00500			< 0.00500	< 0.00500
Selenium	2015-09	mg/L			< 0.005					
Selenium	2015-10	mg/L	< 0.005			< 0.005			< 0.005	< 0.005
Selenium	2016-04	mg/L	**0.0016 J**		< 0.005	< 0.005			**0.00212 J**	< 0.005
Selenium	2016-07	mg/L				< 0.005				< 0.005
Selenium	2016-10	mg/L	**0.00102 J**		< 0.005	< 0.005			**0.00189 J**	< 0.005
Selenium	2017-05	mg/L	**0.00186 J**		< 0.005	< 0.005			**0.00196 J**	< 0.005
Selenium	2017-09	mg/L	< 0.005		< 0.005	< 0.005			**0.00136 J**	< 0.005
Selenium	2018-05	mg/L			< 0.005	< 0.005			**0.00129 J**	< 0.005
Selenium	2018-09	mg/L	**0.00133 J**		< 0.0025	< 0.0025			**0.00161 J**	< 0.0025
Selenium	2019-03	mg/L	**0.0011 J**		< 0.005	< 0.005			< 0.005	< 0.005
Selenium	2019-10	mg/L		< 0.01	< 0.01	< 0.01		~~< 0.01~~	< 0.01	< 0.01
Selenium	2020-04	mg/L		< 0.005	< 0.005	< 0.005	~~< 0.005~~	~~< 0.005~~	< 0.005	< 0.005
Selenium	2020-06	mg/L	**0.00123 J**					~~< 0.005~~		
Selenium	2020-08	mg/L	**0.00104 J**				~~**0.00209 J**~~	~~< 0.005~~		
Selenium	2020-09	mg/L		< 0.005	< 0.005	< 0.005			< 0.005	~~< 0.005~~
Selenium	2020-12	mg/L					~~< 0.005~~	< 0.005		
Selenium	2021-02	mg/L					~~< 0.005~~			
Selenium	2021-04	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	~~< 0.005~~	< 0.005	< 0.005	< 0.005
Selenium	2021-09	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	**0.00135 J**	< 0.005
Selenium	2022-04	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.05	**0.0018 J**	< 0.005
Selenium	2022-09	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	**0.00153 J**	< 0.005
Selenium	2023-04	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	**0.0018 J**	< 0.005
Selenium	2023-09	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	**0.00197 J**	< 0.005
Selenium	2024-04	mg/L	**0.00189 J**	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	**0.00197 J**	< 0.005
Selenium	2024-09	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	**0.00241 J**	< 0.005
Silver	2008-04	mg/l							< 0.0200	
Silver	2008-06	mg/l							< 0.0200	
Silver	2008-08	mg/l							< 0.0200	
Silver	2008-09	mg/l							< 0.0200	
Silver	2009-03	mg/l							< 0.02	
Silver	2009-06	mg/l							< 0.0200	
Silver	2009-09	mg/l				< 0.0200			< 0.0200	< 0.0200
Silver	2009-12	mg/l				< 0.0200				< 0.0200
Silver	2010-03	mg/l							< 0.0200	
Silver	2010-04	mg/l				< 0.0200				< 0.0200
Silver	2010-06	mg/l				< 0.0200				< 0.0200
Silver	2010-09	mg/l				< 0.0200			< 0.0200	< 0.0200
Silver	2011-03	mg/l				< 0.0200			< 0.0200	< 0.0200
Silver	2011-09	mg/l	< 0.0200		< 0.0200	< 0.0200			< 0.0200	< 0.0200
Silver	2011-11	mg/l	< 0.0200		< 0.0200					
Silver	2012-03	mg/l	< 0.0200		< 0.0200	< 0.0200			< 0.0200	< 0.0200
Silver	2012-06	mg/l	< 0.0200		< 0.0200					
Silver	2012-09	mg/l	< 0.0200		< 0.0200	< 0.0200			< 0.0200	< 0.0200
Silver	2013-03	mg/l	< 0.0200		< 0.0200	< 0.0200			< 0.0200	< 0.0200
Silver	2013-06	mg/l				< 0.0200				< 0.0200

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Silver	2013-09	mg/l	< 0.0200		< 0.0200	< 0.0200			< 0.0200	< 0.0200
Silver	2013-11	mg/L				< 0.0200				< 0.0200
Silver	2014-03	mg/L	< 0.0200		< 0.0200	< 0.0200			< 0.0200	< 0.0200
Silver	2014-06	mg/L			< 0.0200	< 0.0200				< 0.0200
Silver	2014-08	mg/L	< 0.00100		< 0.00100	< 0.00100			< 0.00100	< 0.00100
Silver	2014-12	mg/L			< 0.00100	< 0.00100			< 0.00100	< 0.00100
Silver	2015-04	mg/L	< 0.00100		< 0.00100	< 0.00100			< 0.00100	< 0.00100
Silver	2015-09	mg/L			< 0.001					
Silver	2015-10	mg/L	< 0.001			< 0.001			< 0.001	< 0.001
Silver	2016-04	mg/L	< 0.001		< 0.001	< 0.001			< 0.001	< 0.001
Silver	2016-07	mg/L				< 0.001				< 0.001
Silver	2016-10	mg/L	< 0.001		< 0.001	< 0.001			< 0.001	< 0.001
Silver	2017-05	mg/L	< 0.001		< 0.001	< 0.001			< 0.001	< 0.001
Silver	2017-09	mg/L	**0.000206 J**		**0.000168 J**	< 0.001			< 0.001	< 0.001
Silver	2018-05	mg/L			< 0.001	< 0.001			< 0.001	< 0.001
Silver	2018-09	mg/L	< 0.0005		< 0.0005	< 0.0005			< 0.0005	< 0.0005
Silver	2019-03	mg/L	< 0.001		< 0.001	< 0.001			< 0.001	< 0.001
Silver	2019-10	mg/L		< 0.001	< 0.001	< 0.002		~~< 0.001~~	< 0.001	< 0.002
Silver	2020-04	mg/L		< 0.001	< 0.001	< 0.001	~~< 0.001~~	~~< 0.001~~	< 0.001	< 0.001
Silver	2020-06	mg/L	< 0.001					~~< 0.001~~		
Silver	2020-08	mg/L	< 0.001				~~< 0.001~~	~~< 0.001~~		
Silver	2020-09	mg/L		< 0.001	< 0.001	< 0.001			< 0.001	~~< 0.001~~
Silver	2020-12	mg/L					~~< 0.001~~	< 0.001		
Silver	2021-02	mg/L					~~< 0.001~~			
Silver	2021-04	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	~~< 0.001~~	< 0.001	< 0.001	< 0.001
Silver	2021-09	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Silver	2022-04	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.01	< 0.01	< 0.001	< 0.001
Silver	2022-09	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Silver	2023-04	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Silver	2023-09	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Silver	2024-04	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Silver	2024-09	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Styrene	2008-04	ug/l							< 1.00	
Styrene	2008-06	ug/l							< 1.00	
Styrene	2008-08	ug/l							< 1.00	
Styrene	2008-09	ug/l							< 1.00	
Styrene	2009-03	ug/l							< 1	
Styrene	2009-06	ug/l							< 1.00	
Styrene	2009-09	ug/l				< 1.00			< 1.00	< 1.00
Styrene	2009-12	ug/l				< 2.00				< 2.00
Styrene	2010-03	ug/l							< 4.00	
Styrene	2010-04	ug/l				< 4.00				< 4.00
Styrene	2010-06	ug/l				< 1.00				< 1.00
Styrene	2010-09	ug/l				< 4.00			< 4.00	< 4.00
Styrene	2011-03	ug/l				< 1.00			< 1.00	< 1.00
Styrene	2011-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00

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Styrene	2011-11	ug/l	< 1.00		< 1.00					
Styrene	2012-03	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Styrene	2012-06	ug/l	< 1.00		< 1.00					
Styrene	2012-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Styrene	2013-03	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Styrene	2013-06	ug/l			< 1.00	< 1.00			< 1.00	< 1.00
Styrene	2013-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Styrene	2013-11	ug/L				< 1.00			< 1.00	< 1.00
Styrene	2014-03	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Styrene	2014-06	ug/L			< 1.00	< 1.00			< 1.00	< 1.00
Styrene	2014-08	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Styrene	2014-12	ug/L			< 1.00	< 1.00			< 1.00	< 1.00
Styrene	2015-04	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Styrene	2015-09	ug/L			< 1					
Styrene	2015-10	ug/L	< 1			< 1			< 1	< 1
Styrene	2016-04	ug/L	< 1		< 1	< 1			< 1	< 1
Styrene	2016-07	ug/L				< 1				< 1
Styrene	2016-10	ug/L	< 1		< 1	< 1			< 1	< 1
Styrene	2017-05	ug/L	< 1		< 1	< 1			< 1	< 1
Styrene	2017-09	ug/L	< 1		< 1	< 1			< 1	< 1
Styrene	2018-05	ug/L			< 1	< 1			< 1	< 1
Styrene	2018-09	ug/L	< 1		< 1	< 1			< 1	< 1
Styrene	2019-03	ug/L	< 1		< 1	< 1			< 1	< 1
Styrene	2019-10	ug/L		< 1	< 1	< 1		< 1	< 1	< 1
Styrene	2020-04	ug/L		< 1	< 1	< 1	< 1	< 1	< 1	< 1
Styrene	2020-06	ug/L	< 1					< 1		
Styrene	2020-08	ug/L	< 1				< 1	< 1		
Styrene	2020-09	ug/L		< 1	< 1	< 1			< 1	~~< 1~~
Styrene	2020-12	ug/L					< 1	< 1		
Styrene	2021-02	ug/L					< 1			
Styrene	2021-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Styrene	2021-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Styrene	2022-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Styrene	2022-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Styrene	2023-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Styrene	2023-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Styrene	2024-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Styrene	2024-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Sulfide	2009-03	mg/l							< 5	
Sulfide	2009-06	mg/l							< 1.0	
Sulfide	2009-09	mg/l							< 1.0	
Sulfide	2010-09	mg/l							< 1.0	
Sulfide	2013-03	mg/l			< 1.00				< 1.00	
Sulfide	2013-06	mg/l			< 1.00	< 1.00			< 1.00	< 1.00
Sulfide	2013-09	mg/l			< 1.00	< 1.00			< 1.00	< 1.00
Sulfide	2013-11	mg/L				< 1.00			< 1.00	< 1.00

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Sulfide	2014-03	mg/L				< 1.00			< 1.00 J	< 1.00
Sulfide	2014-06	mg/L			< 1.00	< 1.00			< 1.00	< 1.00
Sulfide	2014-08	mg/L			< 1.00	< 1.00			< 1.00	< 1.00
Sulfide	2014-12	mg/L				< 1.00			< 1.00	< 1.00
Sulfide	2015-04	mg/L				< 1.00			< 1.00	< 1.00
Sulfide	2015-10	mg/L				< 1			< 1	< 1
Sulfide	2016-07	mg/L				< 1				< 1
Sulfide	2019-10	mg/L			< 1	< 1			< 1	< 1
Sulfide	2020-09	mg/L				< 10			< 10	~~< 10~~
Sulfide	2024-09	mg/L			< 1	< 1			< 1	< 1
Technical Chlordane	2009-03	ug/l							< 2	
Technical Chlordane	2009-06	ug/l							< 2.00	
Technical Chlordane	2009-09	ug/l							< 2.00	
Technical Chlordane	2010-03	ug/l							< 2.00	
Technical Chlordane	2010-09	ug/l							< 2.22	
Technical Chlordane	2011-03	ug/l							< 2.00	
Technical Chlordane	2014-06	ug/L			< 2.04					
Technical Chlordane	2014-08	ug/L			< 2.00				< 2.00	
Technical Chlordane	2015-10	ug/L				< 2			< 2	< 2
Technical Chlordane	2016-07	ug/L				< 2				< 2
Technical Chlordane	2019-10	ug/L			< 2.09	< 2.08			< 2.08	< 2.08
Technical Chlordane	2020-09	ug/L				< 2.17			< 2.82	~~< 2.17~~
Technical Chlordane	2024-09	ug/L			< 2.17	< 2.08			< 2.08	< 2.08
Tetrachloroethene	2008-04	ug/l							< 1.00	
Tetrachloroethene	2008-06	ug/l							< 1.00	
Tetrachloroethene	2008-08	ug/l							< 1.00	
Tetrachloroethene	2008-09	ug/l							< 1.00	
Tetrachloroethene	2009-03	ug/l							< 1	
Tetrachloroethene	2009-06	ug/l							< 1.00	
Tetrachloroethene	2009-09	ug/l				< 1.00			< 1.00	< 1.00
Tetrachloroethene	2009-12	ug/l				< 1.00				< 1.00
Tetrachloroethene	2010-03	ug/l							< 1.00	
Tetrachloroethene	2010-04	ug/l				< 1.00				< 1.00
Tetrachloroethene	2010-06	ug/l				< 1.00				< 1.00
Tetrachloroethene	2010-09	ug/l				< 1.00			< 1.00	< 1.00
Tetrachloroethene	2011-03	ug/l				< 1.00			< 1.00	< 1.00
Tetrachloroethene	2011-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Tetrachloroethene	2011-11	ug/l	< 1.00		< 1.00					
Tetrachloroethene	2012-03	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Tetrachloroethene	2012-06	ug/l	< 1.00		< 1.00					
Tetrachloroethene	2012-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Tetrachloroethene	2013-03	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Tetrachloroethene	2013-06	ug/l			< 1.00	< 1.00			< 1.00	< 1.00
Tetrachloroethene	2013-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Tetrachloroethene	2013-11	ug/L				< 1.00			< 1.00	< 1.00
Tetrachloroethene	2014-03	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00

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Tetrachloroethene	2014-06	ug/L			< 1.00	< 1.00			< 1.00	< 1.00
Tetrachloroethene	2014-08	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Tetrachloroethene	2014-12	ug/L			< 1.00	< 1.00			< 1.00	< 1.00
Tetrachloroethene	2015-04	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Tetrachloroethene	2015-09	ug/L			< 1					
Tetrachloroethene	2015-10	ug/L	< 1			< 1			< 1	< 1
Tetrachloroethene	2016-04	ug/L	< 1		< 1	< 1			< 1	< 1
Tetrachloroethene	2016-07	ug/L				< 1				< 1
Tetrachloroethene	2016-10	ug/L	< 1		< 1	< 1			< 1	< 1
Tetrachloroethene	2017-05	ug/L	< 1		< 1	< 1			< 1	< 1
Tetrachloroethene	2017-09	ug/L	< 1		< 1	< 1			< 1	< 1
Tetrachloroethene	2018-05	ug/L			< 1	< 1			< 1	< 1
Tetrachloroethene	2018-09	ug/L	< 1		< 1	< 1			< 1	< 1
Tetrachloroethene	2019-03	ug/L	< 1		< 1	< 1			< 1	< 1
Tetrachloroethene	2019-10	ug/L		< 1	< 1	< 1		< 1	< 1	< 1
Tetrachloroethene	2020-04	ug/L		< 1	< 1	< 1	< 1	< 1	< 1	< 1
Tetrachloroethene	2020-06	ug/L	< 1					< 1		
Tetrachloroethene	2020-08	ug/L	< 1				< 1	< 1		
Tetrachloroethene	2020-09	ug/L		< 1	< 1	< 1			< 1	~~< 1~~
Tetrachloroethene	2020-12	ug/L					< 1	< 1		
Tetrachloroethene	2021-02	ug/L					< 1			
Tetrachloroethene	2021-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Tetrachloroethene	2021-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Tetrachloroethene	2022-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Tetrachloroethene	2022-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Tetrachloroethene	2023-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Tetrachloroethene	2023-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Tetrachloroethene	2024-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Tetrachloroethene	2024-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Thallium	2008-04	mg/l							< 0.00200	
Thallium	2008-06	mg/l							< 0.00200	
Thallium	2008-08	mg/l							< 0.00200	
Thallium	2008-09	mg/l							< 0.00200	
Thallium	2009-03	mg/l							< 0.002	
Thallium	2009-06	mg/l							< 0.00200	
Thallium	2009-09	mg/l				< 0.00200			< 0.00200	< 0.00200
Thallium	2009-12	mg/l				< 0.00200				< 0.00200
Thallium	2010-03	mg/l							< 0.00200	
Thallium	2010-04	mg/l				< 0.00200				< 0.00200
Thallium	2010-06	mg/l				< 0.00200				< 0.00200
Thallium	2010-09	mg/l				< 0.00200			< 0.00200	< 0.00200
Thallium	2011-03	mg/l				< 0.00200			< 0.00200	< 0.00200
Thallium	2011-09	mg/l	< 0.00200		< 0.00200	< 0.00200			< 0.00200	< 0.00200
Thallium	2011-11	mg/l	< 0.00200		< 0.00200					
Thallium	2012-03	mg/l	< 0.00200		< 0.00200	< 0.00200			< 0.00200	< 0.00200
Thallium	2012-06	mg/l	< 0.00200		< 0.00200					

Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Thallium	2012-09	mg/l	< 0.00200		< 0.00200	< 0.00200			< 0.00200	< 0.00200
Thallium	2013-03	mg/l	< 0.00200		< 0.00200	< 0.00200			< 0.00200	< 0.00200
Thallium	2013-06	mg/l				< 0.00200				< 0.00200
Thallium	2013-09	mg/l	< 0.00200		< 0.00200	< 0.00200			< 0.00200 J	< 0.00200
Thallium	2013-11	mg/L				< 0.00200				< 0.00200
Thallium	2014-03	mg/L	< 0.00200		< 0.00200	< 0.00200			< 0.00200	< 0.00200
Thallium	2014-06	mg/L			< 0.00200	< 0.00200				< 0.00200
Thallium	2014-08	mg/L	< 0.00100		< 0.00100	< 0.00100			< 0.00100	< 0.00100
Thallium	2014-12	mg/L			< 0.00100	< 0.00100			< 0.00100	< 0.00100
Thallium	2015-04	mg/L	< 0.00100		< 0.00100	< 0.00100			< 0.00100	< 0.00100
Thallium	2015-09	mg/L			< 0.001					
Thallium	2015-10	mg/L	< 0.001			< 0.001			< 0.001	< 0.001
Thallium	2016-04	mg/L	< 0.001		< 0.001	< 0.001			< 0.001	< 0.001
Thallium	2016-07	mg/L				< 0.001				< 0.001
Thallium	2016-10	mg/L	< 0.001		< 0.001	< 0.001			< 0.001	< 0.001
Thallium	2017-05	mg/L	< 0.001		< 0.001	< 0.001			< 0.001	< 0.001
Thallium	2017-09	mg/L	< 0.001		< 0.001	< 0.001			< 0.001	< 0.001
Thallium	2018-05	mg/L			< 0.001	< 0.001			< 0.001	< 0.001
Thallium	2018-09	mg/L	< 0.002		< 0.002	< 0.002			< 0.002	< 0.002
Thallium	2019-03	mg/L	< 0.001		< 0.001	< 0.001			< 0.001	< 0.001
Thallium	2019-10	mg/L		< 0.001	< 0.001	< 0.002		~~< 0.001~~	< 0.001	< 0.002
Thallium	2020-04	mg/L		< 0.001	< 0.001	< 0.001	~~< 0.001~~	~~< 0.001~~	< 0.001	< 0.001
Thallium	2020-06	mg/L	< 0.001					~~< 0.001~~		
Thallium	2020-08	mg/L	< 0.001				~~< 0.001~~	~~< 0.001~~		
Thallium	2020-09	mg/L		< 0.001	< 0.001	< 0.001			< 0.001	~~< 0.001~~
Thallium	2020-12	mg/L					~~< 0.001~~	< 0.001		
Thallium	2021-02	mg/L					~~< 0.001~~			
Thallium	2021-04	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	~~< 0.001~~	< 0.001	< 0.001	< 0.001
Thallium	2021-09	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Thallium	2022-04	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Thallium	2022-09	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Thallium	2023-04	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Thallium	2023-09	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Thallium	2024-04	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Thallium	2024-09	mg/L	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001	< 0.001
Thionazin	2009-03	ug/l							< 10	
Thionazin	2009-06	ug/l							< 10.0	
Thionazin	2009-09	ug/l							< 10.0	
Thionazin	2010-03	ug/l							< 10.0	
Thionazin	2010-09	ug/l							< 10.0	
Thionazin	2011-03	ug/l							< 12.0	
Thionazin	2014-06	ug/L			< 10.5					
Thionazin	2014-08	ug/L			< 10.2				< 10.8	
Thionazin	2015-10	ug/L				< 10			< 10	< 10
Thionazin	2016-07	ug/L				< 10.4				< 10.4
Thionazin	2019-10	ug/L			< 10.5	< 10.2			< 10.5	< 10.2

Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Thionazin	2020-09	ug/L				< 12.8			< 14.9	~~< 12.8~~
Thionazin	2024-09	ug/L			< 10.4	< 10.9			< 10.9	< 10.9
Tin	2009-03	mg/l							< 0.1	
Tin	2009-06	mg/l							< 0.100	
Tin	2009-09	mg/l							< 0.100	
Tin	2010-03	mg/l							< 0.100	
Tin	2010-09	mg/l							< 0.100	
Tin	2011-03	mg/l							**0.141**	
Tin	2011-09	mg/l							< 0.100	
Tin	2012-03	mg/l							< 0.100	
Tin	2012-09	mg/l							< 0.100	
Tin	2013-03	mg/l							< 0.100	
Tin	2013-06	mg/l				< 0.100				< 0.100
Tin	2013-09	mg/l				< 0.100			< 0.100	< 0.100
Tin	2013-11	mg/L				**0.376**				**0.376**
Tin	2014-03	mg/L				< 0.100			< 0.100	< 0.100
Tin	2014-06	mg/L			< 0.100	< 0.100				< 0.100
Tin	2014-08	mg/L			**0.0999 J**	**0.0791 J**			**0.0670 J**	**0.0791 J**
Tin	2014-12	mg/L			< 0.100	< 0.100			< 0.100	< 0.100
Tin	2015-04	mg/L			< 0.100	< 0.100			< 0.100	< 0.100
Tin	2015-09	mg/L			< 0.005					
Tin	2015-10	mg/L				< 0.005			< 0.005	< 0.005
Tin	2016-04	mg/L				< 0.005			< 0.005	< 0.005
Tin	2016-07	mg/L				< 0.005				< 0.005
Tin	2016-10	mg/L				< 0.005			< 0.005	< 0.005
Tin	2017-05	mg/L				< 0.005			< 0.005	< 0.005
Tin	2017-09	mg/L				< 0.005			< 0.005	< 0.005
Tin	2018-05	mg/L				< 0.005			< 0.005	< 0.005
Tin	2018-09	mg/L				< 0.005			< 0.005	< 0.005
Tin	2019-03	mg/L				< 0.005			< 0.005	< 0.005
Tin	2019-10	mg/L			< 0.01	< 0.01			< 0.01	< 0.01
Tin	2020-04	mg/L				< 0.005			< 0.005	< 0.005
Tin	2020-09	mg/L				< 0.005			< 0.005	~~< 0.005~~
Tin	2021-04	mg/L				< 0.005			< 0.005	< 0.005
Tin	2021-09	mg/L			< 0.005	< 0.005			< 0.005	< 0.005
Tin	2022-04	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Tin	2023-04	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Tin	2024-09	mg/L			< 0.005	< 0.005			< 0.005	< 0.005
Toluene	2008-04	ug/l							< 1.00	
Toluene	2008-06	ug/l							< 1.00	
Toluene	2008-08	ug/l							< 1.00	
Toluene	2008-09	ug/l							< 1.00	
Toluene	2009-03	ug/l							< 1	
Toluene	2009-06	ug/l							< 1.00	
Toluene	2009-09	ug/l				< 1.00			< 1.00	< 1.00
Toluene	2009-12	ug/l				< 1.00				< 1.00

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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Toluene	2010-03	ug/l							< 1.00	
Toluene	2010-04	ug/l				< 1.00				< 1.00
Toluene	2010-06	ug/l				< 1.00				< 1.00
Toluene	2010-09	ug/l				< 1.00			< 1.00	< 1.00
Toluene	2011-03	ug/l				< 1.00			< 1.00	< 1.00
Toluene	2011-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Toluene	2011-11	ug/l	< 1.00		< 1.00					
Toluene	2012-03	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Toluene	2012-06	ug/l	< 1.00		< 1.00					
Toluene	2012-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Toluene	2013-03	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Toluene	2013-06	ug/l			< 1.00	< 1.00			< 1.00	< 1.00
Toluene	2013-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Toluene	2013-11	ug/L				< 1.00			< 1.00	< 1.00
Toluene	2014-03	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Toluene	2014-06	ug/L			< 1.00	< 1.00			< 1.00 J	< 1.00
Toluene	2014-08	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Toluene	2014-12	ug/L			< 1.00	< 1.00			< 1.00	< 1.00
Toluene	2015-04	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Toluene	2015-09	ug/L			< 1					
Toluene	2015-10	ug/L	< 1			< 1			< 1	< 1
Toluene	2016-04	ug/L	< 1		< 1	< 1			< 1	< 1
Toluene	2016-07	ug/L				< 1				< 1
Toluene	2016-10	ug/L	< 1		< 1	< 1			< 1	< 1
Toluene	2017-05	ug/L	< 1		< 1	< 1			< 1	< 1
Toluene	2017-09	ug/L	< 1		< 1	< 1			< 1	< 1
Toluene	2018-05	ug/L			< 1	< 1			< 1	< 1
Toluene	2018-09	ug/L	< 1		< 1	< 1			< 1	< 1
Toluene	2019-03	ug/L	< 1		< 1	< 1			< 1	< 1
Toluene	2019-10	ug/L		< 1	< 1	< 1		< 1	< 1	< 1
Toluene	2020-04	ug/L		< 1	< 1	< 1	< 1	< 1	< 1	< 1
Toluene	2020-06	ug/L	< 1					< 1		
Toluene	2020-08	ug/L	< 1				< 1	< 1		
Toluene	2020-09	ug/L		< 1	< 1	< 1			< 1	~~< 1~~
Toluene	2020-12	ug/L					< 1	< 1		
Toluene	2021-02	ug/L					< 1			
Toluene	2021-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Toluene	2021-09	ug/L	< 1	< 1	< 1	< 1	**0.485 J**	< 1	< 1	< 1
Toluene	2022-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Toluene	2022-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Toluene	2023-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Toluene	2023-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Toluene	2024-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Toluene	2024-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Total Suspended Solids	2014-08	mg/L			**13.0**	**11.3**			< 5.00	**11.3**
Total Suspended Solids	2014-12	mg/L			**3.00**	**119**			< 2.50	**119**

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Total Suspended Solids	2015-04	mg/L			**7.40**	< 2.50			< 1.88	< 2.50
Total Suspended Solids	2015-09	mg/L			**15.3**					
Total Suspended Solids	2015-10	mg/L	< 1.88			**5.37**			< 1.88	**5.37**
Total Suspended Solids	2016-04	mg/L	**1.25 J**		**1.75 J**	**1.38 J**			**1 J**	**1.38 J**
Total Suspended Solids	2016-07	mg/L				**1.25 J**				**1.25 J**
Total Suspended Solids	2016-10	mg/L	**2.38**		**4.25**	**0.625 J**			**1.88**	**0.625 J**
Total Suspended Solids	2017-05	mg/L	**2.88**		**4.88**	< 1.88			**0.875 J**	< 1.88
Total Suspended Solids	2017-09	mg/L	**72.7**		**2.5**	**0.875 J**			< 1.88	**0.875 J**
Total Suspended Solids	2018-05	mg/L			**3.5**	**1.13 J**			**0.875 J**	**1.13 J**
Total Suspended Solids	2018-09	mg/L	**35**		**2.5**	**1.13 J**			< 1.88	**1.13 J**
Total Suspended Solids	2019-03	mg/L	**1.25 J**		**3.38**	**1 J**			**0.75 J**	**1 J**
Total Suspended Solids	2019-10	mg/L		**6**	**3.5**	**1.13 J**		**313**	< 1.88	**1.13 J**
Total Suspended Solids	2020-04	mg/L		**1.38 J**	**2.25**	**1.63 J**	**222**	**114**	< 1.88	**1.63 J**
Total Suspended Solids	2020-06	mg/L	**1.63 J**					**316**		
Total Suspended Solids	2020-08	mg/L	**4.13**				**474**	**202**		
Total Suspended Solids	2020-09	mg/L		< 1.88	**3.75**	< 2			< 2.05	~~< 2~~
Total Suspended Solids	2020-12	mg/L					**70.5**	**16.8**		
Total Suspended Solids	2021-02	mg/L					**13**			
Total Suspended Solids	2021-04	mg/L	**0.875 J**	**4.75**	**3.25**	< 1.88	**264**	**10.5**	**1 J**	< 1.88
Total Suspended Solids	2021-09	mg/L	**2**	**1.38 J**	**1.5 J**	**1.88**	**3.63**	**14**	< 1.88	**1.88**
Total Suspended Solids	2022-04	mg/L	< 1.88	**1.38 J**	**14.1**	< 1.88	**0.75 J**	**12.8**	< 1.88	< 1.88
Total Suspended Solids	2022-09	mg/L	**2.63**	**6.25**	**3.25**	**1.13 J**	**6.25**	**16.5**	**0.75 J**	**1.13 J**
Total Suspended Solids	2023-04	mg/L	< 5	**1.88**	< 1.88	< 1.88	**2.38**	**16.5**	< 1.88	< 1.88
Total Suspended Solids	2023-09	mg/L	**15.1**	**2.5**	**4.88**	**1.25 J**	**7.25**	**29.5**	**3**	**1.25 J**
Total Suspended Solids	2024-04	mg/L	< 5	**4.88**	**4.38**	**1.5 J**	**5.37**	**27.3**	< 1.88	**1.5 J**
Total Suspended Solids	2024-09	mg/L	< 1.88	**6**	**2**	< 1.88	**4.13**	**28.6**	< 1.88	< 1.88
Toxaphene	2009-03	ug/l							< 2	
Toxaphene	2009-06	ug/l							< 2.00	
Toxaphene	2009-09	ug/l							< 2.00	
Toxaphene	2010-03	ug/l							< 2.00	
Toxaphene	2010-09	ug/l							< 2.22	
Toxaphene	2011-03	ug/l							< 2.00	
Toxaphene	2011-09	ug/l							< 2.00	
Toxaphene	2012-03	ug/l							< 2.00	
Toxaphene	2013-03	ug/l							< 2.15	
Toxaphene	2013-09	ug/l							< 2.08	
Toxaphene	2014-03	ug/L							< 2.35	
Toxaphene	2014-06	ug/L			< 2.04					
Toxaphene	2014-08	ug/L			< 2.00				< 2.00	
Toxaphene	2015-04	ug/L							< 2.02	
Toxaphene	2015-10	ug/L				< 2			< 2	< 2
Toxaphene	2016-04	ug/L				< 2.04			< 2	< 2.04
Toxaphene	2016-07	ug/L				< 2				< 2
Toxaphene	2016-10	ug/L				< 2.04			< 2	< 2.04
Toxaphene	2017-05	ug/L				< 2.04			< 2.15	< 2.04
Toxaphene	2017-09	ug/L				< 2.15			< 2.13	< 2.15

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Toxaphene	2018-05	ug/L				< 2.15			< 2.15	< 2.15
Toxaphene	2018-09	ug/L				< 2.2			< 2.2	< 2.2
Toxaphene	2019-03	ug/L				< 2.22			< 0.341	< 2.22
Toxaphene	2019-10	ug/L			< 2.09	< 2.08			< 2.08	< 2.08
Toxaphene	2020-04	ug/L				< 2.82			< 2.67	< 2.82
Toxaphene	2020-09	ug/L				< 2.17			< 2.82	~~< 2.17~~
Toxaphene	2021-04	ug/L				< 2.27			< 2.67	< 2.27
Toxaphene	2021-09	ug/L				< 2.5			< 2.44	< 2.5
Toxaphene	2024-09	ug/L			< 2.17	< 2.08			< 2.08	< 2.08
trans-1,2-Dichloroethene	2008-04	ug/l							< 1.00	
trans-1,2-Dichloroethene	2008-06	ug/l							< 1.00	
trans-1,2-Dichloroethene	2008-08	ug/l							< 1.00	
trans-1,2-Dichloroethene	2008-09	ug/l							< 1.00	
trans-1,2-Dichloroethene	2009-03	ug/l							< 1	
trans-1,2-Dichloroethene	2009-06	ug/l							< 1.00	
trans-1,2-Dichloroethene	2009-09	ug/l				< 1.00			< 1.00	< 1.00
trans-1,2-Dichloroethene	2009-12	ug/l				< 1.00				< 1.00
trans-1,2-Dichloroethene	2010-03	ug/l							< 1.00	
trans-1,2-Dichloroethene	2010-04	ug/l				< 1.00				< 1.00
trans-1,2-Dichloroethene	2010-06	ug/l				< 1.00				< 1.00
trans-1,2-Dichloroethene	2010-09	ug/l				< 1.00			< 1.00	< 1.00
trans-1,2-Dichloroethene	2011-03	ug/l				< 1.00			< 1.00	< 1.00
trans-1,2-Dichloroethene	2011-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
trans-1,2-Dichloroethene	2011-11	ug/l	< 1.00		< 1.00					
trans-1,2-Dichloroethene	2012-03	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
trans-1,2-Dichloroethene	2012-06	ug/l	< 1.00		< 1.00					
trans-1,2-Dichloroethene	2012-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
trans-1,2-Dichloroethene	2013-03	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
trans-1,2-Dichloroethene	2013-06	ug/l			< 1.00	< 1.00			< 1.00	< 1.00
trans-1,2-Dichloroethene	2013-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
trans-1,2-Dichloroethene	2013-11	ug/L				< 1.00			< 1.00	< 1.00
trans-1,2-Dichloroethene	2014-03	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
trans-1,2-Dichloroethene	2014-06	ug/L			< 1.00	< 1.00			< 1.00	< 1.00
trans-1,2-Dichloroethene	2014-08	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
trans-1,2-Dichloroethene	2014-12	ug/L			**0.281 J**	< 1.00			< 1.00	< 1.00
trans-1,2-Dichloroethene	2015-04	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
trans-1,2-Dichloroethene	2015-09	ug/L			**0.986 J**					
trans-1,2-Dichloroethene	2015-10	ug/L	< 1			< 1			< 1	< 1
trans-1,2-Dichloroethene	2016-04	ug/L	< 1		**0.509 J**	< 1			< 1	< 1
trans-1,2-Dichloroethene	2016-07	ug/L				< 1				< 1
trans-1,2-Dichloroethene	2016-10	ug/L	< 1		**0.443 J**	< 1			< 1	< 1
trans-1,2-Dichloroethene	2017-05	ug/L	< 1		**0.458 J**	< 1			< 1	< 1
trans-1,2-Dichloroethene	2017-09	ug/L	< 1		**0.535 J**	< 1			< 1	< 1
trans-1,2-Dichloroethene	2018-05	ug/L			**0.338 J**	< 1			< 1	< 1
trans-1,2-Dichloroethene	2018-09	ug/L	< 1		**0.342 J**	< 1			< 1	< 1
trans-1,2-Dichloroethene	2019-03	ug/L	< 1		< 1	< 1			< 1	< 1

Table 13
Carroll County Landfill Western Expansion Area **Analytical Data Summary**
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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
trans-1,2-Dichloroethene	2019-10	ug/L		< 1	**0.462 J**	< 1		< 1	< 1	< 1
trans-1,2-Dichloroethene	2020-04	ug/L		< 1	**0.362 J**	< 1	< 1	< 1	< 1	< 1
trans-1,2-Dichloroethene	2020-06	ug/L	< 1					< 1		
trans-1,2-Dichloroethene	2020-08	ug/L	< 1				< 1	< 1		
trans-1,2-Dichloroethene	2020-09	ug/L		< 1	**0.386 J**	< 1			< 1	~~< 1~~
trans-1,2-Dichloroethene	2020-12	ug/L					< 1	< 1		
trans-1,2-Dichloroethene	2021-02	ug/L					< 1			
trans-1,2-Dichloroethene	2021-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
trans-1,2-Dichloroethene	2021-09	ug/L	< 1	< 1	**0.326 J**	< 1	< 1	< 1	< 1	< 1
trans-1,2-Dichloroethene	2022-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
trans-1,2-Dichloroethene	2022-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
trans-1,2-Dichloroethene	2023-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
trans-1,2-Dichloroethene	2023-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
trans-1,2-Dichloroethene	2024-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
trans-1,2-Dichloroethene	2024-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
trans-1,3-Dichloropropene	2008-04	ug/l							< 5.00	
trans-1,3-Dichloropropene	2008-06	ug/l							< 5.00	
trans-1,3-Dichloropropene	2008-08	ug/l							< 5.00	
trans-1,3-Dichloropropene	2008-09	ug/l							< 5.00	
trans-1,3-Dichloropropene	2009-03	ug/l							< 5	
trans-1,3-Dichloropropene	2009-06	ug/l							< 5.00	
trans-1,3-Dichloropropene	2009-09	ug/l				< 5.00			< 5.00	< 5.00
trans-1,3-Dichloropropene	2009-12	ug/l				< 5.00				< 5.00
trans-1,3-Dichloropropene	2010-03	ug/l							< 20.0	
trans-1,3-Dichloropropene	2010-04	ug/l				< 20.0				< 20.0
trans-1,3-Dichloropropene	2010-06	ug/l				< 5.00				< 5.00
trans-1,3-Dichloropropene	2010-09	ug/l				< 10.0			< 10.0	< 10.0
trans-1,3-Dichloropropene	2011-03	ug/l				< 5.00			< 5.00	< 5.00
trans-1,3-Dichloropropene	2011-09	ug/l	< 5.00		< 5.00	< 5.00			< 5.00	< 5.00
trans-1,3-Dichloropropene	2011-11	ug/l	< 5.00		< 5.00					
trans-1,3-Dichloropropene	2012-03	ug/l	< 5.00		< 5.00	< 5.00			< 5.00	< 5.00
trans-1,3-Dichloropropene	2012-06	ug/l	< 5.00		< 5.00					
trans-1,3-Dichloropropene	2012-09	ug/l	< 5.00		< 5.00	< 5.00			< 5.00	< 5.00
trans-1,3-Dichloropropene	2013-03	ug/l	< 5.00		< 5.00	< 5.00			< 5.00	< 5.00
trans-1,3-Dichloropropene	2013-06	ug/l			< 5.00	< 5.00			< 5.00	< 5.00
trans-1,3-Dichloropropene	2013-09	ug/l	< 5.00		< 5.00	< 5.00			< 5.00	< 5.00
trans-1,3-Dichloropropene	2013-11	ug/L				< 5.00			< 5.00	< 5.00
trans-1,3-Dichloropropene	2014-03	ug/L	< 5.00		< 5.00	< 5.00			< 5.00	< 5.00
trans-1,3-Dichloropropene	2014-06	ug/L			< 5.00	< 5.00			< 5.00	< 5.00
trans-1,3-Dichloropropene	2014-08	ug/L	< 5.00		< 5.00	< 5.00			< 5.00	< 5.00
trans-1,3-Dichloropropene	2014-12	ug/L			< 5.00	< 5.00			< 5.00	< 5.00
trans-1,3-Dichloropropene	2015-04	ug/L	< 5.00		< 5.00	< 5.00			< 5.00	< 5.00
trans-1,3-Dichloropropene	2015-09	ug/L			< 5					
trans-1,3-Dichloropropene	2015-10	ug/L	< 5			< 5			< 5	< 5
trans-1,3-Dichloropropene	2016-04	ug/L	< 5		< 5	< 5			< 5	< 5
trans-1,3-Dichloropropene	2016-07	ug/L				< 5				< 5

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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
trans-1,3-Dichloropropene	2016-10	ug/L	< 5		< 5	< 5			< 5	< 5
trans-1,3-Dichloropropene	2017-05	ug/L	< 5		< 5	< 5			< 5	< 5
trans-1,3-Dichloropropene	2017-09	ug/L	< 5		< 5	< 5			< 5	< 5
trans-1,3-Dichloropropene	2018-05	ug/L			< 5	< 5			< 5	< 5
trans-1,3-Dichloropropene	2018-09	ug/L	< 5		< 5	< 5			< 5	< 5
trans-1,3-Dichloropropene	2019-03	ug/L	< 5		< 5	< 5			< 5	< 5
trans-1,3-Dichloropropene	2019-10	ug/L		< 5	< 5	< 5		< 5	< 5	< 5
trans-1,3-Dichloropropene	2020-04	ug/L		< 5	< 5	< 5	< 5	< 5	< 5	< 5
trans-1,3-Dichloropropene	2020-06	ug/L	< 5					< 5		
trans-1,3-Dichloropropene	2020-08	ug/L	< 5				< 5	< 5		
trans-1,3-Dichloropropene	2020-09	ug/L		< 5	< 5	< 5			< 5	~~< 5~~
trans-1,3-Dichloropropene	2020-12	ug/L					< 5	< 5		
trans-1,3-Dichloropropene	2021-02	ug/L					< 5			
trans-1,3-Dichloropropene	2021-04	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
trans-1,3-Dichloropropene	2021-09	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
trans-1,3-Dichloropropene	2022-04	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
trans-1,3-Dichloropropene	2022-09	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
trans-1,3-Dichloropropene	2023-04	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
trans-1,3-Dichloropropene	2023-09	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
trans-1,3-Dichloropropene	2024-04	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
trans-1,3-Dichloropropene	2024-09	ug/L	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
trans-1,4-Dichloro-2-butene	2008-04	ug/l							< 10.0	
trans-1,4-Dichloro-2-butene	2008-06	ug/l							< 10.0	
trans-1,4-Dichloro-2-butene	2008-08	ug/l							< 10.0	
trans-1,4-Dichloro-2-butene	2008-09	ug/l							< 10.0	
trans-1,4-Dichloro-2-butene	2009-03	ug/l							< 10	
trans-1,4-Dichloro-2-butene	2009-06	ug/l							< 10.0	
trans-1,4-Dichloro-2-butene	2009-09	ug/l				< 10.0			< 10.0	< 10.0
trans-1,4-Dichloro-2-butene	2009-12	ug/l				< 10.0				< 10.0
trans-1,4-Dichloro-2-butene	2010-03	ug/l							< 10.0	
trans-1,4-Dichloro-2-butene	2010-04	ug/l				< 10.0				< 10.0
trans-1,4-Dichloro-2-butene	2010-06	ug/l				< 10.0				< 10.0
trans-1,4-Dichloro-2-butene	2010-09	ug/l				< 10.0			< 10.0	< 10.0
trans-1,4-Dichloro-2-butene	2011-03	ug/l				< 10.0			< 10.0	< 10.0
trans-1,4-Dichloro-2-butene	2011-09	ug/l	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
trans-1,4-Dichloro-2-butene	2011-11	ug/l	< 10.0		< 10.0					
trans-1,4-Dichloro-2-butene	2012-03	ug/l	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
trans-1,4-Dichloro-2-butene	2012-06	ug/l	< 10.0		< 10.0					
trans-1,4-Dichloro-2-butene	2012-09	ug/l	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
trans-1,4-Dichloro-2-butene	2013-03	ug/l	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
trans-1,4-Dichloro-2-butene	2013-06	ug/l			< 10.0	< 10.0			< 10.0	< 10.0
trans-1,4-Dichloro-2-butene	2013-09	ug/l	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
trans-1,4-Dichloro-2-butene	2013-11	ug/L				< 10.0			< 10.0	< 10.0
trans-1,4-Dichloro-2-butene	2014-03	ug/L	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
trans-1,4-Dichloro-2-butene	2014-06	ug/L			< 10.0	< 10.0			< 10.0	< 10.0
trans-1,4-Dichloro-2-butene	2014-08	ug/L	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0

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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
trans-1,4-Dichloro-2-butene	2014-12	ug/L			< 10.0	< 10.0			< 10.0	< 10.0
trans-1,4-Dichloro-2-butene	2015-04	ug/L	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
trans-1,4-Dichloro-2-butene	2015-09	ug/L			< 10					
trans-1,4-Dichloro-2-butene	2015-10	ug/L	< 10			< 10			< 10	< 10
trans-1,4-Dichloro-2-butene	2016-04	ug/L	< 10		< 10	< 10			< 10	< 10
trans-1,4-Dichloro-2-butene	2016-07	ug/L				< 10				< 10
trans-1,4-Dichloro-2-butene	2016-10	ug/L	< 10		< 10	< 10			< 10	< 10
trans-1,4-Dichloro-2-butene	2017-05	ug/L	< 10		< 10	< 10			< 10	< 10
trans-1,4-Dichloro-2-butene	2017-09	ug/L	< 10		< 10	< 10			< 10	< 10
trans-1,4-Dichloro-2-butene	2018-05	ug/L			< 10	< 10			< 10	< 10
trans-1,4-Dichloro-2-butene	2018-09	ug/L	< 10		< 10	< 10			< 10	< 10
trans-1,4-Dichloro-2-butene	2019-03	ug/L	< 10		< 10	< 10			< 10	< 10
trans-1,4-Dichloro-2-butene	2019-10	ug/L		< 10	< 10	< 10		< 10	< 10	< 10
trans-1,4-Dichloro-2-butene	2020-04	ug/L		< 10	< 10	< 10	< 10	< 10	< 10	< 10
trans-1,4-Dichloro-2-butene	2020-06	ug/L	< 10					< 10		
trans-1,4-Dichloro-2-butene	2020-08	ug/L	< 10				< 10	< 10		
trans-1,4-Dichloro-2-butene	2020-09	ug/L		< 10	< 10	< 10			< 10	~~< 10~~
trans-1,4-Dichloro-2-butene	2020-12	ug/L					< 10	< 10		
trans-1,4-Dichloro-2-butene	2021-02	ug/L					< 10			
trans-1,4-Dichloro-2-butene	2021-04	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
trans-1,4-Dichloro-2-butene	2021-09	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
trans-1,4-Dichloro-2-butene	2022-04	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
trans-1,4-Dichloro-2-butene	2022-09	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
trans-1,4-Dichloro-2-butene	2023-04	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
trans-1,4-Dichloro-2-butene	2023-09	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
trans-1,4-Dichloro-2-butene	2024-04	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
trans-1,4-Dichloro-2-butene	2024-09	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Trichloroethene	2008-04	ug/l							< 1.00	
Trichloroethene	2008-06	ug/l							< 1.00	
Trichloroethene	2008-08	ug/l							< 1.00	
Trichloroethene	2008-09	ug/l							< 1.00	
Trichloroethene	2009-03	ug/l							< 1	
Trichloroethene	2009-06	ug/l							< 1.00	
Trichloroethene	2009-09	ug/l				< 1.00			< 1.00	< 1.00
Trichloroethene	2009-12	ug/l				< 1.00				< 1.00
Trichloroethene	2010-03	ug/l							< 1.00	
Trichloroethene	2010-04	ug/l				< 1.00				< 1.00
Trichloroethene	2010-06	ug/l				< 1.00				< 1.00
Trichloroethene	2010-09	ug/l				< 1.00			< 1.00	< 1.00
Trichloroethene	2011-03	ug/l				< 1.00			< 1.00	< 1.00
Trichloroethene	2011-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Trichloroethene	2011-11	ug/l	< 1.00		< 1.00					
Trichloroethene	2012-03	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Trichloroethene	2012-06	ug/l	< 1.00		< 1.00					
Trichloroethene	2012-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Trichloroethene	2013-03	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00

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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Trichloroethene	2013-06	ug/l			< 1.00	< 1.00			< 1.00	< 1.00
Trichloroethene	2013-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Trichloroethene	2013-11	ug/L				< 1.00			< 1.00	< 1.00
Trichloroethene	2014-03	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Trichloroethene	2014-06	ug/L			< 1.00	< 1.00			< 1.00	< 1.00
Trichloroethene	2014-08	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Trichloroethene	2014-12	ug/L			< 1.00	< 1.00			< 1.00	< 1.00
Trichloroethene	2015-04	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Trichloroethene	2015-09	ug/L			< 1					
Trichloroethene	2015-10	ug/L	< 1			< 1			< 1	< 1
Trichloroethene	2016-04	ug/L	< 1		< 1	< 1			< 1	< 1
Trichloroethene	2016-07	ug/L				< 1				< 1
Trichloroethene	2016-10	ug/L	< 1		< 1	< 1			< 1	< 1
Trichloroethene	2017-05	ug/L	< 1		< 1	< 1			< 1	< 1
Trichloroethene	2017-09	ug/L	< 1		< 1	< 1			< 1	< 1
Trichloroethene	2018-05	ug/L			< 1	< 1			< 1	< 1
Trichloroethene	2018-09	ug/L	< 1		< 1	< 1			< 1	< 1
Trichloroethene	2019-03	ug/L	< 1		< 1	< 1			< 1	< 1
Trichloroethene	2019-10	ug/L		< 1	< 1	< 1		< 1	< 1	< 1
Trichloroethene	2020-04	ug/L		< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethene	2020-06	ug/L	< 1					< 1		
Trichloroethene	2020-08	ug/L	< 1				< 1	< 1		
Trichloroethene	2020-09	ug/L		< 1	< 1	< 1			< 1	~~< 1~~
Trichloroethene	2020-12	ug/L					< 1	< 1		
Trichloroethene	2021-02	ug/L					< 1			
Trichloroethene	2021-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethene	2021-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethene	2022-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethene	2022-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethene	2023-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethene	2023-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethene	2024-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethene	2024-09	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Vanadium	2008-04	mg/l							< 0.0500	
Vanadium	2008-06	mg/l							< 0.0500	
Vanadium	2008-08	mg/l							< 0.0500	
Vanadium	2008-09	mg/l							< 0.0500	
Vanadium	2009-03	mg/l							< 0.05	
Vanadium	2009-06	mg/l							< 0.0500	
Vanadium	2009-09	mg/l				< 0.0500			< 0.0500	< 0.0500
Vanadium	2009-12	mg/l				0.0921				0.0921
Vanadium	2010-03	mg/l							< 0.0500	
Vanadium	2010-04	mg/l				< 0.0500				< 0.0500
Vanadium	2010-06	mg/l				< 0.0500				< 0.0500
Vanadium	2010-09	mg/l				< 0.0500			< 0.0500	< 0.0500
Vanadium	2011-03	mg/l				< 0.0500			< 0.0500	< 0.0500

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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Vanadium	2011-09	mg/l	< 0.0500		< 0.0500	< 0.0500			< 0.0500	< 0.0500
Vanadium	2011-11	mg/l	< 0.0500		< 0.0500					
Vanadium	2012-03	mg/l	< 0.0500		< 0.0500	< 0.0500			< 0.0500	< 0.0500
Vanadium	2012-06	mg/l	< 0.0500		< 0.0500					
Vanadium	2012-09	mg/l	< 0.0500		< 0.0500	< 0.0500			< 0.0500	< 0.0500
Vanadium	2013-03	mg/l	< 0.0500		0.00334 J	0.0151 J			< 0.0500	0.0151 J
Vanadium	2013-06	mg/l				< 0.0500				< 0.0500
Vanadium	2013-09	mg/l	< 0.0500		< 0.0500	< 0.0500			< 0.0500	< 0.0500
Vanadium	2013-11	mg/L				< 0.0500				< 0.0500
Vanadium	2014-03	mg/L	< 0.0500		< 0.0500	< 0.0500			< 0.0500	< 0.0500
Vanadium	2014-06	mg/L			< 0.0500	< 0.0500				< 0.0500
Vanadium	2014-08	mg/L	0.000943 J		0.000631 J	0.000915 J			< 0.00500	0.000915 J
Vanadium	2014-12	mg/L			< 0.00500	0.00166 J			0.000487 J	0.00166 J
Vanadium	2015-04	mg/L	0.000741 J		< 0.00500	0.000687 J			0.000465 J	0.000687 J
Vanadium	2015-09	mg/L			0.000622 J					
Vanadium	2015-10	mg/L	0.00113 J			0.000765 J			< 0.005	0.000765 J
Vanadium	2016-04	mg/L	0.000871 J		< 0.005	0.000629 J			0.000304 J	0.000629 J
Vanadium	2016-07	mg/L				0.000529 J				0.000529 J
Vanadium	2016-10	mg/L	0.00117 J		0.00032 J	0.000612 J			0.00045 J	0.000612 J
Vanadium	2017-05	mg/L	0.00137 J		< 0.005	0.00115 J			< 0.005	0.00115 J
Vanadium	2017-09	mg/L	0.00105 J		< 0.005	< 0.005			< 0.005	< 0.005
Vanadium	2018-05	mg/L			< 0.005	0.000641 J			< 0.005	0.000641 J
Vanadium	2018-09	mg/L	0.0136		< 0.005	< 0.005			< 0.005	< 0.005
Vanadium	2019-03	mg/L	0.0012 J		< 0.005	0.00112 J			< 0.005	0.00112 J
Vanadium	2019-10	mg/L		< 0.005	< 0.005	< 0.01		~~< 0.005~~	< 0.005	< 0.01
Vanadium	2020-04	mg/L		< 0.005	< 0.005	< 0.005	~~0.00157 J~~	~~< 0.005~~	< 0.005	< 0.005
Vanadium	2020-06	mg/L	0.00102 J					~~0.0036 J~~		
Vanadium	2020-08	mg/L	0.00165 J				~~0.00436 J~~	~~0.003 J~~		
Vanadium	2020-09	mg/L		< 0.005	< 0.005	0.00093 J			< 0.005	~~0.00093 J~~
Vanadium	2020-12	mg/L					~~< 0.005~~	< 0.005		
Vanadium	2021-02	mg/L					~~< 0.005~~			
Vanadium	2021-04	mg/L	0.00114 J	< 0.005	< 0.005	< 0.005	~~< 0.005~~	< 0.005	< 0.005	< 0.005
Vanadium	2021-09	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Vanadium	2022-04	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Vanadium	2022-09	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Vanadium	2023-04	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Vanadium	2023-09	mg/L	0.00155 J	< 0.005	< 0.005	0.00114 J	< 0.005	< 0.005	< 0.005	0.00114 J
Vanadium	2024-04	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Vanadium	2024-09	mg/L	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Vinyl Acetate	2008-04	ug/l							< 2.00	
Vinyl Acetate	2008-06	ug/l							< 2.00	
Vinyl Acetate	2008-08	ug/l							< 2.00	
Vinyl Acetate	2008-09	ug/l							< 2.00	
Vinyl Acetate	2009-03	ug/l							< 2	
Vinyl Acetate	2009-06	ug/l							< 2.00	
Vinyl Acetate	2009-09	ug/l				< 2.00			< 2.00	< 2.00

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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Vinyl Acetate	2009-12	ug/l				< 2.00				< 2.00
Vinyl Acetate	2010-03	ug/l							< 2.00	
Vinyl Acetate	2010-04	ug/l				< 2.00				< 2.00
Vinyl Acetate	2010-06	ug/l				< 2.00				< 2.00
Vinyl Acetate	2010-09	ug/l				< 2.00			< 2.00	< 2.00
Vinyl Acetate	2011-03	ug/l				< 2.00			< 2.00	< 2.00
Vinyl Acetate	2011-09	ug/l	< 2.00		< 2.00	< 2.00			< 2.00	< 2.00
Vinyl Acetate	2011-11	ug/l	< 20.0		< 20.0					
Vinyl Acetate	2012-03	ug/l	< 2.00		< 10.0	< 10.0			< 10.0	< 10.0
Vinyl Acetate	2012-06	ug/l	< 2.00		< 2.00					
Vinyl Acetate	2012-09	ug/l	< 4.00		< 4.00	< 4.00			< 4.00	< 4.00
Vinyl Acetate	2013-03	ug/l	< 2.00		< 2.00	< 2.00			< 2.00	< 2.00
Vinyl Acetate	2013-06	ug/l			< 2.00	< 2.00			< 2.00	< 2.00
Vinyl Acetate	2013-09	ug/l	< 2.00		< 2.00	< 2.00			< 2.00	< 2.00
Vinyl Acetate	2013-11	ug/L				< 2.00			< 2.00	< 2.00
Vinyl Acetate	2014-03	ug/L	< 2.00		< 2.00	< 2.00			< 2.00	< 2.00
Vinyl Acetate	2014-06	ug/L			< 2.00	< 2.00			< 2.00	< 2.00
Vinyl Acetate	2014-08	ug/L	< 2.00		< 2.00	< 2.00			< 2.00	< 2.00
Vinyl Acetate	2014-12	ug/L			< 10.0	< 10.0			< 10.0	< 10.0
Vinyl Acetate	2015-04	ug/L	< 10.0		< 10.0	< 10.0			< 10.0	< 10.0
Vinyl Acetate	2015-09	ug/L			< 10					
Vinyl Acetate	2015-10	ug/L	< 10			< 10			< 10	< 10
Vinyl Acetate	2016-04	ug/L	< 10		< 10	< 10			< 10	< 10
Vinyl Acetate	2016-07	ug/L				< 10				< 10
Vinyl Acetate	2016-10	ug/L	< 10		< 10	< 10			< 10	< 10
Vinyl Acetate	2017-05	ug/L	< 10		< 10	< 10			< 10	< 10
Vinyl Acetate	2017-09	ug/L	< 10		< 10	< 10			< 10	< 10
Vinyl Acetate	2018-05	ug/L			< 10	< 10			< 10	< 10
Vinyl Acetate	2018-09	ug/L	< 10		< 10	< 10			< 10	< 10
Vinyl Acetate	2019-03	ug/L	< 10		< 10	< 10			< 10	< 10
Vinyl Acetate	2019-10	ug/L		< 10	< 10	< 10		< 10	< 10	< 10
Vinyl Acetate	2020-04	ug/L		< 10	< 10	< 10	< 10	< 10	< 10	< 10
Vinyl Acetate	2020-06	ug/L	< 10					< 10		
Vinyl Acetate	2020-08	ug/L	< 10				< 10	< 10		
Vinyl Acetate	2020-09	ug/L		< 10	< 10	< 10			< 10	~~< 10~~
Vinyl Acetate	2020-12	ug/L					< 10	< 10		
Vinyl Acetate	2021-02	ug/L					< 10			
Vinyl Acetate	2021-04	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Vinyl Acetate	2021-09	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Vinyl Acetate	2022-04	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Vinyl Acetate	2022-09	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Vinyl Acetate	2023-04	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Vinyl Acetate	2023-09	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Vinyl Acetate	2024-04	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Vinyl Acetate	2024-09	ug/L	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Vinyl Chloride	2008-04	ug/l							< 1.00	

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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Vinyl Chloride	2008-06	ug/l							< 1.00	
Vinyl Chloride	2008-08	ug/l							< 1.00	
Vinyl Chloride	2008-09	ug/l							< 1.00	
Vinyl Chloride	2009-03	ug/l							< 1	
Vinyl Chloride	2009-06	ug/l							< 1.00	
Vinyl Chloride	2009-09	ug/l				< 1.00			< 1.00	< 1.00
Vinyl Chloride	2009-12	ug/l				< 1.00				< 1.00
Vinyl Chloride	2010-03	ug/l							< 1.00	
Vinyl Chloride	2010-04	ug/l				< 1.00				< 1.00
Vinyl Chloride	2010-06	ug/l				< 1.00				< 1.00
Vinyl Chloride	2010-09	ug/l				< 1.00			< 1.00	< 1.00
Vinyl Chloride	2011-03	ug/l				< 1.00			< 1.00	< 1.00
Vinyl Chloride	2011-09	ug/l	< 1.00		1.18	< 1.00			< 1.00	< 1.00
Vinyl Chloride	2011-11	ug/l	< 1.00		1.52					
Vinyl Chloride	2012-03	ug/l	< 1.00		1.34	< 1.00			< 1.00	< 1.00
Vinyl Chloride	2012-06	ug/l	< 1.00		< 1.00					
Vinyl Chloride	2012-09	ug/l	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Vinyl Chloride	2013-03	ug/l	< 1.00		0.891 J	< 1.00			< 1.00	< 1.00
Vinyl Chloride	2013-06	ug/l			0.205 J	< 1.00			< 1.00	< 1.00
Vinyl Chloride	2013-09	ug/l	< 1.00		0.488 J	< 1.00			< 1.00	< 1.00
Vinyl Chloride	2013-11	ug/L				< 1.00			< 1.00	< 1.00
Vinyl Chloride	2014-03	ug/L	< 1.00		< 1.00 J	< 1.00			< 1.00	< 1.00
Vinyl Chloride	2014-06	ug/L			< 1.00	< 1.00			< 1.00	< 1.00
Vinyl Chloride	2014-08	ug/L	< 1.00		< 1.00	< 1.00			< 1.00	< 1.00
Vinyl Chloride	2014-12	ug/L			1.85	< 1.00			< 1.00	< 1.00
Vinyl Chloride	2015-04	ug/L	< 1.00		0.812 J	< 1.00			< 1.00	< 1.00
Vinyl Chloride	2015-09	ug/L			4.62					
Vinyl Chloride	2015-10	ug/L	< 1			< 1			< 1	< 1
Vinyl Chloride	2016-04	ug/L	< 1		4.28	< 1			< 1	< 1
Vinyl Chloride	2016-07	ug/L				< 1				< 1
Vinyl Chloride	2016-10	ug/L	< 1		3.48	< 1			< 1	< 1
Vinyl Chloride	2017-05	ug/L	< 1		2.59	< 1			< 1	< 1
Vinyl Chloride	2017-09	ug/L	< 1		3.36	< 1			< 1	< 1
Vinyl Chloride	2018-05	ug/L			1.39	< 1			< 1	< 1
Vinyl Chloride	2018-09	ug/L	< 1		3.08	< 1			< 1	< 1
Vinyl Chloride	2019-03	ug/L	< 1		2.13	< 1			< 1	< 1
Vinyl Chloride	2019-10	ug/L		0.609 J	1.93	< 1		< 1	< 1	< 1
Vinyl Chloride	2020-04	ug/L		0.333 J	1.51	< 1	< 1	< 1	< 1	< 1
Vinyl Chloride	2020-06	ug/L	< 1					< 1		
Vinyl Chloride	2020-08	ug/L	< 1				< 1	< 1		
Vinyl Chloride	2020-09	ug/L		0.307 J	2.12	< 1			< 1	~~< 1~~
Vinyl Chloride	2020-12	ug/L					< 1	< 1		
Vinyl Chloride	2021-02	ug/L					< 1			
Vinyl Chloride	2021-04	ug/L	< 1	< 1	1.05	< 1	< 1	< 1	< 1	< 1
Vinyl Chloride	2021-09	ug/L	< 1	< 1	1.04	< 1	< 1	< 1	< 1	< 1
Vinyl Chloride	2022-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1

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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Vinyl Chloride	2022-09	ug/L	< 1	< 1	0.773 J	< 1	< 1	< 1	< 1	< 1
Vinyl Chloride	2023-04	ug/L	< 1	< 1	0.327 J	< 1	< 1	< 1	< 1	< 1
Vinyl Chloride	2023-09	ug/L	< 1	< 1	0.616 J	< 1	< 1	< 1	< 1	< 1
Vinyl Chloride	2024-04	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Vinyl Chloride	2024-09	ug/L	< 1	< 1	0.592 J	< 1	< 1	< 1	< 1	< 1
Xylenes, Total	2008-04	ug/l							< 3.00	
Xylenes, Total	2008-06	ug/l							< 3.00	
Xylenes, Total	2008-08	ug/l							< 3.00	
Xylenes, Total	2008-09	ug/l							< 3.00	
Xylenes, Total	2009-03	ug/l							< 3	
Xylenes, Total	2009-06	ug/l							< 3.00	
Xylenes, Total	2009-09	ug/l				< 3.00			< 3.00	< 3.00
Xylenes, Total	2009-12	ug/l				< 4.00				< 4.00
Xylenes, Total	2010-03	ug/l							< 6.00	
Xylenes, Total	2010-04	ug/l				< 6.00				< 6.00
Xylenes, Total	2010-06	ug/l				< 3.00				< 3.00
Xylenes, Total	2010-09	ug/l				< 3.00			< 3.00	< 3.00
Xylenes, Total	2011-03	ug/l				< 3.00			< 3.00	< 3.00
Xylenes, Total	2011-09	ug/l	< 3.00		< 3.00	< 3.00			< 3.00	< 3.00
Xylenes, Total	2011-11	ug/l	< 3.00		< 3.00					
Xylenes, Total	2012-03	ug/l	< 3.00		< 3.00	< 3.00			< 3.00	< 3.00
Xylenes, Total	2012-06	ug/l	< 3.00		< 3.00					
Xylenes, Total	2012-09	ug/l	< 3.00		< 3.00	< 3.00			< 3.00	< 3.00
Xylenes, Total	2013-03	ug/l	< 3.00		< 3.00	< 3.00			< 3.00	< 3.00
Xylenes, Total	2013-06	ug/l			< 3.00	< 3.00			< 3.00	< 3.00
Xylenes, Total	2013-09	ug/l	< 3.00		< 3.00	< 3.00			< 3.00	< 3.00
Xylenes, Total	2013-11	ug/L				< 3.00			< 3.00	< 3.00
Xylenes, Total	2014-03	ug/L	< 3.00		< 3.00	< 3.00			< 3.00	< 3.00
Xylenes, Total	2014-06	ug/L			< 3.00	< 3.00			< 3.00	< 3.00
Xylenes, Total	2014-08	ug/L	< 3.00		< 2.00	< 3.00			< 2.00	< 3.00
Xylenes, Total	2014-12	ug/L			< 3.00	< 3.00			< 3.00	< 3.00
Xylenes, Total	2015-04	ug/L	< 3.00		< 3.00	< 3.00			< 3.00	< 3.00
Xylenes, Total	2015-09	ug/L			< 3					
Xylenes, Total	2015-10	ug/L	< 3			< 3			< 3	< 3
Xylenes, Total	2016-04	ug/L	< 3		< 3	< 3			< 3	< 3
Xylenes, Total	2016-07	ug/L				< 3				< 3
Xylenes, Total	2016-10	ug/L	< 3		< 3	< 3			< 3	< 3
Xylenes, Total	2017-05	ug/L	< 3		< 3	< 3			< 3	< 3
Xylenes, Total	2017-09	ug/L	< 3		< 3	< 3			< 3	< 3
Xylenes, Total	2018-05	ug/L			< 3	< 3			< 3	< 3
Xylenes, Total	2018-09	ug/L	< 3		< 3	< 3			< 3	< 3
Xylenes, Total	2019-03	ug/L	< 3		< 3	< 3			< 3	< 3
Xylenes, Total	2019-10	ug/L		< 3	< 3	< 3		< 3	< 3	< 3
Xylenes, Total	2020-04	ug/L		< 3	< 3	< 3	< 3	< 3	< 3	< 3
Xylenes, Total	2020-06	ug/L	< 3					< 3		
Xylenes, Total	2020-08	ug/L	< 3				< 3	< 3		

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Constituent	Date	Units	GU-2A (DwnGrad)	MW-119RR (DwnGrad)	MW-121R (DwnGrad)	MW-200 (DwnGrad)	MW-205 (DwnGrad)	MW-206 (DwnGrad)	MW-122R (Bkgrnd)	MW-200* (Bkgrnd)
Xylenes, Total	2020-09	ug/L		< 3	< 3	< 3			< 3	~~< 3~~
Xylenes, Total	2020-12	ug/L					< 3	< 3		
Xylenes, Total	2021-02	ug/L					< 3			
Xylenes, Total	2021-04	ug/L	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
Xylenes, Total	2021-09	ug/L	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
Xylenes, Total	2022-04	ug/L	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
Xylenes, Total	2022-09	ug/L	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
Xylenes, Total	2023-04	ug/L	< 3 J	< 3	< 3	< 3	< 3	< 3	< 3	< 3
Xylenes, Total	2023-09	ug/L	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
Xylenes, Total	2024-04	ug/L	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
Xylenes, Total	2024-09	ug/L	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
Zinc	2008-04	mg/l							0.0227	
Zinc	2008-06	mg/l							0.0579	
Zinc	2008-08	mg/l							0.0756	
Zinc	2008-09	mg/l							0.0370	
Zinc	2009-03	mg/l							0.0303	
Zinc	2009-06	mg/l							0.0360	
Zinc	2009-09	mg/l				0.0651			0.0283	0.0651
Zinc	2009-12	mg/l				0.224				0.224
Zinc	2010-03	mg/l							0.0232	
Zinc	2010-04	mg/l				0.0232				0.0232
Zinc	2010-06	mg/l				0.0296				0.0296
Zinc	2010-09	mg/l				0.0326			0.0241	0.0326
Zinc	2011-03	mg/l				< 0.0200			< 0.0200	< 0.0200
Zinc	2011-09	mg/l	< 0.0200		< 0.0200	< 0.0200			< 0.0200	< 0.0200
Zinc	2011-11	mg/l	< 0.0200		< 0.0200					
Zinc	2012-03	mg/l	< 0.0200		< 0.0200	< 0.0200			< 0.0200	< 0.0200
Zinc	2012-06	mg/l	< 0.0200		0.0436					
Zinc	2012-09	mg/l	< 0.0200		< 0.0200	< 0.0200			< 0.0200	< 0.0200
Zinc	2013-03	mg/l	0.0284		0.0733	0.0853			0.0313	0.0853
Zinc	2013-06	mg/l				0.0546				0.0546
Zinc	2013-09	mg/l	0.0360		0.0389	0.0369			0.0383	0.0369
Zinc	2013-11	mg/L				0.0986				0.0986
Zinc	2014-03	mg/L	< 0.0200		< 0.0200	0.0206			< 0.0200	0.0206
Zinc	2014-06	mg/L			< 0.0600	< 0.0200				< 0.0200
Zinc	2014-08	mg/L	< 0.0100		< 0.0100	< 0.0100			< 0.0100	< 0.0100
Zinc	2014-12	mg/L			0.00749 J	0.0114			0.0137	0.0114
Zinc	2015-04	mg/L	< 0.0100		< 0.0100	< 0.0100			< 0.0100	< 0.0100
Zinc	2015-09	mg/L			< 0.01					
Zinc	2015-10	mg/L	< 0.01			0.0238			< 0.01	0.0238
Zinc	2016-04	mg/L	0.0897		< 0.01	< 0.01			< 0.01	< 0.01
Zinc	2016-07	mg/L				< 0.01				< 0.01
Zinc	2016-10	mg/L	< 0.01		< 0.01	< 0.01			< 0.01	< 0.01
Zinc	2017-05	mg/L	< 0.02		< 0.02	< 0.02			< 0.02	< 0.02
Zinc	2017-09	mg/L	< 0.02		< 0.02	< 0.02			< 0.02	< 0.02
Zinc	2018-05	mg/L			0.0146 J	< 0.02			0.0255	< 0.02

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Zinc	2018-09	mg/L	0.0174 J		< 0.02	< 0.02			< 0.02	< 0.02
Zinc	2019-03	mg/L	< 0.02		< 0.02	< 0.02			< 0.02	< 0.02
Zinc	2019-10	mg/L		< 0.04	< 0.04	< 0.04		~~< 0.04~~	< 0.04	< 0.04
Zinc	2020-04	mg/L		< 0.02	< 0.02	< 0.02	~~0.0116 J~~	~~< 0.02~~	< 0.02	< 0.02
Zinc	2020-06	mg/L	< 0.02					~~0.0242~~		
Zinc	2020-08	mg/L	< 0.02				~~0.018 J~~	~~0.0294~~		
Zinc	2020-09	mg/L		< 0.02	< 0.02	< 0.02			< 0.02	~~< 0.02~~
Zinc	2020-12	mg/L					~~< 0.02~~	0.0211		
Zinc	2021-02	mg/L					~~0.0111 J~~			
Zinc	2021-04	mg/L	< 0.02	< 0.02	< 0.02	< 0.02	~~< 0.02~~	0.0165 J	< 0.02	< 0.02
Zinc	2021-09	mg/L	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.0149 J	< 0.02	< 0.02
Zinc	2022-04	mg/L	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.2	< 0.02	< 0.02
Zinc	2022-09	mg/L	< 0.02	< 0.02	< 0.02	0.0207	< 0.02	0.0136 J	< 0.02	0.0207
Zinc	2023-04	mg/L	< 0.02	< 0.02	< 0.02	< 0.02	0.00815 J	0.0166 J	< 0.02	< 0.02
Zinc	2023-09	mg/L	0.0204	< 0.02	< 0.02	< 0.02	0.00696 J	0.0165 J	< 0.02	< 0.02
Zinc	2024-04	mg/L	< 0.02	< 0.02	< 0.02	< 0.02	0.00662 J	0.0122 J	< 0.02	< 0.02
Zinc	2024-09	mg/L	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.014 J	< 0.02	< 0.02

Figures

NOTES:

1. Coordinate System: IA83-NF
2. Datum: NAD83
3. Imagery: Foth (April 2024)

LEGEND

- " HMSP Monitoring Well
- " Upgradient Monitoring Well
- " Water Level Only
- Underdrain
- 10' Topographic Contour
- Cell Boundary
- Waste Limits
- 3URSHUW\ %RXQGDU\

This drawing is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only.

Foth

0 225 450 Feet

CARROLL COUNTY SOLID WASTE MANAGEMENT COMMISSION

FIGURE 1

GROUNDWATER MONITORING NETWORK
WESTERN EXPANSION AREA

Date: JANUARY 2025	Revision Date:	
Drawn By: DAT	Checked By: HED	Project: 25C002.00

Path: Q:\Carroll Co SWMC IA\25C002.00\GIS\aprx\2024 AWQR.aprx Date: 1/24/2025

NOTES:

1. Coordinate System: IA83-NF
2. Datum: NAD83
3. Imagery: Foth (April 2024)

LEGEND

- 3LH]RPHWHU
- " 0RQLWRULQJ :HOO
- 10' Topographic Contour
- Cell Boundary
- *URXQGZDWHU 7DEOH &RQWRXU
- ,QIHUUHG *URXQGZDWHU 7DEOH &RQWRXU
- Waste Limits
- 3URSHUW\ %RXQGDU\

This drawing is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only.

Foth

0 225 450 Feet

CARROLL COUNTY SOLID WASTE MANAGEMENT COMMISSION

FIGURE 2

O WATER TABLE CONTOUR MAP - APRIL 2024

Date: JANUARY 2025	Revision Date:	
Drawn By: DAT	Checked By: HED	Project: 25C002.00

Path: Q:\Carroll Co SWMC IA\25C002.00\GIS\aprx\2024 AWQR.aprx Date: 1/29/2025

NOTES:

1. Coordinate System: IA83-NF
2. Datum: NAD83
3. Imagery: Foth (April 2024)

LEGEND

- 3LH]RPHWHU
- " 0RQLWRULQJ :HOO
- 10' Topographic Contour
- Cell Boundary
- *URXQGZDWHU 7DEOH &RQWRXU
- ,QIHUUHG *URXQGZDWHU 7DEOH &RQWRXU
- Waste Limits
- 3URSHUW\ %RXQGDU\

This drawing is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only.

Foth

0 225 450 Feet

CARROLL COUNTY SOLID WASTE MANAGEMENT COMMISSION

FIGURE 3

O WATER TABLE CONTOUR MAP - SEPTEMBER 2024

Date: JANUARY 2025	Revision Date:	
Drawn By:	Checked By: HED	Project: 25C002.00

Path: Q:\Carroll Co SWMC IA\25C002.00\GIS\aprx\2024 AWQR.aprx Date: 2/3/2025

NOTES:

1. Coordinate System: IA83-NF
2. Datum: NAD83
3. Imagery: Foth (April 2024)

LEGEND

- " Leachate Monitoring Location
- 10' Topographic Contour
- Cell Boundary
- Waste Limits
- 3 U R S H U W \ % R X Q G D U \

This drawing is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only.

Foth

0 225 450 Feet

CARROLL COUNTY SOLID WASTE MANAGEMENT COMMISSION

FIGURE 4

O LEACHATE MONITORING LOCATION MAP
WESTERN EXPANSION AREA

Date: JANUARY 2025	Revision Date:	
Drawn By: DAT	Checked By: HED	Project: 25C002.00

Path: Q:\Carroll Co SWMC IA\25C002.00\GIS\aprx\2024 AWQR.aprx Date: 1/29/2025

NOTES:

1. Coordinate System: IA83-NF
2. Datum: NAD83
3. Imagery: Foth (April 2024)

LEGEND

- Methane Monitoring Location
- 10' Topographic Contour
- Cell Boundary
- Waste Limits
- 3 U R S H U W \ % R X Q G D U \

This drawing is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records, information and data used for reference purposes only.

Foth

0 225 450 Feet

CARROLL COUNTY SOLID WASTE MANAGEMENT COMMISSION

FIGURE 5

O METHANE MONITORING NETWORK WESTERN EXPANSION AREA

Date: JANUARY 2025	Revision Date:	
Drawn By: DAT	Checked By: HED	Project: 25C002.00

Path: Q:\Carroll Co SWMC IA\25C002.00\GIS\aprx\2024 AWQR.aprx Date: 1/24/2025

Appendix A

Reporting Period Monitoring Documentation

April and September 2024

IDNR Forms 542-1322
Laboratory Analytical Reports (with Chain of Custody)
Data Validation Reports

April 2024 Sampling Event

Groundwater Sampling Field Sheet

Site Name:	Carroll County Landfill-Western Expansion Area	Permit No.:	14-SDP-01-74P
Well/Piezometer:	GU-2A	Weather:	Clear, 43°F, NNW wind @ 20-25 mph, 30.0" Hg
Date:	4/4/2024	Personnel:	Hannah Dubbs (Foth)

Location Details

Description of Sample Location: GU-2A is the compliance point for the groundwater underdrains for Phases 2A and 2B/3. The underdrain systems beneath Phases 2A and 2B/3 gravity drain to the north of the cells where they tie together. From there, groundwater gravity drains to the drainage way north of the Western Expansion Area, where it outlets at GU-2A. Sample is collected directly from the GU-2A discharge pipe.

Conditions commentary: Well conditions are inspected annually - scheduled for Fall 2024 event.

Sampling Details

Sampling Method: ____ Pump (low flow) ____ No-purge (specify sample interval): ____
____ Bailer X Other (specify): Grab sample from discharge pipe

Equipment type: ____ Submersible pump ____ Peristaltic pump ____ Bladder pump
____ Inertial lift pump ____ Bailer ____ No-purge (specify): ____
____ Other (specify): ____

Equipment name/description: Not Applicable Dedicated? (Y/N): N/A Disposable? (Y/N): N/A
Decontamination method: Not Applicable

Equipment depth (ft. MSL:)	Flow Rate (mL/min):	Volume removed (gal):	Volume sampled (L):
N/A	N/A	N/A	1.37

Well dry? (Y/N): No Odor? (Y/N): No Color? (Y/N): No

Sample Name(s)	Method(s)	Container(s)	Filtered? (if yes, filter size)
GU-2A_24_04	EPA 8260D - Appendix I VOCs	(3) VOA Vial 40 mL - HCl	No
	EPA 6020B - Appendix I Total Metals	(1) Plastic 250 mL - HNO_3	No
	USGS I-3765-85 - TSS	(1) Plastic 1 Liter - Unpreserved	No

Field Analysis

	Final Reading
Time	11:39
Temp (°C)	11.56
Sp. Cond (umhos/cm)	706.76
pH	7.14
DO (mg/l)	3.63
ORP (mV)	38.0
Turbidity (NTU)	0.00

Comments:

Groundwater Sampling Field Sheet

Site Name:	Carroll County Landfill-Western Expansion Area	Permit No.:	14-SDP-01-74P
Well/Piezometer:	GU-4A	Weather:	Clear, 49°F, NNW wind @ 30-45 mph, 29.7" Hg
Date:	4/3/2024	Personnel:	Hannah Dubbs (Foth)

Location Details

Description of Sample Location: GU-4A is the compliance point for the groundwater underdrain for Phase 4A/4B/5A. Phase 4A/4B/5A was constructed with an independent groundwater underdrain system that drains south through the cell to the stormwater maintenance hole located on the south side of the sedimentation pond. At the maintenance hole, groundwater is combined with stormwater from the sedimentation pond and outlets to the surface on the south side of the sedimentation pond. The sample is collected from the vertical sample riser located prior to the maintenance hole. Samples will be collected when the depth to groundwater in the vertical riser is at or above 11.27' (the bottom of pipe elevation for the perpendicular underdrain discharge line). This will ensure that samples are collected when the underdrain is flowing.

Conditions commentary: Well conditions are inspected annually - scheduled for Fall 2024 event.

Sampling Details

Sampling Method: ___ Pump (low flow) ___ No-purge (specify sample interval): ___
___ Bailer X Other (specify): Sample not collected

Equipment type: ___ Submersible pump ___ Peristaltic pump ___ Bladder pump
___ Inertial lift pump ___ Bailer ___ No-purge (specify): ___
___ Other (specify): ___

Equipment name/description: ___ Dedicated? (Y/N): ___ Disposable? (Y/N): ___
Decontamination method: ___

Equipment depth (ft. MSL:)	Flow Rate (mL/min):	Volume removed (gal):	Volume sampled (L):
N/A	N/A	N/A	N/A

Well dry? (Y/N): Yes Odor? (Y/N): N/A Color? (Y/N): N/A

Sample Name(s)	Method(s)	Container(s)	Filtered? (if yes, filter size)
	Sample not collected	N/A	N/A

Field Analysis

	Final Reading
Time	N/A
Temp (°C)	N/A
Sp. Cond (umhos/cm)	N/A
pH	N/A
DO (mg/l)	N/A
ORP (mV)	N/A
Turbidity (NTU)	N/A

Comments: Insufficient water in casing for sample collection.

Groundwater Sampling Field Sheet

Site Name:	Carroll County Landfill-Western Expansion Area	Permit No.:	14-SDP-01-74P
Well/Piezometer:	MW-118	Weather:	Clear, 49°F, NNW wind @ 30-45 mph, 29.7" Hg
Date:	4/3/2024	Personnel:	Hannah Dubbs (Foth)

Monitoring Well Details

Borehole diameter (in): 8 Casing Diameter (in): 2 Ground surface elevation (ft. MSL): 1286.25

Top of screen (ft. MSL): 1268.68 Materials: PVC Top of Casing elevation (ft. MSL): 1289.25

Locked (Y/N): Yes

	Static WL	Before purging	Before sampling
Water Level (ft. TOC):	19.04	N/A	N/A
Water elevation (ft. MSL)	1270.21	N/A	N/A

3 Well Volumes (gal): 5.64 Screen submerged? (Y/N): Yes

	Constructed	Measured	Difference
Well Depth (ft. TOC):	30.57	30.57	0.00

Well conditions commentary: Well conditions are inspected annually - scheduled for Fall 2024 event.

Sampling Details

Sampling Method: ___ Pump (low flow) ___ No-purge (specify sample interval): ___

___ Bailer X Other (specify): Water Level Only - No Sample

Equipment type: ___ Submersible pump ___ Peristaltic pump ___ Bladder pump

___ Inertial lift pump ___ Bailer ___ No-purge (specify): ___

___ Other (specify): ___

Equipment name/description: ___ Dedicated? (Y/N): ___ Disposable? (Y/N): ___

Decontamination method: ___

Equipment depth (ft. MSL:)	N/A	Flow Rate (mL/min):	N/A	Volume removed (gal):	N/A
Well dry? (Y/N):	No	Odor? (Y/N):	N/A	Volume sampled (L):	N/A
				Color? (Y/N):	N/A

Sample Name(s)	Method(s)	Container(s)	Filtered? (if yes, filter size)
	Sample not collected	N/A	N/A

Field Analysis

	Final Reading
Time	N/A
Temp (°C)	N/A
Sp. Cond (umhos/cm)	N/A
pH	N/A
DO (mg/l)	N/A
ORP (mV)	N/A
Turbidity (NTU)	N/A

Comments: Water level monitoring location only.

Groundwater Sampling Field Sheet

Site Name:	Carroll County Landfill-Western Expansion Area	Permit No.:	14-SDP-01-74P
Well/Piezometer:	MW-119RR	Weather:	Clear, 51°F, NNW @ 21 mph, 30.0" Hg
Date:	4/4/2024	Personnel:	Hannah Dubbs (Foth)

Monitoring Well Details

Borehole diameter (in):	8.25	Casing Diameter (in):	2	Ground surface elevation (ft. MSL):	1285.33
Top of screen (ft. MSL):	1265.83	Materials:	PVC	Top of Casing elevation (ft. MSL):	1288.29
Locked (Y/N):	Yes				

	Static WL	Before purging	Before sampling
Water Level (ft. TOC):	24.12	24.18	24.64
Water elevation (ft. MSL)	1264.17	1264.11	1263.65

3 Well Volumes (gal): 4.48 Screen submerged? (Y/N): No

	Constructed	Measured	Difference
Well Depth (ft. TOC):	33.29	33.03	0.26

Well conditions commentary: Well conditions are inspected annually - scheduled for Fall 2024 event.

Sampling Details

Sampling Method: X Pump (low flow) ___ No-purge (specify sample interval): ___
___ Bailer ___ Other (specify): ___

Equipment type: ___ Submersible pump X Peristaltic pump ___ Bladder pump
___ Inertial lift pump ___ Bailer ___ No-purge (specify): ___
___ Other (specify): ___

Equipment name/description: GeoTech Peristaltic Dedicated? (Y/N): No Disposable? (Y/N): No
Decontamination method: disposable tubing

Equipment depth (ft. MSL:)	1258.29	Flow Rate (mL/min):	200	Volume removed (gal):	0.5	Volume sampled (L):	1.37
Well dry? (Y/N):	No	Odor? (Y/N):	No			Color? (Y/N):	No

Sample Name(s)	Method(s)	Container(s)	Filtered? (if yes, filter size)
MW-119RR_24_04	EPA 8260D - Appendix I VOCs	(3) VOA Vial 40 mL - HCl	No
	EPA 6020B - Appendix I Total Metals	(1) Plastic 250 mL - HNO_3	No
	USGS I-3765-85 - TSS	(1) Plastic 1 Liter - Unpreserved	No

Field Analysis

			Final Reading
Elapsed Time	13:42	13:43	13:45
Temp (°C)	11.65	11.59	11.46
Sp. Cond (umhos/cm)	832.63	831.94	831.91
pH	6.59	6.58	6.58
DO (mg/l)	0.32	0.26	0.23
ORP (mV)	18.8	13.4	9.2
Turbidity (NTU)	0.13	0.57	0.38

Groundwater Sampling Field Sheet

Site Name:	Carroll County Landfill-Western Expansion Area	Permit No.:	14-SDP-01-74P
Well/Piezometer:	MW-119RR	Weather:	Clear, 51°F, NNW @ 21 mph, 30.0" Hg
Date:	4/4/2024	Personnel:	Hannah Dubbs (Foth)

Comments:

Groundwater Sampling Field Sheet

Site Name:	Carroll County Landfill-Western Expansion Area	Permit No.:	14-SDP-01-74P
Well/Piezometer:	MW-121R	Weather:	Clear, 47°F, N wind @ 20 mph, 30.0" Hg
Date:	4/4/2024	Personnel:	Hannah Dubbs (Foth)

Monitoring Well Details

Borehole diameter (in): 8.25 Casing Diameter (in): 2 Ground surface elevation (ft. MSL): 1279.97
Top of screen (ft. MSL): 1264.97 Materials: PVC Top of Casing elevation (ft. MSL): 1284.19
Locked (Y/N): Yes

	Static WL	Before purging	Before sampling
Water Level (ft. TOC):	22.56	22.64	23.06
Water elevation (ft. MSL)	1261.63	1261.55	1261.13

3 Well Volumes (gal): 3.26 Screen submerged? (Y/N): No

	Constructed	Measured	Difference
Well Depth (ft. TOC):	29.22	28.86	0.36

Well conditions commentary: Well conditions are inspected annually - scheduled for Fall 2024 event.

Sampling Details

Sampling Method: X Pump (low flow) ___ No-purge (specify sample interval): ___
___ Bailer ___ Other (specify): ___

Equipment type: ___ Submersible pump X Peristaltic pump ___ Bladder pump
___ Inertial lift pump ___ Bailer ___ No-purge (specify): ___
___ Other (specify): ___

Equipment name/description: GeoTech Peristaltic Dedicated? (Y/N): No Disposable? (Y/N): No
Decontamination method: disposable tubing

Equipment depth (ft. MSL:) 1259.19 Flow Rate (mL/min): 100 Volume removed (gal): 1.0 Volume sampled (L): 1.37
Well dry? (Y/N): No Odor? (Y/N): No Color? (Y/N): No

Sample Name(s)	Method(s)	Container(s)	Filtered? (if yes, filter size)
MW-121R_24_04	EPA 8260D - Appendix I VOCs	(3) VOA Vial 40 mL - HCl	No
	EPA 6020B - Appendix I Total Metals	(1) Plastic 250 mL - HNO_3	No
	USGS I-3765-85 - TSS	(1) Plastic 1 Liter - Unpreserved	No

Field Analysis

			Final Reading
Elapsed Time	12:31	12:34	12:37
Temp (°C)	11.18	11.18	11.30
Sp. Cond (umhos/cm)	999.1	1000.6	1004.2
pH	6.48	6.48	6.49
DO (mg/l)	0.80	0.74	0.70
ORP (mV)	-10.4	-11.1	-12.0
Turbidity (NTU)	0.00	0.00	0.00

Groundwater Sampling Field Sheet

Site Name:	Carroll County Landfill-Western Expansion Area	Permit No.:	14-SDP-01-74P
Well/Piezometer:	MW-121R	Weather:	Clear, 47°F, N wind @ 20 mph, 30.0" Hg
Date:	4/4/2024	Personnel:	Hannah Dubbs (Foth)

Comments: Collected field duplicate (FD-1_24_04) at MW-121R.

Groundwater Sampling Field Sheet

Site Name:	Carroll County Landfill-Western Expansion Area	Permit No.:	14-SDP-01-74P
Well/Piezometer:	MW-122R	Weather:	Clear, 42°F, NNW @ 20 mph, 30.0" Hg
Date:	4/4/2024	Personnel:	Hannah Dubbs (Foth)

Monitoring Well Details

Borehole diameter (in): 8 Casing Diameter (in): 4 Ground surface elevation (ft. MSL): 1314.24
Top of screen (ft. MSL): 1302.24 Materials: PVC Top of Casing elevation (ft. MSL): 1317.21
Locked (Y/N): Yes

	Static WL	Before purging	Before sampling
Water Level (ft. TOC):	28.19	N/A	N/A
Water elevation (ft. MSL)	1289.02	N/A	N/A

3 Well Volumes (gal): 3.49 Screen submerged? (Y/N): No

	Constructed	Measured	Difference
Well Depth (ft. TOC)	29.97	30.48	0.51

Well conditions commentary: Well conditions are inspected annually - scheduled for Fall 2024 event.

Sampling Details

Sampling Method: x Pump (low flow) ____ No-purge (specify sample interval): ____
____ Bailer ____ Other (specify): ____

Equipment type: ____ Submersible pump x Peristaltic pump ____ Bladder pump
____ Inertial lift pump ____ Bailer x No-purge (specify): ____
____ Other (specify): ____

Equipment name/description: Bailer Dedicated? (Y/N): No Disposable? (Y/N): No
Decontamination method: disposable tubing

Equipment depth (ft. MSL:) 1288.21 Flow Rate (mL/min): 100 Volume removed (gal): N/A Volume sampled (L): 1.37
Well dry? (Y/N): No Odor? (Y/N): No Color? (Y/N): No

Sample Name(s)	Method(s)	Container(s)	Filtered? (if yes, filter size)
MW-122R_24_04	EPA 8260D - Appendix I VOCs	(3) VOA Vial 40 mL - HCl	No
	EPA 6020B - Appendix I Total Metals	(1) Plastic 250 mL - HNO_3	No
	USGS I-3765-85 - TSS	(1) Plastic 1 Liter - Unpreserved	No

Field Analysis

	Final Reading
Time	10:49
Temp (°C)	13.54
Sp. Cond (umhos/cm)	589.29
pH	7.25
DO (mg/l)	7.45
ORP (mV)	47.8
Turbidity (NTU)	0.00

Groundwater Sampling Field Sheet

Site Name:	Carroll County Landfill-Western Expansion Area	Permit No.:	14-SDP-01-74P
Well/Piezometer:	MW-122R	Weather:	Clear, 42°F, NNW @ 20 mph, 30.0" Hg
Date:	4/4/2024	Personnel:	Hannah Dubbs (Foth)

Comments: Collected field blank (FB-1_24_04) at 11:10.

Groundwater Sampling Field Sheet

Site Name:	Carroll County Landfill-Western Expansion Area	Permit No.:	14-SDP-01-74P
Well/Piezometer:	MW-200	Weather:	Clear, 52°F, NNW wind @ 22 mph, 30.0" Hg
Date:	4/4/2024	Personnel:	Hannah Dubbs (Foth)

Monitoring Well Details

Borehole diameter (in):	8	Casing Diameter (in):	2	Ground surface elevation (ft. MSL):	1285.91
Top of screen (ft. MSL):	1264.91	Materials:	PVC	Top of Casing elevation (ft. MSL):	1288.46
Locked (Y/N):	Yes				

	Static WL	Before purging	Before sampling
Water Level (ft. TOC):	21.40	21.46	23.18
Water elevation (ft. MSL)	1267.06	1267.00	1265.28

3 Well Volumes (gal): 5.78 Screen submerged? (Y/N): Yes

	Constructed	Measured	Difference
Well Depth (ft. TOC)	33.23	33.50	0.27

Well conditions commentary: Well conditions are inspected annually - scheduled for Fall 2024 event.

Sampling Details

Sampling Method: X Pump (low flow) ___ No-purge (specify sample interval): ___
___ Bailer ___ Other (specify): ___

Equipment type: ___ Submersible pump X Peristaltic pump ___ Bladder pump
___ Inertial lift pump ___ Bailer ___ No-purge (specify): ___
___ Other (specify): ___

Equipment name/description: GeoTech Peristaltic Dedicated? (Y/N): No Disposable? (Y/N): No
Decontamination method: disposable tubing

Equipment depth (ft. MSL:)	1260.46	Flow Rate (mL/min):	200	Volume removed (gal):	0.5
Well dry? (Y/N):	No	Odor? (Y/N):	No	Color? (Y/N):	No

Volume sampled (L): 1.37

Sample Name(s)	Method(s)	Container(s)	Filtered? (if yes, filter size)
MW-200_24_04	EPA 8260D - Appendix I VOCs	(3) VOA Vial 40 mL - HCl	No
	EPA 6020B - Appendix I Total Metals	(1) Plastic 250 mL - HNO_3	No
	USGS I-3765-85 - TSS	(1) Plastic 1 Liter - Unpreserved	No

Field Analysis

			Final Reading
Elasped Time	14:16	14:17	14:19
Temp (°C)	12.66	12.49	12.58
Sp. Cond (umhos/cm)	805.84	806.55	808.82
pH	6.85	6.85	6.85
DO (mg/l)	0.60	0.55	0.51
ORP (mV)	-7.2	-6.9	-6.6
Turbidity (NTU)	2.88	1.73	1.68

Groundwater Sampling Field Sheet

Site Name:	Carroll County Landfill-Western Expansion Area	Permit No.:	14-SDP-01-74P
Well/Piezometer:	MW-200	Weather:	Clear, 52°F, NNW wind @ 22 mph, 30.0" Hg
Date:	4/4/2024	Personnel:	Hannah Dubbs (Foth)

Comments:

Groundwater Sampling Field Sheet

Site Name:	Carroll County Landfill-Western Expansion Area	Permit No.:	14-SDP-01-74P
Well/Piezometer:	MW-201	Weather:	Clear, 49°F, NNW wind @ 30-45 mph, 29.7" Hg
Date:	4/3/2024	Personnel:	Hannah Dubbs (Foth)

Monitoring Well Details

Borehole diameter (in):	8	Casing Diameter (in):	2	Ground surface elevation (ft. MSL):	1288.86
Top of screen (ft. MSL):	1258.86	Materials:	PVC	Top of Casing elevation (ft. MSL):	1291.98
Locked (Y/N):	Yes				

	Static WL	Before purging	Before sampling
Water Level (ft. TOC):	20.81	N/A	N/A
Water elevation (ft. MSL)	1271.17	N/A	N/A

3 Well Volumes (gal): 13.08 Screen submerged? (Y/N): Yes

	Constructed	Measured	Difference
Well Depth (ft. TOC):	48.12	47.55	0.57

Well conditions commentary: Well conditions are inspected annually - scheduled for Fall 2024 event.

Sampling Details

Sampling Method: ___ Pump (low flow) ___ No-purge (specify sample interval): ___
___ Bailer X Other (specify): Water Level Only - No Sample

Equipment type: ___ Submersible pump ___ Peristaltic pump ___ Bladder pump
___ Inertial lift pump ___ Bailer ___ No-purge (specify): ___
___ Other (specify): ___

Equipment name/description: ___ Dedicated? (Y/N): ___ Disposable? (Y/N): ___
Decontamination method: ___

Equipment depth (ft. MSL:)	N/A	Flow Rate (mL/min):	N/A	Volume removed (gal):	N/A
Well dry? (Y/N):	No	Odor? (Y/N):	N/A	Volume sampled (L):	N/A
				Color? (Y/N):	N/A

Sample Name(s)	Method(s)	Container(s)	Filtered? (if yes, filter size)
	Sample not collected	N/A	N/A

Field Analysis

	Final Reading
Time	N/A
Temp (°C)	N/A
Sp. Cond (umhos/cm)	N/A
pH	N/A
DO (mg/l)	N/A
ORP (mV)	N/A
Turbidity (NTU)	N/A

Comments: Water level monitoring location only.

Groundwater Sampling Field Sheet

Site Name:	Carroll County Landfill-Western Expansion Area	Permit No.:	14-SDP-01-74P
Well/Piezometer:	MW-203	Weather:	Clear, 49°F, NNW wind @ 30-45 mph, 29.7" Hg
Date:	4/3/2024	Personnel:	Hannah Dubbs (Foth)

Monitoring Well Details

Borehole diameter (in):	8	Casing Diameter (in):	2	Ground surface elevation (ft. MSL):	1301.73
Top of screen (ft. MSL):	1286.73	Materials:	PVC	Top of Casing elevation (ft. MSL):	1304.29
Locked (Y/N):	Yes				

	Static WL	Before purging	Before sampling
Water Level (ft. TOC):	11.76	N/A	N/A
Water elevation (ft. MSL)	1292.53	N/A	N/A

3 Well Volumes (gal): 12.83 Screen submerged? (Y/N): Yes

	Constructed	Measured	Difference
Well Depth (ft. TOC):	37.56	38.00	0.44

Well conditions commentary: Well conditions are inspected annually - scheduled for Fall 2024 event.

Sampling Details

Sampling Method: ___ Pump (low flow) ___ No-purge (specify sample interval): ___
___ Bailer X Other (specify): Water Level Only - No Sample

Equipment type: ___ Submersible pump ___ Peristaltic pump ___ Bladder pump
___ Inertial lift pump ___ Bailer ___ No-purge (specify): ___
___ Other (specify): ___

Equipment name/description: ___ Dedicated? (Y/N): ___ Disposable? (Y/N): ___
Decontamination method: ___

Equipment depth (ft. MSL:)	N/A	Flow Rate (mL/min):	N/A	Volume removed (gal):	N/A
Well dry? (Y/N):	No	Odor? (Y/N):	N/A	Volume sampled (L):	N/A
				Color? (Y/N):	N/A

Sample Name(s)	Method(s)	Container(s)	Filtered? (if yes, filter size)
	Sample not collected	N/A	N/A

Field Analysis

	Final Reading
Time	N/A
Temp (°C)	N/A
Sp. Cond (umhos/cm)	N/A
pH	N/A
DO (mg/l)	N/A
ORP (mV)	N/A
Turbidity (NTU)	N/A

Comments: Water level monitoring location only.

Groundwater Sampling Field Sheet

Site Name:	Carroll County Landfill-Western Expansion Area	Permit No.:	14-SDP-01-74P
Well/Piezometer:	MW-204RR	Weather:	Clear, 49°F, NNW wind @ 30-45 mph, 29.7" Hg
Date:	4/3/2024	Personnel:	Hannah Dubbs (Foth)

Monitoring Well Details

Borehole diameter (in):	8.25	Casing Diameter (in):	2	Ground surface elevation (ft. MSL):	1289.96
Top of screen (ft. MSL):	1249.96	Materials:	PVC	Top of Casing elevation (ft. MSL):	1292.47
Locked (Y/N):	Yes				

	Static WL	Before purging	Before sampling
Water Level (ft. TOC):	52.37	N/A	N/A
Water elevation (ft. MSL)	1240.10	N/A	N/A

3 Well Volumes (gal): N/A Screen submerged? (Y/N): No

	Constructed	Measured	Difference
Well Depth (ft. TOC):	52.67	52.66	0.01

Well conditions commentary: Well conditions are inspected annually - scheduled for Fall 2024 event.

Sampling Details

Sampling Method: ___ Pump (low flow) ___ No-purge (specify sample interval): ___
___ Bailer X Other (specify): Water Level Only - No Sample

Equipment type: ___ Submersible pump ___ Peristaltic pump ___ Bladder pump
___ Inertial lift pump ___ Bailer ___ No-purge (specify): ___
___ Other (specify): ___

Equipment name/description: ___ Dedicated? (Y/N): No Disposable? (Y/N): No
Decontamination method: ___

Equipment depth (ft. MSL:)	N/A	Flow Rate (mL/min):	N/A	Volume removed (gal):	N/A
Volume sampled (L):	N/A				
Well dry? (Y/N):	No	Odor? (Y/N):	N/A	Color? (Y/N):	N/A

Sample Name(s)	Method(s)	Container(s)	Filtered? (if yes, filter size)
	Sample not collected*	N/A	N/A

Field Analysis

	Final Reading
Time	N/A
Temp (°C)	N/A
Sp. Cond (umhos/cm)	N/A
pH	N/A
DO (mg/l)	N/A
ORP (mV)	N/A
Turbidity (NTU)	N/A

Comments: Water level monitoring location only. In the *2023 AWQR* , Foth requested to replace MW-204RR with MW-205 in the downgradient monitoring network and retaining MW-204RR as a water level monitoring location. The IDNR approved the HMSP change in their letter dated July 5, 2024.

Groundwater Sampling Field Sheet

Site Name:	Carroll County Landfill-Western Expansion Area	Permit No.:	14-SDP-01-74P
Well/Piezometer:	MW-205	Weather:	Clear, 36°F, NNW wind @ 15-20 mph, 30.0" Hg
Date:	4/4/2024	Personnel:	Hannah Dubbs (Foth)

Monitoring Well Details

Borehole diameter (in):	8.25	Casing Diameter (in):	2	Ground surface elevation (ft. MSL):	1293.47
Top of screen (ft. MSL):	1244.30	Materials:	PVC	Top of Casing elevation (ft. MSL):	1296.46
Locked (Y/N):	Yes				

	Static WL	Before purging	Before sampling
Water Level (ft. TOC):	41.66	N/A	N/A
Water elevation (ft. MSL)	1254.80	N/A	N/A

3 Well Volumes (gal): 10.02 Screen submerged? (Y/N): Yes

	Constructed	Measured	Difference
Well Depth (ft. TOC):	62.16	62.16	0.00

Well conditions commentary: Well conditions are inspected annually - scheduled for Fall 2024 event.

Sampling Details

Sampling Method: x Pump (low flow) ____ No-purge (specify sample interval): ____
____ Bailer ____ Other (specify): ____

Equipment type: ____ Submersible pump ____ Peristaltic pump x Bladder pump
____ Inertial lift pump ____ Bailer x No-purge (specify): ____
____ Other (specify): ____

Equipment name/description: QED Bladder Dedicated? (Y/N): No Disposable? (Y/N): No
Decontamination method: disposable tubing

Equipment depth (ft. MSL:)	1241.46	Flow Rate (mL/min):	100	Volume removed (gal):	N/A
Well dry? (Y/N):	No	Odor? (Y/N):	No	Volume sampled (L):	1.37
				Color? (Y/N):	No

Sample Name(s)	Method(s)	Container(s)	Filtered? (if yes, filter size)
MW-205_24_04	EPA 8260D - Appendix I VOCs	(3) VOA Vial 40 mL - HCl	No
	EPA 6020B - Appendix I Total Metals	(1) Plastic 250 mL - HNO_3	No
	USGS I-3765-85 - TSS	(1) Plastic 1 Liter - Unpreserved	No

Field Analysis

	Final Reading
Time	9:32
Temp (°C)	8.46
Sp. Cond (umhos/cm)	3161.4
pH	6.88
DO (mg/l)	4.35
ORP (mV)	96.9
Turbidity (NTU)	0.78

Groundwater Sampling Field Sheet

Site Name:	Carroll County Landfill-Western Expansion Area	Permit No.:	14-SDP-01-74P
Well/Piezometer:	MW-205	Weather:	Clear, 36°F, NNW wind @ 15-20 mph, 30.0" Hg
Date:	4/4/2024	Personnel:	Hannah Dubbs (Foth)

Comments: Due to dry conditions or insufficient water column for sample collection at replacement well MW-204RR, detection monitoring samples were collected at MW-205 as a temporary or potential replacement for MW-204RR. In the *2023 AWQR* , Foth requested to replace MW-204RR with MW-205, and the IDNR approved the HMSP change in their letter dated July 5, 2024.

Groundwater Sampling Field Sheet

Site Name:	Carroll County Landfill-Western Expansion Area	Permit No.:	14-SDP-01-74P
Well/Piezometer:	MW-206	Weather:	Clear, 34°F, NNW wind @ 15-20 mph, 30.0" Hg
Date:	4/4/2024	Personnel:	Hannah Dubbs (Foth)

Monitoring Well Details

Borehole diameter (in):	8.25	Casing Diameter (in):	2	Ground surface elevation (ft. MSL):	1297.51
Top of screen (ft. MSL):	1247.57	Materials:	PVC	Top of Casing elevation (ft. MSL):	1300.72
Locked (Y/N):	Yes				

	Static WL	Before purging	Before sampling
Water Level (ft. TOC):	27.77	N/A	N/A
Water elevation (ft. MSL)	1272.95	N/A	N/A

3 Well Volumes (gal): 17.30 Screen submerged? (Y/N): Yes

	Constructed	Measured	Difference
Well Depth (ft. TOC):	63.15	63.14	0.01

Well conditions commentary: Well conditions are inspected annually - scheduled for Fall 2024 event.

Sampling Details

Sampling Method: x Pump (low flow) ___ No-purge (specify sample interval): ___
___ Bailer ___ Other (specify): ___

Equipment type: ___ Submersible pump ___ Peristaltic pump x Bladder pump
___ Inertial lift pump ___ Bailer x No-purge (specify): ___
___ Other (specify): ___

Equipment name/description: QED Bladder Dedicated? (Y/N): No Disposable? (Y/N): No
Decontamination method: disposable tubing

Equipment depth (ft. MSL:)	1244.72	Flow Rate (mL/min):	100	Volume removed (gal):	N/A
Well dry? (Y/N):	No	Odor? (Y/N):	No	Color? (Y/N):	No

Sample Name(s)	Method(s)	Container(s)	Filtered? (if yes, filter size)
MW-206_24_04	EPA 8260D - Appendix I VOCs	(3) VOA Vial 40 mL - HCl	No
	EPA 6020B - Appendix I Total Metals	(1) Plastic 250 mL - HNO_3	No
	USGS I-3765-85 - TSS	(1) Plastic 1 Liter - Unpreserved	No

Field Analysis

	Final Reading
Time	8:43
Temp (°C)	7.13
Sp. Cond (umhos/cm)	2637.7
pH	7.02
DO (mg/l)	4.96
ORP (mV)	220.4
Turbidity (NTU)	9.36

Groundwater Sampling Field Sheet

Site Name:	Carroll County Landfill-Western Expansion Area	Permit No.:	14-SDP-01-74P
Well/Piezometer:	MW-206	Weather:	Clear, 34°F, NNW wind @ 15-20 mph, 30.0" Hg
Date:	4/4/2024	Personnel:	Hannah Dubbs (Foth)

Comments:

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Mary Wittry
Carroll County SLF
19111 Kittyhawk Ave
Carroll, Iowa 51401-9309

Generated 4/22/2024 10:56:09 AM

JOB DESCRIPTION

Carroll County Landfill
24C002.00

JOB NUMBER

310-278355-1

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls IA 50613

See page two for job notes and contact information.

Job Notes

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Authorized for release by
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(319)277-2401

Table of Contents

Job Narrative
310-278355-1

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

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

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

Receipt
The samples were received on 4/5/2024 11:10 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 0.1°C.

GC/MS VOA
Method 8260D: The method requirement for no headspace was not met. The following volatile sample was analyzed with headspace in the sample container: TB-1_24_04 (310-278355-10).

Method 8260D: The continuing calibration verification (CCV) associated with batch 310-418328 recovered above the upper control limit for 2-Hexanone (25.8%D). The samples associated with this CCV were non-detects for the affected analyte; therefore, the data have been reported. The associated sample is impacted: (CCV 310-418328/3).

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

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

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

Sample Summary

Client: Carroll County SLF
Project/Site: Carroll County Landfill

Job ID: 310-278355-1
SDG: 24C002.00

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-278355-1	GU-2A_24_04	Ground Water	04/04/24 11:35	04/05/24 11:10
310-278355-2	MW-119RR_24_04	Ground Water	04/04/24 13:45	04/05/24 11:10
310-278355-3	MW-121R_24_04	Ground Water	04/04/24 12:40	04/05/24 11:10
310-278355-4	MW-122R_24_04	Ground Water	04/04/24 10:50	04/05/24 11:10
310-278355-5	MW-200_24_04	Ground Water	04/04/24 14:20	04/05/24 11:10
310-278355-6	MW-205_24_04	Ground Water	04/04/24 09:30	04/05/24 11:10
310-278355-7	MW-206_24_04	Ground Water	04/04/24 08:45	04/05/24 11:10
310-278355-8	FB-1_24_04	Ground Water	04/04/24 11:10	04/05/24 11:10
310-278355-9	FD-1_24_04	Ground Water	04/04/24 00:00	04/05/24 11:10
310-278355-10	TB-1_24_04	Water	04/04/24 00:00	04/05/24 11:10

Detection Summary

Client: Carroll County SLF
Project/Site: Carroll County Landfill

Job ID: 310-278355-1
SDG: 24C002.00

Client Sample ID: GU-2A_24_04 — Lab Sample ID: 310-278355-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.000535	J	0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.229	F1	0.00200	0.000640	mg/L	1		6020B	Total/NA
Selenium	0.00189	J	0.00500	0.00140	mg/L	1		6020B	Total/NA

Client Sample ID: MW-119RR_24_04 — Lab Sample ID: 310-278355-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00187	J	0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.614		0.00200	0.000640	mg/L	1		6020B	Total/NA
Cobalt	0.00216		0.000500	0.000170	mg/L	1		6020B	Total/NA
Lead	0.000300	J	0.000500	0.000240	mg/L	1		6020B	Total/NA
Nickel	0.0168		0.00500	0.00190	mg/L	1		6020B	Total/NA
Total Suspended Solids	4.88		1.88	0.638	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-121R_24_04 — Lab Sample ID: 310-278355-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.662		0.500	0.220	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	6.00		1.00	0.210	ug/L	1		8260D	Total/NA
Arsenic	0.0222		0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.671		0.00200	0.000640	mg/L	1		6020B	Total/NA
Cobalt	0.00384		0.000500	0.000170	mg/L	1		6020B	Total/NA
Nickel	0.0359		0.00500	0.00190	mg/L	1		6020B	Total/NA
Total Suspended Solids	4.38		1.88	0.638	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-122R_24_04 — Lab Sample ID: 310-278355-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.659		0.00200	0.000640	mg/L	1		6020B	Total/NA
Chromium	0.00232	J	0.00500	0.00110	mg/L	1		6020B	Total/NA
Selenium	0.00197	J	0.00500	0.00140	mg/L	1		6020B	Total/NA

Client Sample ID: MW-200_24_04 — Lab Sample ID: 310-278355-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.471		0.00200	0.000640	mg/L	1		6020B	Total/NA
Cadmium	0.000184	J	0.000200	0.000100	mg/L	1		6020B	Total/NA
Nickel	0.00429	J	0.00500	0.00190	mg/L	1		6020B	Total/NA
Total Suspended Solids	1.50	J	1.88	0.638	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-205_24_04 — Lab Sample ID: 310-278355-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00105	J	0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.0244		0.00200	0.000640	mg/L	1		6020B	Total/NA
Cobalt	0.00755		0.000500	0.000170	mg/L	1		6020B	Total/NA
Lead	0.000637		0.000500	0.000240	mg/L	1		6020B	Total/NA
Nickel	0.0106		0.00500	0.00190	mg/L	1		6020B	Total/NA
Zinc	0.00662	J	0.0200	0.00640	mg/L	1		6020B	Total/NA
Total Suspended Solids	5.37		1.88	0.638	mg/L	1		I-3765-85	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Carroll County SLF
Project/Site: Carroll County Landfill

Job ID: 310-278355-1
SDG: 24C002.00

Client Sample ID: MW-206_24_04 — Lab Sample ID: 310-278355-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00271		0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.0227		0.00200	0.000640	mg/L	1		6020B	Total/NA
Cobalt	0.00522		0.000500	0.000170	mg/L	1		6020B	Total/NA
Lead	0.00299		0.000500	0.000240	mg/L	1		6020B	Total/NA
Nickel	0.00820		0.00500	0.00190	mg/L	1		6020B	Total/NA
Zinc	0.0122	J	0.0200	0.00640	mg/L	1		6020B	Total/NA
Total Suspended Solids	27.3		5.00	1.70	mg/L	1		I-3765-85	Total/NA

Client Sample ID: FB-1_24_04 — Lab Sample ID: 310-278355-8

No Detections.

Client Sample ID: FD-1_24_04 — Lab Sample ID: 310-278355-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.703		0.500	0.220	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	6.22		1.00	0.210	ug/L	1		8260D	Total/NA
Arsenic	0.0217		0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.698		0.00200	0.000640	mg/L	1		6020B	Total/NA
Cobalt	0.00388		0.000500	0.000170	mg/L	1		6020B	Total/NA
Nickel	0.0373		0.00500	0.00190	mg/L	1		6020B	Total/NA
Total Suspended Solids	3.33	J	5.00	1.70	mg/L	1		I-3765-85	Total/NA

Client Sample ID: TB-1_24_04 — Lab Sample ID: 310-278355-10

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: GU-2A_24_04

Date Collected: 04/04/24 11:35
Date Received: 04/05/24 11:10

Lab Sample ID: 310-278355-1

Matrix: Ground Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<3.10		10.0	3.10	ug/L			04/09/24 22:35	1
Acrylonitrile	<2.20		5.00	2.20	ug/L			04/09/24 22:35	1
Benzene	<0.220		0.500	0.220	ug/L			04/09/24 22:35	1
Bromochloromethane	<0.540		5.00	0.540	ug/L			04/09/24 22:35	1
Bromodichloromethane	<0.390		1.00	0.390	ug/L			04/09/24 22:35	1
Bromoform	<0.780		5.00	0.780	ug/L			04/09/24 22:35	1
Bromomethane	<1.10		4.00	1.10	ug/L			04/09/24 22:35	1
2-Butanone (MEK)	<2.10		10.0	2.10	ug/L			04/09/24 22:35	1
Carbon disulfide	<0.450		1.00	0.450	ug/L			04/09/24 22:35	1
Carbon tetrachloride	<0.650		2.00	0.650	ug/L			04/10/24 12:56	1
Chlorobenzene	<0.400		1.00	0.400	ug/L			04/09/24 22:35	1
Chlorodibromomethane	<0.750		5.00	0.750	ug/L			04/09/24 22:35	1
Chloroethane	<0.790		4.00	0.790	ug/L			04/09/24 22:35	1
Chloroform	<1.30		3.00	1.30	ug/L			04/09/24 22:35	1
Chloromethane	<0.610		3.00	0.610	ug/L			04/09/24 22:35	1
cis-1,2-Dichloroethene	<0.210		1.00	0.210	ug/L			04/09/24 22:35	1
cis-1,3-Dichloropropene	<0.250		5.00	0.250	ug/L			04/09/24 22:35	1
1,2-Dibromo-3-Chloropropane	<1.20		5.00	1.20	ug/L			04/09/24 22:35	1
1,2-Dibromoethane (EDB)	<0.340		1.00	0.340	ug/L			04/09/24 22:35	1
Dibromomethane	<0.330		1.00	0.330	ug/L			04/09/24 22:35	1
1,2-Dichlorobenzene	<0.370		1.00	0.370	ug/L			04/09/24 22:35	1
1,4-Dichlorobenzene	<0.230		1.00	0.230	ug/L			04/09/24 22:35	1
1,1-Dichloroethane	<0.220		1.00	0.220	ug/L			04/09/24 22:35	1
1,2-Dichloroethane	<0.390		1.00	0.390	ug/L			04/09/24 22:35	1
1,1-Dichloroethene	<0.560		2.00	0.560	ug/L			04/09/24 22:35	1
1,2-Dichloropropane	<0.270		1.00	0.270	ug/L			04/09/24 22:35	1
Ethylbenzene	<0.310		1.00	0.310	ug/L			04/09/24 22:35	1
2-Hexanone	<2.00		10.0	2.00	ug/L			04/09/24 22:35	1
Iodomethane	<7.00		10.0	7.00	ug/L			04/09/24 22:35	1
Methylene Chloride	<1.70		5.00	1.70	ug/L			04/09/24 22:35	1
4-Methyl-2-pentanone (MIBK)	<2.10		10.0	2.10	ug/L			04/09/24 22:35	1
Styrene	<0.370		1.00	0.370	ug/L			04/09/24 22:35	1
1,1,1,2-Tetrachloroethane	<0.380		1.00	0.380	ug/L			04/09/24 22:35	1
1,1,2,2-Tetrachloroethane	<0.470		1.00	0.470	ug/L			04/09/24 22:35	1
Tetrachloroethene	<0.480		1.00	0.480	ug/L			04/09/24 22:35	1
Toluene	<0.430		1.00	0.430	ug/L			04/09/24 22:35	1
trans-1,4-Dichloro-2-butene	<1.10		10.0	1.10	ug/L			04/09/24 22:35	1
trans-1,2-Dichloroethene	<0.270		1.00	0.270	ug/L			04/09/24 22:35	1
trans-1,3-Dichloropropene	<0.560		5.00	0.560	ug/L			04/09/24 22:35	1
1,1,1-Trichloroethane	<0.190		1.00	0.190	ug/L			04/09/24 22:35	1
1,1,2-Trichloroethane	<0.450		1.00	0.450	ug/L			04/09/24 22:35	1
Trichloroethene	<0.430		1.00	0.430	ug/L			04/09/24 22:35	1
Trichlorofluoromethane	<0.380		4.00	0.380	ug/L			04/09/24 22:35	1
1,2,3-Trichloropropane	<0.590		1.00	0.590	ug/L			04/09/24 22:35	1
Vinyl acetate	<2.50		10.0	2.50	ug/L			04/09/24 22:35	1
Vinyl chloride	<0.180		1.00	0.180	ug/L			04/09/24 22:35	1
Xylenes, Total	<0.400		3.00	0.400	ug/L			04/09/24 22:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*04/09/24 22:35*	*1*

Client Sample ID: GU-2A_24_04

Date Collected: 04/04/24 11:35
Date Received: 04/05/24 11:10

Lab Sample ID: 310-278355-1

Matrix: Ground Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*		*04/10/24 12:56*	*1*
Dibromofluoromethane (Surr)	*95*		*73 - 130*		*04/09/24 22:35*	*1*
Dibromofluoromethane (Surr)	*97*		*73 - 130*		*04/10/24 12:56*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*04/09/24 22:35*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*04/10/24 12:56*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00200	0.00100	mg/L		04/11/24 09:00	04/19/24 16:13	1
Arsenic	**0.000535**	**J**	0.00200	0.000530	mg/L		04/11/24 09:00	04/19/24 16:13	1
Barium	**0.229**	**F1**	0.00200	0.000640	mg/L		04/11/24 09:00	04/19/24 16:13	1
Beryllium	<0.000330		0.00100	0.000330	mg/L		04/11/24 09:00	04/19/24 16:13	1
Cadmium	<0.000100		0.000200	0.000100	mg/L		04/11/24 09:00	04/19/24 16:13	1
Chromium	<0.00110		0.00500	0.00110	mg/L		04/11/24 09:00	04/19/24 16:13	1
Cobalt	<0.000170		0.000500	0.000170	mg/L		04/11/24 09:00	04/19/24 16:13	1
Copper	<0.00180		0.00500	0.00180	mg/L		04/11/24 09:00	04/19/24 16:13	1
Lead	<0.000240		0.000500	0.000240	mg/L		04/11/24 09:00	04/19/24 16:13	1
Nickel	<0.00190		0.00500	0.00190	mg/L		04/11/24 09:00	04/19/24 16:13	1
Selenium	**0.00189**	**J**	0.00500	0.00140	mg/L		04/11/24 09:00	04/19/24 16:13	1
Silver	<0.000500		0.00100	0.000500	mg/L		04/11/24 09:00	04/19/24 16:13	1
Thallium	<0.000260		0.00100	0.000260	mg/L		04/11/24 09:00	04/19/24 16:13	1
Vanadium	<0.00110		0.00500	0.00110	mg/L		04/11/24 09:00	04/19/24 16:13	1
Zinc	<0.00640		0.0200	0.00640	mg/L		04/11/24 09:00	04/19/24 16:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	<1.70		5.00	1.70	mg/L			04/09/24 17:25	1

Client Sample ID: MW-119RR_24_04

Date Collected: 04/04/24 13:45
Date Received: 04/05/24 11:10

Lab Sample ID: 310-278355-2

Matrix: Ground Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<3.10		10.0	3.10	ug/L			04/10/24 13:17	1
Acrylonitrile	<2.20		5.00	2.20	ug/L			04/10/24 13:17	1
Benzene	<0.220		0.500	0.220	ug/L			04/10/24 13:17	1
Bromochloromethane	<0.540		5.00	0.540	ug/L			04/10/24 13:17	1
Bromodichloromethane	<0.390		1.00	0.390	ug/L			04/10/24 13:17	1
Bromoform	<0.780		5.00	0.780	ug/L			04/10/24 13:17	1
Bromomethane	<1.10		4.00	1.10	ug/L			04/10/24 13:17	1
2-Butanone (MEK)	<2.10		10.0	2.10	ug/L			04/10/24 13:17	1
Carbon disulfide	<0.450		1.00	0.450	ug/L			04/10/24 13:17	1
Carbon tetrachloride	<0.650		2.00	0.650	ug/L			04/10/24 13:17	1
Chlorobenzene	<0.400		1.00	0.400	ug/L			04/10/24 13:17	1
Chlorodibromomethane	<0.750		5.00	0.750	ug/L			04/10/24 13:17	1
Chloroethane	<0.790		4.00	0.790	ug/L			04/10/24 13:17	1
Chloroform	<1.30		3.00	1.30	ug/L			04/10/24 13:17	1
Chloromethane	<0.610		3.00	0.610	ug/L			04/10/24 13:17	1
cis-1,2-Dichloroethene	<0.210		1.00	0.210	ug/L			04/10/24 13:17	1
cis-1,3-Dichloropropene	<0.250		5.00	0.250	ug/L			04/10/24 13:17	1
1,2-Dibromo-3-Chloropropane	<1.20		5.00	1.20	ug/L			04/10/24 13:17	1
1,2-Dibromoethane (EDB)	<0.340		1.00	0.340	ug/L			04/10/24 13:17	1
Dibromomethane	<0.330		1.00	0.330	ug/L			04/10/24 13:17	1
1,2-Dichlorobenzene	<0.370		1.00	0.370	ug/L			04/10/24 13:17	1
1,4-Dichlorobenzene	<0.230		1.00	0.230	ug/L			04/10/24 13:17	1
1,1-Dichloroethane	<0.220		1.00	0.220	ug/L			04/10/24 13:17	1
1,2-Dichloroethane	<0.390		1.00	0.390	ug/L			04/10/24 13:17	1
1,1-Dichloroethene	<0.560		2.00	0.560	ug/L			04/10/24 13:17	1
1,2-Dichloropropane	<0.270		1.00	0.270	ug/L			04/10/24 13:17	1
Ethylbenzene	<0.310		1.00	0.310	ug/L			04/10/24 13:17	1
2-Hexanone	<2.00		10.0	2.00	ug/L			04/10/24 13:17	1
Iodomethane	<7.00		10.0	7.00	ug/L			04/10/24 13:17	1
Methylene Chloride	<1.70		5.00	1.70	ug/L			04/10/24 13:17	1
4-Methyl-2-pentanone (MIBK)	<2.10		10.0	2.10	ug/L			04/10/24 13:17	1
Styrene	<0.370		1.00	0.370	ug/L			04/10/24 13:17	1
1,1,1,2-Tetrachloroethane	<0.380		1.00	0.380	ug/L			04/10/24 13:17	1
1,1,2,2-Tetrachloroethane	<0.470		1.00	0.470	ug/L			04/10/24 13:17	1
Tetrachloroethene	<0.480		1.00	0.480	ug/L			04/10/24 13:17	1
Toluene	<0.430		1.00	0.430	ug/L			04/10/24 13:17	1
trans-1,4-Dichloro-2-butene	<1.10		10.0	1.10	ug/L			04/10/24 13:17	1
trans-1,2-Dichloroethene	<0.270		1.00	0.270	ug/L			04/10/24 13:17	1
trans-1,3-Dichloropropene	<0.560		5.00	0.560	ug/L			04/10/24 13:17	1
1,1,1-Trichloroethane	<0.190		1.00	0.190	ug/L			04/10/24 13:17	1
1,1,2-Trichloroethane	<0.450		1.00	0.450	ug/L			04/10/24 13:17	1
Trichloroethene	<0.430		1.00	0.430	ug/L			04/10/24 13:17	1
Trichlorofluoromethane	<0.380		4.00	0.380	ug/L			04/10/24 13:17	1
1,2,3-Trichloropropane	<0.590		1.00	0.590	ug/L			04/10/24 13:17	1
Vinyl acetate	<2.50		10.0	2.50	ug/L			04/10/24 13:17	1
Vinyl chloride	<0.180		1.00	0.180	ug/L			04/10/24 13:17	1
Xylenes, Total	<0.400		3.00	0.400	ug/L			04/10/24 13:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*04/10/24 13:17*	*1*

Client Sample ID: MW-119RR_24_04

Date Collected: 04/04/24 13:45
Date Received: 04/05/24 11:10

Lab Sample ID: 310-278355-2

Matrix: Ground Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*97*		*73 - 130*		*04/10/24 13:17*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*04/10/24 13:17*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00200	0.00100	mg/L		04/11/24 09:00	04/19/24 16:32	1
Arsenic	**0.00187**	**J**	0.00200	0.000530	mg/L		04/11/24 09:00	04/19/24 16:32	1
Barium	**0.614**		0.00200	0.000640	mg/L		04/11/24 09:00	04/19/24 16:32	1
Beryllium	<0.000330		0.00100	0.000330	mg/L		04/11/24 09:00	04/19/24 16:32	1
Cadmium	<0.000100		0.000200	0.000100	mg/L		04/11/24 09:00	04/19/24 16:32	1
Chromium	<0.00110		0.00500	0.00110	mg/L		04/11/24 09:00	04/19/24 16:32	1
Cobalt	**0.00216**		0.000500	0.000170	mg/L		04/11/24 09:00	04/19/24 16:32	1
Copper	<0.00180		0.00500	0.00180	mg/L		04/11/24 09:00	04/19/24 16:32	1
Lead	**0.000300**	**J**	0.000500	0.000240	mg/L		04/11/24 09:00	04/19/24 16:32	1
Nickel	**0.0168**		0.00500	0.00190	mg/L		04/11/24 09:00	04/19/24 16:32	1
Selenium	<0.00140		0.00500	0.00140	mg/L		04/11/24 09:00	04/19/24 16:32	1
Silver	<0.000500		0.00100	0.000500	mg/L		04/11/24 09:00	04/19/24 16:32	1
Thallium	<0.000260		0.00100	0.000260	mg/L		04/11/24 09:00	04/19/24 16:32	1
Vanadium	<0.00110		0.00500	0.00110	mg/L		04/11/24 09:00	04/19/24 16:32	1
Zinc	<0.00640		0.0200	0.00640	mg/L		04/11/24 09:00	04/19/24 16:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	**4.88**		1.88	0.638	mg/L			04/09/24 16:37	1

Client: Carroll County SLF
Project/Site: Carroll County Landfill

Job ID: 310-278355-1
SDG: 24C002.00

Client Sample ID: MW-121R_24_04

Date Collected: 04/04/24 12:40
Date Received: 04/05/24 11:10

Lab Sample ID: 310-278355-3

Matrix: Ground Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<3.10		10.0	3.10	ug/L			04/10/24 13:39	1
Acrylonitrile	<2.20		5.00	2.20	ug/L			04/10/24 13:39	1
Benzene	**0.662**		0.500	0.220	ug/L			04/10/24 13:39	1
Bromochloromethane	<0.540		5.00	0.540	ug/L			04/10/24 13:39	1
Bromodichloromethane	<0.390		1.00	0.390	ug/L			04/10/24 13:39	1
Bromoform	<0.780		5.00	0.780	ug/L			04/10/24 13:39	1
Bromomethane	<1.10		4.00	1.10	ug/L			04/10/24 13:39	1
2-Butanone (MEK)	<2.10		10.0	2.10	ug/L			04/10/24 13:39	1
Carbon disulfide	<0.450		1.00	0.450	ug/L			04/10/24 13:39	1
Carbon tetrachloride	<0.650		2.00	0.650	ug/L			04/10/24 13:39	1
Chlorobenzene	<0.400		1.00	0.400	ug/L			04/10/24 13:39	1
Chlorodibromomethane	<0.750		5.00	0.750	ug/L			04/10/24 13:39	1
Chloroethane	<0.790		4.00	0.790	ug/L			04/10/24 13:39	1
Chloroform	<1.30		3.00	1.30	ug/L			04/10/24 13:39	1
Chloromethane	<0.610		3.00	0.610	ug/L			04/10/24 13:39	1
cis-1,2-Dichloroethene	**6.00**		1.00	0.210	ug/L			04/10/24 13:39	1
cis-1,3-Dichloropropene	<0.250		5.00	0.250	ug/L			04/10/24 13:39	1
1,2-Dibromo-3-Chloropropane	<1.20		5.00	1.20	ug/L			04/10/24 13:39	1
1,2-Dibromoethane (EDB)	<0.340		1.00	0.340	ug/L			04/10/24 13:39	1
Dibromomethane	<0.330		1.00	0.330	ug/L			04/10/24 13:39	1
1,2-Dichlorobenzene	<0.370		1.00	0.370	ug/L			04/10/24 13:39	1
1,4-Dichlorobenzene	<0.230		1.00	0.230	ug/L			04/10/24 13:39	1
1,1-Dichloroethane	<0.220		1.00	0.220	ug/L			04/10/24 13:39	1
1,2-Dichloroethane	<0.390		1.00	0.390	ug/L			04/10/24 13:39	1
1,1-Dichloroethene	<0.560		2.00	0.560	ug/L			04/10/24 13:39	1
1,2-Dichloropropane	<0.270		1.00	0.270	ug/L			04/10/24 13:39	1
Ethylbenzene	<0.310		1.00	0.310	ug/L			04/10/24 13:39	1
2-Hexanone	<2.00		10.0	2.00	ug/L			04/10/24 13:39	1
Iodomethane	<7.00		10.0	7.00	ug/L			04/10/24 13:39	1
Methylene Chloride	<1.70		5.00	1.70	ug/L			04/10/24 13:39	1
4-Methyl-2-pentanone (MIBK)	<2.10		10.0	2.10	ug/L			04/10/24 13:39	1
Styrene	<0.370		1.00	0.370	ug/L			04/10/24 13:39	1
1,1,1,2-Tetrachloroethane	<0.380		1.00	0.380	ug/L			04/10/24 13:39	1
1,1,2,2-Tetrachloroethane	<0.470		1.00	0.470	ug/L			04/10/24 13:39	1
Tetrachloroethene	<0.480		1.00	0.480	ug/L			04/10/24 13:39	1
Toluene	<0.430		1.00	0.430	ug/L			04/10/24 13:39	1
trans-1,4-Dichloro-2-butene	<1.10		10.0	1.10	ug/L			04/10/24 13:39	1
trans-1,2-Dichloroethene	<0.270		1.00	0.270	ug/L			04/10/24 13:39	1
trans-1,3-Dichloropropene	<0.560		5.00	0.560	ug/L			04/10/24 13:39	1
1,1,1-Trichloroethane	<0.190		1.00	0.190	ug/L			04/10/24 13:39	1
1,1,2-Trichloroethane	<0.450		1.00	0.450	ug/L			04/10/24 13:39	1
Trichloroethene	<0.430		1.00	0.430	ug/L			04/10/24 13:39	1
Trichlorofluoromethane	<0.380		4.00	0.380	ug/L			04/10/24 13:39	1
1,2,3-Trichloropropane	<0.590		1.00	0.590	ug/L			04/10/24 13:39	1
Vinyl acetate	<2.50		10.0	2.50	ug/L			04/10/24 13:39	1
Vinyl chloride	<0.180		1.00	0.180	ug/L			04/10/24 13:39	1
Xylenes, Total	<0.400		3.00	0.400	ug/L			04/10/24 13:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*04/10/24 13:39*	*1*

Client: Carroll County SLF
Project/Site: Carroll County Landfill

Job ID: 310-278355-1
SDG: 24C002.00

Client Sample ID: MW-121R_24_04

Date Collected: 04/04/24 12:40
Date Received: 04/05/24 11:10

Lab Sample ID: 310-278355-3

Matrix: Ground Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*99*		*73 - 130*		*04/10/24 13:39*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*04/10/24 13:39*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00200	0.00100	mg/L		04/11/24 09:00	04/19/24 16:34	1
Arsenic	**0.0222**		0.00200	0.000530	mg/L		04/11/24 09:00	04/19/24 16:34	1
Barium	**0.671**		0.00200	0.000640	mg/L		04/11/24 09:00	04/19/24 16:34	1
Beryllium	<0.000330		0.00100	0.000330	mg/L		04/11/24 09:00	04/19/24 16:34	1
Cadmium	<0.000100		0.000200	0.000100	mg/L		04/11/24 09:00	04/19/24 16:34	1
Chromium	<0.00110		0.00500	0.00110	mg/L		04/11/24 09:00	04/19/24 16:34	1
Cobalt	**0.00384**		0.000500	0.000170	mg/L		04/11/24 09:00	04/19/24 16:34	1
Copper	<0.00180		0.00500	0.00180	mg/L		04/11/24 09:00	04/19/24 16:34	1
Lead	<0.000240		0.000500	0.000240	mg/L		04/11/24 09:00	04/19/24 16:34	1
Nickel	**0.0359**		0.00500	0.00190	mg/L		04/11/24 09:00	04/19/24 16:34	1
Selenium	<0.00140		0.00500	0.00140	mg/L		04/11/24 09:00	04/19/24 16:34	1
Silver	<0.000500		0.00100	0.000500	mg/L		04/11/24 09:00	04/19/24 16:34	1
Thallium	<0.000260		0.00100	0.000260	mg/L		04/11/24 09:00	04/19/24 16:34	1
Vanadium	<0.00110		0.00500	0.00110	mg/L		04/11/24 09:00	04/19/24 16:34	1
Zinc	<0.00640		0.0200	0.00640	mg/L		04/11/24 09:00	04/19/24 16:34	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	**4.38**		1.88	0.638	mg/L			04/09/24 17:25	1

Client: Carroll County SLF
Project/Site: Carroll County Landfill

Job ID: 310-278355-1
SDG: 24C002.00

Client Sample ID: MW-122R_24_04
Date Collected: 04/04/24 10:50
Date Received: 04/05/24 11:10

Lab Sample ID: 310-278355-4
Matrix: Ground Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<3.10		10.0	3.10	ug/L			04/10/24 14:01	1
Acrylonitrile	<2.20		5.00	2.20	ug/L			04/10/24 14:01	1
Benzene	<0.220		0.500	0.220	ug/L			04/10/24 14:01	1
Bromochloromethane	<0.540		5.00	0.540	ug/L			04/10/24 14:01	1
Bromodichloromethane	<0.390		1.00	0.390	ug/L			04/10/24 14:01	1
Bromoform	<0.780		5.00	0.780	ug/L			04/10/24 14:01	1
Bromomethane	<1.10		4.00	1.10	ug/L			04/10/24 14:01	1
2-Butanone (MEK)	<2.10		10.0	2.10	ug/L			04/10/24 14:01	1
Carbon disulfide	<0.450		1.00	0.450	ug/L			04/10/24 14:01	1
Carbon tetrachloride	<0.650		2.00	0.650	ug/L			04/10/24 14:01	1
Chlorobenzene	<0.400		1.00	0.400	ug/L			04/10/24 14:01	1
Chlorodibromomethane	<0.750		5.00	0.750	ug/L			04/10/24 14:01	1
Chloroethane	<0.790		4.00	0.790	ug/L			04/10/24 14:01	1
Chloroform	<1.30		3.00	1.30	ug/L			04/10/24 14:01	1
Chloromethane	<0.610		3.00	0.610	ug/L			04/10/24 14:01	1
cis-1,2-Dichloroethene	<0.210		1.00	0.210	ug/L			04/10/24 14:01	1
cis-1,3-Dichloropropene	<0.250		5.00	0.250	ug/L			04/10/24 14:01	1
1,2-Dibromo-3-Chloropropane	<1.20		5.00	1.20	ug/L			04/10/24 14:01	1
1,2-Dibromoethane (EDB)	<0.340		1.00	0.340	ug/L			04/10/24 14:01	1
Dibromomethane	<0.330		1.00	0.330	ug/L			04/10/24 14:01	1
1,2-Dichlorobenzene	<0.370		1.00	0.370	ug/L			04/10/24 14:01	1
1,4-Dichlorobenzene	<0.230		1.00	0.230	ug/L			04/10/24 14:01	1
1,1-Dichloroethane	<0.220		1.00	0.220	ug/L			04/10/24 14:01	1
1,2-Dichloroethane	<0.390		1.00	0.390	ug/L			04/10/24 14:01	1
1,1-Dichloroethene	<0.560		2.00	0.560	ug/L			04/10/24 14:01	1
1,2-Dichloropropane	<0.270		1.00	0.270	ug/L			04/10/24 14:01	1
Ethylbenzene	<0.310		1.00	0.310	ug/L			04/10/24 14:01	1
2-Hexanone	<2.00		10.0	2.00	ug/L			04/10/24 14:01	1
Iodomethane	<7.00		10.0	7.00	ug/L			04/10/24 14:01	1
Methylene Chloride	<1.70		5.00	1.70	ug/L			04/10/24 14:01	1
4-Methyl-2-pentanone (MIBK)	<2.10		10.0	2.10	ug/L			04/10/24 14:01	1
Styrene	<0.370		1.00	0.370	ug/L			04/10/24 14:01	1
1,1,1,2-Tetrachloroethane	<0.380		1.00	0.380	ug/L			04/10/24 14:01	1
1,1,2,2-Tetrachloroethane	<0.470		1.00	0.470	ug/L			04/10/24 14:01	1
Tetrachloroethene	<0.480		1.00	0.480	ug/L			04/10/24 14:01	1
Toluene	<0.430		1.00	0.430	ug/L			04/10/24 14:01	1
trans-1,4-Dichloro-2-butene	<1.10		10.0	1.10	ug/L			04/10/24 14:01	1
trans-1,2-Dichloroethene	<0.270		1.00	0.270	ug/L			04/10/24 14:01	1
trans-1,3-Dichloropropene	<0.560		5.00	0.560	ug/L			04/10/24 14:01	1
1,1,1-Trichloroethane	<0.190		1.00	0.190	ug/L			04/10/24 14:01	1
1,1,2-Trichloroethane	<0.450		1.00	0.450	ug/L			04/10/24 14:01	1
Trichloroethene	<0.430		1.00	0.430	ug/L			04/10/24 14:01	1
Trichlorofluoromethane	<0.380		4.00	0.380	ug/L			04/10/24 14:01	1
1,2,3-Trichloropropane	<0.590		1.00	0.590	ug/L			04/10/24 14:01	1
Vinyl acetate	<2.50		10.0	2.50	ug/L			04/10/24 14:01	1
Vinyl chloride	<0.180		1.00	0.180	ug/L			04/10/24 14:01	1
Xylenes, Total	<0.400		3.00	0.400	ug/L			04/10/24 14:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*		*04/10/24 14:01*	*1*

Client: Carroll County SLF
Project/Site: Carroll County Landfill

Job ID: 310-278355-1
SDG: 24C002.00

Client Sample ID: MW-122R_24_04

Date Collected: 04/04/24 10:50
Date Received: 04/05/24 11:10

Lab Sample ID: 310-278355-4

Matrix: Ground Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*99*		*73 - 130*		*04/10/24 14:01*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*04/10/24 14:01*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00200	0.00100	mg/L		04/11/24 09:00	04/19/24 16:36	1
Arsenic	<0.000530		0.00200	0.000530	mg/L		04/11/24 09:00	04/19/24 16:36	1
Barium	**0.659**		0.00200	0.000640	mg/L		04/11/24 09:00	04/19/24 16:36	1
Beryllium	<0.000330		0.00100	0.000330	mg/L		04/11/24 09:00	04/19/24 16:36	1
Cadmium	<0.000100		0.000200	0.000100	mg/L		04/11/24 09:00	04/19/24 16:36	1
Chromium	**0.00232**	**J**	0.00500	0.00110	mg/L		04/11/24 09:00	04/19/24 16:36	1
Cobalt	<0.000170		0.000500	0.000170	mg/L		04/11/24 09:00	04/19/24 16:36	1
Copper	<0.00180		0.00500	0.00180	mg/L		04/11/24 09:00	04/19/24 16:36	1
Lead	<0.000240		0.000500	0.000240	mg/L		04/11/24 09:00	04/19/24 16:36	1
Nickel	<0.00190		0.00500	0.00190	mg/L		04/11/24 09:00	04/19/24 16:36	1
Selenium	**0.00197**	**J**	0.00500	0.00140	mg/L		04/11/24 09:00	04/19/24 16:36	1
Silver	<0.000500		0.00100	0.000500	mg/L		04/11/24 09:00	04/19/24 16:36	1
Thallium	<0.000260		0.00100	0.000260	mg/L		04/11/24 09:00	04/19/24 16:36	1
Vanadium	<0.00110		0.00500	0.00110	mg/L		04/11/24 09:00	04/19/24 16:36	1
Zinc	<0.00640		0.0200	0.00640	mg/L		04/11/24 09:00	04/19/24 16:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	<0.638		1.88	0.638	mg/L			04/09/24 15:49	1

Client: Carroll County SLF
Project/Site: Carroll County Landfill

Job ID: 310-278355-1
SDG: 24C002.00

Client Sample ID: MW-200_24_04
Date Collected: 04/04/24 14:20
Date Received: 04/05/24 11:10

Lab Sample ID: 310-278355-5
Matrix: Ground Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<3.10		10.0	3.10	ug/L			04/10/24 14:22	1
Acrylonitrile	<2.20		5.00	2.20	ug/L			04/10/24 14:22	1
Benzene	<0.220		0.500	0.220	ug/L			04/10/24 14:22	1
Bromochloromethane	<0.540		5.00	0.540	ug/L			04/10/24 14:22	1
Bromodichloromethane	<0.390		1.00	0.390	ug/L			04/10/24 14:22	1
Bromoform	<0.780		5.00	0.780	ug/L			04/10/24 14:22	1
Bromomethane	<1.10		4.00	1.10	ug/L			04/10/24 14:22	1
2-Butanone (MEK)	<2.10		10.0	2.10	ug/L			04/10/24 14:22	1
Carbon disulfide	<0.450		1.00	0.450	ug/L			04/10/24 14:22	1
Carbon tetrachloride	<0.650		2.00	0.650	ug/L			04/10/24 14:22	1
Chlorobenzene	<0.400		1.00	0.400	ug/L			04/10/24 14:22	1
Chlorodibromomethane	<0.750		5.00	0.750	ug/L			04/10/24 14:22	1
Chloroethane	<0.790		4.00	0.790	ug/L			04/10/24 14:22	1
Chloroform	<1.30		3.00	1.30	ug/L			04/10/24 14:22	1
Chloromethane	<0.610		3.00	0.610	ug/L			04/10/24 14:22	1
cis-1,2-Dichloroethene	<0.210		1.00	0.210	ug/L			04/10/24 14:22	1
cis-1,3-Dichloropropene	<0.250		5.00	0.250	ug/L			04/10/24 14:22	1
1,2-Dibromo-3-Chloropropane	<1.20		5.00	1.20	ug/L			04/10/24 14:22	1
1,2-Dibromoethane (EDB)	<0.340		1.00	0.340	ug/L			04/10/24 14:22	1
Dibromomethane	<0.330		1.00	0.330	ug/L			04/10/24 14:22	1
1,2-Dichlorobenzene	<0.370		1.00	0.370	ug/L			04/10/24 14:22	1
1,4-Dichlorobenzene	<0.230		1.00	0.230	ug/L			04/10/24 14:22	1
1,1-Dichloroethane	<0.220		1.00	0.220	ug/L			04/10/24 14:22	1
1,2-Dichloroethane	<0.390		1.00	0.390	ug/L			04/10/24 14:22	1
1,1-Dichloroethene	<0.560		2.00	0.560	ug/L			04/10/24 14:22	1
1,2-Dichloropropane	<0.270		1.00	0.270	ug/L			04/10/24 14:22	1
Ethylbenzene	<0.310		1.00	0.310	ug/L			04/10/24 14:22	1
2-Hexanone	<2.00		10.0	2.00	ug/L			04/10/24 14:22	1
Iodomethane	<7.00		10.0	7.00	ug/L			04/10/24 14:22	1
Methylene Chloride	<1.70		5.00	1.70	ug/L			04/10/24 14:22	1
4-Methyl-2-pentanone (MIBK)	<2.10		10.0	2.10	ug/L			04/10/24 14:22	1
Styrene	<0.370		1.00	0.370	ug/L			04/10/24 14:22	1
1,1,1,2-Tetrachloroethane	<0.380		1.00	0.380	ug/L			04/10/24 14:22	1
1,1,2,2-Tetrachloroethane	<0.470		1.00	0.470	ug/L			04/10/24 14:22	1
Tetrachloroethene	<0.480		1.00	0.480	ug/L			04/10/24 14:22	1
Toluene	<0.430		1.00	0.430	ug/L			04/10/24 14:22	1
trans-1,4-Dichloro-2-butene	<1.10		10.0	1.10	ug/L			04/10/24 14:22	1
trans-1,2-Dichloroethene	<0.270		1.00	0.270	ug/L			04/10/24 14:22	1
trans-1,3-Dichloropropene	<0.560		5.00	0.560	ug/L			04/10/24 14:22	1
1,1,1-Trichloroethane	<0.190		1.00	0.190	ug/L			04/10/24 14:22	1
1,1,2-Trichloroethane	<0.450		1.00	0.450	ug/L			04/10/24 14:22	1
Trichloroethene	<0.430		1.00	0.430	ug/L			04/10/24 14:22	1
Trichlorofluoromethane	<0.380		4.00	0.380	ug/L			04/10/24 14:22	1
1,2,3-Trichloropropane	<0.590		1.00	0.590	ug/L			04/10/24 14:22	1
Vinyl acetate	<2.50		10.0	2.50	ug/L			04/10/24 14:22	1
Vinyl chloride	<0.180		1.00	0.180	ug/L			04/10/24 14:22	1
Xylenes, Total	<0.400		3.00	0.400	ug/L			04/10/24 14:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*		*04/10/24 14:22*	*1*

Client Sample ID: MW-200_24_04

Date Collected: 04/04/24 14:20
Date Received: 04/05/24 11:10

Lab Sample ID: 310-278355-5

Matrix: Ground Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*97*		*73 - 130*		*04/10/24 14:22*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*04/10/24 14:22*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00200	0.00100	mg/L		04/11/24 09:00	04/19/24 16:38	1
Arsenic	<0.000530		0.00200	0.000530	mg/L		04/11/24 09:00	04/19/24 16:38	1
Barium	**0.471**		0.00200	0.000640	mg/L		04/11/24 09:00	04/19/24 16:38	1
Beryllium	<0.000330		0.00100	0.000330	mg/L		04/11/24 09:00	04/19/24 16:38	1
Cadmium	**0.000184**	**J**	0.000200	0.000100	mg/L		04/11/24 09:00	04/19/24 16:38	1
Chromium	<0.00110		0.00500	0.00110	mg/L		04/11/24 09:00	04/19/24 16:38	1
Cobalt	<0.000170		0.000500	0.000170	mg/L		04/11/24 09:00	04/19/24 16:38	1
Copper	<0.00180		0.00500	0.00180	mg/L		04/11/24 09:00	04/19/24 16:38	1
Lead	<0.000240		0.000500	0.000240	mg/L		04/11/24 09:00	04/19/24 16:38	1
Nickel	**0.00429**	**J**	0.00500	0.00190	mg/L		04/11/24 09:00	04/19/24 16:38	1
Selenium	<0.00140		0.00500	0.00140	mg/L		04/11/24 09:00	04/19/24 16:38	1
Silver	<0.000500		0.00100	0.000500	mg/L		04/11/24 09:00	04/19/24 16:38	1
Thallium	<0.000260		0.00100	0.000260	mg/L		04/11/24 09:00	04/19/24 16:38	1
Vanadium	<0.00110		0.00500	0.00110	mg/L		04/11/24 09:00	04/19/24 16:38	1
Zinc	<0.00640		0.0200	0.00640	mg/L		04/11/24 09:00	04/19/24 16:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	**1.50**	**J**	1.88	0.638	mg/L			04/09/24 15:49	1

Client: Carroll County SLF
Project/Site: Carroll County Landfill

Job ID: 310-278355-1
SDG: 24C002.00

Client Sample ID: MW-205_24_04
Date Collected: 04/04/24 09:30
Date Received: 04/05/24 11:10

Lab Sample ID: 310-278355-6
Matrix: Ground Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<3.10		10.0	3.10	ug/L			04/10/24 14:44	1
Acrylonitrile	<2.20		5.00	2.20	ug/L			04/10/24 14:44	1
Benzene	<0.220		0.500	0.220	ug/L			04/10/24 14:44	1
Bromochloromethane	<0.540		5.00	0.540	ug/L			04/10/24 14:44	1
Bromodichloromethane	<0.390		1.00	0.390	ug/L			04/10/24 14:44	1
Bromoform	<0.780		5.00	0.780	ug/L			04/10/24 14:44	1
Bromomethane	<1.10		4.00	1.10	ug/L			04/10/24 14:44	1
2-Butanone (MEK)	<2.10		10.0	2.10	ug/L			04/10/24 14:44	1
Carbon disulfide	<0.450		1.00	0.450	ug/L			04/10/24 14:44	1
Carbon tetrachloride	<0.650		2.00	0.650	ug/L			04/10/24 14:44	1
Chlorobenzene	<0.400		1.00	0.400	ug/L			04/10/24 14:44	1
Chlorodibromomethane	<0.750		5.00	0.750	ug/L			04/10/24 14:44	1
Chloroethane	<0.790		4.00	0.790	ug/L			04/10/24 14:44	1
Chloroform	<1.30		3.00	1.30	ug/L			04/10/24 14:44	1
Chloromethane	<0.610		3.00	0.610	ug/L			04/10/24 14:44	1
cis-1,2-Dichloroethene	<0.210		1.00	0.210	ug/L			04/10/24 14:44	1
cis-1,3-Dichloropropene	<0.250		5.00	0.250	ug/L			04/10/24 14:44	1
1,2-Dibromo-3-Chloropropane	<1.20		5.00	1.20	ug/L			04/10/24 14:44	1
1,2-Dibromoethane (EDB)	<0.340		1.00	0.340	ug/L			04/10/24 14:44	1
Dibromomethane	<0.330		1.00	0.330	ug/L			04/10/24 14:44	1
1,2-Dichlorobenzene	<0.370		1.00	0.370	ug/L			04/10/24 14:44	1
1,4-Dichlorobenzene	<0.230		1.00	0.230	ug/L			04/10/24 14:44	1
1,1-Dichloroethane	<0.220		1.00	0.220	ug/L			04/10/24 14:44	1
1,2-Dichloroethane	<0.390		1.00	0.390	ug/L			04/10/24 14:44	1
1,1-Dichloroethene	<0.560		2.00	0.560	ug/L			04/10/24 14:44	1
1,2-Dichloropropane	<0.270		1.00	0.270	ug/L			04/10/24 14:44	1
Ethylbenzene	<0.310		1.00	0.310	ug/L			04/10/24 14:44	1
2-Hexanone	<2.00		10.0	2.00	ug/L			04/10/24 14:44	1
Iodomethane	<7.00		10.0	7.00	ug/L			04/10/24 14:44	1
Methylene Chloride	<1.70		5.00	1.70	ug/L			04/10/24 14:44	1
4-Methyl-2-pentanone (MIBK)	<2.10		10.0	2.10	ug/L			04/10/24 14:44	1
Styrene	<0.370		1.00	0.370	ug/L			04/10/24 14:44	1
1,1,1,2-Tetrachloroethane	<0.380		1.00	0.380	ug/L			04/10/24 14:44	1
1,1,2,2-Tetrachloroethane	<0.470		1.00	0.470	ug/L			04/10/24 14:44	1
Tetrachloroethene	<0.480		1.00	0.480	ug/L			04/10/24 14:44	1
Toluene	<0.430		1.00	0.430	ug/L			04/10/24 14:44	1
trans-1,4-Dichloro-2-butene	<1.10		10.0	1.10	ug/L			04/10/24 14:44	1
trans-1,2-Dichloroethene	<0.270		1.00	0.270	ug/L			04/10/24 14:44	1
trans-1,3-Dichloropropene	<0.560		5.00	0.560	ug/L			04/10/24 14:44	1
1,1,1-Trichloroethane	<0.190		1.00	0.190	ug/L			04/10/24 14:44	1
1,1,2-Trichloroethane	<0.450		1.00	0.450	ug/L			04/10/24 14:44	1
Trichloroethene	<0.430		1.00	0.430	ug/L			04/10/24 14:44	1
Trichlorofluoromethane	<0.380		4.00	0.380	ug/L			04/10/24 14:44	1
1,2,3-Trichloropropane	<0.590		1.00	0.590	ug/L			04/10/24 14:44	1
Vinyl acetate	<2.50		10.0	2.50	ug/L			04/10/24 14:44	1
Vinyl chloride	<0.180		1.00	0.180	ug/L			04/10/24 14:44	1
Xylenes, Total	<0.400		3.00	0.400	ug/L			04/10/24 14:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*		*04/10/24 14:44*	*1*

Client Sample ID: MW-205_24_04

Date Collected: 04/04/24 09:30
Date Received: 04/05/24 11:10

Lab Sample ID: 310-278355-6

Matrix: Ground Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*99*		*73 - 130*		*04/10/24 14:44*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*04/10/24 14:44*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00200	0.00100	mg/L		04/11/24 09:00	04/19/24 16:41	1
Arsenic	**0.00105**	**J**	0.00200	0.000530	mg/L		04/11/24 09:00	04/19/24 16:41	1
Barium	**0.0244**		0.00200	0.000640	mg/L		04/11/24 09:00	04/19/24 16:41	1
Beryllium	<0.000330		0.00100	0.000330	mg/L		04/11/24 09:00	04/19/24 16:41	1
Cadmium	<0.000100		0.000200	0.000100	mg/L		04/11/24 09:00	04/19/24 16:41	1
Chromium	<0.00110		0.00500	0.00110	mg/L		04/11/24 09:00	04/19/24 16:41	1
Cobalt	**0.00755**		0.000500	0.000170	mg/L		04/11/24 09:00	04/19/24 16:41	1
Copper	<0.00180		0.00500	0.00180	mg/L		04/11/24 09:00	04/19/24 16:41	1
Lead	**0.000637**		0.000500	0.000240	mg/L		04/11/24 09:00	04/19/24 16:41	1
Nickel	**0.0106**		0.00500	0.00190	mg/L		04/11/24 09:00	04/19/24 16:41	1
Selenium	<0.00140		0.00500	0.00140	mg/L		04/11/24 09:00	04/19/24 16:41	1
Silver	<0.000500		0.00100	0.000500	mg/L		04/11/24 09:00	04/19/24 16:41	1
Thallium	<0.000260		0.00100	0.000260	mg/L		04/11/24 09:00	04/19/24 16:41	1
Vanadium	<0.00110		0.00500	0.00110	mg/L		04/11/24 09:00	04/19/24 16:41	1
Zinc	**0.00662**	**J**	0.0200	0.00640	mg/L		04/11/24 09:00	04/19/24 16:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	**5.37**		1.88	0.638	mg/L			04/09/24 17:25	1

Client: Carroll County SLF
Project/Site: Carroll County Landfill

Job ID: 310-278355-1
SDG: 24C002.00

Client Sample ID: MW-206_24_04
Date Collected: 04/04/24 08:45
Date Received: 04/05/24 11:10

Lab Sample ID: 310-278355-7
Matrix: Ground Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<3.10		10.0	3.10	ug/L			04/10/24 15:06	1
Acrylonitrile	<2.20		5.00	2.20	ug/L			04/10/24 15:06	1
Benzene	<0.220		0.500	0.220	ug/L			04/10/24 15:06	1
Bromochloromethane	<0.540		5.00	0.540	ug/L			04/10/24 15:06	1
Bromodichloromethane	<0.390		1.00	0.390	ug/L			04/10/24 15:06	1
Bromoform	<0.780		5.00	0.780	ug/L			04/10/24 15:06	1
Bromomethane	<1.10		4.00	1.10	ug/L			04/10/24 15:06	1
2-Butanone (MEK)	<2.10		10.0	2.10	ug/L			04/10/24 15:06	1
Carbon disulfide	<0.450		1.00	0.450	ug/L			04/10/24 15:06	1
Carbon tetrachloride	<0.650		2.00	0.650	ug/L			04/10/24 15:06	1
Chlorobenzene	<0.400		1.00	0.400	ug/L			04/10/24 15:06	1
Chlorodibromomethane	<0.750		5.00	0.750	ug/L			04/10/24 15:06	1
Chloroethane	<0.790		4.00	0.790	ug/L			04/10/24 15:06	1
Chloroform	<1.30		3.00	1.30	ug/L			04/10/24 15:06	1
Chloromethane	<0.610		3.00	0.610	ug/L			04/10/24 15:06	1
cis-1,2-Dichloroethene	<0.210		1.00	0.210	ug/L			04/10/24 15:06	1
cis-1,3-Dichloropropene	<0.250		5.00	0.250	ug/L			04/10/24 15:06	1
1,2-Dibromo-3-Chloropropane	<1.20		5.00	1.20	ug/L			04/10/24 15:06	1
1,2-Dibromoethane (EDB)	<0.340		1.00	0.340	ug/L			04/10/24 15:06	1
Dibromomethane	<0.330		1.00	0.330	ug/L			04/10/24 15:06	1
1,2-Dichlorobenzene	<0.370		1.00	0.370	ug/L			04/10/24 15:06	1
1,4-Dichlorobenzene	<0.230		1.00	0.230	ug/L			04/10/24 15:06	1
1,1-Dichloroethane	<0.220		1.00	0.220	ug/L			04/10/24 15:06	1
1,2-Dichloroethane	<0.390		1.00	0.390	ug/L			04/10/24 15:06	1
1,1-Dichloroethene	<0.560		2.00	0.560	ug/L			04/10/24 15:06	1
1,2-Dichloropropane	<0.270		1.00	0.270	ug/L			04/10/24 15:06	1
Ethylbenzene	<0.310		1.00	0.310	ug/L			04/10/24 15:06	1
2-Hexanone	<2.00		10.0	2.00	ug/L			04/10/24 15:06	1
Iodomethane	<7.00		10.0	7.00	ug/L			04/10/24 15:06	1
Methylene Chloride	<1.70		5.00	1.70	ug/L			04/10/24 15:06	1
4-Methyl-2-pentanone (MIBK)	<2.10		10.0	2.10	ug/L			04/10/24 15:06	1
Styrene	<0.370		1.00	0.370	ug/L			04/10/24 15:06	1
1,1,1,2-Tetrachloroethane	<0.380		1.00	0.380	ug/L			04/10/24 15:06	1
1,1,2,2-Tetrachloroethane	<0.470		1.00	0.470	ug/L			04/10/24 15:06	1
Tetrachloroethene	<0.480		1.00	0.480	ug/L			04/10/24 15:06	1
Toluene	<0.430		1.00	0.430	ug/L			04/10/24 15:06	1
trans-1,4-Dichloro-2-butene	<1.10		10.0	1.10	ug/L			04/10/24 15:06	1
trans-1,2-Dichloroethene	<0.270		1.00	0.270	ug/L			04/10/24 15:06	1
trans-1,3-Dichloropropene	<0.560		5.00	0.560	ug/L			04/10/24 15:06	1
1,1,1-Trichloroethane	<0.190		1.00	0.190	ug/L			04/10/24 15:06	1
1,1,2-Trichloroethane	<0.450		1.00	0.450	ug/L			04/10/24 15:06	1
Trichloroethene	<0.430		1.00	0.430	ug/L			04/10/24 15:06	1
Trichlorofluoromethane	<0.380		4.00	0.380	ug/L			04/10/24 15:06	1
1,2,3-Trichloropropane	<0.590		1.00	0.590	ug/L			04/10/24 15:06	1
Vinyl acetate	<2.50		10.0	2.50	ug/L			04/10/24 15:06	1
Vinyl chloride	<0.180		1.00	0.180	ug/L			04/10/24 15:06	1
Xylenes, Total	<0.400		3.00	0.400	ug/L			04/10/24 15:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*04/10/24 15:06*	*1*

Client: Carroll County SLF
Project/Site: Carroll County Landfill

Job ID: 310-278355-1
SDG: 24C002.00

Client Sample ID: MW-206_24_04

Date Collected: 04/04/24 08:45
Date Received: 04/05/24 11:10

Lab Sample ID: 310-278355-7

Matrix: Ground Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*96*		*73 - 130*		*04/10/24 15:06*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*04/10/24 15:06*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00200	0.00100	mg/L		04/11/24 09:00	04/19/24 16:43	1
Arsenic	**0.00271**		0.00200	0.000530	mg/L		04/11/24 09:00	04/19/24 16:43	1
Barium	**0.0227**		0.00200	0.000640	mg/L		04/11/24 09:00	04/19/24 16:43	1
Beryllium	<0.000330		0.00100	0.000330	mg/L		04/11/24 09:00	04/19/24 16:43	1
Cadmium	<0.000100		0.000200	0.000100	mg/L		04/11/24 09:00	04/19/24 16:43	1
Chromium	<0.00110		0.00500	0.00110	mg/L		04/11/24 09:00	04/19/24 16:43	1
Cobalt	**0.00522**		0.000500	0.000170	mg/L		04/11/24 09:00	04/19/24 16:43	1
Copper	<0.00180		0.00500	0.00180	mg/L		04/11/24 09:00	04/19/24 16:43	1
Lead	**0.00299**		0.000500	0.000240	mg/L		04/11/24 09:00	04/19/24 16:43	1
Nickel	**0.00820**		0.00500	0.00190	mg/L		04/11/24 09:00	04/19/24 16:43	1
Selenium	<0.00140		0.00500	0.00140	mg/L		04/11/24 09:00	04/19/24 16:43	1
Silver	<0.000500		0.00100	0.000500	mg/L		04/11/24 09:00	04/19/24 16:43	1
Thallium	<0.000260		0.00100	0.000260	mg/L		04/11/24 09:00	04/19/24 16:43	1
Vanadium	<0.00110		0.00500	0.00110	mg/L		04/11/24 09:00	04/19/24 16:43	1
Zinc	**0.0122**	**J**	0.0200	0.00640	mg/L		04/11/24 09:00	04/19/24 16:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	**27.3**		5.00	1.70	mg/L			04/09/24 17:25	1

Client Sample ID: FB-1_24_04

Date Collected: 04/04/24 11:10
Date Received: 04/05/24 11:10

Lab Sample ID: 310-278355-8

Matrix: Ground Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<3.10		10.0	3.10	ug/L			04/10/24 11:50	1
Acrylonitrile	<2.20		5.00	2.20	ug/L			04/10/24 11:50	1
Benzene	<0.220		0.500	0.220	ug/L			04/10/24 11:50	1
Bromochloromethane	<0.540		5.00	0.540	ug/L			04/10/24 11:50	1
Bromodichloromethane	<0.390		1.00	0.390	ug/L			04/10/24 11:50	1
Bromoform	<0.780		5.00	0.780	ug/L			04/10/24 11:50	1
Bromomethane	<1.10		4.00	1.10	ug/L			04/10/24 11:50	1
2-Butanone (MEK)	<2.10		10.0	2.10	ug/L			04/10/24 11:50	1
Carbon disulfide	<0.450		1.00	0.450	ug/L			04/10/24 11:50	1
Carbon tetrachloride	<0.650		2.00	0.650	ug/L			04/10/24 11:50	1
Chlorobenzene	<0.400		1.00	0.400	ug/L			04/10/24 11:50	1
Chlorodibromomethane	<0.750		5.00	0.750	ug/L			04/10/24 11:50	1
Chloroethane	<0.790		4.00	0.790	ug/L			04/10/24 11:50	1
Chloroform	<1.30		3.00	1.30	ug/L			04/10/24 11:50	1
Chloromethane	<0.610		3.00	0.610	ug/L			04/10/24 11:50	1
cis-1,2-Dichloroethene	<0.210		1.00	0.210	ug/L			04/10/24 11:50	1
cis-1,3-Dichloropropene	<0.250		5.00	0.250	ug/L			04/10/24 11:50	1
1,2-Dibromo-3-Chloropropane	<1.20		5.00	1.20	ug/L			04/10/24 11:50	1
1,2-Dibromoethane (EDB)	<0.340		1.00	0.340	ug/L			04/10/24 11:50	1
Dibromomethane	<0.330		1.00	0.330	ug/L			04/10/24 11:50	1
1,2-Dichlorobenzene	<0.370		1.00	0.370	ug/L			04/10/24 11:50	1
1,4-Dichlorobenzene	<0.230		1.00	0.230	ug/L			04/10/24 11:50	1
1,1-Dichloroethane	<0.220		1.00	0.220	ug/L			04/10/24 11:50	1
1,2-Dichloroethane	<0.390		1.00	0.390	ug/L			04/10/24 11:50	1
1,1-Dichloroethene	<0.560		2.00	0.560	ug/L			04/10/24 11:50	1
1,2-Dichloropropane	<0.270		1.00	0.270	ug/L			04/10/24 11:50	1
Ethylbenzene	<0.310		1.00	0.310	ug/L			04/10/24 11:50	1
2-Hexanone	<2.00		10.0	2.00	ug/L			04/10/24 11:50	1
Iodomethane	<7.00		10.0	7.00	ug/L			04/10/24 11:50	1
Methylene Chloride	<1.70		5.00	1.70	ug/L			04/10/24 11:50	1
4-Methyl-2-pentanone (MIBK)	<2.10		10.0	2.10	ug/L			04/10/24 11:50	1
Styrene	<0.370		1.00	0.370	ug/L			04/10/24 11:50	1
1,1,1,2-Tetrachloroethane	<0.380		1.00	0.380	ug/L			04/10/24 11:50	1
1,1,2,2-Tetrachloroethane	<0.470		1.00	0.470	ug/L			04/10/24 11:50	1
Tetrachloroethene	<0.480		1.00	0.480	ug/L			04/10/24 11:50	1
Toluene	<0.430		1.00	0.430	ug/L			04/10/24 11:50	1
trans-1,4-Dichloro-2-butene	<1.10		10.0	1.10	ug/L			04/10/24 11:50	1
trans-1,2-Dichloroethene	<0.270		1.00	0.270	ug/L			04/10/24 11:50	1
trans-1,3-Dichloropropene	<0.560		5.00	0.560	ug/L			04/10/24 11:50	1
1,1,1-Trichloroethane	<0.190		1.00	0.190	ug/L			04/10/24 11:50	1
1,1,2-Trichloroethane	<0.450		1.00	0.450	ug/L			04/10/24 11:50	1
Trichloroethene	<0.430		1.00	0.430	ug/L			04/10/24 11:50	1
Trichlorofluoromethane	<0.380		4.00	0.380	ug/L			04/10/24 11:50	1
1,2,3-Trichloropropane	<0.590		1.00	0.590	ug/L			04/10/24 11:50	1
Vinyl acetate	<2.50		10.0	2.50	ug/L			04/10/24 11:50	1
Vinyl chloride	<0.180		1.00	0.180	ug/L			04/10/24 11:50	1
Xylenes, Total	<0.400		3.00	0.400	ug/L			04/10/24 11:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*		*04/10/24 11:50*	*1*

Client: Carroll County SLF
Project/Site: Carroll County Landfill

Job ID: 310-278355-1
SDG: 24C002.00

Client Sample ID: FB-1_24_04

Date Collected: 04/04/24 11:10
Date Received: 04/05/24 11:10

Lab Sample ID: 310-278355-8

Matrix: Ground Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*96*		*73 - 130*		*04/10/24 11:50*	*1*
Toluene-d8 (Surr)	*101*		*80 - 120*		*04/10/24 11:50*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00200	0.00100	mg/L		04/11/24 09:00	04/19/24 16:45	1
Arsenic	<0.000530		0.00200	0.000530	mg/L		04/11/24 09:00	04/19/24 16:45	1
Barium	<0.000640		0.00200	0.000640	mg/L		04/11/24 09:00	04/19/24 16:45	1
Beryllium	<0.000330		0.00100	0.000330	mg/L		04/11/24 09:00	04/19/24 16:45	1
Cadmium	<0.000100		0.000200	0.000100	mg/L		04/11/24 09:00	04/19/24 16:45	1
Chromium	<0.00110		0.00500	0.00110	mg/L		04/11/24 09:00	04/19/24 16:45	1
Cobalt	<0.000170		0.000500	0.000170	mg/L		04/11/24 09:00	04/19/24 16:45	1
Copper	<0.00180		0.00500	0.00180	mg/L		04/11/24 09:00	04/19/24 16:45	1
Lead	<0.000240		0.000500	0.000240	mg/L		04/11/24 09:00	04/19/24 16:45	1
Nickel	<0.00190		0.00500	0.00190	mg/L		04/11/24 09:00	04/19/24 16:45	1
Selenium	<0.00140		0.00500	0.00140	mg/L		04/11/24 09:00	04/19/24 16:45	1
Silver	<0.000500		0.00100	0.000500	mg/L		04/11/24 09:00	04/19/24 16:45	1
Thallium	<0.000260		0.00100	0.000260	mg/L		04/11/24 09:00	04/19/24 16:45	1
Vanadium	<0.00110		0.00500	0.00110	mg/L		04/11/24 09:00	04/19/24 16:45	1
Zinc	<0.00640		0.0200	0.00640	mg/L		04/11/24 09:00	04/19/24 16:45	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	<1.70		5.00	1.70	mg/L			04/09/24 17:25	1

Client: Carroll County SLF
Project/Site: Carroll County Landfill

Job ID: 310-278355-1
SDG: 24C002.00

Client Sample ID: FD-1_24_04

Date Collected: 04/04/24 00:00
Date Received: 04/05/24 11:10

Lab Sample ID: 310-278355-9

Matrix: Ground Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<3.10		10.0	3.10	ug/L			04/10/24 15:28	1
Acrylonitrile	<2.20		5.00	2.20	ug/L			04/10/24 15:28	1
Benzene	**0.703**		0.500	0.220	ug/L			04/10/24 15:28	1
Bromochloromethane	<0.540		5.00	0.540	ug/L			04/10/24 15:28	1
Bromodichloromethane	<0.390		1.00	0.390	ug/L			04/10/24 15:28	1
Bromoform	<0.780		5.00	0.780	ug/L			04/10/24 15:28	1
Bromomethane	<1.10		4.00	1.10	ug/L			04/10/24 15:28	1
2-Butanone (MEK)	<2.10		10.0	2.10	ug/L			04/10/24 15:28	1
Carbon disulfide	<0.450		1.00	0.450	ug/L			04/10/24 15:28	1
Carbon tetrachloride	<0.650		2.00	0.650	ug/L			04/10/24 15:28	1
Chlorobenzene	<0.400		1.00	0.400	ug/L			04/10/24 15:28	1
Chlorodibromomethane	<0.750		5.00	0.750	ug/L			04/10/24 15:28	1
Chloroethane	<0.790		4.00	0.790	ug/L			04/10/24 15:28	1
Chloroform	<1.30		3.00	1.30	ug/L			04/10/24 15:28	1
Chloromethane	<0.610		3.00	0.610	ug/L			04/10/24 15:28	1
cis-1,2-Dichloroethene	**6.22**		1.00	0.210	ug/L			04/10/24 15:28	1
cis-1,3-Dichloropropene	<0.250		5.00	0.250	ug/L			04/10/24 15:28	1
1,2-Dibromo-3-Chloropropane	<1.20		5.00	1.20	ug/L			04/10/24 15:28	1
1,2-Dibromoethane (EDB)	<0.340		1.00	0.340	ug/L			04/10/24 15:28	1
Dibromomethane	<0.330		1.00	0.330	ug/L			04/10/24 15:28	1
1,2-Dichlorobenzene	<0.370		1.00	0.370	ug/L			04/10/24 15:28	1
1,4-Dichlorobenzene	<0.230		1.00	0.230	ug/L			04/10/24 15:28	1
1,1-Dichloroethane	<0.220		1.00	0.220	ug/L			04/10/24 15:28	1
1,2-Dichloroethane	<0.390		1.00	0.390	ug/L			04/10/24 15:28	1
1,1-Dichloroethene	<0.560		2.00	0.560	ug/L			04/10/24 15:28	1
1,2-Dichloropropane	<0.270		1.00	0.270	ug/L			04/10/24 15:28	1
Ethylbenzene	<0.310		1.00	0.310	ug/L			04/10/24 15:28	1
2-Hexanone	<2.00		10.0	2.00	ug/L			04/10/24 15:28	1
Iodomethane	<7.00		10.0	7.00	ug/L			04/10/24 15:28	1
Methylene Chloride	<1.70		5.00	1.70	ug/L			04/10/24 15:28	1
4-Methyl-2-pentanone (MIBK)	<2.10		10.0	2.10	ug/L			04/10/24 15:28	1
Styrene	<0.370		1.00	0.370	ug/L			04/10/24 15:28	1
1,1,1,2-Tetrachloroethane	<0.380		1.00	0.380	ug/L			04/10/24 15:28	1
1,1,2,2-Tetrachloroethane	<0.470		1.00	0.470	ug/L			04/10/24 15:28	1
Tetrachloroethene	<0.480		1.00	0.480	ug/L			04/10/24 15:28	1
Toluene	<0.430		1.00	0.430	ug/L			04/10/24 15:28	1
trans-1,4-Dichloro-2-butene	<1.10		10.0	1.10	ug/L			04/10/24 15:28	1
trans-1,2-Dichloroethene	<0.270		1.00	0.270	ug/L			04/10/24 15:28	1
trans-1,3-Dichloropropene	<0.560		5.00	0.560	ug/L			04/10/24 15:28	1
1,1,1-Trichloroethane	<0.190		1.00	0.190	ug/L			04/10/24 15:28	1
1,1,2-Trichloroethane	<0.450		1.00	0.450	ug/L			04/10/24 15:28	1
Trichloroethene	<0.430		1.00	0.430	ug/L			04/10/24 15:28	1
Trichlorofluoromethane	<0.380		4.00	0.380	ug/L			04/10/24 15:28	1
1,2,3-Trichloropropane	<0.590		1.00	0.590	ug/L			04/10/24 15:28	1
Vinyl acetate	<2.50		10.0	2.50	ug/L			04/10/24 15:28	1
Vinyl chloride	<0.180		1.00	0.180	ug/L			04/10/24 15:28	1
Xylenes, Total	<0.400		3.00	0.400	ug/L			04/10/24 15:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*		*04/10/24 15:28*	*1*

Client Sample ID: FD-1_24_04

Date Collected: 04/04/24 00:00
Date Received: 04/05/24 11:10

Lab Sample ID: 310-278355-9

Matrix: Ground Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*95*		*73 - 130*		*04/10/24 15:28*	*1*
Toluene-d8 (Surr)	*104*		*80 - 120*		*04/10/24 15:28*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00200	0.00100	mg/L		04/11/24 09:00	04/19/24 16:47	1
Arsenic	**0.0217**		0.00200	0.000530	mg/L		04/11/24 09:00	04/19/24 16:47	1
Barium	**0.698**		0.00200	0.000640	mg/L		04/11/24 09:00	04/19/24 16:47	1
Beryllium	<0.000330		0.00100	0.000330	mg/L		04/11/24 09:00	04/19/24 16:47	1
Cadmium	<0.000100		0.000200	0.000100	mg/L		04/11/24 09:00	04/19/24 16:47	1
Chromium	<0.00110		0.00500	0.00110	mg/L		04/11/24 09:00	04/19/24 16:47	1
Cobalt	**0.00388**		0.000500	0.000170	mg/L		04/11/24 09:00	04/19/24 16:47	1
Copper	<0.00180		0.00500	0.00180	mg/L		04/11/24 09:00	04/19/24 16:47	1
Lead	<0.000240		0.000500	0.000240	mg/L		04/11/24 09:00	04/19/24 16:47	1
Nickel	**0.0373**		0.00500	0.00190	mg/L		04/11/24 09:00	04/19/24 16:47	1
Selenium	<0.00140		0.00500	0.00140	mg/L		04/11/24 09:00	04/19/24 16:47	1
Silver	<0.000500		0.00100	0.000500	mg/L		04/11/24 09:00	04/19/24 16:47	1
Thallium	<0.000260		0.00100	0.000260	mg/L		04/11/24 09:00	04/19/24 16:47	1
Vanadium	<0.00110		0.00500	0.00110	mg/L		04/11/24 09:00	04/19/24 16:47	1
Zinc	<0.00640		0.0200	0.00640	mg/L		04/11/24 09:00	04/19/24 16:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	**3.33**	**J**	5.00	1.70	mg/L			04/09/24 17:25	1

Client Sample ID: TB-1_24_04

Date Collected: 04/04/24 00:00
Date Received: 04/05/24 11:10

Lab Sample ID: 310-278355-10

Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<3.10		10.0	3.10	ug/L			04/10/24 12:12	1
Acrylonitrile	<2.20		5.00	2.20	ug/L			04/10/24 12:12	1
Benzene	<0.220		0.500	0.220	ug/L			04/10/24 12:12	1
Bromochloromethane	<0.540		5.00	0.540	ug/L			04/10/24 12:12	1
Bromodichloromethane	<0.390		1.00	0.390	ug/L			04/10/24 12:12	1
Bromoform	<0.780		5.00	0.780	ug/L			04/10/24 12:12	1
Bromomethane	<1.10		4.00	1.10	ug/L			04/10/24 12:12	1
2-Butanone (MEK)	<2.10		10.0	2.10	ug/L			04/10/24 12:12	1
Carbon disulfide	<0.450		1.00	0.450	ug/L			04/10/24 12:12	1
Carbon tetrachloride	<0.650		2.00	0.650	ug/L			04/10/24 12:12	1
Chlorobenzene	<0.400		1.00	0.400	ug/L			04/10/24 12:12	1
Chlorodibromomethane	<0.750		5.00	0.750	ug/L			04/10/24 12:12	1
Chloroethane	<0.790		4.00	0.790	ug/L			04/10/24 12:12	1
Chloroform	<1.30		3.00	1.30	ug/L			04/10/24 12:12	1
Chloromethane	<0.610		3.00	0.610	ug/L			04/10/24 12:12	1
cis-1,2-Dichloroethene	<0.210		1.00	0.210	ug/L			04/10/24 12:12	1
cis-1,3-Dichloropropene	<0.250		5.00	0.250	ug/L			04/10/24 12:12	1
1,2-Dibromo-3-Chloropropane	<1.20		5.00	1.20	ug/L			04/10/24 12:12	1
1,2-Dibromoethane (EDB)	<0.340		1.00	0.340	ug/L			04/10/24 12:12	1
Dibromomethane	<0.330		1.00	0.330	ug/L			04/10/24 12:12	1
1,2-Dichlorobenzene	<0.370		1.00	0.370	ug/L			04/10/24 12:12	1
1,4-Dichlorobenzene	<0.230		1.00	0.230	ug/L			04/10/24 12:12	1
1,1-Dichloroethane	<0.220		1.00	0.220	ug/L			04/10/24 12:12	1
1,2-Dichloroethane	<0.390		1.00	0.390	ug/L			04/10/24 12:12	1
1,1-Dichloroethene	<0.560		2.00	0.560	ug/L			04/10/24 12:12	1
1,2-Dichloropropane	<0.270		1.00	0.270	ug/L			04/10/24 12:12	1
Ethylbenzene	<0.310		1.00	0.310	ug/L			04/10/24 12:12	1
2-Hexanone	<2.00		10.0	2.00	ug/L			04/10/24 12:12	1
Iodomethane	<7.00		10.0	7.00	ug/L			04/10/24 12:12	1
Methylene Chloride	<1.70		5.00	1.70	ug/L			04/10/24 12:12	1
4-Methyl-2-pentanone (MIBK)	<2.10		10.0	2.10	ug/L			04/10/24 12:12	1
Styrene	<0.370		1.00	0.370	ug/L			04/10/24 12:12	1
1,1,1,2-Tetrachloroethane	<0.380		1.00	0.380	ug/L			04/10/24 12:12	1
1,1,2,2-Tetrachloroethane	<0.470		1.00	0.470	ug/L			04/10/24 12:12	1
Tetrachloroethene	<0.480		1.00	0.480	ug/L			04/10/24 12:12	1
Toluene	<0.430		1.00	0.430	ug/L			04/10/24 12:12	1
trans-1,4-Dichloro-2-butene	<1.10		10.0	1.10	ug/L			04/10/24 12:12	1
trans-1,2-Dichloroethene	<0.270		1.00	0.270	ug/L			04/10/24 12:12	1
trans-1,3-Dichloropropene	<0.560		5.00	0.560	ug/L			04/10/24 12:12	1
1,1,1-Trichloroethane	<0.190		1.00	0.190	ug/L			04/10/24 12:12	1
1,1,2-Trichloroethane	<0.450		1.00	0.450	ug/L			04/10/24 12:12	1
Trichloroethene	<0.430		1.00	0.430	ug/L			04/10/24 12:12	1
Trichlorofluoromethane	<0.380		4.00	0.380	ug/L			04/10/24 12:12	1
1,2,3-Trichloropropane	<0.590		1.00	0.590	ug/L			04/10/24 12:12	1
Vinyl acetate	<2.50		10.0	2.50	ug/L			04/10/24 12:12	1
Vinyl chloride	<0.180		1.00	0.180	ug/L			04/10/24 12:12	1
Xylenes, Total	<0.400		3.00	0.400	ug/L			04/10/24 12:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*04/10/24 12:12*	*1*

Client: Carroll County SLF
Project/Site: Carroll County Landfill

Job ID: 310-278355-1
SDG: 24C002.00

Client Sample ID: TB-1_24_04
Date Collected: 04/04/24 00:00
Date Received: 04/05/24 11:10

Lab Sample ID: 310-278355-10
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	95		73 - 130		04/10/24 12:12	1
Toluene-d8 (Surr)	102		80 - 120		04/10/24 12:12	1

Definitions/Glossary

Client: Carroll County SLF
Project/Site: Carroll County Landfill

Job ID: 310-278355-1
SDG: 24C002.00

Qualifiers

Metals

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Surrogate Summary

Client: Carroll County SLF
Project/Site: Carroll County Landfill

Job ID: 310-278355-1
SDG: 24C002.00

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Ground Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(80-120)	(73-130)	(80-120)
310-278355-1	GU-2A_24_04	105	95	99
310-278355-1	GU-2A_24_04	104	97	100
310-278355-1 MS	GU-2A_24_04	100	95	106
310-278355-1 MSD	GU-2A_24_04	102	94	106
310-278355-2	MW-119RR_24_04	105	97	100
310-278355-3	MW-121R_24_04	105	99	101
310-278355-4	MW-122R_24_04	103	99	102
310-278355-5	MW-200_24_04	104	97	101
310-278355-6	MW-205_24_04	103	99	101
310-278355-7	MW-206_24_04	105	96	101
310-278355-8	FB-1_24_04	104	96	101
310-278355-9	FD-1_24_04	106	95	104

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Water — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(80-120)	(73-130)	(80-120)
310-278355-10	TB-1_24_04	102	95	102
LCS 310-418195/6	Lab Control Sample	99	94	105
LCS 310-418195/7	Lab Control Sample	105	96	103
LCS 310-418328/6	Lab Control Sample	98	96	105
LCS 310-418328/7	Lab Control Sample	104	96	103
MB 310-418195/5	Method Blank	103	98	102
MB 310-418328/5	Method Blank	104	96	102

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 310-418195/5
Matrix: Water
Analysis Batch: 418195

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<3.10		10.0	3.10	ug/L			04/09/24 20:02	1
Acrylonitrile	<2.20		5.00	2.20	ug/L			04/09/24 20:02	1
Benzene	<0.220		0.500	0.220	ug/L			04/09/24 20:02	1
Bromochloromethane	<0.540		5.00	0.540	ug/L			04/09/24 20:02	1
Bromodichloromethane	<0.390		1.00	0.390	ug/L			04/09/24 20:02	1
Bromoform	<0.780		5.00	0.780	ug/L			04/09/24 20:02	1
Bromomethane	<1.10		4.00	1.10	ug/L			04/09/24 20:02	1
2-Butanone (MEK)	<2.10		10.0	2.10	ug/L			04/09/24 20:02	1
Carbon disulfide	<0.450		1.00	0.450	ug/L			04/09/24 20:02	1
Chlorobenzene	<0.400		1.00	0.400	ug/L			04/09/24 20:02	1
Chlorodibromomethane	<0.750		5.00	0.750	ug/L			04/09/24 20:02	1
Chloroethane	<0.790		4.00	0.790	ug/L			04/09/24 20:02	1
Chloroform	<1.30		3.00	1.30	ug/L			04/09/24 20:02	1
Chloromethane	<0.610		3.00	0.610	ug/L			04/09/24 20:02	1
cis-1,2-Dichloroethene	<0.210		1.00	0.210	ug/L			04/09/24 20:02	1
cis-1,3-Dichloropropene	<0.250		5.00	0.250	ug/L			04/09/24 20:02	1
1,2-Dibromo-3-Chloropropane	<1.20		5.00	1.20	ug/L			04/09/24 20:02	1
1,2-Dibromoethane (EDB)	<0.340		1.00	0.340	ug/L			04/09/24 20:02	1
Dibromomethane	<0.330		1.00	0.330	ug/L			04/09/24 20:02	1
1,2-Dichlorobenzene	<0.370		1.00	0.370	ug/L			04/09/24 20:02	1
1,4-Dichlorobenzene	<0.230		1.00	0.230	ug/L			04/09/24 20:02	1
1,1-Dichloroethane	<0.220		1.00	0.220	ug/L			04/09/24 20:02	1
1,2-Dichloroethane	<0.390		1.00	0.390	ug/L			04/09/24 20:02	1
1,1-Dichloroethene	<0.560		2.00	0.560	ug/L			04/09/24 20:02	1
1,2-Dichloropropane	<0.270		1.00	0.270	ug/L			04/09/24 20:02	1
Ethylbenzene	<0.310		1.00	0.310	ug/L			04/09/24 20:02	1
2-Hexanone	<2.00		10.0	2.00	ug/L			04/09/24 20:02	1
Iodomethane	<7.00		10.0	7.00	ug/L			04/09/24 20:02	1
Methylene Chloride	<1.70		5.00	1.70	ug/L			04/09/24 20:02	1
4-Methyl-2-pentanone (MIBK)	<2.10		10.0	2.10	ug/L			04/09/24 20:02	1
Styrene	<0.370		1.00	0.370	ug/L			04/09/24 20:02	1
1,1,1,2-Tetrachloroethane	<0.380		1.00	0.380	ug/L			04/09/24 20:02	1
1,1,2,2-Tetrachloroethane	<0.470		1.00	0.470	ug/L			04/09/24 20:02	1
Tetrachloroethene	<0.480		1.00	0.480	ug/L			04/09/24 20:02	1
Toluene	<0.430		1.00	0.430	ug/L			04/09/24 20:02	1
trans-1,4-Dichloro-2-butene	<1.10		10.0	1.10	ug/L			04/09/24 20:02	1
trans-1,2-Dichloroethene	<0.270		1.00	0.270	ug/L			04/09/24 20:02	1
trans-1,3-Dichloropropene	<0.560		5.00	0.560	ug/L			04/09/24 20:02	1
1,1,1-Trichloroethane	<0.190		1.00	0.190	ug/L			04/09/24 20:02	1
1,1,2-Trichloroethane	<0.450		1.00	0.450	ug/L			04/09/24 20:02	1
Trichloroethene	<0.430		1.00	0.430	ug/L			04/09/24 20:02	1
Trichlorofluoromethane	<0.380		4.00	0.380	ug/L			04/09/24 20:02	1
1,2,3-Trichloropropane	<0.590		1.00	0.590	ug/L			04/09/24 20:02	1
Vinyl acetate	<2.50		10.0	2.50	ug/L			04/09/24 20:02	1
Vinyl chloride	<0.180		1.00	0.180	ug/L			04/09/24 20:02	1
Xylenes, Total	<0.400		3.00	0.400	ug/L			04/09/24 20:02	1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 310-418195/5
Matrix: Water
Analysis Batch: 418195

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

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*		*04/09/24 20:02*	*1*
Dibromofluoromethane (Surr)	*98*		*73 - 130*		*04/09/24 20:02*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*04/09/24 20:02*	*1*

Lab Sample ID: LCS 310-418195/6
Matrix: Water
Analysis Batch: 418195

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	40.0	37.66		ug/L		94	50 - 150
Acrylonitrile	200	161.1		ug/L		81	50 - 150
Benzene	20.0	14.41		ug/L		72	72 - 124
Bromochloromethane	20.0	14.88		ug/L		74	73 - 130
Bromodichloromethane	20.0	14.98		ug/L		75	74 - 122
Bromoform	20.0	14.34		ug/L		72	61 - 122
2-Butanone (MEK)	40.0	33.88		ug/L		85	50 - 150
Carbon disulfide	20.0	14.84		ug/L		74	59 - 135
Chlorobenzene	20.0	15.54		ug/L		78	76 - 120
Chlorodibromomethane	20.0	14.74		ug/L		74	71 - 121
Chloroform	20.0	15.34		ug/L		77	72 - 125
cis-1,2-Dichloroethene	20.0	14.79		ug/L		74	74 - 123
cis-1,3-Dichloropropene	20.0	15.13		ug/L		76	71 - 125
1,2-Dibromo-3-Chloropropane	20.0	18.42		ug/L		92	50 - 150
1,2-Dibromoethane (EDB)	20.0	15.51		ug/L		78	75 - 125
Dibromomethane	20.0	15.80		ug/L		79	74 - 125
1,2-Dichlorobenzene	20.0	16.47		ug/L		82	74 - 120
1,4-Dichlorobenzene	20.0	17.38		ug/L		87	72 - 120
1,1-Dichloroethane	20.0	15.45		ug/L		77	70 - 127
1,2-Dichloroethane	20.0	15.49		ug/L		77	71 - 125
1,1-Dichloroethene	20.0	14.71		ug/L		74	63 - 132
1,2-Dichloropropane	20.0	15.64		ug/L		78	73 - 124
Ethylbenzene	20.0	15.64		ug/L		78	74 - 122
2-Hexanone	40.0	35.55		ug/L		89	60 - 140
Iodomethane	20.0	11.12		ug/L		56	10 - 150
Methylene Chloride	20.0	16.38		ug/L		82	50 - 150
4-Methyl-2-pentanone (MIBK)	40.0	34.20		ug/L		85	60 - 139
Styrene	20.0	15.54		ug/L		78	74 - 121
1,1,1,2-Tetrachloroethane	20.0	15.16		ug/L		76	71 - 120
1,1,2,2-Tetrachloroethane	20.0	16.46		ug/L		82	68 - 124
Tetrachloroethene	20.0	14.50		ug/L		72	71 - 130
Toluene	20.0	15.15		ug/L		76	74 - 123
trans-1,4-Dichloro-2-butene	20.0	15.75		ug/L		79	50 - 150
trans-1,2-Dichloroethene	20.0	14.38		ug/L		72	70 - 126
trans-1,3-Dichloropropene	20.0	15.64		ug/L		78	69 - 123
1,1,1-Trichloroethane	20.0	14.71		ug/L		74	73 - 129
1,1,2-Trichloroethane	20.0	15.67		ug/L		78	73 - 123
Trichloroethene	20.0	14.96		ug/L		75	72 - 126
1,2,3-Trichloropropane	20.0	16.01		ug/L		80	65 - 127

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 310-418195/6
Matrix: Water
Analysis Batch: 418195

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Vinyl acetate	40.0	29.80		ug/L		75	50 - 150
Xylenes, Total	40.0	30.12		ug/L		75	73 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*
Dibromofluoromethane (Surr)	*94*		*73 - 130*
Toluene-d8 (Surr)	*105*		*80 - 120*

Lab Sample ID: LCS 310-418195/7
Matrix: Water
Analysis Batch: 418195

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromomethane	20.0	15.12		ug/L		76	23 - 150
Chloroethane	20.0	17.97		ug/L		90	54 - 136
Chloromethane	20.0	17.62		ug/L		88	38 - 150
Trichlorofluoromethane	20.0	15.50		ug/L		78	54 - 149
Vinyl chloride	20.0	17.21		ug/L		86	56 - 140

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*
Dibromofluoromethane (Surr)	*96*		*73 - 130*
Toluene-d8 (Surr)	*103*		*80 - 120*

Lab Sample ID: 310-278355-1 MS
Matrix: Ground Water
Analysis Batch: 418195

Client Sample ID: GU-2A_24_04
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Acetone	<3.10		50.0	39.69		ug/L		79	31 - 150
Acrylonitrile	<2.20		250	187.8		ug/L		75	40 - 150
Benzene	<0.220		25.0	16.95		ug/L		68	46 - 130
Bromochloromethane	<0.540		25.0	16.84		ug/L		67	57 - 130
Bromodichloromethane	<0.390		25.0	17.46		ug/L		70	57 - 130
Bromoform	<0.780		25.0	17.25		ug/L		69	44 - 130
2-Butanone (MEK)	<2.10		50.0	39.30		ug/L		79	38 - 150
Carbon disulfide	<0.450		25.0	18.51		ug/L		74	38 - 135
Chlorobenzene	<0.400		25.0	18.31		ug/L		73	59 - 130
Chlorodibromomethane	<0.750		25.0	16.88		ug/L		68	54 - 130
Chloroform	<1.30		25.0	17.49		ug/L		70	51 - 130
cis-1,2-Dichloroethene	<0.210		25.0	17.92		ug/L		72	45 - 130
cis-1,3-Dichloropropene	<0.250		25.0	17.48		ug/L		70	53 - 130
1,2-Dibromo-3-Chloropropane	<1.20		25.0	21.89		ug/L		88	38 - 150
1,2-Dibromoethane (EDB)	<0.340		25.0	17.76		ug/L		71	60 - 130
Dibromomethane	<0.330		25.0	18.19		ug/L		73	59 - 130
1,2-Dichlorobenzene	<0.370		25.0	19.82		ug/L		79	59 - 130
1,4-Dichlorobenzene	<0.230		25.0	20.20		ug/L		81	57 - 130
1,1-Dichloroethane	<0.220		25.0	18.04		ug/L		72	49 - 130

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 310-278355-1 MS
Matrix: Ground Water
Analysis Batch: 418195

Client Sample ID: GU-2A_24_04
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,2-Dichloroethane	<0.390		25.0	18.05		ug/L		72	51 - 130
1,1-Dichloroethene	<0.560		25.0	18.07		ug/L		72	37 - 132
1,2-Dichloropropane	<0.270		25.0	18.24		ug/L		73	57 - 130
Ethylbenzene	<0.310		25.0	18.46		ug/L		74	45 - 130
2-Hexanone	<2.00		50.0	38.54		ug/L		77	46 - 140
Iodomethane	<7.00		25.0	13.66		ug/L		55	10 - 150
Methylene Chloride	<1.70		25.0	19.94		ug/L		80	37 - 150
4-Methyl-2-pentanone (MIBK)	<2.10		50.0	38.58		ug/L		77	47 - 139
Styrene	<0.370		25.0	18.71		ug/L		75	47 - 130
1,1,1,2-Tetrachloroethane	<0.380		25.0	18.12		ug/L		72	55 - 130
1,1,2,2-Tetrachloroethane	<0.470		25.0	19.06		ug/L		76	54 - 130
Tetrachloroethene	<0.480		25.0	16.76		ug/L		67	47 - 130
Toluene	<0.430		25.0	17.80		ug/L		71	51 - 130
trans-1,4-Dichloro-2-butene	<1.10		25.0	18.28		ug/L		73	26 - 150
trans-1,2-Dichloroethene	<0.270		25.0	17.36		ug/L		69	48 - 130
trans-1,3-Dichloropropene	<0.560		25.0	18.11		ug/L		72	50 - 130
1,1,1-Trichloroethane	<0.190		25.0	16.42		ug/L		66	52 - 130
1,1,2-Trichloroethane	<0.450		25.0	18.23		ug/L		73	58 - 130
Trichloroethene	<0.430		25.0	18.25		ug/L		73	51 - 130
1,2,3-Trichloropropane	<0.590		25.0	19.82		ug/L		79	49 - 130
Vinyl acetate	<2.50		50.0	33.74		ug/L		67	29 - 150
Xylenes, Total	<0.400		50.0	35.49		ug/L		71	43 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*
Dibromofluoromethane (Surr)	*95*		*73 - 130*
Toluene-d8 (Surr)	*106*		*80 - 120*

Lab Sample ID: 310-278355-1 MSD
Matrix: Ground Water
Analysis Batch: 418195

Client Sample ID: GU-2A_24_04
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acetone	<3.10		50.0	44.05		ug/L		88	31 - 150	10	29
Acrylonitrile	<2.20		250	190.3		ug/L		76	40 - 150	1	20
Benzene	<0.220		25.0	15.85		ug/L		63	46 - 130	7	20
Bromochloromethane	<0.540		25.0	15.81		ug/L		63	57 - 130	6	20
Bromodichloromethane	<0.390		25.0	16.51		ug/L		66	57 - 130	6	20
Bromoform	<0.780		25.0	16.48		ug/L		66	44 - 130	5	20
2-Butanone (MEK)	<2.10		50.0	39.03		ug/L		78	38 - 150	1	20
Carbon disulfide	<0.450		25.0	17.23		ug/L		69	38 - 135	7	30
Chlorobenzene	<0.400		25.0	17.15		ug/L		69	59 - 130	7	20
Chlorodibromomethane	<0.750		25.0	16.19		ug/L		65	54 - 130	4	20
Chloroform	<1.30		25.0	16.56		ug/L		66	51 - 130	5	20
cis-1,2-Dichloroethene	<0.210		25.0	16.96		ug/L		68	45 - 130	6	20
cis-1,3-Dichloropropene	<0.250		25.0	16.83		ug/L		67	53 - 130	4	20
1,2-Dibromo-3-Chloropropane	<1.20		25.0	22.96		ug/L		92	38 - 150	5	20
1,2-Dibromoethane (EDB)	<0.340		25.0	17.17		ug/L		69	60 - 130	3	20

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 310-278355-1 MSD
Matrix: Ground Water
Analysis Batch: 418195

Client Sample ID: GU-2A_24_04
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dibromomethane	<0.330		25.0	17.86		ug/L		71	59 - 130	2	20
1,2-Dichlorobenzene	<0.370		25.0	19.41		ug/L		78	59 - 130	2	20
1,4-Dichlorobenzene	<0.230		25.0	20.28		ug/L		81	57 - 130	0	20
1,1-Dichloroethane	<0.220		25.0	16.92		ug/L		68	49 - 130	6	20
1,2-Dichloroethane	<0.390		25.0	17.26		ug/L		69	51 - 130	4	20
1,1-Dichloroethene	<0.560		25.0	16.50		ug/L		66	37 - 132	9	26
1,2-Dichloropropane	<0.270		25.0	17.23		ug/L		69	57 - 130	6	20
Ethylbenzene	<0.310		25.0	17.25		ug/L		69	45 - 130	7	20
2-Hexanone	<2.00		50.0	38.80		ug/L		78	46 - 140	1	20
Iodomethane	<7.00		25.0	15.08		ug/L		60	10 - 150	10	35
Methylene Chloride	<1.70		25.0	19.08		ug/L		76	37 - 150	4	24
4-Methyl-2-pentanone (MIBK)	<2.10		50.0	40.15		ug/L		80	47 - 139	4	20
Styrene	<0.370		25.0	17.56		ug/L		70	47 - 130	6	20
1,1,1,2-Tetrachloroethane	<0.380		25.0	17.00		ug/L		68	55 - 130	6	20
1,1,2,2-Tetrachloroethane	<0.470		25.0	18.68		ug/L		75	54 - 130	2	20
Tetrachloroethene	<0.480		25.0	15.88		ug/L		64	47 - 130	5	20
Toluene	<0.430		25.0	16.56		ug/L		66	51 - 130	7	20
trans-1,4-Dichloro-2-butene	<1.10		25.0	18.26		ug/L		73	26 - 150	0	23
trans-1,2-Dichloroethene	<0.270		25.0	16.14		ug/L		65	48 - 130	7	22
trans-1,3-Dichloropropene	<0.560		25.0	17.75		ug/L		71	50 - 130	2	20
1,1,1-Trichloroethane	<0.190		25.0	15.71		ug/L		63	52 - 130	4	20
1,1,2-Trichloroethane	<0.450		25.0	17.90		ug/L		72	58 - 130	2	20
Trichloroethene	<0.430		25.0	16.55		ug/L		66	51 - 130	10	20
1,2,3-Trichloropropane	<0.590		25.0	18.69		ug/L		75	49 - 130	6	26
Vinyl acetate	<2.50		50.0	34.33		ug/L		69	29 - 150	2	23
Xylenes, Total	<0.400		50.0	33.59		ug/L		67	43 - 130	6	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*
Dibromofluoromethane (Surr)	*94*		*73 - 130*
Toluene-d8 (Surr)	*106*		*80 - 120*

Lab Sample ID: MB 310-418328/5
Matrix: Water
Analysis Batch: 418328

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<3.10		10.0	3.10	ug/L			04/10/24 10:23	1
Acrylonitrile	<2.20		5.00	2.20	ug/L			04/10/24 10:23	1
Benzene	<0.220		0.500	0.220	ug/L			04/10/24 10:23	1
Bromochloromethane	<0.540		5.00	0.540	ug/L			04/10/24 10:23	1
Bromodichloromethane	<0.390		1.00	0.390	ug/L			04/10/24 10:23	1
Bromoform	<0.780		5.00	0.780	ug/L			04/10/24 10:23	1
Bromomethane	<1.10		4.00	1.10	ug/L			04/10/24 10:23	1
2-Butanone (MEK)	<2.10		10.0	2.10	ug/L			04/10/24 10:23	1
Carbon disulfide	<0.450		1.00	0.450	ug/L			04/10/24 10:23	1
Carbon tetrachloride	<0.650		2.00	0.650	ug/L			04/10/24 10:23	1
Chlorobenzene	<0.400		1.00	0.400	ug/L			04/10/24 10:23	1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 310-418328/5
Matrix: Water
Analysis Batch: 418328

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorodibromomethane	<0.750		5.00	0.750	ug/L			04/10/24 10:23	1
Chloroethane	<0.790		4.00	0.790	ug/L			04/10/24 10:23	1
Chloroform	<1.30		3.00	1.30	ug/L			04/10/24 10:23	1
Chloromethane	<0.610		3.00	0.610	ug/L			04/10/24 10:23	1
cis-1,2-Dichloroethene	<0.210		1.00	0.210	ug/L			04/10/24 10:23	1
cis-1,3-Dichloropropene	<0.250		5.00	0.250	ug/L			04/10/24 10:23	1
1,2-Dibromo-3-Chloropropane	<1.20		5.00	1.20	ug/L			04/10/24 10:23	1
1,2-Dibromoethane (EDB)	<0.340		1.00	0.340	ug/L			04/10/24 10:23	1
Dibromomethane	<0.330		1.00	0.330	ug/L			04/10/24 10:23	1
1,2-Dichlorobenzene	<0.370		1.00	0.370	ug/L			04/10/24 10:23	1
1,4-Dichlorobenzene	<0.230		1.00	0.230	ug/L			04/10/24 10:23	1
1,1-Dichloroethane	<0.220		1.00	0.220	ug/L			04/10/24 10:23	1
1,2-Dichloroethane	<0.390		1.00	0.390	ug/L			04/10/24 10:23	1
1,1-Dichloroethene	<0.560		2.00	0.560	ug/L			04/10/24 10:23	1
1,2-Dichloropropane	<0.270		1.00	0.270	ug/L			04/10/24 10:23	1
Ethylbenzene	<0.310		1.00	0.310	ug/L			04/10/24 10:23	1
2-Hexanone	<2.00		10.0	2.00	ug/L			04/10/24 10:23	1
Iodomethane	<7.00		10.0	7.00	ug/L			04/10/24 10:23	1
Methylene Chloride	<1.70		5.00	1.70	ug/L			04/10/24 10:23	1
4-Methyl-2-pentanone (MIBK)	<2.10		10.0	2.10	ug/L			04/10/24 10:23	1
Styrene	<0.370		1.00	0.370	ug/L			04/10/24 10:23	1
1,1,1,2-Tetrachloroethane	<0.380		1.00	0.380	ug/L			04/10/24 10:23	1
1,1,2,2-Tetrachloroethane	<0.470		1.00	0.470	ug/L			04/10/24 10:23	1
Tetrachloroethene	<0.480		1.00	0.480	ug/L			04/10/24 10:23	1
Toluene	<0.430		1.00	0.430	ug/L			04/10/24 10:23	1
trans-1,4-Dichloro-2-butene	<1.10		10.0	1.10	ug/L			04/10/24 10:23	1
trans-1,2-Dichloroethene	<0.270		1.00	0.270	ug/L			04/10/24 10:23	1
trans-1,3-Dichloropropene	<0.560		5.00	0.560	ug/L			04/10/24 10:23	1
1,1,1-Trichloroethane	<0.190		1.00	0.190	ug/L			04/10/24 10:23	1
1,1,2-Trichloroethane	<0.450		1.00	0.450	ug/L			04/10/24 10:23	1
Trichloroethene	<0.430		1.00	0.430	ug/L			04/10/24 10:23	1
Trichlorofluoromethane	<0.380		4.00	0.380	ug/L			04/10/24 10:23	1
1,2,3-Trichloropropane	<0.590		1.00	0.590	ug/L			04/10/24 10:23	1
Vinyl acetate	<2.50		10.0	2.50	ug/L			04/10/24 10:23	1
Vinyl chloride	<0.180		1.00	0.180	ug/L			04/10/24 10:23	1
Xylenes, Total	<0.400		3.00	0.400	ug/L			04/10/24 10:23	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*		*04/10/24 10:23*	*1*
Dibromofluoromethane (Surr)	*96*		*73 - 130*		*04/10/24 10:23*	*1*
Toluene-d8 (Surr)	*102*		*80 - 120*		*04/10/24 10:23*	*1*

Lab Sample ID: LCS 310-418328/6
Matrix: Water
Analysis Batch: 418328

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Acetone			40.0	45.77		ug/L		114	50 - 150		

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 310-418328/6
Matrix: Water
Analysis Batch: 418328

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acrylonitrile	200	208.6		ug/L		104	50 - 150
Benzene	20.0	18.81		ug/L		94	72 - 124
Bromochloromethane	20.0	18.72		ug/L		94	73 - 130
Bromodichloromethane	20.0	19.08		ug/L		95	74 - 122
Bromoform	20.0	17.43		ug/L		87	61 - 122
2-Butanone (MEK)	40.0	42.83		ug/L		107	50 - 150
Carbon disulfide	20.0	22.06		ug/L		110	59 - 135
Carbon tetrachloride	20.0	18.17		ug/L		91	67 - 132
Chlorobenzene	20.0	19.39		ug/L		97	76 - 120
Chlorodibromomethane	20.0	18.34		ug/L		92	71 - 121
Chloroform	20.0	19.38		ug/L		97	72 - 125
cis-1,2-Dichloroethene	20.0	19.65		ug/L		98	74 - 123
cis-1,3-Dichloropropene	20.0	19.71		ug/L		99	71 - 125
1,2-Dibromo-3-Chloropropane	20.0	22.80		ug/L		114	50 - 150
1,2-Dibromoethane (EDB)	20.0	19.09		ug/L		95	75 - 125
Dibromomethane	20.0	19.53		ug/L		98	74 - 125
1,2-Dichlorobenzene	20.0	20.23		ug/L		101	74 - 120
1,4-Dichlorobenzene	20.0	21.79		ug/L		109	72 - 120
1,1-Dichloroethane	20.0	19.99		ug/L		100	70 - 127
1,2-Dichloroethane	20.0	19.47		ug/L		97	71 - 125
1,1-Dichloroethene	20.0	20.80		ug/L		104	63 - 132
1,2-Dichloropropane	20.0	19.98		ug/L		100	73 - 124
Ethylbenzene	20.0	20.02		ug/L		100	74 - 122
2-Hexanone	40.0	44.90		ug/L		112	60 - 140
Iodomethane	20.0	14.18		ug/L		71	10 - 150
Methylene Chloride	20.0	21.42		ug/L		107	50 - 150
4-Methyl-2-pentanone (MIBK)	40.0	44.68		ug/L		112	60 - 139
Styrene	20.0	20.07		ug/L		100	74 - 121
1,1,1,2-Tetrachloroethane	20.0	18.85		ug/L		94	71 - 120
1,1,2,2-Tetrachloroethane	20.0	20.63		ug/L		103	68 - 124
Tetrachloroethene	20.0	18.88		ug/L		94	71 - 130
Toluene	20.0	19.06		ug/L		95	74 - 123
trans-1,4-Dichloro-2-butene	20.0	20.14		ug/L		101	50 - 150
trans-1,2-Dichloroethene	20.0	19.86		ug/L		99	70 - 126
trans-1,3-Dichloropropene	20.0	20.48		ug/L		102	69 - 123
1,1,1-Trichloroethane	20.0	18.97		ug/L		95	73 - 129
1,1,2-Trichloroethane	20.0	20.08		ug/L		100	73 - 123
Trichloroethene	20.0	19.50		ug/L		97	72 - 126
1,2,3-Trichloropropane	20.0	20.93		ug/L		105	65 - 127
Vinyl acetate	40.0	39.47		ug/L		99	50 - 150
Xylenes, Total	40.0	38.24		ug/L		96	73 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*
Dibromofluoromethane (Surr)	*96*		*73 - 130*
Toluene-d8 (Surr)	*105*		*80 - 120*

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 310-418328/7
Matrix: Water
Analysis Batch: 418328

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromomethane	20.0	17.08		ug/L		85	23 - 150
Chloroethane	20.0	19.98		ug/L		100	54 - 136
Chloromethane	20.0	19.45		ug/L		97	38 - 150
Trichlorofluoromethane	20.0	18.63		ug/L		93	54 - 149
Vinyl chloride	20.0	20.00		ug/L		100	56 - 140

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*
Dibromofluoromethane (Surr)	*96*		*73 - 130*
Toluene-d8 (Surr)	*103*		*80 - 120*

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-418372/1-A
Matrix: Water
Analysis Batch: 419401

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 418372

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00200	0.00100	mg/L		04/11/24 09:00	04/19/24 16:09	1
Arsenic	<0.000530		0.00200	0.000530	mg/L		04/11/24 09:00	04/19/24 16:09	1
Barium	<0.000640		0.00200	0.000640	mg/L		04/11/24 09:00	04/19/24 16:09	1
Beryllium	<0.000330		0.00100	0.000330	mg/L		04/11/24 09:00	04/19/24 16:09	1
Cadmium	<0.000100		0.000200	0.000100	mg/L		04/11/24 09:00	04/19/24 16:09	1
Chromium	<0.00110		0.00500	0.00110	mg/L		04/11/24 09:00	04/19/24 16:09	1
Cobalt	<0.000170		0.000500	0.000170	mg/L		04/11/24 09:00	04/19/24 16:09	1
Copper	<0.00180		0.00500	0.00180	mg/L		04/11/24 09:00	04/19/24 16:09	1
Lead	<0.000240		0.000500	0.000240	mg/L		04/11/24 09:00	04/19/24 16:09	1
Nickel	<0.00190		0.00500	0.00190	mg/L		04/11/24 09:00	04/19/24 16:09	1
Selenium	<0.00140		0.00500	0.00140	mg/L		04/11/24 09:00	04/19/24 16:09	1
Silver	<0.000500		0.00100	0.000500	mg/L		04/11/24 09:00	04/19/24 16:09	1
Thallium	<0.000260		0.00100	0.000260	mg/L		04/11/24 09:00	04/19/24 16:09	1
Vanadium	<0.00110		0.00500	0.00110	mg/L		04/11/24 09:00	04/19/24 16:09	1
Zinc	<0.00640		0.0200	0.00640	mg/L		04/11/24 09:00	04/19/24 16:09	1

Lab Sample ID: LCS 310-418372/2-A
Matrix: Water
Analysis Batch: 419401

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 418372

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.200	0.2105		mg/L		105	80 - 120
Arsenic	0.200	0.1970		mg/L		99	80 - 120
Barium	0.100	0.1040		mg/L		104	80 - 120
Beryllium	0.100	0.1056		mg/L		106	80 - 120
Cadmium	0.100	0.09456		mg/L		95	80 - 120
Chromium	0.100	0.1025		mg/L		103	80 - 120
Cobalt	0.100	0.1077		mg/L		108	80 - 120
Copper	0.200	0.2062		mg/L		103	80 - 120
Lead	0.200	0.2137		mg/L		107	80 - 120
Nickel	0.200	0.1932		mg/L		97	80 - 120

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

Lab Sample ID: LCS 310-418372/2-A
Matrix: Water
Analysis Batch: 419401

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 418372

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Selenium			0.400	0.3734		mg/L		93	80 - 120		
Silver			0.100	0.1068		mg/L		107	80 - 120		
Thallium			0.100	0.1065		mg/L		106	80 - 120		
Vanadium			0.100	0.09142		mg/L		91	80 - 120		
Zinc			0.200	0.1838		mg/L		92	80 - 120		

Lab Sample ID: 310-278355-1 MS
Matrix: Ground Water
Analysis Batch: 419401

Client Sample ID: GU-2A_24_04
Prep Type: Total/NA
Prep Batch: 418372

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Antimony	<0.00100		0.200	0.2098		mg/L		105	75 - 125		
Arsenic	0.000535	J	0.200	0.2025		mg/L		101	75 - 125		
Barium	0.229	F1	0.100	0.3415		mg/L		112	75 - 125		
Beryllium	<0.000330		0.100	0.1102		mg/L		110	75 - 125		
Cadmium	<0.000100		0.100	0.09763		mg/L		98	75 - 125		
Chromium	<0.00110		0.100	0.09975		mg/L		100	75 - 125		
Cobalt	<0.000170		0.100	0.1059		mg/L		106	75 - 125		
Copper	<0.00180		0.200	0.1946		mg/L		97	75 - 125		
Lead	<0.000240		0.200	0.2126		mg/L		106	75 - 125		
Nickel	<0.00190		0.200	0.1929		mg/L		96	75 - 125		
Selenium	0.00189	J	0.400	0.3869		mg/L		96	75 - 125		
Silver	<0.000500		0.100	0.1018		mg/L		102	75 - 125		
Thallium	<0.000260		0.100	0.1033		mg/L		103	75 - 125		
Vanadium	<0.00110		0.100	0.08996		mg/L		90	75 - 125		
Zinc	<0.00640		0.200	0.1855		mg/L		93	75 - 125		

Lab Sample ID: 310-278355-1 MSD
Matrix: Ground Water
Analysis Batch: 419401

Client Sample ID: GU-2A_24_04
Prep Type: Total/NA
Prep Batch: 418372

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Antimony	<0.00100		0.200	0.2183		mg/L		109	75 - 125	4	20
Arsenic	0.000535	J	0.200	0.2098		mg/L		105	75 - 125	4	20
Barium	0.229	F1	0.100	0.3894	F1	mg/L		160	75 - 125	13	20
Beryllium	<0.000330		0.100	0.1159		mg/L		116	75 - 125	5	20
Cadmium	<0.000100		0.100	0.1032		mg/L		103	75 - 125	6	20
Chromium	<0.00110		0.100	0.1045		mg/L		104	75 - 125	5	20
Cobalt	<0.000170		0.100	0.1101		mg/L		110	75 - 125	4	20
Copper	<0.00180		0.200	0.2054		mg/L		103	75 - 125	5	20
Lead	<0.000240		0.200	0.2242		mg/L		112	75 - 125	5	20
Nickel	<0.00190		0.200	0.2046		mg/L		102	75 - 125	6	20
Selenium	0.00189	J	0.400	0.4028		mg/L		100	75 - 125	4	20
Silver	<0.000500		0.100	0.1063		mg/L		106	75 - 125	4	20
Thallium	<0.000260		0.100	0.1127		mg/L		113	75 - 125	9	20
Vanadium	<0.00110		0.100	0.09478		mg/L		95	75 - 125	5	20
Zinc	<0.00640		0.200	0.1968		mg/L		98	75 - 125	6	20

Method: I-3765-85 - Residue, Non-filterable (TSS)

Lab Sample ID: MB 310-418270/1
Matrix: Water
Analysis Batch: 418270

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<1.70		5.00	1.70	mg/L			04/09/24 15:49	1

Lab Sample ID: LCS 310-418270/2
Matrix: Water
Analysis Batch: 418270

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	100	100.0		mg/L		100	75 - 116

Lab Sample ID: MB 310-418274/1
Matrix: Water
Analysis Batch: 418274

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<1.70		5.00	1.70	mg/L			04/09/24 16:37	1

Lab Sample ID: LCS 310-418274/2
Matrix: Water
Analysis Batch: 418274

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	100	102.0		mg/L		102	75 - 116

Lab Sample ID: MB 310-418275/1
Matrix: Water
Analysis Batch: 418275

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<1.70		5.00	1.70	mg/L			04/09/24 17:25	1

Lab Sample ID: LCS 310-418275/2
Matrix: Water
Analysis Batch: 418275

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	100	98.00		mg/L		98	75 - 116

QC Association Summary

Client: Carroll County SLF
Project/Site: Carroll County Landfill

Job ID: 310-278355-1
SDG: 24C002.00

GC/MS VOA

Analysis Batch: 418195

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-278355-1	GU-2A_24_04	Total/NA	Ground Water	8260D	
MB 310-418195/5	Method Blank	Total/NA	Water	8260D	
LCS 310-418195/6	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-418195/7	Lab Control Sample	Total/NA	Water	8260D	
310-278355-1 MS	GU-2A_24_04	Total/NA	Ground Water	8260D	
310-278355-1 MSD	GU-2A_24_04	Total/NA	Ground Water	8260D	

Analysis Batch: 418328

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-278355-1	GU-2A_24_04	Total/NA	Ground Water	8260D	
310-278355-2	MW-119RR_24_04	Total/NA	Ground Water	8260D	
310-278355-3	MW-121R_24_04	Total/NA	Ground Water	8260D	
310-278355-4	MW-122R_24_04	Total/NA	Ground Water	8260D	
310-278355-5	MW-200_24_04	Total/NA	Ground Water	8260D	
310-278355-6	MW-205_24_04	Total/NA	Ground Water	8260D	
310-278355-7	MW-206_24_04	Total/NA	Ground Water	8260D	
310-278355-8	FB-1_24_04	Total/NA	Ground Water	8260D	
310-278355-9	FD-1_24_04	Total/NA	Ground Water	8260D	
310-278355-10	TB-1_24_04	Total/NA	Water	8260D	
MB 310-418328/5	Method Blank	Total/NA	Water	8260D	
LCS 310-418328/6	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-418328/7	Lab Control Sample	Total/NA	Water	8260D	

Metals

Prep Batch: 418372

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-278355-1	GU-2A_24_04	Total/NA	Ground Water	3005A	
310-278355-2	MW-119RR_24_04	Total/NA	Ground Water	3005A	
310-278355-3	MW-121R_24_04	Total/NA	Ground Water	3005A	
310-278355-4	MW-122R_24_04	Total/NA	Ground Water	3005A	
310-278355-5	MW-200_24_04	Total/NA	Ground Water	3005A	
310-278355-6	MW-205_24_04	Total/NA	Ground Water	3005A	
310-278355-7	MW-206_24_04	Total/NA	Ground Water	3005A	
310-278355-8	FB-1_24_04	Total/NA	Ground Water	3005A	
310-278355-9	FD-1_24_04	Total/NA	Ground Water	3005A	
MB 310-418372/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-418372/2-A	Lab Control Sample	Total/NA	Water	3005A	
310-278355-1 MS	GU-2A_24_04	Total/NA	Ground Water	3005A	
310-278355-1 MSD	GU-2A_24_04	Total/NA	Ground Water	3005A	

Analysis Batch: 419401

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-278355-1	GU-2A_24_04	Total/NA	Ground Water	6020B	418372
310-278355-2	MW-119RR_24_04	Total/NA	Ground Water	6020B	418372
310-278355-3	MW-121R_24_04	Total/NA	Ground Water	6020B	418372
310-278355-4	MW-122R_24_04	Total/NA	Ground Water	6020B	418372
310-278355-5	MW-200_24_04	Total/NA	Ground Water	6020B	418372
310-278355-6	MW-205_24_04	Total/NA	Ground Water	6020B	418372
310-278355-7	MW-206_24_04	Total/NA	Ground Water	6020B	418372
310-278355-8	FB-1_24_04	Total/NA	Ground Water	6020B	418372

Metals (Continued)

Analysis Batch: 419401 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-278355-9	FD-1_24_04	Total/NA	Ground Water	6020B	418372
MB 310-418372/1-A	Method Blank	Total/NA	Water	6020B	418372
LCS 310-418372/2-A	Lab Control Sample	Total/NA	Water	6020B	418372
310-278355-1 MS	GU-2A_24_04	Total/NA	Ground Water	6020B	418372
310-278355-1 MSD	GU-2A_24_04	Total/NA	Ground Water	6020B	418372

General Chemistry

Analysis Batch: 418270

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-278355-4	MW-122R_24_04	Total/NA	Ground Water	I-3765-85	
310-278355-5	MW-200_24_04	Total/NA	Ground Water	I-3765-85	
MB 310-418270/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-418270/2	Lab Control Sample	Total/NA	Water	I-3765-85	

Analysis Batch: 418274

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-278355-2	MW-119RR_24_04	Total/NA	Ground Water	I-3765-85	
MB 310-418274/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-418274/2	Lab Control Sample	Total/NA	Water	I-3765-85	

Analysis Batch: 418275

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-278355-1	GU-2A_24_04	Total/NA	Ground Water	I-3765-85	
310-278355-3	MW-121R_24_04	Total/NA	Ground Water	I-3765-85	
310-278355-6	MW-205_24_04	Total/NA	Ground Water	I-3765-85	
310-278355-7	MW-206_24_04	Total/NA	Ground Water	I-3765-85	
310-278355-8	FB-1_24_04	Total/NA	Ground Water	I-3765-85	
310-278355-9	FD-1_24_04	Total/NA	Ground Water	I-3765-85	
MB 310-418275/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-418275/2	Lab Control Sample	Total/NA	Water	I-3765-85	

Lab Chronicle

Client: Carroll County SLF
Project/Site: Carroll County Landfill

Job ID: 310-278355-1
SDG: 24C002.00

Client Sample ID: GU-2A_24_04

Lab Sample ID: 310-278355-1
Matrix: Ground Water
Date Collected: 04/04/24 11:35
Date Received: 04/05/24 11:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	418195	WSE8	EET CF	04/09/24 22:35
Total/NA	Analysis	8260D		1	418328	WSE8	EET CF	04/10/24 12:56
Total/NA	Prep	3005A			418372	KM3E	EET CF	04/11/24 09:00
Total/NA	Analysis	6020B		1	419401	DHM5	EET CF	04/19/24 16:13
Total/NA	Analysis	I-3765-85		1	418275	A4XP	EET CF	04/09/24 17:25

Client Sample ID: MW-119RR_24_04

Lab Sample ID: 310-278355-2
Matrix: Ground Water
Date Collected: 04/04/24 13:45
Date Received: 04/05/24 11:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	418328	WSE8	EET CF	04/10/24 13:17
Total/NA	Prep	3005A			418372	KM3E	EET CF	04/11/24 09:00
Total/NA	Analysis	6020B		1	419401	DHM5	EET CF	04/19/24 16:32
Total/NA	Analysis	I-3765-85		1	418274	A4XP	EET CF	04/09/24 16:37

Client Sample ID: MW-121R_24_04

Lab Sample ID: 310-278355-3
Matrix: Ground Water
Date Collected: 04/04/24 12:40
Date Received: 04/05/24 11:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	418328	WSE8	EET CF	04/10/24 13:39
Total/NA	Prep	3005A			418372	KM3E	EET CF	04/11/24 09:00
Total/NA	Analysis	6020B		1	419401	DHM5	EET CF	04/19/24 16:34
Total/NA	Analysis	I-3765-85		1	418275	A4XP	EET CF	04/09/24 17:25

Client Sample ID: MW-122R_24_04

Lab Sample ID: 310-278355-4
Matrix: Ground Water
Date Collected: 04/04/24 10:50
Date Received: 04/05/24 11:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	418328	WSE8	EET CF	04/10/24 14:01
Total/NA	Prep	3005A			418372	KM3E	EET CF	04/11/24 09:00
Total/NA	Analysis	6020B		1	419401	DHM5	EET CF	04/19/24 16:36
Total/NA	Analysis	I-3765-85		1	418270	A4XP	EET CF	04/09/24 15:49

Client Sample ID: MW-200_24_04

Lab Sample ID: 310-278355-5
Matrix: Ground Water
Date Collected: 04/04/24 14:20
Date Received: 04/05/24 11:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	418328	WSE8	EET CF	04/10/24 14:22
Total/NA	Prep	3005A			418372	KM3E	EET CF	04/11/24 09:00
Total/NA	Analysis	6020B		1	419401	DHM5	EET CF	04/19/24 16:38
Total/NA	Analysis	I-3765-85		1	418270	A4XP	EET CF	04/09/24 15:49

Lab Chronicle

Client: Carroll County SLF
Project/Site: Carroll County Landfill

Job ID: 310-278355-1
SDG: 24C002.00

Client Sample ID: MW-205_24_04
Date Collected: 04/04/24 09:30
Date Received: 04/05/24 11:10

Lab Sample ID: 310-278355-6
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	418328	WSE8	EET CF	04/10/24 14:44
Total/NA	Prep	3005A			418372	KM3E	EET CF	04/11/24 09:00
Total/NA	Analysis	6020B		1	419401	DHM5	EET CF	04/19/24 16:41
Total/NA	Analysis	I-3765-85		1	418275	A4XP	EET CF	04/09/24 17:25

Client Sample ID: MW-206_24_04
Date Collected: 04/04/24 08:45
Date Received: 04/05/24 11:10

Lab Sample ID: 310-278355-7
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	418328	WSE8	EET CF	04/10/24 15:06
Total/NA	Prep	3005A			418372	KM3E	EET CF	04/11/24 09:00
Total/NA	Analysis	6020B		1	419401	DHM5	EET CF	04/19/24 16:43
Total/NA	Analysis	I-3765-85		1	418275	A4XP	EET CF	04/09/24 17:25

Client Sample ID: FB-1_24_04
Date Collected: 04/04/24 11:10
Date Received: 04/05/24 11:10

Lab Sample ID: 310-278355-8
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	418328	WSE8	EET CF	04/10/24 11:50
Total/NA	Prep	3005A			418372	KM3E	EET CF	04/11/24 09:00
Total/NA	Analysis	6020B		1	419401	DHM5	EET CF	04/19/24 16:45
Total/NA	Analysis	I-3765-85		1	418275	A4XP	EET CF	04/09/24 17:25

Client Sample ID: FD-1_24_04
Date Collected: 04/04/24 00:00
Date Received: 04/05/24 11:10

Lab Sample ID: 310-278355-9
Matrix: Ground Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	418328	WSE8	EET CF	04/10/24 15:28
Total/NA	Prep	3005A			418372	KM3E	EET CF	04/11/24 09:00
Total/NA	Analysis	6020B		1	419401	DHM5	EET CF	04/19/24 16:47
Total/NA	Analysis	I-3765-85		1	418275	A4XP	EET CF	04/09/24 17:25

Client Sample ID: TB-1_24_04
Date Collected: 04/04/24 00:00
Date Received: 04/05/24 11:10

Lab Sample ID: 310-278355-10
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	418328	WSE8	EET CF	04/10/24 12:12

Laboratory References:
EET CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401

Accreditation/Certification Summary

Client: Carroll County SLF
Project/Site: Carroll County Landfill

Job ID: 310-278355-1
SDG: 24C002.00

Laboratory: Eurofins Cedar Falls

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Iowa	State	007	12-01-25

Method Summary

Client: Carroll County SLF
Project/Site: Carroll County Landfill

Job ID: 310-278355-1
SDG: 24C002.00

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET CF
6020B	Metals (ICP/MS)	SW846	EET CF
I-3765-85	Residue, Non-filterable (TSS)	USGS	EET CF
3005A	Preparation, Total Metals	SW846	EET CF
5030B	Purge and Trap	SW846	EET CF

Protocol References:

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

USGS = "Methods For Analysis Of Water And Fluvial Sediments", USGS, 1989

Laboratory References:

EET CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401

eurofins | Environment Testing America

310-278355 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Foth

City/State: CITY Cedar Rapids STATE IA

Project: MT. Pleasant

Receipt Information

Date/Time Received: DATE 4/5/24 TIME 1110

Received By: TO

Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee ☐ Lab Courier ☐ Lab Field Services ☑ Client Drop-off ☐ Other:_____

Condition of Cooler/Containers

Sample(s) received in Cooler? ☑ Yes ☐ No *If yes:* Cooler ID:

Multiple Coolers? ☐ Yes ☑ No *If yes:* Cooler # _____ of _____

Cooler Custody Seals Present? ☐ Yes ☑ No *If yes:* Cooler custody seals intact? ☐ Yes ☐ No

Sample Custody Seals Present? ☐ Yes ☑ No *If yes:* Sample custody seals intact? ☐ Yes ☐ No

Trip Blank Present? ☑ Yes ☐ No *If yes:* Which VOA samples are in cooler? ↓

Temperature Record

Coolant: ☑ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other:_____ ☐ NONE

Thermometer ID: X

Correction Factor (°C): 0.0

• **Temp Blank Temperature** – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C): 0.1

Corrected Temp (°C): 0.1

• **Sample Container Temperature**

	CONTAINER 1	CONTAINER 2
Container(s) used:		
Uncorrected Temp (°C):		
Corrected Temp (°C):		

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes:* Is there evidence that the chilling process began? ☐ Yes ☐ No

2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No

NOTE: If yes, contact PM before proceeding. If no, proceed with login

Additional Comments

Foth

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT All relevant fields must be completed accurately

Page: 1 of 1 **COC Number:** 1-3865545471-030524-854103

Company: Foth Infrastructure & Environment, LLC	Report To: Gina Wilming/Hannah Dubbs (Foth)	Requested Due Date:	Quote Reference:
Address: 411 6th Avenue SE, Suite 400	Copy To:	*TAT: Standard	Project Manager: Gina Wimling
Cedar Rapids, IA 52401	Invoice To: Mary Wittry (CCSWMC)		Project #: 24C002 00
Phone: (319) 365-9565	P.O		Profile #:
Email Addresses: gina.wilming@foth.com	Project Name: Carroll County Landfill	Regulatory Agency: Iowa DNR	Sampling Team Members: Tyler Merritt
hannah.dubbs@foth.com	Task #: 24C002_24_04	State Location: Iowa	

ITEM NUMBER ID	SAMPLE ID	Sample Location	MATRIX CODE	SAMPLE TYPE G = Grab C = Composite	DATE COLLECTED MM/DD/YYYY	TIME COLLECTED (Military time)	Preservatives: Total # Containers	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Requested Analysis: N	N	N	Filtered (Y/N)	REMARKS / Lab ID
															IA Appendix I List	TSS	IA App. I VOCs Only		
1	GU-2A_24_04	GU-2A	WG	G	4/4/24	11:35	5	1		1	3				X	X			
2	GU-4A_24_04	GU-4A	WG	G											X	X			No Sample Submitted
3	MW-119RR_24_04	MW-119RR	WG	G	4/4/24	13:45	5	1		1	3				X	X			
4	MW-121R_24_04	MW-121R	WG	G	4/4/24	12:40	5	1		1	3				X	X			
5	MW-122R_24_04	MW-122R	WG	G	4/4/24	10:50	5	1		1	3				X	X			
6	MW-200_24_04	MW-200	WG	G	4/4/24	14:20	5	1		1	3				X	X			
7	MW-205_24_04	MW-205	WG	G	4/4/24	9:30	5	1		1	3				X	X			
8	MW-206_24_04	MW-206	WG	G	4/4/24	8:45	5	1		1	3				X	X			
9	FB-1_24_04	FB-1	WQ	G	4/4/24	11:10	5	1		1	3				X	X			
10	FD-1_24_04		WG	G	4/4/24	—	5	1		1	3				X	X			
11	TB-1_24_04	Trip Blank	WQ	G	—	—	2				2						X		
12																			

Tyler Merritt QA Tech 11:10 4/5/24

SAMPLE CONDITION:

Temp in C	
Received on Ice	Y / N
Sealed Cooler	Y / N
Sample Intact	Y / N

SAMPLE NOTES: No Sample submitted for GU-4A_24_04

Additional Comments:

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Tyler Merritt

SIGNATURE of SAMPLER: Tyler Merritt

DATE Signed: 4/5/24

4/5/24 1110

4/22/2024

Login Sample Receipt Checklist

Client: Carroll County SLF

Job Number: 310-278355-1
SDG Number: 24C002.00

Login Number: 278355
List Number: 1
Creator: Homolar, Dana J

List Source: Eurofins Cedar Falls

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Data Validation Report

Project Name:	Carroll County Landfill Western Expansion Area (24C002.00)
Task Name:	24C002_24_04
Data Set Description:	Spring 2024 Groundwater Event
Laboratory(s):	Eurofins – Cedar Falls, IA
Laboratory Sample Delivery Group (SDG) ID(s):	310-278355-1
Sample Collection Date(s):	4/04/2024
Sample Analysis Dates:	4/09/2024 – 4/19/2024
Sample Matrices:	Groundwater
Sample IDs Reviewed:	See Table 1
Verification and Validation Stage, 100% data:	☐ 1 ☒ 2A ☐ 2B ☐ 3 ☐ 4
Verified and Validated By:	Hannah Dubbs, Project Environmental Scientist 5/15/2024

The analytical data were validated to verify that laboratory quality assurance and quality control (QA/QC) procedures were documented and to evaluate the overall quality of the data reported. The analytical report includes seven investigative groundwater samples collected via low-flow or no-purge sampling techniques at the Carroll County Landfill Western Expansion Area on April 4, 2024; samples are listed in Table 1. The data were collected in accordance with the Hydrologic Monitoring System Plan (HMSP) for the Carroll County Landfill Western Expansion Area (Foth, 2008), Iowa Department of Natural Resources (IDNR) Sanitary Disposal Permit Number 14-SDP-01-74P (including Permit Revisions), and 567 Iowa Administrative Code (IAC) 113.10.

Validation Summary

Stage 2A data validation was performed on 100% of the data from this SDG, with review tasks and items of note documented in the summary table below.

Validation Task and Description	Review Notes	Action
Chain of Custody (COC) and Sample Receipt Form Confirm relinquish & receipt signatures. Confirm parameters and analytical methods match COC and Hydrologic Monitoring System Plan (HMSP).	All appropriate relinquish and receipt signatures were present. Parameters and analytical methods match the COC and HMSP.	Not applicable
Case Narrative Review for items noted by the laboratory that may impact the validation process.	The case narrative for laboratory report 310-278355-1 noted the volatile organic compound (VOC) sample containers for TB-1_24_04 did not meet the headspace requirement. The VOCs for TB-1_24_04 were analyzed from the sample containers with headspace, and the potential for low bias is noted. Resampling was not considered since TB-1_24_04 is a quality control sample.	Not applicable

Validation Task and Description	Review Notes	Action
Case Narrative Continued	The remaining quality control issues noted in the case narrative were reviewed and found acceptable. Issues either were addressed in the comments below, had no impact on investigative samples, or were corrected/qualified by the laboratory. No additional actions are required. Note: continuing calibration verification (CCV) evaluation is not part of Stage 2A validation.	Not applicable
Sample Condition Upon Receipt (SCUR) Confirm samples in acceptable condition and no discrepancies noted. Confirm preservation meets method requirements.	Samples were received by Eurofins – Cedar Falls, IA in acceptable conditions.	Not applicable
Methods Requested Confirm methods match project requirements and lab provided all methods ordered.	The methods ordered and analyzed were performed in accordance with the project requirements. Methods include United States Environmental Protection Agency (USEPA) 8260D VOCs, USEPA 6020B Total Metals, and United States Geological Survey (USGS) I-3765-85 Total Suspended Solids.	Not applicable
Analytes Requested Confirm analytes ordered match project requirements and lab provided all analytes ordered.	The analytes requested were analyzed in accordance with the project requirements. The laboratory provided all the analytes ordered.	Not applicable
Holding Times Confirm laboratory performed extractions and analyses within method-required holding times.	Eurofins performed analysis within the method-required holding times.	Not applicable
Blanks Confirm no detections in laboratory method blanks, field blanks, and trip blanks.	Table 3 is intended to present analytes detected in the method, field, and trip blanks. No detections were found in the method, field, and trip blanks for this SDG.	Not applicable
Surrogates or Deuterated Monitoring Compounds For *organic analyses only*, confirm surrogates analyzed and surrogate recovery within QC limits.	Table 4 is intended to present surrogate recoveries that were outside the control limits. Surrogate recoveries were within control limits for this SDG.	Not applicable
Matrix Spike/Matrix Spike Duplicates (MS/MSDs) Confirm MS/MSDs analyzed at frequency specified by project requirements and MS/MSD percent recovery within lab specified limits.	MS/MSD quality control samples are not required for this project. As a result, no MS/MSD samples were collected or submitted for analysis. Where analyzed and reported by the laboratory, MS/MSD results associated with the samples in 310-278355-1 are reviewed under Stage 2A validation guidelines. Table 5 presents MS/MSD recoveries and RPDs that were outside the control limits.	See next page

Validation Task and Description	Review Notes	Action
MS/MSDs Continued Confirm, for Organic analytes, MSD relative percent difference (RPD) within limits. For inorganic analytes, lab replicate RPD within limits.	The MS recovery for barium associated with GUA-2A_24_04 was within the recovery limit (75%-125%); therefore, in accordance with *National Functional Guidelines for Inorganic Superfund Methods Data Review* (USEPA, 2020), no MSD analysis is required. However, a MSD was analyzed and the recovery limit was greater than 125%. According to the *National Functional Guidelines for Inorganic Superfund Methods Data Review* (USEPA, 2020), no qualification is required since both the MS and MSD were not above the recovery limit.	No qualifiers assigned
Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) Confirm LCS analyzed and LCS/LCSD recovery and RPD within lab specified limits.	LCS/LCSD quality control samples are not required for this project. Where analyzed and reported by the laboratory, LCS/LCSD results associated with method batches in 310-278355-1 are reviewed under Stage 2A validation guidelines. Table 6 is intended to present the LCS/LCSD recoveries and RPDs that were outside the control limits. LCS/LCSD recoveries and RPDs were within control limits for this SDG.	Not applicable
Laboratory Duplicates Confirm lab duplicates analyzed and RPD within lab specified limits.	Laboratory duplicate quality control samples are not required for this project. Where analyzed and reported by the laboratory, laboratory duplicate results associated with the samples in 310-278355-1 are reviewed under Stage 2A validation guidelines. Table 7 is intended to present the lab duplicate sample RPDs that were outside the RPD limits. No laboratory duplicate samples were analyzed for samples in this SDG.	Not applicable
Field Duplicates Confirm field duplicates collected at required frequency and field duplicate RPD within acceptable limits.	Field duplicate samples were collected at 1 per 10 frequencies, in accordance with the project requirements. Table 8 contains the precision evaluation of the parent/field duplicate samples. The RPDs between the investigative and field duplicate samples were within the duplicate sample validation criteria.	Not applicable

Abbreviations:
COC = chain of custody
CCV = continuing calibration verification
HMSP = Hydrologic Monitoring System Plan
LCS = laboratory control sample
LCSD = laboratory control sample duplicate
MS = matrix spike
MSD = matrix spike duplicate
RPD = relative percent difference
SCUR = sample condition upon receipt
SDG = sample delivery group
SOP = Standard Operating Procedure
USEPA = United States Environmental Protection Agency
USGS = United States Geological Survey
VOC = volatile organic compound

Overall Assessment of Data

Item	Acceptable Yes	Acceptable No	Comments
1. Method Criteria	X		Samples were collected, preserved, shipped/delivered, and analyzed within the method protocols.
2. Precision	X		Field precision was evaluated through investigative and field duplicate RPDs. The RPDs between the investigative and field duplicate samples were within the duplicate sample validation criteria. Laboratory precision was evaluated through MS/MSD and LCS/LCSD, and laboratory duplicate RPDs. Eurofins did not analyze or report laboratory duplicate results. Where analyzed and reported by the laboratory, MS/MSD and LCS/LCSD RPDs were within control limits.
3. Accuracy	X		Accuracy was evaluated through surrogate, MS/MSD, and LCS/LCD recovery. The percent recoveries for surrogate samples were within control limits. Where analyzed and reported by the laboratory, MS/MSD and LCS/LCSD percent recoveries were within control limits when required.
4. Representativeness	X		Sampling was conducted in accordance with the sample collection procedures described in the approved HMSP, approved HMSP revisions, and standard operating procedures (SOPs).
5. Comparability	X		Collection techniques, measurement procedures, methods, and reporting were equivalent to currently approved procedures and are comparable to historical data.
6. Completeness	X		Valid analytical results exceeded 90%.
7. Suitability for Intended Use	X		No evidence of gross contamination or significant issues with the method criteria, precision, accuracy, representativeness, comparability, or completeness were identified.

Overall, the data reported are of good quality and the results for the applicable quality assurance/quality control (QA/QC) measurements that were used by the laboratories during the analysis of the samples were generally acceptable. Table 2 provides a definition of the qualifiers that may be assigned by the validator and/or retained from the laboratory. No sample results were qualified during data validation because method-specific QA/QC criteria were met. 100% of the data is usable for project data quality objectives.

Attachment 1

Tables

Table 1
Sample IDs Reviewed

Project Sample ID	Analyzed Lab Sample ID	Project Sample ID Matches Lab Client Sample ID	Lab Sample Date/Time Match COC/Logbook	Parameters and Analytical Methods Match COC	Sample Type
GU-2A_24_04	310-278355-1	Yes	Yes	Yes	Normal
MW-119RR_24_04	310-278355-2	Yes	Yes	Yes	Normal
MW-121R_24_04	310-278355-3	Yes	Yes	Yes	Normal
MW-122R_24_04	310-278355-4	Yes	Yes	Yes	Normal
MW-200_24_04	310-278355-5	Yes	Yes	Yes	Normal
MW-205_24_04	310-278355-6	Yes	Yes	Yes	Normal
MW-206_24_04	310-278355-7	Yes	Yes	Yes	Normal
FB-1_24_04	310-278355-8	Yes	Yes	Yes	FB
FD-1_24_04	310-278355-9	Yes	Yes	Yes	FD
TB-1_24_04	310-278355-10	Yes	Yes	Yes	TB

Notes:
FB = field blank
FD = field duplicate
TB = trip blank

Table 2
Explanation of Qualifiers

Qualifier	Explanation
U	The analyte was analyzed for and was not detected above the numerical quantitation limit.
J	The analyte was analyzed for and was positively identified, but the analytical result (i.e., quantitation) is an estimated value. In some cases it is recognized that the estimated value is biased high (J+) suggesting the actual value is lower than estimated; or biased low (J-) suggesting the actual value is higher than estimated.
UJ	The analyte was analyzed for and was not detected above the reporting limit, but the reporting limit is an estimated value.
R	The analyte was analyzed for but may or may not be present and/or quantifiable due to quality control issues. The analytical result is not usable and should be rejected.
N	The analysis indicates presumptive evidence of the presence of the analyte.
NJ	The analysis indicates presumptive evidence of the presence of the analyte, but the numerical value is an estimated quantity.

Notes:
Results qualified as “J” or “UJ” are of acceptable data quality and may be used quantitatively per United States Environmental Protection Agency guidelines.

Table 3
Method, Field, and Trip Blank Exceedances

Lab Report	Blank Type	Lab Sample ID	Client Sample ID	Analysis Batch	Prep Batch	Parameter	Result	Units	Lab Qualifier	MDL	PQL	Associated Samples
No analytes were detected in the method, field, and trip blanks in this Sample Delivery Group.												

Notes:
MDL = minimum detection limit
PQL = practical quantitation limit

Table 4
Surrogate Recovery Exceedances

Lab Sample ID	Parent Sample	Parameter	Surrogate % Recovery	% Recovery Limits
Surrogate recoveries were within control limits for this Sample Delivery Group.				

Notes:
% = percent

Table 5
Matrix Spike - Matrix Spike Duplicate Exceedances

Lab Sample ID	Parent Sample	Parameter	MS % Recovery	MSD % Recovery	% Recovery Limits	RPD	RPD Limit
310-278355-1 MS	GU-2A_24_04	Barium	112	160	75 - 125	13	20
310-278355-1 MSD							

Notes:
% = percent
MS = matrix spike
MSD = matrix spike duplicate
RPD = relative percent difference

Table 6
Laboratory Control Sample and Laboratory Control Sample Duplicate Exceedances

Lab Sample ID	Associated SDG Batch	Parameter	LCS % Recovery	LCSD % Recovery	% Recovery Limits	RPD	RPD Limit
LCS/LCSD recoveries and RPDs were within control limits for this Sample Delivery Group.							

Notes:
% = percent
LCS = laboratory control sample
LSCD = laboratory control sample duplicate
RPD = relative percent difference

Table 7
Laboratory Duplicate Sample Exceedances

Lab Sample ID	Client Sample ID	Parameter	RPD	RPD Limit
Lab duplicate samples were not conducted for this Sample Delivery Group.				

Notes:
RPD = relative percent difference

Table 8
Relative Percent Difference (RPD) Analysis for Field Duplicate Samples
Appendix I Constituents & TSS

RPD = $\frac{\text{absolute value (a - b)}}{\text{(a + b)/2}}$ **x 100%**

Acceptance Criteria*: 35%

* Unless otherwise noted in project planning documents, the acceptance criteria for field duplicates RPD is as follows:
- For analytes with concentrations greater than 5x (2x for soil matrices) the reporting limit, the RPD should be within 35% for water matrices (50% for soil matrices).
- For analytes with either or both concentrations less than 5x (2x for soil matrices) the reporting limit (indicated below by "low-level"), the absolute difference between the sample and field duplicate should not exceed 5x the reporting limit.

Duplicate Result Analysis:

Parameter	Unit	Parent	Duplicate Sample	RPD	Acceptable?
		MW-121R_24_04	FD-1_24_04		
Benzene	ug/L	0.662	0.703	low-level	Yes
cis-1,2-Dichloroethene	ug/L	6.00	6.22	3.6%	Yes
Arsenic	mg/L	0.0222	0.0217	2.3%	Yes
Barium	mg/L	0.671	0.698	3.9%	Yes
Cobalt	mg/L	0.00384	0.00388	1.0%	Yes
Nickel	mg/L	0.0359	0.0373	3.8%	Yes
Total Suspended Solids	mg/L	4.38	J 3.33	low-level	Yes

Table 9
Qualified Results from Data Validation

Sample ID	Lab Sample ID	Method	Parameter	Result	Lab Qualifier	Units	Qualified Result	Validator Qualifier	Explanation
No qualifiers were assigned to data in this Sample Delivery Group.									

Attachment 2

References

References

Foth, 2008. *Hydrologic Monitoring System and Gas Monitoring Plan, Carroll County Sanitary Landfill Western Expansion Area*. January. [Doc #16450].

USEPA, 2020. *National Functional Guidelines for Inorganic Superfund Methods Data Review*. EPA-542-R-20-006. Office of Superfund Remediation and Technology Innovation, Washington, D.C. Revised November 2020.

September 2024 Sampling Event

Groundwater Sampling Field Sheet

Site Name:	Carroll County Landfill-Western Expansion Area	Permit No.:	14-SDP-01-74P
Well/Piezometer:	GU-2A	Weather:	Clear, 75°F, SSE wind @ 5-10 mph
Date:	9/23/2024	Personnel:	O.A. Technical Services: Tyler Merritt

Location Details

Description of Sample Location: GU-2A is the compliance point for the groundwater underdrains for Phases 2A and 2B/3. The underdrain systems beneath Phases 2A and 2B/3 gravity drain to the north of the cells where they tie together. From there, groundwater gravity drains to the drainage way north of the Western Expansion Area, where it outlets at GU-2A. Sample is collected directly from the GU-2A discharge pipe.

Conditions commentary: No issues identified.

Sampling Details

Sampling Method: ___ Pump (low flow) ___ No-purge (specify sample interval): ___
___ Bailer X Other (specify): Grab sample from discharge pipe

Equipment type: ___ Submersible pump ___ Peristaltic pump ___ Bladder pump
___ Inertial lift pump ___ Bailer ___ No-purge (specify): ___
___ Other (specify): ___

Equipment name/description: Not Applicable Dedicated? (Y/N): N/A Disposable? (Y/N): N/A
Decontamination method: Not Applicable

Equipment depth (ft. MSL:)	Flow Rate (mL/min):	Volume removed (gal):	Volume sampled (L):
N/A	4000	N/A	1.37

Well dry? (Y/N): No Odor? (Y/N): No Color? (Y/N): No

Sample Name(s)	Method(s)	Container(s)	Filtered? (if yes, filter size)
GU-2A_24_09	EPA 8260D - Appendix I VOCs	(3) VOA Vial 40 mL - HCl	No
	EPA 6020B - Appendix I Total Metals	(1) Plastic 250 mL - HNO_3	No
	USGS I-3765-85 - TSS	(1) Plastic 1 Liter - Unpreserved	No

Field Analysis

	Final Reading
Time	17:59
Temp (°C)	18.18
Sp. Cond (umhos/cm)	691.96
pH	7.81
DO (mg/l)	2.96
ORP (mV)	53.2
Turbidity (NTU)	0.00

Comments:

Groundwater Sampling Field Sheet

Site Name:	Carroll County Landfill-Western Expansion Area	Permit No.:	14-SDP-01-74P
Well/Piezometer:	GU-4A	Weather:	Clear, 68°F, SSE wind @ 5-10 mph
Date:	9/23/2024	Personnel:	O.A. Technical Services: Tyler Merritt

Location Details

Description of Sample Location: GU-4A is the compliance point for the groundwater underdrain for Phase 4A/4B/5A. Phase 4A/4B/5A was constructed with an independent groundwater underdrain system that drains south through the cell to the stormwater maintenance hole located on the south side of the sedimentation pond. At the maintenance hole, groundwater is combined with stormwater from the sedimentation pond and outlets to the surface on the south side of the sedimentation pond. The sample is collected from the vertical sample riser located prior to the maintenance hole. Samples will be collected when the depth to groundwater in the vertical riser is at or above 11.27' (the bottom of pipe elevation for the perpendicular underdrain discharge line). This will ensure that samples are collected when the underdrain is flowing.

Conditions commentary: No issues identified.

Sampling Details

Sampling Method: ___ Pump (low flow) ___ No-purge (specify sample interval): ___
___ Bailer X Other (specify): Sample not collected

Equipment type: ___ Submersible pump ___ Peristaltic pump ___ Bladder pump
___ Inertial lift pump ___ Bailer ___ No-purge (specify): ___
___ Other (specify): ___

Equipment name/description: ___ Dedicated? (Y/N): ___ Disposable? (Y/N): ___
Decontamination method: ___

Equipment depth (ft. MSL:)	Flow Rate (mL/min):	Volume removed (gal):	Volume sampled (L):
N/A	N/A	N/A	N/A

Well dry? (Y/N): Yes Odor? (Y/N): N/A Color? (Y/N): N/A

Sample Name(s)	Method(s)	Container(s)	Filtered? (if yes, filter size)
	Sample not collected	N/A	N/A

Field Analysis

	Final Reading
Time	N/A
Temp (°C)	N/A
Sp. Cond (umhos/cm)	N/A
pH	N/A
DO (mg/l)	N/A
ORP (mV)	N/A
Turbidity (NTU)	N/A

Comments: Insufficient water in casing for sample collection.

Groundwater Sampling Field Sheet

Site Name:	Carroll County Landfill-Western Expansion Area	Permit No.:	14-SDP-01-74P
Well/Piezometer:	MW-118	Weather:	Clear, 68°F, SSE wind @ 5-10 mph
Date:	9/23/2024	Personnel:	O.A. Technical Services: Tyler Merritt

Monitoring Well Details

Borehole diameter (in):	8	Casing Diameter (in):	2	Ground surface elevation (ft. MSL):	1286.25
Top of screen (ft. MSL):	1268.68	Materials:	PVC	Top of Casing elevation (ft. MSL):	1289.25
Locked (Y/N):	Yes				

	Static WL	Before purging	Before sampling
Water Level (ft. TOC):	19.44	N/A	N/A
Water elevation (ft. MSL)	1269.81	N/A	N/A

3 Well Volumes (gal): 5.44 Screen submerged? (Y/N): Yes

	Constructed	Measured	Difference
Well Depth (ft. TOC):	30.57	30.57	0.00

Well conditions commentary: See Well Maintenance Evaluation Form for details.

Sampling Details

Sampling Method: ___ Pump (low flow) ___ No-purge (specify sample interval): ___
___ Bailer X Other (specify): Water Level Only - No Sample

Equipment type: ___ Submersible pump ___ Peristaltic pump ___ Bladder pump
___ Inertial lift pump ___ Bailer ___ No-purge (specify): ___
___ Other (specify): ___

Equipment name/description: ___ Dedicated? (Y/N): ___ Disposable? (Y/N): ___
Decontamination method: ___

Equipment depth (ft. MSL:)	N/A	Flow Rate (mL/min):	N/A	Volume removed (gal):	N/A
Well dry? (Y/N):	No	Odor? (Y/N):	N/A	Volume sampled (L):	N/A
				Color? (Y/N):	N/A

Sample Name(s)	Method(s)	Container(s)	Filtered? (if yes, filter size)
	Sample not collected	N/A	N/A

Field Analysis

	Final Reading
Time	N/A
Temp (°C)	N/A
Sp. Cond (umhos/cm)	N/A
pH	N/A
DO (mg/l)	N/A
ORP (mV)	N/A
Turbidity (NTU)	N/A

Comments: Water level monitoring location only.

Groundwater Sampling Field Sheet

Site Name:	Carroll County Landfill-Western Expansion Area	Permit No.:	14-SDP-01-74P
Well/Piezometer:	MW-119RR	Weather:	Clear, 62°F, NNW wind @ 0-5 mph
Date:	9/24/2024	Personnel:	O.A. Technical Services: Tyler Merritt

Monitoring Well Details

Borehole diameter (in): 8.25 Casing Diameter (in): 2 Ground surface elevation (ft. MSL): 1285.33

Top of screen (ft. MSL): 1265.83 Materials: PVC Top of Casing elevation (ft. MSL): 1288.29

Locked (Y/N): Yes

	Static WL	Before purging	Before sampling
Water Level (ft. TOC):	24.58	24.57	25.18
Water elevation (ft. MSL)	1263.71	1263.72	1263.11

3 Well Volumes (gal): 4.26 Screen submerged? (Y/N): No

	Constructed	Measured	Difference
Well Depth (ft. TOC):	33.29	33.03	0.26

Well conditions commentary: See Well Maintenance Evaluation Form for details.

Sampling Details

Sampling Method: X Pump (low flow) ____ No-purge (specify sample interval): ____

____ Bailer ____ Other (specify): ____

Equipment type: ____ Submersible pump X Peristaltic pump ____ Bladder pump

____ Inertial lift pump ____ Bailer ____ No-purge (specify): ____

____ Other (specify): ____

Equipment name/description: GeoTech Peristaltic Dedicated? (Y/N): No Disposable? (Y/N): No

Decontamination method: disposable tubing

Equipment depth (ft. MSL:) 1258.29 Flow Rate (mL/min): 200 Volume removed (gal): 0.8 Volume sampled (L): 1.37

Well dry? (Y/N): No Odor? (Y/N): No Color? (Y/N): No

Sample Name(s)	Method(s)	Container(s)	Filtered? (if yes, filter size)
MW-119RR_24_09	EPA 8260D - Appendix I VOCs	(3) VOA Vial 40 mL - HCl	No
	EPA 6020B - Appendix I Total Metals	(1) Plastic 250 mL - HNO_3	No
	USGS I-3765-85 - TSS	(1) Plastic 1 Liter - Unpreserved	No

Field Analysis

			Final Reading
Time	11:08	11:10	11:12
Temp (°C)	14.09	13.99	14.17
Sp. Cond (umhos/cm)	917.45	918.70	919.77
pH	7.40	7.36	7.38
DO (mg/l)	0.18	0.16	0.14
ORP (mV)	30.9	26.6	22.6
Turbidity (NTU)	1.29	3.17	1.36

Groundwater Sampling Field Sheet

Site Name:	Carroll County Landfill-Western Expansion Area	Permit No.:	14-SDP-01-74P
Well/Piezometer:	MW-119RR	Weather:	Clear, 62°F, NNW wind @ 0-5 mph
Date:	9/24/2024	Personnel:	O.A. Technical Services: Tyler Merritt

Comments:

Groundwater Sampling Field Sheet

Site Name:	Carroll County Landfill-Western Expansion Area	Permit No.:	14-SDP-01-74P
Well/Piezometer:	MW-121R	Weather:	Clear, 56°F, NE wind @ 0-5 mph
Date:	9/24/2024	Personnel:	O.A. Technical Services: Tyler Merritt

Monitoring Well Details

Borehole diameter (in): 8.25 Casing Diameter (in): 2 Ground surface elevation (ft. MSL): 1279.97

Top of screen (ft. MSL): 1264.97 Materials: PVC Top of Casing elevation (ft. MSL): 1284.19

Locked (Y/N): Yes

	Static WL	Before purging	Before sampling
Water Level (ft. TOC):	23.08	N/A	23.63
Water elevation (ft. MSL)	1261.11	N/A	1260.56

3 Well Volumes (gal): 3.00 Screen submerged? (Y/N): No

	Constructed	Measured	Difference
Well Depth (ft. TOC):	29.22	28.84	0.38

Well conditions commentary: See Well Maintenance Evaluation Form for details.

Sampling Details

Sampling Method: X Pump (low flow) ____ No-purge (specify sample interval): ____

____ Bailer ____ Other (specify): ____

Equipment type: ____ Submersible pump X Peristaltic pump ____ Bladder pump

____ Inertial lift pump ____ Bailer ____ No-purge (specify): ____

____ Other (specify): ____

Equipment name/description: GeoTech Peristaltic Dedicated? (Y/N): No Disposable? (Y/N): No

Decontamination method: disposable tubing

Equipment depth (ft. MSL:)	1259.19	Flow Rate (mL/min):	150	Volume removed (gal):	1.0
Volume sampled (L):	4.99				
Well dry? (Y/N):	No	Odor? (Y/N):	No	Color? (Y/N):	No

Sample Name(s)	Method(s)	Container(s)	Filtered? (if yes, filter size)
MW-121R_24_09	EPA 8260D - Appendix II VOCs	(3) VOA Vial 40 mL - HCl	No
	USEPA 8015C - Acetonitrile & Isobutanol	(3) VOA Vial 40 mL - Unpreserved	No
	USEPA 8270E - Appendix II SVOCs	(3) Amber Glass 250 mL - Unpreserved	No
	USEPA 8081B - Appendix II Pesticides		
	USEPA 8082A - Appendix II PCBs		
	USEPA 8151A - Appendix II Herbicides	(2) Amber Glass 1 Liter - Unpreserved	No
	USEPA 6020B - Appendix II Total Metals	(1) Plastic 250 mL - HNO_3	No
	USEPA 7470A - Mercury		
	USEPA 9012B - Cyanide	(1) Plastic 250 mL - NaOH	No
	USEPA 9034 - Sulfide	(1) Plastic 500 mL - $ZnC_4H_6O_4$ + NaOH	No
	USGS I-3765-85 - TSS	(1) Plastic 1 Liter - Unpreserved	No

Groundwater Sampling Field Sheet

Site Name:	Carroll County Landfill-Western Expansion Area	Permit No.:	14-SDP-01-74P
Well/Piezometer:	MW-121R	Weather:	Clear, 56°F, NE wind @ 0-5 mph
Date:	9/24/2024	Personnel:	O.A. Technical Services: Tyler Merritt

Field Analysis

			Final Reading
Time	9:33	9:35	9:37
Temp (°C)	12.67	12.62	12.57
Sp. Cond (umhos/cm)	1053.5	1053.2	1055.1
pH	7.08	7.09	7.10
DO (mg/l)	0.17	0.15	0.13
ORP (mV)	41.2	41.7	43.4
Turbidity (NTU)	0.00	0.00	0.00

Comments: In accordance with Special Provision X.4.h, the 5-year resampling for the full Appendix II list was conducted at MW-121R in September 2024.

Collected field duplicate (FD-1_24_10) at MW-121R.

Collected field blank (FB-1_24_10) at 08:50.

Groundwater Sampling Field Sheet

Site Name:	Carroll County Landfill-Western Expansion Area	Permit No.:	14-SDP-01-74P
Well/Piezometer:	MW-122R	Weather:	Partly Cloudy, 73°F, SE wind @ 0-5 mph
Date:	9/23/2024	Personnel:	O.A. Technical Services: Tyler Merritt

Monitoring Well Details

Borehole diameter (in): 8 Casing Diameter (in): 4 Ground surface elevation (ft. MSL): 1314.24

Top of screen (ft. MSL): 1302.24 Materials: PVC Top of Casing elevation (ft. MSL): 1317.21

Locked (Y/N): Yes

	Static WL	Before purging	Before sampling
Water Level (ft. TOC):	26.69	N/A	N/A
Water elevation (ft. MSL)	1290.52	N/A	N/A

3 Well Volumes (gal): 6.43 Screen submerged? (Y/N): No

	Constructed	Measured	Difference
Well Depth (ft. TOC)	29.97	30.44	0.47

Well conditions commentary: See Well Maintenance Evaluation Form for details.

Sampling Details

Sampling Method: X Pump (low flow) ____ No-purge (specify sample interval): ____

____ Bailer ____ Other (specify): ____

Equipment type: ____ Submersible pump X Peristaltic pump ____ Bladder pump

____ Inertial lift pump ____ Bailer X No-purge (specify): ____

____ Other (specify): ____

Equipment name/description: Bailer Dedicated? (Y/N): No Disposable? (Y/N): No

Decontamination method: disposable tubing

Equipment depth (ft. MSL:) 1288.21 Flow Rate (mL/min): 100 Volume removed (gal): N/A Volume sampled (L): 4.99

Well dry? (Y/N): No Odor? (Y/N): No Color? (Y/N): No

Sample Name(s)	Method(s)	Container(s)	Filtered? (if yes, filter size)
MW-122R_24_09	EPA 8260D - Appendix II VOCs	(3) VOA Vial 40 mL - HCl	No
	USEPA 8015C - Acetonitrile & Isobutanol	(3) VOA Vial 40 mL - Unpreserved	No
	USEPA 8270E - Appendix II SVOCs	(3) Amber Glass 250 mL - Unpreserved	No
	USEPA 8081B - Appendix II Pesticides		
	USEPA 8082A - Appendix II PCBs		
	USEPA 8151A - Appendix II Herbicides	(2) Amber Glass 1 Liter - Unpreserved	No
	USEPA 6020B - Appendix II Total Metals	(1) Plastic 250 mL - HNO_3	No
	USEPA 7470A - Mercury		
	USEPA 9012B - Cyanide	(1) Plastic 250 mL - NaOH	No
	USEPA 9034 - Sulfide	(1) Plastic 500 mL - $ZnC_4H_6O_4$ + NaOH	No
	USGS I-3765-85 - TSS	(1) Plastic 1 Liter - Unpreserved	No

Groundwater Sampling Field Sheet

Site Name:	Carroll County Landfill-Western Expansion Area	Permit No.:	14-SDP-01-74P
Well/Piezometer:	MW-122R	Weather:	Partly Cloudy, 73°F, SE wind @ 0-5 mph
Date:	9/23/2024	Personnel:	O.A. Technical Services: Tyler Merritt

Field Analysis

	Final Reading
Time	15:22
Temp (°C)	21.83
Sp. Cond (umhos/cm)	715.67
pH	7.41
DO (mg/l)	8.82
ORP (mV)	153.3
Turbidity (NTU)	0.22

Comments: In accordance with Special Provision X.4.h, the 5-year resampling for the full Appendix II list was conducted at MW-122R in September 2024.

Groundwater Sampling Field Sheet

Site Name:	Carroll County Landfill-Western Expansion Area	Permit No.:	14-SDP-01-74P
Well/Piezometer:	MW-200	Weather:	Clear, 65°F, NNW wind @ 0-5 mph
Date:	9/24/2024	Personnel:	O.A. Technical Services: Tyler Merritt

Monitoring Well Details

Borehole diameter (in): 8 Casing Diameter (in): 2 Ground surface elevation (ft. MSL): 1285.91

Top of screen (ft. MSL): 1264.91 Materials: PVC Top of Casing elevation (ft. MSL): 1288.46

Locked (Y/N): Yes

	Static WL	Before purging	Before sampling
Water Level (ft. TOC):	20.88	20.88	22.38
Water elevation (ft. MSL)	1267.58	1267.58	1266.08

3 Well Volumes (gal): 6.04 Screen submerged? (Y/N): Yes

	Constructed	Measured	Difference
Well Depth (ft. TOC)	33.23	33.53	0.30

Well conditions commentary: See Well Maintenance Evaluation Form for details.

Sampling Details

Sampling Method: X Pump (low flow) ____ No-purge (specify sample interval): ____

____ Bailer ____ Other (specify): ____

Equipment type: ____ Submersible pump X Peristaltic pump ____ Bladder pump

____ Inertial lift pump ____ Bailer ____ No-purge (specify): ____

____ Other (specify): ____

Equipment name/description: GeoTech Peristaltic Dedicated? (Y/N): No Disposable? (Y/N): No

Decontamination method: disposable tubing

Equipment depth (ft. MSL:) 1260.46 Flow Rate (mL/min): 200 Volume removed (gal): 0.5 Volume sampled (L): 4.99

Well dry? (Y/N): No Odor? (Y/N): No Color? (Y/N): No

Sample Name(s)	Method(s)	Container(s)	Filtered? (if yes, filter size)
MW-200_24_09	EPA 8260D - Appendix I VOCs	(3) VOA Vial 40 mL - HCl	No
	USEPA 8015C - Acetonitrile & Isobutanol	(3) VOA Vial 40 mL - Unpreserved	
	USEPA 8270E - Appendix II SVOCs	(3) Amber Glass 250 mL - Unpreserved	No
	USEPA 8081B - Appendix II Pesticides		
	USEPA 8082A - Appendix II PCBs		
	USEPA 8151A - Appendix II Herbicides	(2) Amber Glass 1 Liter - Unpreserved	No
	USEPA 6020B - Appendix II Total Metals	(1) Plastic 250 mL - HNO_3	No
	USEPA 7470A - Mercury		
	USEPA 9012B - Cyanide	(1) Plastic 250 mL - NaOH	No
	USEPA 9034 - Sulfide	(1) Plastic 500 mL - $ZnC_4H_6O_4$ + NaOH	No
	USGS I-3765-85 - TSS	(1) Plastic 1 Liter - Unpreserved	No

Groundwater Sampling Field Sheet

Site Name:	Carroll County Landfill-Western Expansion Area	Permit No.:	14-SDP-01-74P
Well/Piezometer:	MW-200	Weather:	Clear, 65°F, NNW wind @ 0-5 mph
Date:	9/24/2024	Personnel:	O.A. Technical Services: Tyler Merritt

Field Analysis

			Final Reading
Time	11:41	11:43	11:45
Temp (°C)	15.03	14.89	14.74
Sp. Cond (umhos/cm)	886.57	890.53	890.04
pH	7.81	7.75	7.72
DO (mg/l)	0.28	0.21	0.17
ORP (mV)	35.9	38.7	41.5
Turbidity (NTU)	0.00	0.00	0.00

Comments: In accordance with Special Provision X.4.h, the 5-year resampling for the full Appendix II list was conducted at MW-200 in September 2024.

Groundwater Sampling Field Sheet

Site Name:	Carroll County Landfill-Western Expansion Area	Permit No.:	14-SDP-01-74P
Well/Piezometer:	MW-201	Weather:	Clear, 68°F, SSE wind @ 5-10 mph
Date:	9/23/2024	Personnel:	O.A. Technical Services: Tyler Merritt

Monitoring Well Details

Borehole diameter (in):	8	Casing Diameter (in):	2	Ground surface elevation (ft. MSL):	1288.86
Top of screen (ft. MSL):	1258.86	Materials:	PVC	Top of Casing elevation (ft. MSL):	1291.98
Locked (Y/N):	Yes				

	Static WL	Before purging	Before sampling
Water Level (ft. TOC):	20.41	N/A	N/A
Water elevation (ft. MSL)	1271.57	N/A	N/A

3 Well Volumes (gal): 13.27 Screen submerged? (Y/N): Yes

	Constructed	Measured	Difference
Well Depth (ft. TOC):	48.12	47.55	0.57

Well conditions commentary: See Well Maintenance Evaluation Form for details.

Sampling Details

Sampling Method: ___ Pump (low flow) ___ No-purge (specify sample interval): ___
___ Bailer X Other (specify): Water Level Only - No Sample

Equipment type: ___ Submersible pump ___ Peristaltic pump ___ Bladder pump
___ Inertial lift pump ___ Bailer ___ No-purge (specify): ___
___ Other (specify): ___

Equipment name/description: ___ Dedicated? (Y/N): ___ Disposable? (Y/N): ___
Decontamination method: ___

Equipment depth (ft. MSL:)	N/A	Flow Rate (mL/min):	N/A	Volume removed (gal):	N/A
Well dry? (Y/N):	No	Odor? (Y/N):	N/A	Volume sampled (L):	N/A
				Color? (Y/N):	N/A

Sample Name(s)	Method(s)	Container(s)	Filtered? (if yes, filter size)
	Sample not collected	N/A	N/A

Field Analysis

	Final Reading
Time	N/A
Temp (°C)	N/A
Sp. Cond (umhos/cm)	N/A
pH	N/A
DO (mg/l)	N/A
ORP (mV)	N/A
Turbidity (NTU)	N/A

Comments: Water level monitoring location only.

Groundwater Sampling Field Sheet

Site Name:	Carroll County Landfill-Western Expansion Area	Permit No.:	14-SDP-01-74P
Well/Piezometer:	MW-203	Weather:	Clear, 68°F, SSE wind @ 5-10 mph
Date:	9/23/2024	Personnel:	O.A. Technical Services: Tyler Merritt

Monitoring Well Details

Borehole diameter (in):	8	Casing Diameter (in):	2	Ground surface elevation (ft. MSL):	1301.73
Top of screen (ft. MSL):	1286.73	Materials:	PVC	Top of Casing elevation (ft. MSL):	1304.29
Locked (Y/N):	Yes				

	Static WL	Before purging	Before sampling
Water Level (ft. TOC):	16.77	N/A	N/A
Water elevation (ft. MSL)	1287.52	N/A	N/A

3 Well Volumes (gal): 10.38 Screen submerged? (Y/N): Yes

	Constructed	Measured	Difference
Well Depth (ft. TOC):	37.56	38.00	0.44

Well conditions commentary: See Well Maintenance Evaluation Form for details.

Sampling Details

Sampling Method: ___ Pump (low flow) ___ No-purge (specify sample interval): ___
___ Bailer X Other (specify): Water Level Only - No Sample

Equipment type: ___ Submersible pump ___ Peristaltic pump ___ Bladder pump
___ Inertial lift pump ___ Bailer ___ No-purge (specify): ___
___ Other (specify): ___

Equipment name/description: ___ Dedicated? (Y/N): ___ Disposable? (Y/N): ___
Decontamination method: ___

Equipment depth (ft. MSL:)	N/A	Flow Rate (mL/min):	N/A	Volume removed (gal):	N/A
Well dry? (Y/N):	No	Odor? (Y/N):	N/A	Volume sampled (L):	N/A
				Color? (Y/N):	N/A

Sample Name(s)	Method(s)	Container(s)	Filtered? (if yes, filter size)
	Sample not collected	N/A	N/A

Field Analysis

	Final Reading
Time	N/A
Temp (°C)	N/A
Sp. Cond (umhos/cm)	N/A
pH	N/A
DO (mg/l)	N/A
ORP (mV)	N/A
Turbidity (NTU)	N/A

Comments: Water level monitoring location only.

Groundwater Sampling Field Sheet

Site Name:	Carroll County Landfill-Western Expansion Area	Permit No.:	14-SDP-01-74P
Well/Piezometer:	MW-204RR	Weather:	Clear, 68°F, SSE wind @ 5-10 mph
Date:	9/23/2024	Personnel:	O.A. Technical Services: Tyler Merritt

Monitoring Well Details

Borehole diameter (in):	8.25	Casing Diameter (in):	2	Ground surface elevation (ft. MSL):	1289.96
Top of screen (ft. MSL):	1249.96	Materials:	PVC	Top of Casing elevation (ft. MSL):	1292.47
Locked (Y/N):	Yes				

	Static WL	Before purging	Before sampling
Water Level (ft. TOC):	52.44	N/A	N/A
Water elevation (ft. MSL)	1240.03	N/A	N/A

3 Well Volumes (gal): N/A Screen submerged? (Y/N): No

	Constructed	Measured	Difference
Well Depth (ft. TOC):	52.67	52.66	0.01

Well conditions commentary: See Well Maintenance Evaluation Form for details.

Sampling Details

Sampling Method: ___ Pump (low flow) ___ No-purge (specify sample interval): ___
___ Bailer X Other (specify): Water Level Only - No Sample

Equipment type: ___ Submersible pump ___ Peristaltic pump ___ Bladder pump
___ Inertial lift pump ___ Bailer ___ No-purge (specify): ___
___ Other (specify): ___

Equipment name/description: ___ Dedicated? (Y/N): No Disposable? (Y/N): No
Decontamination method: ___

Equipment depth (ft. MSL:)	N/A	Flow Rate (mL/min):	N/A	Volume removed (gal):	N/A
Well dry? (Y/N):	No	Odor? (Y/N):	N/A	Volume sampled (L):	N/A
				Color? (Y/N):	N/A

Sample Name(s)	Method(s)	Container(s)	Filtered? (if yes, filter size)
	Sample not collected	N/A	N/A

Field Analysis

	Final Reading
Time	N/A
Temp (°C)	N/A
Sp. Cond (umhos/cm)	N/A
pH	N/A
DO (mg/l)	N/A
ORP (mV)	N/A
Turbidity (NTU)	N/A

Comments: Water level monitoring location only. In the *2023 AWQR* , Foth requested to replace MW-204RR with MW-205 in the downgradient monitoring network and retain MW-204RR as a water level monitoring location. The IDNR approved the HMSP change in their letter dated July 5, 2024.

Groundwater Sampling Field Sheet

Site Name:	Carroll County Landfill-Western Expansion Area	Permit No.:	14-SDP-01-74P
Well/Piezometer:	MW-205	Weather:	Clear, 75°F, SSE wind @ 5-10 mph
Date:	9/23/2024	Personnel:	O.A. Technical Services: Tyler Merritt

Monitoring Well Details

Borehole diameter (in): 8.25 Casing Diameter (in): 2 Ground surface elevation (ft. MSL): 1293.47

Top of screen (ft. MSL): 1244.30 Materials: PVC Top of Casing elevation (ft. MSL): 1296.46

Locked (Y/N): Yes

	Static WL	Before purging	Before sampling
Water Level (ft. TOC):	41.68	N/A	N/A
Water elevation (ft. MSL)	1254.78	N/A	N/A

3 Well Volumes (gal): 10.01 Screen submerged? (Y/N): Yes

	Constructed	Measured	Difference
Well Depth (ft. TOC):	62.16	62.26	0.10

Well conditions commentary: See Well Maintenance Evaluation Form for details.

Sampling Details

Sampling Method: X Pump (low flow) ___ No-purge (specify sample interval): ___

___ Bailer ___ Other (specify): ___

Equipment type: ___ Submersible pump ___ Peristaltic pump X Bladder pump

___ Inertial lift pump ___ Bailer X No-purge (specify): ___

___ Other (specify): ___

Equipment name/description: QED Bladder Dedicated? (Y/N): No Disposable? (Y/N): No

Decontamination method: disposable tubing/bladder; Alconox/DI rinse on pump

Equipment depth (ft. MSL:) 1241.46 Flow Rate (mL/min): 100 Volume removed (gal): N/A Volume sampled (L): 1.37

Well dry? (Y/N): No Odor? (Y/N): No Color? (Y/N): No

Sample Name(s)	Method(s)	Container(s)	Filtered? (if yes, filter size)
MW-205_24_09	EPA 8260D - Appendix I VOCs	(3) VOA Vial 40 mL - HCl	No
	EPA 6020B - Appendix I Total Metals	(1) Plastic 250 mL - HNO_3	No
	USGS I-3765-85 - TSS	(1) Plastic 1 Liter - Unpreserved	No

Field Analysis

	Final Reading
Time	17:31
Temp (°C)	17.76
Sp. Cond (umhos/cm)	3221.9
pH	8.14
DO (mg/l)	1.10
ORP (mV)	22.8
Turbidity (NTU)	0.02

Groundwater Sampling Field Sheet

Site Name:	Carroll County Landfill-Western Expansion Area	Permit No.:	14-SDP-01-74P
Well/Piezometer:	MW-205	Weather:	Clear, 75°F, SSE wind @ 5-10 mph
Date:	9/23/2024	Personnel:	O.A. Technical Services: Tyler Merritt

Comments: In their letter dated July 5, 2024, IDNR approved modifying the HMSP by replacing MW-204RR with MW-205

Groundwater Sampling Field Sheet

Site Name:	Carroll County Landfill-Western Expansion Area	Permit No.:	14-SDP-01-74P
Well/Piezometer:	MW-206	Weather:	Clear, 75°F, SS wind @ 0-5 mph
Date:	9/23/2024	Personnel:	O.A. Technical Services: Tyler Merritt

Monitoring Well Details

Borehole diameter (in):	8.25	Casing Diameter (in):	2	Ground surface elevation (ft. MSL):	1297.51
Top of screen (ft. MSL):	1247.57	Materials:	PVC	Top of Casing elevation (ft. MSL):	1300.72
Locked (Y/N):	Yes				

	Static WL	Before purging	Before sampling
Water Level (ft. TOC):	27.78	N/A	N/A
Water elevation (ft. MSL)	1272.94	N/A	N/A

3 Well Volumes (gal): 17.30 Screen submerged? (Y/N): Yes

	Constructed	Measured	Difference
Well Depth (ft. TOC):	63.15	63.12	0.03

Well conditions commentary: See Well Maintenance Evaluation Form for details.

Sampling Details

Sampling Method: X Pump (low flow) ____ No-purge (specify sample interval): ____
____ Bailer ____ Other (specify): ____

Equipment type: ____ Submersible pump ____ Peristaltic pump X Bladder pump
____ Inertial lift pump ____ Bailer X No-purge (specify): ____
____ Other (specify): ____

Equipment name/description: QED Bladder Dedicated? (Y/N): No Disposable? (Y/N): No
Decontamination method: disposable tubing/bladder; Alconox/DI rinse on pump

Equipment depth (ft. MSL:)	1244.72	Flow Rate (mL/min):	100	Volume removed (gal):	N/A
Well dry? (Y/N):	No	Odor? (Y/N):	No	Volume sampled (L):	1.37
				Color? (Y/N):	No

Sample Name(s)	Method(s)	Container(s)	Filtered? (if yes, filter size)
MW-206_24_09	EPA 8260D - Appendix I VOCs	(3) VOA Vial 40 mL - HCl	No
	EPA 6020B - Appendix I Total Metals	(1) Plastic 250 mL - HNO_3	No
	USGS I-3765-85 - TSS	(1) Plastic 1 Liter - Unpreserved	No

Field Analysis

	Final Reading
Time	16:49
Temp (°C)	20.47
Sp. Cond (umhos/cm)	2839.7
pH	7.91
DO (mg/l)	4.15
ORP (mV)	27.2
Turbidity (NTU)	21.50

Groundwater Sampling Field Sheet

Site Name:	Carroll County Landfill-Western Expansion Area	Permit No.:	14-SDP-01-74P
Well/Piezometer:	MW-206	Weather:	Clear, 75°F, SS wind @ 0-5 mph
Date:	9/23/2024	Personnel:	O.A. Technical Services: Tyler Merritt

Comments:

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Gina Wilming
Foth Infrastructure & Environment, LLC
411 6th Avenue SE
Suite 400
Cedar Rapids, Iowa 52401

Generated 10/10/2024 12:59:54 AM

JOB DESCRIPTION

Carroll County Landfill Groundwater
24C002.00

JOB NUMBER

310-291233-1

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls IA 50613

See page two for job notes and contact information.

Job Notes

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

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

Authorization

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Authorized for release by
Conner Calhoun, Client Service Manager
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(319)277-2401

Table of Contents

Job ID: 310-291233-1 Eurofins Cedar Falls

Job Narrative
310-291233-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers and/or narrative comments are included to explain any exceptions, if applicable.

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

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

Receipt
The samples were received on 9/25/2024 3:05 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 1.0°C, 1.3°C, 3.3°C and 5.9°C.

GC/MS VOA
Method 8260D: The continuing calibration verification (CCV) associated with batch 310-434388 recovered above the upper control limit for 2-Hexanone (32.2%D), trans-1,3-Dichloropropene (26.2%D), 2-Chloro-1,3-butadiene (23.3%D), Methyl methacrylate (21.4%D), Ethyl methacrylate (20.7%D), and 4-Methyl-2-pentanone (33.2%D). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 310-434388/3).

Method 8260D: The continuing calibration verification (CCV) associated with batch 310-434391 recovered above the upper control limit for 2-Hexanone (28.7%D), trans-1,3-Dichloropropene (21.7%D), Methyl methacrylate (21.1%D), and 4-Methyl-2-pentanone (31.8%D). The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated sample is impacted: (CCV 310-434391/3).

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

GC/MS Semi VOA
Method 8270E: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 310-434383 and analytical batch 310-435275 recovered outside control limits for the following analytes: 2,4-Dinitrophenol and 4,6-Dinitro-2-methylphenol.

Method 8270E: The continuing calibration verification (CCV) associated with batch 310-435538 recovered above the upper control limit for 4-Aminobiphenyl (22.5%D), N-Nitrosodiethylamine (21.1%D), Diallate (34.1%D), Pronamide (27.3%D), 3,3'-Dimethylbenzidine (24.6%D), N-Nitrosopyrrolidine (24.8%D), 2,2'-oxybis[1-chloropropane (20.4%D).6%D), Isosafrole (32.1%D), Disulfoton (24.7%D), o,o',o''-Triethylphosphorothioate (35.4%D), Phorate (26.5%D) and Hexachloropropene (28.9%D).mples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

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

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

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

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

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

Metals

Job ID: 310-291233-1 (Continued) Eurofins Cedar Falls

Method 6020B: The initial calibration verification (ICV) result for batch 310-435214 was above the upper control limit. The affected analytes are: Silver. Sample results were non-detects, and have been reported as qualified data.

Method 6020B: The laboratory control sample (LCS) for preparation batch 310-434436 and analytical batch 310-435214 recovered outside control limits for the following analytes: Antimony. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

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

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

Sample Summary

Client: Foth Infrastructure & Environment, LLC
Project/Site: Carroll County Landfill Groundwater

Job ID: 310-291233-1
SDG: 24C002.00

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-291233-1	GU-2A_24_09	Water	09/23/24 18:00	09/25/24 15:05
310-291233-2	MW-119RR_24_09	Water	09/24/24 11:15	09/25/24 15:05
310-291233-3	MW-121R_24_09	Water	09/24/24 09:40	09/25/24 15:05
310-291233-4	MW-122R_24_09	Water	09/23/24 15:25	09/25/24 15:05
310-291233-5	MW-200_24_09	Water	09/24/24 11:06	09/25/24 15:05
310-291233-6	MW-205_24_09	Water	09/23/24 17:35	09/25/24 15:05
310-291233-7	MW-206_24_09	Water	09/23/24 16:50	09/25/24 15:05
310-291233-8	FB-1_24_09	Water	09/24/24 08:50	09/25/24 15:05
310-291233-9	FD-1_24_09	Water	09/24/24 00:00	09/25/24 15:05
310-291233-10	TB-1_24_09	Water	09/24/24 00:00	09/25/24 15:05

Detection Summary

Client: Foth Infrastructure & Environment, LLC
Project/Site: Carroll County Landfill Groundwater

Job ID: 310-291233-1
SDG: 24C002.00

Client Sample ID: GU-2A_24_09 — Lab Sample ID: 310-291233-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.294		0.00200	0.000660	mg/L	1		6020B	Total/NA

Client Sample ID: MW-119RR_24_09 — Lab Sample ID: 310-291233-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	3.73	J	10.0	3.10	ug/L	1		8260D	Total/NA
Arsenic	0.00388		0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.667		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cobalt	0.00217		0.000500	0.000170	mg/L	1		6020B	Total/NA
Nickel	0.00969		0.00500	0.00210	mg/L	1		6020B	Total/NA
Total Suspended Solids	6.00		1.88	1.39	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-121R_24_09 — Lab Sample ID: 310-291233-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.00		0.500	0.220	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	8.47		1.00	0.210	ug/L	1		8260D	Total/NA
Vinyl chloride	0.592	J	1.00	0.180	ug/L	1		8260D	Total/NA
Arsenic	0.0183		0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.708		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cobalt	0.00206		0.000500	0.000170	mg/L	1		6020B	Total/NA
Nickel	0.0422		0.00500	0.00210	mg/L	1		6020B	Total/NA
Total Suspended Solids	2.00		1.88	1.39	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-122R_24_09 — Lab Sample ID: 310-291233-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Barium	0.703		0.00200	0.000660	mg/L	1		6020B	Total/NA
Chromium	0.00214	J	0.00500	0.00120	mg/L	1		6020B	Total/NA
Selenium	0.00241	J	0.00500	0.00140	mg/L	1		6020B	Total/NA

Client Sample ID: MW-200_24_09 — Lab Sample ID: 310-291233-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzyl alcohol	4.15	J	10.9	1.41	ug/L	1		8270E	Total/NA
Barium	0.492		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cadmium	0.000436		0.000200	0.000100	mg/L	1		6020B	Total/NA
Nickel	0.00697		0.00500	0.00210	mg/L	1		6020B	Total/NA

Client Sample ID: MW-205_24_09 — Lab Sample ID: 310-291233-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00117	J	0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.0223		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cobalt	0.00582		0.000500	0.000170	mg/L	1		6020B	Total/NA
Lead	0.000363	J	0.000500	0.000260	mg/L	1		6020B	Total/NA
Nickel	0.00871		0.00500	0.00210	mg/L	1		6020B	Total/NA
Total Suspended Solids	4.13		1.88	1.39	mg/L	1		I-3765-85	Total/NA

Client Sample ID: MW-206_24_09 — Lab Sample ID: 310-291233-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	0.00326		0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.0216		0.00200	0.000660	mg/L	1		6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-206_24_09 (Continued) — Lab Sample ID: 310-291233-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cadmium	0.000122	J	0.000200	0.000100	mg/L	1		6020B	Total/NA
Cobalt	0.00412		0.000500	0.000170	mg/L	1		6020B	Total/NA
Lead	0.00361		0.000500	0.000260	mg/L	1		6020B	Total/NA
Nickel	0.00812		0.00500	0.00210	mg/L	1		6020B	Total/NA
Zinc	0.0140	J	0.0200	0.00970	mg/L	1		6020B	Total/NA
Total Suspended Solids	28.6		1.88	1.39	mg/L	1		I-3765-85	Total/NA

Client Sample ID: FB-1_24_09 — Lab Sample ID: 310-291233-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Di-n-octyl phthalate	8.05	J	20.8	7.29	ug/L	1		8270E	Total/NA

Client Sample ID: FD-1_24_09 — Lab Sample ID: 310-291233-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.13		0.500	0.220	ug/L	1		8260D	Total/NA
cis-1,2-Dichloroethene	9.74		1.00	0.210	ug/L	1		8260D	Total/NA
Vinyl chloride	0.626	J	1.00	0.180	ug/L	1		8260D	Total/NA
Arsenic	0.0210		0.00200	0.000530	mg/L	1		6020B	Total/NA
Barium	0.741		0.00200	0.000660	mg/L	1		6020B	Total/NA
Cobalt	0.00214		0.000500	0.000170	mg/L	1		6020B	Total/NA
Nickel	0.0427		0.00500	0.00210	mg/L	1		6020B	Total/NA
Total Suspended Solids	1.63	J	1.88	1.39	mg/L	1		I-3765-85	Total/NA

Client Sample ID: TB-1_24_09 — Lab Sample ID: 310-291233-10

No Detections.

This Detection Summary does not include radiochemical test results.

Client: Foth Infrastructure & Environment, LLC
Project/Site: Carroll County Landfill Groundwater

Job ID: 310-291233-1
SDG: 24C002.00

Client Sample ID: GU-2A_24_09
Date Collected: 09/23/24 18:00
Date Received: 09/25/24 15:05

Lab Sample ID: 310-291233-1
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<3.10		10.0	3.10	ug/L			09/27/24 02:58	1
Acrylonitrile	<2.20		5.00	2.20	ug/L			09/27/24 02:58	1
Benzene	<0.220		0.500	0.220	ug/L			09/27/24 02:58	1
Bromochloromethane	<0.540		5.00	0.540	ug/L			09/27/24 02:58	1
Bromodichloromethane	<0.390		1.00	0.390	ug/L			09/27/24 02:58	1
Bromoform	<0.780		5.00	0.780	ug/L			09/27/24 02:58	1
Bromomethane	<1.10		4.00	1.10	ug/L			09/27/24 02:58	1
2-Butanone (MEK)	<2.10		10.0	2.10	ug/L			09/27/24 02:58	1
Carbon disulfide	<0.450		1.00	0.450	ug/L			09/27/24 02:58	1
Carbon tetrachloride	<0.650		2.00	0.650	ug/L			09/27/24 02:58	1
Chlorobenzene	<0.400		1.00	0.400	ug/L			09/27/24 02:58	1
Chlorodibromomethane	<0.750		5.00	0.750	ug/L			09/27/24 02:58	1
Chloroethane	<0.790		4.00	0.790	ug/L			09/27/24 02:58	1
Chloroform	<1.30		3.00	1.30	ug/L			09/27/24 02:58	1
Chloromethane	<0.610		3.00	0.610	ug/L			09/27/24 02:58	1
cis-1,2-Dichloroethene	<0.210		1.00	0.210	ug/L			09/27/24 02:58	1
cis-1,3-Dichloropropene	<0.250		5.00	0.250	ug/L			09/27/24 02:58	1
1,2-Dibromo-3-Chloropropane	<1.20		5.00	1.20	ug/L			09/27/24 02:58	1
1,2-Dibromoethane (EDB)	<0.340		1.00	0.340	ug/L			09/27/24 02:58	1
Dibromomethane	<0.330		1.00	0.330	ug/L			09/27/24 02:58	1
1,2-Dichlorobenzene	<0.370		1.00	0.370	ug/L			09/27/24 02:58	1
1,4-Dichlorobenzene	<0.230		1.00	0.230	ug/L			09/27/24 02:58	1
1,1-Dichloroethane	<0.220		1.00	0.220	ug/L			09/27/24 02:58	1
1,2-Dichloroethane	<0.390		1.00	0.390	ug/L			09/27/24 02:58	1
1,1-Dichloroethene	<0.560		2.00	0.560	ug/L			09/27/24 02:58	1
1,2-Dichloropropane	<0.270		1.00	0.270	ug/L			09/27/24 02:58	1
Ethylbenzene	<0.310		1.00	0.310	ug/L			09/27/24 02:58	1
2-Hexanone	<2.00		10.0	2.00	ug/L			09/27/24 02:58	1
Iodomethane	<7.00		10.0	7.00	ug/L			09/27/24 02:58	1
Methylene Chloride	<1.70		5.00	1.70	ug/L			09/27/24 02:58	1
4-Methyl-2-pentanone (MIBK)	<2.10		10.0	2.10	ug/L			09/27/24 02:58	1
Styrene	<0.370		1.00	0.370	ug/L			09/27/24 02:58	1
1,1,1,2-Tetrachloroethane	<0.380		1.00	0.380	ug/L			09/27/24 02:58	1
1,1,2,2-Tetrachloroethane	<0.470		1.00	0.470	ug/L			09/27/24 02:58	1
Tetrachloroethene	<0.480		1.00	0.480	ug/L			09/27/24 02:58	1
Toluene	<0.430		1.00	0.430	ug/L			09/27/24 02:58	1
trans-1,4-Dichloro-2-butene	<1.10		10.0	1.10	ug/L			09/27/24 02:58	1
trans-1,2-Dichloroethene	<0.270		1.00	0.270	ug/L			09/27/24 02:58	1
trans-1,3-Dichloropropene	<0.560		5.00	0.560	ug/L			09/27/24 02:58	1
1,1,1-Trichloroethane	<0.190		1.00	0.190	ug/L			09/27/24 02:58	1
1,1,2-Trichloroethane	<0.450		1.00	0.450	ug/L			09/27/24 02:58	1
Trichloroethene	<0.430		1.00	0.430	ug/L			09/27/24 02:58	1
Trichlorofluoromethane	<0.380		4.00	0.380	ug/L			09/27/24 02:58	1
1,2,3-Trichloropropane	<0.590		1.00	0.590	ug/L			09/27/24 02:58	1
Vinyl acetate	<2.50		10.0	2.50	ug/L			09/27/24 02:58	1
Vinyl chloride	<0.180		1.00	0.180	ug/L			09/27/24 02:58	1
Xylenes, Total	<0.400		3.00	0.400	ug/L			09/27/24 02:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*09/27/24 02:58*	*1*

Client: Foth Infrastructure & Environment, LLC
Project/Site: Carroll County Landfill Groundwater

Job ID: 310-291233-1
SDG: 24C002.00

Client Sample ID: GU-2A_24_09
Date Collected: 09/23/24 18:00
Date Received: 09/25/24 15:05

Lab Sample ID: 310-291233-1
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*100*		*73 - 130*		*09/27/24 02:58*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*09/27/24 02:58*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100	*+	0.00200	0.00100	mg/L		09/27/24 09:00	10/03/24 19:39	1
Arsenic	<0.000530		0.00200	0.000530	mg/L		09/27/24 09:00	10/03/24 19:39	1
Barium	**0.294**		0.00200	0.000660	mg/L		09/27/24 09:00	10/03/24 19:39	1
Beryllium	<0.000330		0.00100	0.000330	mg/L		09/27/24 09:00	10/03/24 19:39	1
Cadmium	<0.000100		0.000200	0.000100	mg/L		09/27/24 09:00	10/03/24 19:39	1
Chromium	<0.00120		0.00500	0.00120	mg/L		09/27/24 09:00	10/03/24 19:39	1
Cobalt	<0.000170		0.000500	0.000170	mg/L		09/27/24 09:00	10/03/24 19:39	1
Copper	<0.00180		0.00500	0.00180	mg/L		09/27/24 09:00	10/03/24 19:39	1
Lead	<0.000260		0.000500	0.000260	mg/L		09/27/24 09:00	10/03/24 19:39	1
Nickel	<0.00210		0.00500	0.00210	mg/L		09/27/24 09:00	10/03/24 19:39	1
Selenium	<0.00140		0.00500	0.00140	mg/L		09/27/24 09:00	10/03/24 19:39	1
Silver	<0.000500	^1+	0.00100	0.000500	mg/L		09/27/24 09:00	10/03/24 19:39	1
Thallium	<0.000570		0.00100	0.000570	mg/L		09/27/24 09:00	10/03/24 19:39	1
Vanadium	<0.00110		0.00500	0.00110	mg/L		09/27/24 09:00	10/03/24 19:39	1
Zinc	<0.00970		0.0200	0.00970	mg/L		09/27/24 09:00	10/03/24 19:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	<1.39		1.88	1.39	mg/L			09/26/24 11:31	1

Client: Foth Infrastructure & Environment, LLC
Project/Site: Carroll County Landfill Groundwater

Job ID: 310-291233-1
SDG: 24C002.00

Client Sample ID: MW-119RR_24_09
Date Collected: 09/24/24 11:15
Date Received: 09/25/24 15:05

Lab Sample ID: 310-291233-2
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.73	J	10.0	3.10	ug/L			09/26/24 20:02	1
Acrylonitrile	<2.20		5.00	2.20	ug/L			09/26/24 20:02	1
Benzene	<0.220		0.500	0.220	ug/L			09/26/24 20:02	1
Bromochloromethane	<0.540		5.00	0.540	ug/L			09/26/24 20:02	1
Bromodichloromethane	<0.390		1.00	0.390	ug/L			09/26/24 20:02	1
Bromoform	<0.780		5.00	0.780	ug/L			09/26/24 20:02	1
Bromomethane	<1.10		4.00	1.10	ug/L			09/26/24 20:02	1
2-Butanone (MEK)	<2.10		10.0	2.10	ug/L			09/26/24 20:02	1
Carbon disulfide	<0.450		1.00	0.450	ug/L			09/26/24 20:02	1
Carbon tetrachloride	<0.650		2.00	0.650	ug/L			09/26/24 20:02	1
Chlorobenzene	<0.400		1.00	0.400	ug/L			09/26/24 20:02	1
Chlorodibromomethane	<0.750		5.00	0.750	ug/L			09/26/24 20:02	1
Chloroethane	<0.790		4.00	0.790	ug/L			09/26/24 20:02	1
Chloroform	<1.30		3.00	1.30	ug/L			09/26/24 20:02	1
Chloromethane	<0.610		3.00	0.610	ug/L			09/26/24 20:02	1
cis-1,2-Dichloroethene	<0.210		1.00	0.210	ug/L			09/26/24 20:02	1
cis-1,3-Dichloropropene	<0.250		5.00	0.250	ug/L			09/26/24 20:02	1
1,2-Dibromo-3-Chloropropane	<1.20		5.00	1.20	ug/L			09/26/24 20:02	1
1,2-Dibromoethane (EDB)	<0.340		1.00	0.340	ug/L			09/26/24 20:02	1
Dibromomethane	<0.330		1.00	0.330	ug/L			09/26/24 20:02	1
1,2-Dichlorobenzene	<0.370		1.00	0.370	ug/L			09/26/24 20:02	1
1,4-Dichlorobenzene	<0.230		1.00	0.230	ug/L			09/26/24 20:02	1
1,1-Dichloroethane	<0.220		1.00	0.220	ug/L			09/26/24 20:02	1
1,2-Dichloroethane	<0.390		1.00	0.390	ug/L			09/26/24 20:02	1
1,1-Dichloroethene	<0.560		2.00	0.560	ug/L			09/26/24 20:02	1
1,2-Dichloropropane	<0.270		1.00	0.270	ug/L			09/26/24 20:02	1
Ethylbenzene	<0.310		1.00	0.310	ug/L			09/26/24 20:02	1
2-Hexanone	<2.00		10.0	2.00	ug/L			09/26/24 20:02	1
Iodomethane	<7.00		10.0	7.00	ug/L			09/26/24 20:02	1
Methylene Chloride	<1.70		5.00	1.70	ug/L			09/26/24 20:02	1
4-Methyl-2-pentanone (MIBK)	<2.10		10.0	2.10	ug/L			09/26/24 20:02	1
Styrene	<0.370		1.00	0.370	ug/L			09/26/24 20:02	1
1,1,1,2-Tetrachloroethane	<0.380		1.00	0.380	ug/L			09/26/24 20:02	1
1,1,2,2-Tetrachloroethane	<0.470		1.00	0.470	ug/L			09/26/24 20:02	1
Tetrachloroethene	<0.480		1.00	0.480	ug/L			09/26/24 20:02	1
Toluene	<0.430		1.00	0.430	ug/L			09/26/24 20:02	1
trans-1,4-Dichloro-2-butene	<1.10		10.0	1.10	ug/L			09/26/24 20:02	1
trans-1,2-Dichloroethene	<0.270		1.00	0.270	ug/L			09/26/24 20:02	1
trans-1,3-Dichloropropene	<0.560		5.00	0.560	ug/L			09/26/24 20:02	1
1,1,1-Trichloroethane	<0.190		1.00	0.190	ug/L			09/26/24 20:02	1
1,1,2-Trichloroethane	<0.450		1.00	0.450	ug/L			09/26/24 20:02	1
Trichloroethene	<0.430		1.00	0.430	ug/L			09/26/24 20:02	1
Trichlorofluoromethane	<0.380		4.00	0.380	ug/L			09/26/24 20:02	1
1,2,3-Trichloropropane	<0.590		1.00	0.590	ug/L			09/26/24 20:02	1
Vinyl acetate	<2.50		10.0	2.50	ug/L			09/26/24 20:02	1
Vinyl chloride	<0.180		1.00	0.180	ug/L			09/26/24 20:02	1
Xylenes, Total	<0.400		3.00	0.400	ug/L			09/26/24 20:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*		*09/26/24 20:02*	*1*

Client: Foth Infrastructure & Environment, LLC
Project/Site: Carroll County Landfill Groundwater

Job ID: 310-291233-1
SDG: 24C002.00

Client Sample ID: MW-119RR_24_09
Date Collected: 09/24/24 11:15
Date Received: 09/25/24 15:05

Lab Sample ID: 310-291233-2
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*104*		*73 - 130*		*09/26/24 20:02*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*09/26/24 20:02*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100	*+	0.00200	0.00100	mg/L		09/27/24 09:00	10/03/24 19:41	1
Arsenic	**0.00388**		0.00200	0.000530	mg/L		09/27/24 09:00	10/03/24 19:41	1
Barium	**0.667**		0.00200	0.000660	mg/L		09/27/24 09:00	10/03/24 19:41	1
Beryllium	<0.000330		0.00100	0.000330	mg/L		09/27/24 09:00	10/03/24 19:41	1
Cadmium	<0.000100		0.000200	0.000100	mg/L		09/27/24 09:00	10/03/24 19:41	1
Chromium	<0.00120		0.00500	0.00120	mg/L		09/27/24 09:00	10/03/24 19:41	1
Cobalt	**0.00217**		0.000500	0.000170	mg/L		09/27/24 09:00	10/03/24 19:41	1
Copper	<0.00180		0.00500	0.00180	mg/L		09/27/24 09:00	10/03/24 19:41	1
Lead	<0.000260		0.000500	0.000260	mg/L		09/27/24 09:00	10/03/24 19:41	1
Nickel	**0.00969**		0.00500	0.00210	mg/L		09/27/24 09:00	10/03/24 19:41	1
Selenium	<0.00140		0.00500	0.00140	mg/L		09/27/24 09:00	10/03/24 19:41	1
Silver	<0.000500	^1+	0.00100	0.000500	mg/L		09/27/24 09:00	10/03/24 19:41	1
Thallium	<0.000570		0.00100	0.000570	mg/L		09/27/24 09:00	10/03/24 19:41	1
Vanadium	<0.00110		0.00500	0.00110	mg/L		09/27/24 09:00	10/03/24 19:41	1
Zinc	<0.00970		0.0200	0.00970	mg/L		09/27/24 09:00	10/03/24 19:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	**6.00**		1.88	1.39	mg/L			09/26/24 11:31	1

Client: Foth Infrastructure & Environment, LLC
Project/Site: Carroll County Landfill Groundwater

Job ID: 310-291233-1
SDG: 24C002.00

Client Sample ID: MW-121R_24_09
Date Collected: 09/24/24 09:40
Date Received: 09/25/24 15:05

Lab Sample ID: 310-291233-3
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.380		1.00	0.380	ug/L			09/26/24 20:24	1
1,1,1-Trichloroethane	<0.190		1.00	0.190	ug/L			09/26/24 20:24	1
1,1,2,2-Tetrachloroethane	<0.470		1.00	0.470	ug/L			09/26/24 20:24	1
1,1,2-Trichloroethane	<0.450		1.00	0.450	ug/L			09/26/24 20:24	1
1,1-Dichloroethane	<0.220		1.00	0.220	ug/L			09/26/24 20:24	1
1,1-Dichloroethene	<0.560		2.00	0.560	ug/L			09/26/24 20:24	1
1,1-Dichloropropene	<0.430		1.00	0.430	ug/L			09/26/24 20:24	1
1,2,3-Trichloropropane	<0.590		1.00	0.590	ug/L			09/26/24 20:24	1
1,2,4-Trichlorobenzene	<0.750		5.00	0.750	ug/L			09/26/24 20:24	1
1,2-Dibromo-3-Chloropropane	<1.20		5.00	1.20	ug/L			09/26/24 20:24	1
1,2-Dibromoethane (EDB)	<0.340		1.00	0.340	ug/L			09/26/24 20:24	1
1,2-Dichlorobenzene	<0.370		1.00	0.370	ug/L			09/26/24 20:24	1
1,2-Dichloroethane	<0.390		1.00	0.390	ug/L			09/26/24 20:24	1
1,2-Dichloropropane	<0.270		1.00	0.270	ug/L			09/26/24 20:24	1
1,3-Dichlorobenzene	<0.300		1.00	0.300	ug/L			09/26/24 20:24	1
1,3-Dichloropropane	<0.400		1.00	0.400	ug/L			09/26/24 20:24	1
1,4-Dichlorobenzene	<0.230		1.00	0.230	ug/L			09/26/24 20:24	1
2,2-Dichloropropane	<0.690		4.00	0.690	ug/L			09/26/24 20:24	1
2-Butanone (MEK)	<2.10		10.0	2.10	ug/L			09/26/24 20:24	1
2-Hexanone	<2.00		10.0	2.00	ug/L			09/26/24 20:24	1
4-Methyl-2-pentanone (MIBK)	<2.10		10.0	2.10	ug/L			09/26/24 20:24	1
Acetone	<3.10		10.0	3.10	ug/L			09/26/24 20:24	1
Acrolein	<3.60		10.0	3.60	ug/L			09/26/24 20:24	1
Acrylonitrile	<2.20		5.00	2.20	ug/L			09/26/24 20:24	1
Allyl chloride	<0.700		2.00	0.700	ug/L			09/26/24 20:24	1
Benzene	**1.00**		0.500	0.220	ug/L			09/26/24 20:24	1
Bromochloromethane	<0.540		5.00	0.540	ug/L			09/26/24 20:24	1
Bromodichloromethane	<0.390		1.00	0.390	ug/L			09/26/24 20:24	1
Bromoform	<0.780		5.00	0.780	ug/L			09/26/24 20:24	1
Bromomethane	<1.10		4.00	1.10	ug/L			09/26/24 20:24	1
Carbon disulfide	<0.450		1.00	0.450	ug/L			09/26/24 20:24	1
Carbon tetrachloride	<0.650		2.00	0.650	ug/L			09/26/24 20:24	1
Chlorobenzene	<0.400		1.00	0.400	ug/L			09/26/24 20:24	1
Chlorodibromomethane	<0.750		5.00	0.750	ug/L			09/26/24 20:24	1
Chloroethane	<0.790		4.00	0.790	ug/L			09/26/24 20:24	1
Chloroform	<1.30		3.00	1.30	ug/L			09/26/24 20:24	1
Chloromethane	<0.610		3.00	0.610	ug/L			09/26/24 20:24	1
Chloroprene	<0.230		1.00	0.230	ug/L			09/26/24 20:24	1
cis-1,2-Dichloroethene	**8.47**		1.00	0.210	ug/L			09/26/24 20:24	1
cis-1,3-Dichloropropene	<0.250		5.00	0.250	ug/L			09/26/24 20:24	1
Dibromomethane	<0.330		1.00	0.330	ug/L			09/26/24 20:24	1
Dichlorodifluoromethane	<0.250		3.00	0.250	ug/L			09/26/24 20:24	1
Ethyl methacrylate	<0.680		2.00	0.680	ug/L			09/26/24 20:24	1
Ethylbenzene	<0.310		1.00	0.310	ug/L			09/26/24 20:24	1
Iodomethane	<7.00		10.0	7.00	ug/L			09/26/24 20:24	1
m,p-Xylene	<0.380		2.00	0.380	ug/L			09/26/24 20:24	1
Methacrylonitrile	<3.30		10.0	3.30	ug/L			09/26/24 20:24	1
Methyl methacrylate	<0.760		2.00	0.760	ug/L			09/26/24 20:24	1
Methylene Chloride	<1.70		5.00	1.70	ug/L			09/26/24 20:24	1

Client Sample ID: MW-121R_24_09
Date Collected: 09/24/24 09:40
Date Received: 09/25/24 15:05

Lab Sample ID: 310-291233-3
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	<3.00		5.00	3.00	ug/L			09/26/24 20:24	1
o-Xylene	<0.400		1.00	0.400	ug/L			09/26/24 20:24	1
Propionitrile	<3.40		10.0	3.40	ug/L			09/26/24 20:24	1
Styrene	<0.370		1.00	0.370	ug/L			09/26/24 20:24	1
Tetrachloroethene	<0.480		1.00	0.480	ug/L			09/26/24 20:24	1
Toluene	<0.430		1.00	0.430	ug/L			09/26/24 20:24	1
trans-1,2-Dichloroethene	<0.270		1.00	0.270	ug/L			09/26/24 20:24	1
trans-1,3-Dichloropropene	<0.560		5.00	0.560	ug/L			09/26/24 20:24	1
trans-1,4-Dichloro-2-butene	<1.10		10.0	1.10	ug/L			09/26/24 20:24	1
Trichloroethene	<0.430		1.00	0.430	ug/L			09/26/24 20:24	1
Trichlorofluoromethane	<0.380		4.00	0.380	ug/L			09/26/24 20:24	1
Vinyl acetate	<2.50		10.0	2.50	ug/L			09/26/24 20:24	1
Vinyl chloride	**0.592**	**J**	1.00	0.180	ug/L			09/26/24 20:24	1
Xylenes, Total	<0.400		3.00	0.400	ug/L			09/26/24 20:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*103*		*73 - 130*		*09/26/24 20:24*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*09/26/24 20:24*	*1*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*		*09/26/24 20:24*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4,5-Tetrachlorobenzene	<0.563		10.4	0.563	ug/L		09/26/24 10:27	10/04/24 18:11	1
1,3,5-Trinitrobenzene	<2.40		10.4	2.40	ug/L		09/26/24 10:27	10/08/24 14:45	1
1,3-Dinitrobenzene	<3.33		10.4	3.33	ug/L		09/26/24 10:27	10/04/24 18:11	1
1,4-Naphthoquinone	<3.75		10.4	3.75	ug/L		09/26/24 10:27	10/08/24 14:45	1
1,4-phenylenediamine	<1.98		10.4	1.98	ug/L		09/26/24 10:27	10/08/24 14:45	1
1-Naphthylamine	<2.60		10.4	2.60	ug/L		09/26/24 10:27	10/08/24 14:45	1
2,3,4,6-Tetrachlorophenol	<5.52		10.4	5.52	ug/L		09/26/24 10:27	10/04/24 18:11	1
2,4,5-Trichlorophenol	<5.52		10.4	5.52	ug/L		09/26/24 10:27	10/04/24 18:11	1
2,4,6-Trichlorophenol	<5.21		10.4	5.21	ug/L		09/26/24 10:27	10/04/24 18:11	1
2,4-Dichlorophenol	<0.885		10.4	0.885	ug/L		09/26/24 10:27	10/04/24 18:11	1
2,4-Dimethylphenol	<0.604		10.4	0.604	ug/L		09/26/24 10:27	10/04/24 18:11	1
2,4-Dinitrophenol	<13.5	*1	20.8	13.5	ug/L		09/26/24 10:27	10/04/24 18:11	1
2,4-Dinitrotoluene	<6.67		10.4	6.67	ug/L		09/26/24 10:27	10/04/24 18:11	1
2,6-Dichlorophenol	<0.719		10.4	0.719	ug/L		09/26/24 10:27	10/04/24 18:11	1
2,6-Dinitrotoluene	<0.542		10.4	0.542	ug/L		09/26/24 10:27	10/04/24 18:11	1
2-Acetylaminofluorene	<2.81		10.4	2.81	ug/L		09/26/24 10:27	10/08/24 14:45	1
2-Chloronaphthalene	<0.667		10.4	0.667	ug/L		09/26/24 10:27	10/04/24 18:11	1
2-Chlorophenol	<0.563		10.4	0.563	ug/L		09/26/24 10:27	10/04/24 18:11	1
2-Methylnaphthalene	<0.615		10.4	0.615	ug/L		09/26/24 10:27	10/04/24 18:11	1
2-Methylphenol	<0.677		10.4	0.677	ug/L		09/26/24 10:27	10/04/24 18:11	1
2-Naphthylamine	<2.19		10.4	2.19	ug/L		09/26/24 10:27	10/08/24 14:45	1
2-Nitroaniline	<6.15		10.4	6.15	ug/L		09/26/24 10:27	10/04/24 18:11	1
2-Nitrophenol	<7.08		10.4	7.08	ug/L		09/26/24 10:27	10/04/24 18:11	1
3,3'-Dichlorobenzidine	<1.46		10.4	1.46	ug/L		09/26/24 10:27	10/04/24 18:11	1
3,3'-Dimethylbenzidine	<1.56		10.4	1.56	ug/L		09/26/24 10:27	10/08/24 14:45	1
3-Methylcholanthrene	<0.333		10.4	0.333	ug/L		09/26/24 10:27	10/08/24 14:45	1
3-Nitroaniline	<2.81		10.4	2.81	ug/L		09/26/24 10:27	10/04/24 18:11	1
4,6-Dinitro-2-methylphenol	<7.19	*1	10.4	7.19	ug/L		09/26/24 10:27	10/04/24 18:11	1

Client: Foth Infrastructure & Environment, LLC
Project/Site: Carroll County Landfill Groundwater

Job ID: 310-291233-1
SDG: 24C002.00

Client Sample ID: MW-121R_24_09
Date Collected: 09/24/24 09:40
Date Received: 09/25/24 15:05

Lab Sample ID: 310-291233-3
Matrix: Water

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Aminobiphenyl	<2.29		10.4	2.29	ug/L		09/26/24 10:27	10/08/24 14:45	1
4-Bromophenyl phenyl ether	<0.729		10.4	0.729	ug/L		09/26/24 10:27	10/04/24 18:11	1
4-Chloro-3-methylphenol	<0.875		10.4	0.875	ug/L		09/26/24 10:27	10/04/24 18:11	1
4-Chloroaniline	<0.646		10.4	0.646	ug/L		09/26/24 10:27	10/04/24 18:11	1
4-Chlorophenyl phenyl ether	<0.719		10.4	0.719	ug/L		09/26/24 10:27	10/04/24 18:11	1
Methylphenol, 3 & 4	<0.729		10.4	0.729	ug/L		09/26/24 10:27	10/04/24 18:11	1
4-Nitroaniline	<1.35		10.4	1.35	ug/L		09/26/24 10:27	10/04/24 18:11	1
4-Nitrophenol	<7.92		10.4	7.92	ug/L		09/26/24 10:27	10/04/24 18:11	1
5-Nitro-o-toluidine	<2.92		10.4	2.92	ug/L		09/26/24 10:27	10/08/24 14:45	1
7,12-Dimethylbenz(a)anthracene	<1.98		10.4	1.98	ug/L		09/26/24 10:27	10/08/24 14:45	1
Acenaphthene	<0.667		10.4	0.667	ug/L		09/26/24 10:27	10/04/24 18:11	1
Acenaphthylene	<0.750		10.4	0.750	ug/L		09/26/24 10:27	10/04/24 18:11	1
Acetophenone	<0.719		10.4	0.719	ug/L		09/26/24 10:27	10/04/24 18:11	1
Anthracene	<0.906		10.4	0.906	ug/L		09/26/24 10:27	10/04/24 18:11	1
Benzo[a]anthracene	<0.885		10.4	0.885	ug/L		09/26/24 10:27	10/04/24 18:11	1
Benzo[a]pyrene	<8.44		10.4	8.44	ug/L		09/26/24 10:27	10/04/24 18:11	1
Benzo[b]fluoranthene	<5.10		10.4	5.10	ug/L		09/26/24 10:27	10/04/24 18:11	1
Benzo[g,h,i]perylene	<6.56		10.4	6.56	ug/L		09/26/24 10:27	10/04/24 18:11	1
Benzo[k]fluoranthene	<2.29		10.4	2.29	ug/L		09/26/24 10:27	10/04/24 18:11	1
Benzyl alcohol	<1.35		10.4	1.35	ug/L		09/26/24 10:27	10/04/24 18:11	1
Bis(2-chloroethoxy)methane	<0.792		10.4	0.792	ug/L		09/26/24 10:27	10/04/24 18:11	1
Bis(2-chloroethyl)ether	<0.854		10.4	0.854	ug/L		09/26/24 10:27	10/04/24 18:11	1
2,2'-oxybis[1-chloropropane]	<0.563		10.4	0.563	ug/L		09/26/24 10:27	10/04/24 18:11	1
Bis(2-ethylhexyl) phthalate	<5.73		10.4	5.73	ug/L		09/26/24 10:27	10/04/24 18:11	1
Butyl benzyl phthalate	<5.63		10.4	5.63	ug/L		09/26/24 10:27	10/04/24 18:11	1
Chlorobenzilate	<3.75		10.4	3.75	ug/L		09/26/24 10:27	10/08/24 14:45	1
Chrysene	<0.906		10.4	0.906	ug/L		09/26/24 10:27	10/04/24 18:11	1
Diallate	<4.17		10.4	4.17	ug/L		09/26/24 10:27	10/08/24 14:45	1
Dibenzo(a,h)anthracene	<4.06		10.4	4.06	ug/L		09/26/24 10:27	10/04/24 18:11	1
Dibenzofuran	<0.771		10.4	0.771	ug/L		09/26/24 10:27	10/04/24 18:11	1
Diethyl phthalate	<1.77		10.4	1.77	ug/L		09/26/24 10:27	10/04/24 18:11	1
Dimethoate	<3.75		10.4	3.75	ug/L		09/26/24 10:27	10/08/24 14:45	1
Dimethyl phthalate	<1.04		10.4	1.04	ug/L		09/26/24 10:27	10/04/24 18:11	1
Di-n-butyl phthalate	<5.83		10.4	5.83	ug/L		09/26/24 10:27	10/04/24 18:11	1
Di-n-octyl phthalate	<7.29		20.8	7.29	ug/L		09/26/24 10:27	10/04/24 18:11	1
Dinoseb	<2.50		10.4	2.50	ug/L		09/26/24 10:27	10/08/24 14:45	1
Diphenylamine	<6.25		10.4	6.25	ug/L		09/26/24 10:27	10/04/24 18:11	1
Disulfoton	<2.50		10.4	2.50	ug/L		09/26/24 10:27	10/08/24 14:45	1
Ethyl methanesulfonate	<3.75		10.4	3.75	ug/L		09/26/24 10:27	10/08/24 14:45	1
Ethyl Parathion	<2.29		10.4	2.29	ug/L		09/26/24 10:27	10/08/24 14:45	1
Famphur	<3.96		10.4	3.96	ug/L		09/26/24 10:27	10/08/24 14:45	1
Fluoranthene	<1.77		10.4	1.77	ug/L		09/26/24 10:27	10/04/24 18:11	1
Fluorene	<0.823		10.4	0.823	ug/L		09/26/24 10:27	10/04/24 18:11	1
Hexachlorobenzene	<0.729		10.4	0.729	ug/L		09/26/24 10:27	10/04/24 18:11	1
Hexachlorobutadiene	<0.896		10.4	0.896	ug/L		09/26/24 10:27	10/04/24 18:11	1
Hexachlorocyclopentadiene	<5.31		10.4	5.31	ug/L		09/26/24 10:27	10/04/24 18:11	1
Hexachloroethane	<1.01		10.4	1.01	ug/L		09/26/24 10:27	10/04/24 18:11	1
Hexachloropropene	<2.71		10.4	2.71	ug/L		09/26/24 10:27	10/08/24 14:45	1
Indeno[1,2,3-cd]pyrene	<4.38		10.4	4.38	ug/L		09/26/24 10:27	10/04/24 18:11	1

Client Sample ID: MW-121R_24_09
Date Collected: 09/24/24 09:40
Date Received: 09/25/24 15:05

Lab Sample ID: 310-291233-3
Matrix: Water

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isodrin	<4.90		10.4	4.90	ug/L		09/26/24 10:27	10/08/24 14:45	1
Isophorone	<0.969		10.4	0.969	ug/L		09/26/24 10:27	10/04/24 18:11	1
Isosafrole	<2.40		10.4	2.40	ug/L		09/26/24 10:27	10/08/24 14:45	1
Kepone	<1.04		10.4	1.04	ug/L		09/26/24 10:27	10/08/24 14:45	1
Methapyrilene	<0.792		10.4	0.792	ug/L		09/26/24 10:27	10/08/24 14:45	1
Methyl methanesulfonate	<3.44		10.4	3.44	ug/L		09/26/24 10:27	10/08/24 14:45	1
Methyl parathion	<2.40		10.4	2.40	ug/L		09/26/24 10:27	10/08/24 14:45	1
Nitrobenzene	<0.833		10.4	0.833	ug/L		09/26/24 10:27	10/04/24 18:11	1
N-Nitrosodiethylamine	<3.54		10.4	3.54	ug/L		09/26/24 10:27	10/08/24 14:45	1
N-Nitrosodimethylamine	<0.750		10.4	0.750	ug/L		09/26/24 10:27	10/04/24 18:11	1
N-Nitrosodi-n-butylamine	<4.06		10.4	4.06	ug/L		09/26/24 10:27	10/08/24 14:45	1
N-Nitrosodi-n-propylamine	<0.958		10.4	0.958	ug/L		09/26/24 10:27	10/04/24 18:11	1
N-Nitrosodiphenylamine	<0.781		10.4	0.781	ug/L		09/26/24 10:27	10/04/24 18:11	1
N-Nitrosomethylethylamine	<5.10		10.4	5.10	ug/L		09/26/24 10:27	10/08/24 14:45	1
N-Nitrosopiperidine	<2.81		10.4	2.81	ug/L		09/26/24 10:27	10/08/24 14:45	1
N-Nitrosopyrrolidine	<3.75		10.4	3.75	ug/L		09/26/24 10:27	10/08/24 14:45	1
o,o',o''-Triethylphosphorothioate	<3.33		10.4	3.33	ug/L		09/26/24 10:27	10/08/24 14:45	1
o-Toluidine	<3.02		10.4	3.02	ug/L		09/26/24 10:27	10/08/24 14:45	1
p-Dimethylamino azobenzene	<2.29		10.4	2.29	ug/L		09/26/24 10:27	10/08/24 14:45	1
Pentachlorobenzene	<2.92		10.4	2.92	ug/L		09/26/24 10:27	10/08/24 14:45	1
Pentachloronitrobenzene	<6.04		10.4	6.04	ug/L		09/26/24 10:27	10/08/24 14:45	1
Pentachlorophenol	<10.0		10.4	10.0	ug/L		09/26/24 10:27	10/04/24 18:11	1
Phenacetin	<1.98		10.4	1.98	ug/L		09/26/24 10:27	10/08/24 14:45	1
Phenanthrene	<0.823		10.4	0.823	ug/L		09/26/24 10:27	10/04/24 18:11	1
Phenol	<1.15		10.4	1.15	ug/L		09/26/24 10:27	10/04/24 18:11	1
Phorate	<3.33		10.4	3.33	ug/L		09/26/24 10:27	10/08/24 14:45	1
Pronamide	<2.81		10.4	2.81	ug/L		09/26/24 10:27	10/08/24 14:45	1
Pyrene	<0.823		10.4	0.823	ug/L		09/26/24 10:27	10/04/24 18:11	1
Safrole	<2.92		10.4	2.92	ug/L		09/26/24 10:27	10/08/24 14:45	1
Thionazin	<3.65		10.4	3.65	ug/L		09/26/24 10:27	10/08/24 14:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol (Surr)	*48*		*25 - 110*	*09/26/24 10:27*	*10/04/24 18:11*	*1*
Phenol-d5 (Surr)	*39*		*21 - 110*	*09/26/24 10:27*	*10/04/24 18:11*	*1*
Nitrobenzene-d5 (Surr)	*68*		*45 - 129*	*09/26/24 10:27*	*10/04/24 18:11*	*1*
2-Fluorobiphenyl (Surr)	*61*		*39 - 118*	*09/26/24 10:27*	*10/04/24 18:11*	*1*
2,4,6-Tribromophenol (Surr)	*64*		*27 - 136*	*09/26/24 10:27*	*10/04/24 18:11*	*1*
Terphenyl-d14 (Surr)	*71*		*12 - 144*	*09/26/24 10:27*	*10/04/24 18:11*	*1*

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetonitrile	<2.60		10.0	2.60	mg/L			09/28/24 15:01	1
Isobutanol	<2.40		10.0	2.40	mg/L			09/28/24 15:01	1

Method: SW846 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	<0.0293		0.0696	0.0293	ug/L		09/26/24 14:09	10/04/24 21:21	1
4,4'-DDE	<0.0293		0.0696	0.0293	ug/L		09/26/24 14:09	10/04/24 21:21	1
4,4'-DDT	<0.0457		0.0696	0.0457	ug/L		09/26/24 14:09	10/04/24 21:21	1
Aldrin	<0.0348		0.0696	0.0348	ug/L		09/26/24 14:09	10/04/24 21:21	1

Client Sample ID: MW-121R_24_09
Date Collected: 09/24/24 09:40
Date Received: 09/25/24 15:05

Lab Sample ID: 310-291233-3
Matrix: Water

Method: SW846 8081B - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	<0.0315		0.0696	0.0315	ug/L		09/26/24 14:09	10/04/24 21:21	1
beta-BHC	<0.0402		0.0696	0.0402	ug/L		09/26/24 14:09	10/04/24 21:21	1
Chlordane (technical)	<0.880		2.17	0.880	ug/L		09/26/24 14:09	10/04/24 21:21	1
delta-BHC	<0.0293		0.0696	0.0293	ug/L		09/26/24 14:09	10/04/24 21:21	1
Dieldrin	<0.0283		0.0696	0.0283	ug/L		09/26/24 14:09	10/04/24 21:21	1
Endosulfan I	<0.0359		0.0696	0.0359	ug/L		09/26/24 14:09	10/04/24 21:21	1
Endosulfan II	<0.0315		0.0696	0.0315	ug/L		09/26/24 14:09	10/04/24 21:21	1
Endosulfan sulfate	<0.0326		0.0696	0.0326	ug/L		09/26/24 14:09	10/04/24 21:21	1
Endrin	<0.0283		0.0696	0.0283	ug/L		09/26/24 14:09	10/04/24 21:21	1
Endrin aldehyde	<0.0315		0.0696	0.0315	ug/L		09/26/24 14:09	10/04/24 21:21	1
gamma-BHC (Lindane)	<0.0391		0.0696	0.0391	ug/L		09/26/24 14:09	10/04/24 21:21	1
Heptachlor	<0.0359		0.0696	0.0359	ug/L		09/26/24 14:09	10/04/24 21:21	1
Heptachlor epoxide	<0.0315		0.0696	0.0315	ug/L		09/26/24 14:09	10/04/24 21:21	1
Methoxychlor	<0.0446		0.0696	0.0446	ug/L		09/26/24 14:09	10/04/24 21:21	1
Toxaphene	<0.750		2.17	0.750	ug/L		09/26/24 14:09	10/04/24 21:21	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*79*		*10 - 124*	*09/26/24 14:09*	*10/04/24 21:21*	*1*
Tetrachloro-m-xylene	*67*		*10 - 124*	*09/26/24 14:09*	*10/04/24 21:21*	*1*

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<0.177		0.833	0.177	ug/L		10/01/24 12:23	10/08/24 16:08	1
PCB-1221	<0.177		0.833	0.177	ug/L		10/01/24 12:23	10/08/24 16:08	1
PCB-1232	<0.177		0.833	0.177	ug/L		10/01/24 12:23	10/08/24 16:08	1
PCB-1242	<0.177		0.833	0.177	ug/L		10/01/24 12:23	10/08/24 16:08	1
PCB-1248	<0.115		0.833	0.115	ug/L		10/01/24 12:23	10/08/24 16:08	1
PCB-1254	<0.115		0.833	0.115	ug/L		10/01/24 12:23	10/08/24 16:08	1
PCB-1260	<0.115		0.833	0.115	ug/L		10/01/24 12:23	10/08/24 16:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*77*		*10 - 124*	*10/01/24 12:23*	*10/08/24 16:08*	*1*
Tetrachloro-m-xylene	*68*		*10 - 124*	*10/01/24 12:23*	*10/08/24 16:08*	*1*

Method: SW846 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silvex (2,4,5-TP)	<0.0243		0.0553	0.0243	ug/L		09/28/24 17:22	10/01/24 05:09	1
2,4-D	<0.277		0.664	0.277	ug/L		09/28/24 17:22	10/01/24 05:09	1
2,4,5-T	<0.0719		0.166	0.0719	ug/L		09/28/24 17:22	10/01/24 05:09	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100	*+	0.00200	0.00100	mg/L		09/27/24 09:00	10/03/24 19:44	1
Arsenic	**0.0183**		0.00200	0.000530	mg/L		09/27/24 09:00	10/03/24 19:44	1
Barium	**0.708**		0.00200	0.000660	mg/L		09/27/24 09:00	10/03/24 19:44	1
Beryllium	<0.000330		0.00100	0.000330	mg/L		09/27/24 09:00	10/03/24 19:44	1
Cadmium	<0.000100		0.000200	0.000100	mg/L		09/27/24 09:00	10/03/24 19:44	1
Chromium	<0.00120		0.00500	0.00120	mg/L		09/27/24 09:00	10/03/24 19:44	1
Cobalt	**0.00206**		0.000500	0.000170	mg/L		09/27/24 09:00	10/03/24 19:44	1
Copper	<0.00180		0.00500	0.00180	mg/L		09/27/24 09:00	10/03/24 19:44	1
Lead	<0.000260		0.000500	0.000260	mg/L		09/27/24 09:00	10/03/24 19:44	1

Client: Foth Infrastructure & Environment, LLC
Project/Site: Carroll County Landfill Groundwater

Job ID: 310-291233-1
SDG: 24C002.00

Client Sample ID: MW-121R_24_09
Date Collected: 09/24/24 09:40
Date Received: 09/25/24 15:05

Lab Sample ID: 310-291233-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	**0.0422**		0.00500	0.00210	mg/L		09/27/24 09:00	10/03/24 19:44	1
Selenium	<0.00140		0.00500	0.00140	mg/L		09/27/24 09:00	10/03/24 19:44	1
Silver	<0.000500	^1+	0.00100	0.000500	mg/L		09/27/24 09:00	10/03/24 19:44	1
Thallium	<0.000570		0.00100	0.000570	mg/L		09/27/24 09:00	10/03/24 19:44	1
Tin	<0.00230		0.00500	0.00230	mg/L		09/27/24 09:00	10/03/24 19:44	1
Vanadium	<0.00110		0.00500	0.00110	mg/L		09/27/24 09:00	10/03/24 19:44	1
Zinc	<0.00970		0.0200	0.00970	mg/L		09/27/24 09:00	10/03/24 19:44	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000110		0.000200	0.000110	mg/L		10/07/24 14:55	10/08/24 16:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total (SW846 9012B)	<0.00350		0.0100	0.00350	mg/L		09/26/24 10:32	09/27/24 20:18	1
Sulfide (SW846 9034)	<0.231		1.00	0.231	mg/L		09/29/24 18:06	09/30/24 01:57	1
Total Suspended Solids (USGS I-3765-85)	**2.00**		1.88	1.39	mg/L			09/26/24 12:16	1

Client: Foth Infrastructure & Environment, LLC
Project/Site: Carroll County Landfill Groundwater

Job ID: 310-291233-1
SDG: 24C002.00

Client Sample ID: MW-122R_24_09
Date Collected: 09/23/24 15:25
Date Received: 09/25/24 15:05

Lab Sample ID: 310-291233-4
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.380		1.00	0.380	ug/L			09/26/24 20:46	1
1,1,1-Trichloroethane	<0.190		1.00	0.190	ug/L			09/26/24 20:46	1
1,1,2,2-Tetrachloroethane	<0.470		1.00	0.470	ug/L			09/26/24 20:46	1
1,1,2-Trichloroethane	<0.450		1.00	0.450	ug/L			09/26/24 20:46	1
1,1-Dichloroethane	<0.220		1.00	0.220	ug/L			09/26/24 20:46	1
1,1-Dichloroethene	<0.560		2.00	0.560	ug/L			09/26/24 20:46	1
1,1-Dichloropropene	<0.430		1.00	0.430	ug/L			09/26/24 20:46	1
1,2,3-Trichloropropane	<0.590		1.00	0.590	ug/L			09/26/24 20:46	1
1,2,4-Trichlorobenzene	<0.750		5.00	0.750	ug/L			09/26/24 20:46	1
1,2-Dibromo-3-Chloropropane	<1.20		5.00	1.20	ug/L			09/26/24 20:46	1
1,2-Dibromoethane (EDB)	<0.340		1.00	0.340	ug/L			09/26/24 20:46	1
1,2-Dichlorobenzene	<0.370		1.00	0.370	ug/L			09/26/24 20:46	1
1,2-Dichloroethane	<0.390		1.00	0.390	ug/L			09/26/24 20:46	1
1,2-Dichloropropane	<0.270		1.00	0.270	ug/L			09/26/24 20:46	1
1,3-Dichlorobenzene	<0.300		1.00	0.300	ug/L			09/26/24 20:46	1
1,3-Dichloropropane	<0.400		1.00	0.400	ug/L			09/26/24 20:46	1
1,4-Dichlorobenzene	<0.230		1.00	0.230	ug/L			09/26/24 20:46	1
2,2-Dichloropropane	<0.690		4.00	0.690	ug/L			09/26/24 20:46	1
2-Butanone (MEK)	<2.10		10.0	2.10	ug/L			09/26/24 20:46	1
2-Hexanone	<2.00		10.0	2.00	ug/L			09/26/24 20:46	1
4-Methyl-2-pentanone (MIBK)	<2.10		10.0	2.10	ug/L			09/26/24 20:46	1
Acetone	<3.10		10.0	3.10	ug/L			09/26/24 20:46	1
Acrolein	<3.60		10.0	3.60	ug/L			09/26/24 20:46	1
Acrylonitrile	<2.20		5.00	2.20	ug/L			09/26/24 20:46	1
Allyl chloride	<0.700		2.00	0.700	ug/L			09/26/24 20:46	1
Benzene	<0.220		0.500	0.220	ug/L			09/26/24 20:46	1
Bromochloromethane	<0.540		5.00	0.540	ug/L			09/26/24 20:46	1
Bromodichloromethane	<0.390		1.00	0.390	ug/L			09/26/24 20:46	1
Bromoform	<0.780		5.00	0.780	ug/L			09/26/24 20:46	1
Bromomethane	<1.10		4.00	1.10	ug/L			09/26/24 20:46	1
Carbon disulfide	<0.450		1.00	0.450	ug/L			09/26/24 20:46	1
Carbon tetrachloride	<0.650		2.00	0.650	ug/L			09/26/24 20:46	1
Chlorobenzene	<0.400		1.00	0.400	ug/L			09/26/24 20:46	1
Chlorodibromomethane	<0.750		5.00	0.750	ug/L			09/26/24 20:46	1
Chloroethane	<0.790		4.00	0.790	ug/L			09/26/24 20:46	1
Chloroform	<1.30		3.00	1.30	ug/L			09/26/24 20:46	1
Chloromethane	<0.610		3.00	0.610	ug/L			09/26/24 20:46	1
Chloroprene	<0.230		1.00	0.230	ug/L			09/26/24 20:46	1
cis-1,2-Dichloroethene	<0.210		1.00	0.210	ug/L			09/26/24 20:46	1
cis-1,3-Dichloropropene	<0.250		5.00	0.250	ug/L			09/26/24 20:46	1
Dibromomethane	<0.330		1.00	0.330	ug/L			09/26/24 20:46	1
Dichlorodifluoromethane	<0.250		3.00	0.250	ug/L			09/26/24 20:46	1
Ethyl methacrylate	<0.680		2.00	0.680	ug/L			09/26/24 20:46	1
Ethylbenzene	<0.310		1.00	0.310	ug/L			09/26/24 20:46	1
Iodomethane	<7.00		10.0	7.00	ug/L			09/26/24 20:46	1
m,p-Xylene	<0.380		2.00	0.380	ug/L			09/26/24 20:46	1
Methacrylonitrile	<3.30		10.0	3.30	ug/L			09/26/24 20:46	1
Methyl methacrylate	<0.760		2.00	0.760	ug/L			09/26/24 20:46	1
Methylene Chloride	<1.70		5.00	1.70	ug/L			09/26/24 20:46	1

Client Sample ID: MW-122R_24_09
Date Collected: 09/23/24 15:25
Date Received: 09/25/24 15:05

Lab Sample ID: 310-291233-4
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	<3.00		5.00	3.00	ug/L			09/26/24 20:46	1
o-Xylene	<0.400		1.00	0.400	ug/L			09/26/24 20:46	1
Propionitrile	<3.40		10.0	3.40	ug/L			09/26/24 20:46	1
Styrene	<0.370		1.00	0.370	ug/L			09/26/24 20:46	1
Tetrachloroethene	<0.480		1.00	0.480	ug/L			09/26/24 20:46	1
Toluene	<0.430		1.00	0.430	ug/L			09/26/24 20:46	1
trans-1,2-Dichloroethene	<0.270		1.00	0.270	ug/L			09/26/24 20:46	1
trans-1,3-Dichloropropene	<0.560		5.00	0.560	ug/L			09/26/24 20:46	1
trans-1,4-Dichloro-2-butene	<1.10		10.0	1.10	ug/L			09/26/24 20:46	1
Trichloroethene	<0.430		1.00	0.430	ug/L			09/26/24 20:46	1
Trichlorofluoromethane	<0.380		4.00	0.380	ug/L			09/26/24 20:46	1
Vinyl acetate	<2.50		10.0	2.50	ug/L			09/26/24 20:46	1
Vinyl chloride	<0.180		1.00	0.180	ug/L			09/26/24 20:46	1
Xylenes, Total	<0.400		3.00	0.400	ug/L			09/26/24 20:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*105*		*73 - 130*		*09/26/24 20:46*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*09/26/24 20:46*	*1*
4-Bromofluorobenzene (Surr)	*93*		*80 - 120*		*09/26/24 20:46*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4,5-Tetrachlorobenzene	<0.587		10.9	0.587	ug/L		09/26/24 10:27	10/04/24 16:50	1
1,3,5-Trinitrobenzene	<2.50		10.9	2.50	ug/L		09/26/24 10:27	10/08/24 13:27	1
1,3-Dinitrobenzene	<3.48		10.9	3.48	ug/L		09/26/24 10:27	10/04/24 16:50	1
1,4-Naphthoquinone	<3.91		10.9	3.91	ug/L		09/26/24 10:27	10/08/24 13:27	1
1,4-phenylenediamine	<2.07		10.9	2.07	ug/L		09/26/24 10:27	10/08/24 13:27	1
1-Naphthylamine	<2.72		10.9	2.72	ug/L		09/26/24 10:27	10/08/24 13:27	1
2,3,4,6-Tetrachlorophenol	<5.76		10.9	5.76	ug/L		09/26/24 10:27	10/04/24 16:50	1
2,4,5-Trichlorophenol	<5.76		10.9	5.76	ug/L		09/26/24 10:27	10/04/24 16:50	1
2,4,6-Trichlorophenol	<5.43		10.9	5.43	ug/L		09/26/24 10:27	10/04/24 16:50	1
2,4-Dichlorophenol	<0.924		10.9	0.924	ug/L		09/26/24 10:27	10/04/24 16:50	1
2,4-Dimethylphenol	<0.630		10.9	0.630	ug/L		09/26/24 10:27	10/04/24 16:50	1
2,4-Dinitrophenol	<14.1	*1	21.7	14.1	ug/L		09/26/24 10:27	10/04/24 16:50	1
2,4-Dinitrotoluene	<6.96		10.9	6.96	ug/L		09/26/24 10:27	10/04/24 16:50	1
2,6-Dichlorophenol	<0.750		10.9	0.750	ug/L		09/26/24 10:27	10/04/24 16:50	1
2,6-Dinitrotoluene	<0.565		10.9	0.565	ug/L		09/26/24 10:27	10/04/24 16:50	1
2-Acetylaminofluorene	<2.93		10.9	2.93	ug/L		09/26/24 10:27	10/08/24 13:27	1
2-Chloronaphthalene	<0.696		10.9	0.696	ug/L		09/26/24 10:27	10/04/24 16:50	1
2-Chlorophenol	<0.587		10.9	0.587	ug/L		09/26/24 10:27	10/04/24 16:50	1
2-Methylnaphthalene	<0.641		10.9	0.641	ug/L		09/26/24 10:27	10/04/24 16:50	1
2-Methylphenol	<0.707		10.9	0.707	ug/L		09/26/24 10:27	10/04/24 16:50	1
2-Naphthylamine	<2.28		10.9	2.28	ug/L		09/26/24 10:27	10/08/24 13:27	1
2-Nitroaniline	<6.41		10.9	6.41	ug/L		09/26/24 10:27	10/04/24 16:50	1
2-Nitrophenol	<7.39		10.9	7.39	ug/L		09/26/24 10:27	10/04/24 16:50	1
3,3'-Dichlorobenzidine	<1.52		10.9	1.52	ug/L		09/26/24 10:27	10/04/24 16:50	1
3,3'-Dimethylbenzidine	<1.63		10.9	1.63	ug/L		09/26/24 10:27	10/08/24 13:27	1
3-Methylcholanthrene	<0.348		10.9	0.348	ug/L		09/26/24 10:27	10/08/24 13:27	1
3-Nitroaniline	<2.93		10.9	2.93	ug/L		09/26/24 10:27	10/04/24 16:50	1
4,6-Dinitro-2-methylphenol	<7.50	*1	10.9	7.50	ug/L		09/26/24 10:27	10/04/24 16:50	1

Client: Foth Infrastructure & Environment, LLC
Project/Site: Carroll County Landfill Groundwater

Job ID: 310-291233-1
SDG: 24C002.00

Client Sample ID: MW-122R_24_09
Date Collected: 09/23/24 15:25
Date Received: 09/25/24 15:05

Lab Sample ID: 310-291233-4
Matrix: Water

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Aminobiphenyl	<2.39		10.9	2.39	ug/L		09/26/24 10:27	10/08/24 13:27	1
4-Bromophenyl phenyl ether	<0.761		10.9	0.761	ug/L		09/26/24 10:27	10/04/24 16:50	1
4-Chloro-3-methylphenol	<0.913		10.9	0.913	ug/L		09/26/24 10:27	10/04/24 16:50	1
4-Chloroaniline	<0.674		10.9	0.674	ug/L		09/26/24 10:27	10/04/24 16:50	1
4-Chlorophenyl phenyl ether	<0.750		10.9	0.750	ug/L		09/26/24 10:27	10/04/24 16:50	1
Methylphenol, 3 & 4	<0.761		10.9	0.761	ug/L		09/26/24 10:27	10/04/24 16:50	1
4-Nitroaniline	<1.41		10.9	1.41	ug/L		09/26/24 10:27	10/04/24 16:50	1
4-Nitrophenol	<8.26		10.9	8.26	ug/L		09/26/24 10:27	10/04/24 16:50	1
5-Nitro-o-toluidine	<3.04		10.9	3.04	ug/L		09/26/24 10:27	10/08/24 13:27	1
7,12-Dimethylbenz(a)anthracene	<2.07		10.9	2.07	ug/L		09/26/24 10:27	10/08/24 13:27	1
Acenaphthene	<0.696		10.9	0.696	ug/L		09/26/24 10:27	10/04/24 16:50	1
Acenaphthylene	<0.783		10.9	0.783	ug/L		09/26/24 10:27	10/04/24 16:50	1
Acetophenone	<0.750		10.9	0.750	ug/L		09/26/24 10:27	10/04/24 16:50	1
Anthracene	<0.946		10.9	0.946	ug/L		09/26/24 10:27	10/04/24 16:50	1
Benzo[a]anthracene	<0.924		10.9	0.924	ug/L		09/26/24 10:27	10/04/24 16:50	1
Benzo[a]pyrene	<8.80		10.9	8.80	ug/L		09/26/24 10:27	10/04/24 16:50	1
Benzo[b]fluoranthene	<5.33		10.9	5.33	ug/L		09/26/24 10:27	10/04/24 16:50	1
Benzo[g,h,i]perylene	<6.85		10.9	6.85	ug/L		09/26/24 10:27	10/04/24 16:50	1
Benzo[k]fluoranthene	<2.39		10.9	2.39	ug/L		09/26/24 10:27	10/04/24 16:50	1
Benzyl alcohol	<1.41		10.9	1.41	ug/L		09/26/24 10:27	10/04/24 16:50	1
Bis(2-chloroethoxy)methane	<0.826		10.9	0.826	ug/L		09/26/24 10:27	10/04/24 16:50	1
Bis(2-chloroethyl)ether	<0.891		10.9	0.891	ug/L		09/26/24 10:27	10/04/24 16:50	1
2,2'-oxybis[1-chloropropane]	<0.587		10.9	0.587	ug/L		09/26/24 10:27	10/04/24 16:50	1
Bis(2-ethylhexyl) phthalate	<5.98		10.9	5.98	ug/L		09/26/24 10:27	10/04/24 16:50	1
Butyl benzyl phthalate	<5.87		10.9	5.87	ug/L		09/26/24 10:27	10/04/24 16:50	1
Chlorobenzilate	<3.91		10.9	3.91	ug/L		09/26/24 10:27	10/08/24 13:27	1
Chrysene	<0.946		10.9	0.946	ug/L		09/26/24 10:27	10/04/24 16:50	1
Diallate	<4.35		10.9	4.35	ug/L		09/26/24 10:27	10/08/24 13:27	1
Dibenzo(a,h)anthracene	<4.24		10.9	4.24	ug/L		09/26/24 10:27	10/04/24 16:50	1
Dibenzofuran	<0.804		10.9	0.804	ug/L		09/26/24 10:27	10/04/24 16:50	1
Diethyl phthalate	<1.85		10.9	1.85	ug/L		09/26/24 10:27	10/04/24 16:50	1
Dimethoate	<3.91		10.9	3.91	ug/L		09/26/24 10:27	10/08/24 13:27	1
Dimethyl phthalate	<1.09		10.9	1.09	ug/L		09/26/24 10:27	10/04/24 16:50	1
Di-n-butyl phthalate	<6.09		10.9	6.09	ug/L		09/26/24 10:27	10/04/24 16:50	1
Di-n-octyl phthalate	<7.61		21.7	7.61	ug/L		09/26/24 10:27	10/04/24 16:50	1
Dinoseb	<2.61		10.9	2.61	ug/L		09/26/24 10:27	10/08/24 13:27	1
Diphenylamine	<6.52		10.9	6.52	ug/L		09/26/24 10:27	10/04/24 16:50	1
Disulfoton	<2.61		10.9	2.61	ug/L		09/26/24 10:27	10/08/24 13:27	1
Ethyl methanesulfonate	<3.91		10.9	3.91	ug/L		09/26/24 10:27	10/08/24 13:27	1
Ethyl Parathion	<2.39		10.9	2.39	ug/L		09/26/24 10:27	10/08/24 13:27	1
Famphur	<4.13		10.9	4.13	ug/L		09/26/24 10:27	10/08/24 13:27	1
Fluoranthene	<1.85		10.9	1.85	ug/L		09/26/24 10:27	10/04/24 16:50	1
Fluorene	<0.859		10.9	0.859	ug/L		09/26/24 10:27	10/04/24 16:50	1
Hexachlorobenzene	<0.761		10.9	0.761	ug/L		09/26/24 10:27	10/04/24 16:50	1
Hexachlorobutadiene	<0.935		10.9	0.935	ug/L		09/26/24 10:27	10/04/24 16:50	1
Hexachlorocyclopentadiene	<5.54		10.9	5.54	ug/L		09/26/24 10:27	10/04/24 16:50	1
Hexachloroethane	<1.05		10.9	1.05	ug/L		09/26/24 10:27	10/04/24 16:50	1
Hexachloropropene	<2.83		10.9	2.83	ug/L		09/26/24 10:27	10/08/24 13:27	1
Indeno[1,2,3-cd]pyrene	<4.57		10.9	4.57	ug/L		09/26/24 10:27	10/04/24 16:50	1

Client Sample ID: MW-122R_24_09
Date Collected: 09/23/24 15:25
Date Received: 09/25/24 15:05

Lab Sample ID: 310-291233-4
Matrix: Water

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isodrin	<5.11		10.9	5.11	ug/L		09/26/24 10:27	10/08/24 13:27	1
Isophorone	<1.01		10.9	1.01	ug/L		09/26/24 10:27	10/04/24 16:50	1
Isosafrole	<2.50		10.9	2.50	ug/L		09/26/24 10:27	10/08/24 13:27	1
Kepone	<1.09		10.9	1.09	ug/L		09/26/24 10:27	10/08/24 13:27	1
Methapyrilene	<0.826		10.9	0.826	ug/L		09/26/24 10:27	10/08/24 13:27	1
Methyl methanesulfonate	<3.59		10.9	3.59	ug/L		09/26/24 10:27	10/08/24 13:27	1
Methyl parathion	<2.50		10.9	2.50	ug/L		09/26/24 10:27	10/08/24 13:27	1
Nitrobenzene	<0.870		10.9	0.870	ug/L		09/26/24 10:27	10/04/24 16:50	1
N-Nitrosodiethylamine	<3.70		10.9	3.70	ug/L		09/26/24 10:27	10/08/24 13:27	1
N-Nitrosodimethylamine	<0.783		10.9	0.783	ug/L		09/26/24 10:27	10/04/24 16:50	1
N-Nitrosodi-n-butylamine	<4.24		10.9	4.24	ug/L		09/26/24 10:27	10/08/24 13:27	1
N-Nitrosodi-n-propylamine	<1.00		10.9	1.00	ug/L		09/26/24 10:27	10/04/24 16:50	1
N-Nitrosodiphenylamine	<0.815		10.9	0.815	ug/L		09/26/24 10:27	10/04/24 16:50	1
N-Nitrosomethylethylamine	<5.33		10.9	5.33	ug/L		09/26/24 10:27	10/08/24 13:27	1
N-Nitrosopiperidine	<2.93		10.9	2.93	ug/L		09/26/24 10:27	10/08/24 13:27	1
N-Nitrosopyrrolidine	<3.91		10.9	3.91	ug/L		09/26/24 10:27	10/08/24 13:27	1
o,o',o''-Triethylphosphorothioate	<3.48		10.9	3.48	ug/L		09/26/24 10:27	10/08/24 13:27	1
o-Toluidine	<3.15		10.9	3.15	ug/L		09/26/24 10:27	10/08/24 13:27	1
p-Dimethylamino azobenzene	<2.39		10.9	2.39	ug/L		09/26/24 10:27	10/08/24 13:27	1
Pentachlorobenzene	<3.04		10.9	3.04	ug/L		09/26/24 10:27	10/08/24 13:27	1
Pentachloronitrobenzene	<6.30		10.9	6.30	ug/L		09/26/24 10:27	10/08/24 13:27	1
Pentachlorophenol	<10.4		10.9	10.4	ug/L		09/26/24 10:27	10/04/24 16:50	1
Phenacetin	<2.07		10.9	2.07	ug/L		09/26/24 10:27	10/08/24 13:27	1
Phenanthrene	<0.859		10.9	0.859	ug/L		09/26/24 10:27	10/04/24 16:50	1
Phenol	<1.20		10.9	1.20	ug/L		09/26/24 10:27	10/04/24 16:50	1
Phorate	<3.48		10.9	3.48	ug/L		09/26/24 10:27	10/08/24 13:27	1
Pronamide	<2.93		10.9	2.93	ug/L		09/26/24 10:27	10/08/24 13:27	1
Pyrene	<0.859		10.9	0.859	ug/L		09/26/24 10:27	10/04/24 16:50	1
Safrole	<3.04		10.9	3.04	ug/L		09/26/24 10:27	10/08/24 13:27	1
Thionazin	<3.80		10.9	3.80	ug/L		09/26/24 10:27	10/08/24 13:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol (Surr)	*64*		*25 - 110*	*09/26/24 10:27*	*10/04/24 16:50*	*1*
Phenol-d5 (Surr)	*54*		*21 - 110*	*09/26/24 10:27*	*10/04/24 16:50*	*1*
Nitrobenzene-d5 (Surr)	*79*		*45 - 129*	*09/26/24 10:27*	*10/04/24 16:50*	*1*
2-Fluorobiphenyl (Surr)	*69*		*39 - 118*	*09/26/24 10:27*	*10/04/24 16:50*	*1*
2,4,6-Tribromophenol (Surr)	*76*		*27 - 136*	*09/26/24 10:27*	*10/04/24 16:50*	*1*
Terphenyl-d14 (Surr)	*84*		*12 - 144*	*09/26/24 10:27*	*10/04/24 16:50*	*1*

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetonitrile	<2.60		10.0	2.60	mg/L			09/28/24 15:19	1
Isobutanol	<2.40		10.0	2.40	mg/L			09/28/24 15:19	1

Method: SW846 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	<0.0281		0.0667	0.0281	ug/L		09/26/24 14:09	10/04/24 20:16	1
4,4'-DDE	<0.0281		0.0667	0.0281	ug/L		09/26/24 14:09	10/04/24 20:16	1
4,4'-DDT	<0.0438		0.0667	0.0438	ug/L		09/26/24 14:09	10/04/24 20:16	1
Aldrin	<0.0333		0.0667	0.0333	ug/L		09/26/24 14:09	10/04/24 20:16	1

Client Sample ID: MW-122R_24_09
Date Collected: 09/23/24 15:25
Date Received: 09/25/24 15:05

Lab Sample ID: 310-291233-4
Matrix: Water

Method: SW846 8081B - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	<0.0302		0.0667	0.0302	ug/L		09/26/24 14:09	10/04/24 20:16	1
beta-BHC	<0.0385		0.0667	0.0385	ug/L		09/26/24 14:09	10/04/24 20:16	1
Chlordane (technical)	<0.844		2.08	0.844	ug/L		09/26/24 14:09	10/04/24 20:16	1
delta-BHC	<0.0281		0.0667	0.0281	ug/L		09/26/24 14:09	10/04/24 20:16	1
Dieldrin	<0.0271		0.0667	0.0271	ug/L		09/26/24 14:09	10/04/24 20:16	1
Endosulfan I	<0.0344		0.0667	0.0344	ug/L		09/26/24 14:09	10/04/24 20:16	1
Endosulfan II	<0.0302		0.0667	0.0302	ug/L		09/26/24 14:09	10/04/24 20:16	1
Endosulfan sulfate	<0.0313		0.0667	0.0313	ug/L		09/26/24 14:09	10/04/24 20:16	1
Endrin	<0.0271		0.0667	0.0271	ug/L		09/26/24 14:09	10/04/24 20:16	1
Endrin aldehyde	<0.0302		0.0667	0.0302	ug/L		09/26/24 14:09	10/04/24 20:16	1
gamma-BHC (Lindane)	<0.0375		0.0667	0.0375	ug/L		09/26/24 14:09	10/04/24 20:16	1
Heptachlor	<0.0344		0.0667	0.0344	ug/L		09/26/24 14:09	10/04/24 20:16	1
Heptachlor epoxide	<0.0302		0.0667	0.0302	ug/L		09/26/24 14:09	10/04/24 20:16	1
Methoxychlor	<0.0427		0.0667	0.0427	ug/L		09/26/24 14:09	10/04/24 20:16	1
Toxaphene	<0.719		2.08	0.719	ug/L		09/26/24 14:09	10/04/24 20:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*80*		*10 - 124*	*09/26/24 14:09*	*10/04/24 20:16*	*1*
Tetrachloro-m-xylene	*73*		*10 - 124*	*09/26/24 14:09*	*10/04/24 20:16*	*1*

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<0.185		0.870	0.185	ug/L		10/01/24 12:23	10/08/24 16:32	1
PCB-1221	<0.185		0.870	0.185	ug/L		10/01/24 12:23	10/08/24 16:32	1
PCB-1232	<0.185		0.870	0.185	ug/L		10/01/24 12:23	10/08/24 16:32	1
PCB-1242	<0.185		0.870	0.185	ug/L		10/01/24 12:23	10/08/24 16:32	1
PCB-1248	<0.120		0.870	0.120	ug/L		10/01/24 12:23	10/08/24 16:32	1
PCB-1254	<0.120		0.870	0.120	ug/L		10/01/24 12:23	10/08/24 16:32	1
PCB-1260	<0.120		0.870	0.120	ug/L		10/01/24 12:23	10/08/24 16:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*102*		*10 - 124*	*10/01/24 12:23*	*10/08/24 16:32*	*1*
Tetrachloro-m-xylene	*88*		*10 - 124*	*10/01/24 12:23*	*10/08/24 16:32*	*1*

Method: SW846 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silvex (2,4,5-TP)	<0.0257		0.0585	0.0257	ug/L		09/28/24 17:22	10/01/24 05:37	1
2,4-D	<0.293		0.702	0.293	ug/L		09/28/24 17:22	10/01/24 05:37	1
2,4,5-T	<0.0761		0.176	0.0761	ug/L		09/28/24 17:22	10/01/24 05:37	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100	*+	0.00200	0.00100	mg/L		09/27/24 09:00	10/03/24 19:46	1
Arsenic	<0.000530		0.00200	0.000530	mg/L		09/27/24 09:00	10/03/24 19:46	1
Barium	**0.703**		0.00200	0.000660	mg/L		09/27/24 09:00	10/03/24 19:46	1
Beryllium	<0.000330		0.00100	0.000330	mg/L		09/27/24 09:00	10/03/24 19:46	1
Cadmium	<0.000100		0.000200	0.000100	mg/L		09/27/24 09:00	10/03/24 19:46	1
Chromium	**0.00214**	**J**	0.00500	0.00120	mg/L		09/27/24 09:00	10/03/24 19:46	1
Cobalt	<0.000170		0.000500	0.000170	mg/L		09/27/24 09:00	10/03/24 19:46	1
Copper	<0.00180		0.00500	0.00180	mg/L		09/27/24 09:00	10/03/24 19:46	1
Lead	<0.000260		0.000500	0.000260	mg/L		09/27/24 09:00	10/03/24 19:46	1

Client: Foth Infrastructure & Environment, LLC
Project/Site: Carroll County Landfill Groundwater

Job ID: 310-291233-1
SDG: 24C002.00

Client Sample ID: MW-122R_24_09
Date Collected: 09/23/24 15:25
Date Received: 09/25/24 15:05

Lab Sample ID: 310-291233-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	<0.00210		0.00500	0.00210	mg/L		09/27/24 09:00	10/03/24 19:46	1
Selenium	**0.00241**	**J**	0.00500	0.00140	mg/L		09/27/24 09:00	10/03/24 19:46	1
Silver	<0.000500	^1+	0.00100	0.000500	mg/L		09/27/24 09:00	10/03/24 19:46	1
Thallium	<0.000570		0.00100	0.000570	mg/L		09/27/24 09:00	10/03/24 19:46	1
Tin	<0.00230		0.00500	0.00230	mg/L		09/27/24 09:00	10/03/24 19:46	1
Vanadium	<0.00110		0.00500	0.00110	mg/L		09/27/24 09:00	10/03/24 19:46	1
Zinc	<0.00970		0.0200	0.00970	mg/L		09/27/24 09:00	10/03/24 19:46	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000110		0.000200	0.000110	mg/L		10/07/24 14:55	10/08/24 16:06	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total (SW846 9012B)	<0.00350		0.0100	0.00350	mg/L		09/26/24 10:32	09/27/24 20:22	1
Sulfide (SW846 9034)	<0.231		1.00	0.231	mg/L		09/29/24 18:16	09/30/24 02:23	1
Total Suspended Solids (USGS I-3765-85)	<1.39		1.88	1.39	mg/L			09/26/24 12:16	1

Client: Foth Infrastructure & Environment, LLC
Project/Site: Carroll County Landfill Groundwater

Job ID: 310-291233-1
SDG: 24C002.00

Client Sample ID: MW-200_24_09
Date Collected: 09/24/24 11:06
Date Received: 09/25/24 15:05

Lab Sample ID: 310-291233-5
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.380		1.00	0.380	ug/L			09/26/24 21:08	1
1,1,1-Trichloroethane	<0.190		1.00	0.190	ug/L			09/26/24 21:08	1
1,1,2,2-Tetrachloroethane	<0.470		1.00	0.470	ug/L			09/26/24 21:08	1
1,1,2-Trichloroethane	<0.450		1.00	0.450	ug/L			09/26/24 21:08	1
1,1-Dichloroethane	<0.220		1.00	0.220	ug/L			09/26/24 21:08	1
1,1-Dichloroethene	<0.560		2.00	0.560	ug/L			09/26/24 21:08	1
1,1-Dichloropropene	<0.430		1.00	0.430	ug/L			09/26/24 21:08	1
1,2,3-Trichloropropane	<0.590		1.00	0.590	ug/L			09/26/24 21:08	1
1,2,4-Trichlorobenzene	<0.750		5.00	0.750	ug/L			09/26/24 21:08	1
1,2-Dibromo-3-Chloropropane	<1.20		5.00	1.20	ug/L			09/26/24 21:08	1
1,2-Dibromoethane (EDB)	<0.340		1.00	0.340	ug/L			09/26/24 21:08	1
1,2-Dichlorobenzene	<0.370		1.00	0.370	ug/L			09/26/24 21:08	1
1,2-Dichloroethane	<0.390		1.00	0.390	ug/L			09/26/24 21:08	1
1,2-Dichloropropane	<0.270		1.00	0.270	ug/L			09/26/24 21:08	1
1,3-Dichlorobenzene	<0.300		1.00	0.300	ug/L			09/26/24 21:08	1
1,3-Dichloropropane	<0.400		1.00	0.400	ug/L			09/26/24 21:08	1
1,4-Dichlorobenzene	<0.230		1.00	0.230	ug/L			09/26/24 21:08	1
2,2-Dichloropropane	<0.690		4.00	0.690	ug/L			09/26/24 21:08	1
2-Butanone (MEK)	<2.10		10.0	2.10	ug/L			09/26/24 21:08	1
2-Hexanone	<2.00		10.0	2.00	ug/L			09/26/24 21:08	1
4-Methyl-2-pentanone (MIBK)	<2.10		10.0	2.10	ug/L			09/26/24 21:08	1
Acetone	<3.10		10.0	3.10	ug/L			09/26/24 21:08	1
Acrolein	<3.60		10.0	3.60	ug/L			09/26/24 21:08	1
Acrylonitrile	<2.20		5.00	2.20	ug/L			09/26/24 21:08	1
Allyl chloride	<0.700		2.00	0.700	ug/L			09/26/24 21:08	1
Benzene	<0.220		0.500	0.220	ug/L			09/26/24 21:08	1
Bromochloromethane	<0.540		5.00	0.540	ug/L			09/26/24 21:08	1
Bromodichloromethane	<0.390		1.00	0.390	ug/L			09/26/24 21:08	1
Bromoform	<0.780		5.00	0.780	ug/L			09/26/24 21:08	1
Bromomethane	<1.10		4.00	1.10	ug/L			09/26/24 21:08	1
Carbon disulfide	<0.450		1.00	0.450	ug/L			09/26/24 21:08	1
Carbon tetrachloride	<0.650		2.00	0.650	ug/L			09/26/24 21:08	1
Chlorobenzene	<0.400		1.00	0.400	ug/L			09/26/24 21:08	1
Chlorodibromomethane	<0.750		5.00	0.750	ug/L			09/26/24 21:08	1
Chloroethane	<0.790		4.00	0.790	ug/L			09/26/24 21:08	1
Chloroform	<1.30		3.00	1.30	ug/L			09/26/24 21:08	1
Chloromethane	<0.610		3.00	0.610	ug/L			09/26/24 21:08	1
Chloroprene	<0.230		1.00	0.230	ug/L			09/26/24 21:08	1
cis-1,2-Dichloroethene	<0.210		1.00	0.210	ug/L			09/26/24 21:08	1
cis-1,3-Dichloropropene	<0.250		5.00	0.250	ug/L			09/26/24 21:08	1
Dibromomethane	<0.330		1.00	0.330	ug/L			09/26/24 21:08	1
Dichlorodifluoromethane	<0.250		3.00	0.250	ug/L			09/26/24 21:08	1
Ethyl methacrylate	<0.680		2.00	0.680	ug/L			09/26/24 21:08	1
Ethylbenzene	<0.310		1.00	0.310	ug/L			09/26/24 21:08	1
Iodomethane	<7.00		10.0	7.00	ug/L			09/26/24 21:08	1
m,p-Xylene	<0.380		2.00	0.380	ug/L			09/26/24 21:08	1
Methacrylonitrile	<3.30		10.0	3.30	ug/L			09/26/24 21:08	1
Methyl methacrylate	<0.760		2.00	0.760	ug/L			09/26/24 21:08	1
Methylene Chloride	<1.70		5.00	1.70	ug/L			09/26/24 21:08	1

Client Sample ID: MW-200_24_09
Date Collected: 09/24/24 11:06
Date Received: 09/25/24 15:05

Lab Sample ID: 310-291233-5
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	<3.00		5.00	3.00	ug/L			09/26/24 21:08	1
o-Xylene	<0.400		1.00	0.400	ug/L			09/26/24 21:08	1
Propionitrile	<3.40		10.0	3.40	ug/L			09/26/24 21:08	1
Styrene	<0.370		1.00	0.370	ug/L			09/26/24 21:08	1
Tetrachloroethene	<0.480		1.00	0.480	ug/L			09/26/24 21:08	1
Toluene	<0.430		1.00	0.430	ug/L			09/26/24 21:08	1
trans-1,2-Dichloroethene	<0.270		1.00	0.270	ug/L			09/26/24 21:08	1
trans-1,3-Dichloropropene	<0.560		5.00	0.560	ug/L			09/26/24 21:08	1
trans-1,4-Dichloro-2-butene	<1.10		10.0	1.10	ug/L			09/26/24 21:08	1
Trichloroethene	<0.430		1.00	0.430	ug/L			09/26/24 21:08	1
Trichlorofluoromethane	<0.380		4.00	0.380	ug/L			09/26/24 21:08	1
Vinyl acetate	<2.50		10.0	2.50	ug/L			09/26/24 21:08	1
Vinyl chloride	<0.180		1.00	0.180	ug/L			09/26/24 21:08	1
Xylenes, Total	<0.400		3.00	0.400	ug/L			09/26/24 21:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*102*		*73 - 130*		*09/26/24 21:08*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*09/26/24 21:08*	*1*
4-Bromofluorobenzene (Surr)	*92*		*80 - 120*		*09/26/24 21:08*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4,5-Tetrachlorobenzene	<0.587		10.9	0.587	ug/L		09/26/24 10:27	10/04/24 17:44	1
1,3,5-Trinitrobenzene	<2.50		10.9	2.50	ug/L		09/26/24 10:27	10/08/24 14:19	1
1,3-Dinitrobenzene	<3.48		10.9	3.48	ug/L		09/26/24 10:27	10/04/24 17:44	1
1,4-Naphthoquinone	<3.91		10.9	3.91	ug/L		09/26/24 10:27	10/08/24 14:19	1
1,4-phenylenediamine	<2.07		10.9	2.07	ug/L		09/26/24 10:27	10/08/24 14:19	1
1-Naphthylamine	<2.72		10.9	2.72	ug/L		09/26/24 10:27	10/08/24 14:19	1
2,3,4,6-Tetrachlorophenol	<5.76		10.9	5.76	ug/L		09/26/24 10:27	10/04/24 17:44	1
2,4,5-Trichlorophenol	<5.76		10.9	5.76	ug/L		09/26/24 10:27	10/04/24 17:44	1
2,4,6-Trichlorophenol	<5.43		10.9	5.43	ug/L		09/26/24 10:27	10/04/24 17:44	1
2,4-Dichlorophenol	<0.924		10.9	0.924	ug/L		09/26/24 10:27	10/04/24 17:44	1
2,4-Dimethylphenol	<0.630		10.9	0.630	ug/L		09/26/24 10:27	10/04/24 17:44	1
2,4-Dinitrophenol	<14.1	*1	21.7	14.1	ug/L		09/26/24 10:27	10/04/24 17:44	1
2,4-Dinitrotoluene	<6.96		10.9	6.96	ug/L		09/26/24 10:27	10/04/24 17:44	1
2,6-Dichlorophenol	<0.750		10.9	0.750	ug/L		09/26/24 10:27	10/04/24 17:44	1
2,6-Dinitrotoluene	<0.565		10.9	0.565	ug/L		09/26/24 10:27	10/04/24 17:44	1
2-Acetylaminofluorene	<2.93		10.9	2.93	ug/L		09/26/24 10:27	10/08/24 14:19	1
2-Chloronaphthalene	<0.696		10.9	0.696	ug/L		09/26/24 10:27	10/04/24 17:44	1
2-Chlorophenol	<0.587		10.9	0.587	ug/L		09/26/24 10:27	10/04/24 17:44	1
2-Methylnaphthalene	<0.641		10.9	0.641	ug/L		09/26/24 10:27	10/04/24 17:44	1
2-Methylphenol	<0.707		10.9	0.707	ug/L		09/26/24 10:27	10/04/24 17:44	1
2-Naphthylamine	<2.28		10.9	2.28	ug/L		09/26/24 10:27	10/08/24 14:19	1
2-Nitroaniline	<6.41		10.9	6.41	ug/L		09/26/24 10:27	10/04/24 17:44	1
2-Nitrophenol	<7.39		10.9	7.39	ug/L		09/26/24 10:27	10/04/24 17:44	1
3,3'-Dichlorobenzidine	<1.52		10.9	1.52	ug/L		09/26/24 10:27	10/04/24 17:44	1
3,3'-Dimethylbenzidine	<1.63		10.9	1.63	ug/L		09/26/24 10:27	10/08/24 14:19	1
3-Methylcholanthrene	<0.348		10.9	0.348	ug/L		09/26/24 10:27	10/08/24 14:19	1
3-Nitroaniline	<2.93		10.9	2.93	ug/L		09/26/24 10:27	10/04/24 17:44	1
4,6-Dinitro-2-methylphenol	<7.50	*1	10.9	7.50	ug/L		09/26/24 10:27	10/04/24 17:44	1

Client: Foth Infrastructure & Environment, LLC
Project/Site: Carroll County Landfill Groundwater

Job ID: 310-291233-1
SDG: 24C002.00

Client Sample ID: MW-200_24_09
Date Collected: 09/24/24 11:06
Date Received: 09/25/24 15:05

Lab Sample ID: 310-291233-5
Matrix: Water

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Aminobiphenyl	<2.39		10.9	2.39	ug/L		09/26/24 10:27	10/08/24 14:19	1
4-Bromophenyl phenyl ether	<0.761		10.9	0.761	ug/L		09/26/24 10:27	10/04/24 17:44	1
4-Chloro-3-methylphenol	<0.913		10.9	0.913	ug/L		09/26/24 10:27	10/04/24 17:44	1
4-Chloroaniline	<0.674		10.9	0.674	ug/L		09/26/24 10:27	10/04/24 17:44	1
4-Chlorophenyl phenyl ether	<0.750		10.9	0.750	ug/L		09/26/24 10:27	10/04/24 17:44	1
Methylphenol, 3 & 4	<0.761		10.9	0.761	ug/L		09/26/24 10:27	10/04/24 17:44	1
4-Nitroaniline	<1.41		10.9	1.41	ug/L		09/26/24 10:27	10/04/24 17:44	1
4-Nitrophenol	<8.26		10.9	8.26	ug/L		09/26/24 10:27	10/04/24 17:44	1
5-Nitro-o-toluidine	<3.04		10.9	3.04	ug/L		09/26/24 10:27	10/08/24 14:19	1
7,12-Dimethylbenz(a)anthracene	<2.07		10.9	2.07	ug/L		09/26/24 10:27	10/08/24 14:19	1
Acenaphthene	<0.696		10.9	0.696	ug/L		09/26/24 10:27	10/04/24 17:44	1
Acenaphthylene	<0.783		10.9	0.783	ug/L		09/26/24 10:27	10/04/24 17:44	1
Acetophenone	<0.750		10.9	0.750	ug/L		09/26/24 10:27	10/04/24 17:44	1
Anthracene	<0.946		10.9	0.946	ug/L		09/26/24 10:27	10/04/24 17:44	1
Benzo[a]anthracene	<0.924		10.9	0.924	ug/L		09/26/24 10:27	10/04/24 17:44	1
Benzo[a]pyrene	<8.80		10.9	8.80	ug/L		09/26/24 10:27	10/04/24 17:44	1
Benzo[b]fluoranthene	<5.33		10.9	5.33	ug/L		09/26/24 10:27	10/04/24 17:44	1
Benzo[g,h,i]perylene	<6.85		10.9	6.85	ug/L		09/26/24 10:27	10/04/24 17:44	1
Benzo[k]fluoranthene	<2.39		10.9	2.39	ug/L		09/26/24 10:27	10/04/24 17:44	1
Benzyl alcohol	**4.15**	**J**	10.9	1.41	ug/L		09/26/24 10:27	10/04/24 17:44	1
Bis(2-chloroethoxy)methane	<0.826		10.9	0.826	ug/L		09/26/24 10:27	10/04/24 17:44	1
Bis(2-chloroethyl)ether	<0.891		10.9	0.891	ug/L		09/26/24 10:27	10/04/24 17:44	1
2,2'-oxybis[1-chloropropane]	<0.587		10.9	0.587	ug/L		09/26/24 10:27	10/04/24 17:44	1
Bis(2-ethylhexyl) phthalate	<5.98		10.9	5.98	ug/L		09/26/24 10:27	10/04/24 17:44	1
Butyl benzyl phthalate	<5.87		10.9	5.87	ug/L		09/26/24 10:27	10/04/24 17:44	1
Chlorobenzilate	<3.91		10.9	3.91	ug/L		09/26/24 10:27	10/08/24 14:19	1
Chrysene	<0.946		10.9	0.946	ug/L		09/26/24 10:27	10/04/24 17:44	1
Diallate	<4.35		10.9	4.35	ug/L		09/26/24 10:27	10/08/24 14:19	1
Dibenzo(a,h)anthracene	<4.24		10.9	4.24	ug/L		09/26/24 10:27	10/04/24 17:44	1
Dibenzofuran	<0.804		10.9	0.804	ug/L		09/26/24 10:27	10/04/24 17:44	1
Diethyl phthalate	<1.85		10.9	1.85	ug/L		09/26/24 10:27	10/04/24 17:44	1
Dimethoate	<3.91		10.9	3.91	ug/L		09/26/24 10:27	10/08/24 14:19	1
Dimethyl phthalate	<1.09		10.9	1.09	ug/L		09/26/24 10:27	10/04/24 17:44	1
Di-n-butyl phthalate	<6.09		10.9	6.09	ug/L		09/26/24 10:27	10/04/24 17:44	1
Di-n-octyl phthalate	<7.61		21.7	7.61	ug/L		09/26/24 10:27	10/04/24 17:44	1
Dinoseb	<2.61		10.9	2.61	ug/L		09/26/24 10:27	10/08/24 14:19	1
Diphenylamine	<6.52		10.9	6.52	ug/L		09/26/24 10:27	10/04/24 17:44	1
Disulfoton	<2.61		10.9	2.61	ug/L		09/26/24 10:27	10/08/24 14:19	1
Ethyl methanesulfonate	<3.91		10.9	3.91	ug/L		09/26/24 10:27	10/08/24 14:19	1
Ethyl Parathion	<2.39		10.9	2.39	ug/L		09/26/24 10:27	10/08/24 14:19	1
Famphur	<4.13		10.9	4.13	ug/L		09/26/24 10:27	10/08/24 14:19	1
Fluoranthene	<1.85		10.9	1.85	ug/L		09/26/24 10:27	10/04/24 17:44	1
Fluorene	<0.859		10.9	0.859	ug/L		09/26/24 10:27	10/04/24 17:44	1
Hexachlorobenzene	<0.761		10.9	0.761	ug/L		09/26/24 10:27	10/04/24 17:44	1
Hexachlorobutadiene	<0.935		10.9	0.935	ug/L		09/26/24 10:27	10/04/24 17:44	1
Hexachlorocyclopentadiene	<5.54		10.9	5.54	ug/L		09/26/24 10:27	10/04/24 17:44	1
Hexachloroethane	<1.05		10.9	1.05	ug/L		09/26/24 10:27	10/04/24 17:44	1
Hexachloropropene	<2.83		10.9	2.83	ug/L		09/26/24 10:27	10/08/24 14:19	1
Indeno[1,2,3-cd]pyrene	<4.57		10.9	4.57	ug/L		09/26/24 10:27	10/04/24 17:44	1

Client Sample ID: MW-200_24_09
Date Collected: 09/24/24 11:06
Date Received: 09/25/24 15:05

Lab Sample ID: 310-291233-5
Matrix: Water

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isodrin	<5.11		10.9	5.11	ug/L		09/26/24 10:27	10/08/24 14:19	1
Isophorone	<1.01		10.9	1.01	ug/L		09/26/24 10:27	10/04/24 17:44	1
Isosafrole	<2.50		10.9	2.50	ug/L		09/26/24 10:27	10/08/24 14:19	1
Kepone	<1.09		10.9	1.09	ug/L		09/26/24 10:27	10/08/24 14:19	1
Methapyrilene	<0.826		10.9	0.826	ug/L		09/26/24 10:27	10/08/24 14:19	1
Methyl methanesulfonate	<3.59		10.9	3.59	ug/L		09/26/24 10:27	10/08/24 14:19	1
Methyl parathion	<2.50		10.9	2.50	ug/L		09/26/24 10:27	10/08/24 14:19	1
Nitrobenzene	<0.870		10.9	0.870	ug/L		09/26/24 10:27	10/04/24 17:44	1
N-Nitrosodiethylamine	<3.70		10.9	3.70	ug/L		09/26/24 10:27	10/08/24 14:19	1
N-Nitrosodimethylamine	<0.783		10.9	0.783	ug/L		09/26/24 10:27	10/04/24 17:44	1
N-Nitrosodi-n-butylamine	<4.24		10.9	4.24	ug/L		09/26/24 10:27	10/08/24 14:19	1
N-Nitrosodi-n-propylamine	<1.00		10.9	1.00	ug/L		09/26/24 10:27	10/04/24 17:44	1
N-Nitrosodiphenylamine	<0.815		10.9	0.815	ug/L		09/26/24 10:27	10/04/24 17:44	1
N-Nitrosomethylethylamine	<5.33		10.9	5.33	ug/L		09/26/24 10:27	10/08/24 14:19	1
N-Nitrosopiperidine	<2.93		10.9	2.93	ug/L		09/26/24 10:27	10/08/24 14:19	1
N-Nitrosopyrrolidine	<3.91		10.9	3.91	ug/L		09/26/24 10:27	10/08/24 14:19	1
o,o',o''-Triethylphosphorothioate	<3.48		10.9	3.48	ug/L		09/26/24 10:27	10/08/24 14:19	1
o-Toluidine	<3.15		10.9	3.15	ug/L		09/26/24 10:27	10/08/24 14:19	1
p-Dimethylamino azobenzene	<2.39		10.9	2.39	ug/L		09/26/24 10:27	10/08/24 14:19	1
Pentachlorobenzene	<3.04		10.9	3.04	ug/L		09/26/24 10:27	10/08/24 14:19	1
Pentachloronitrobenzene	<6.30		10.9	6.30	ug/L		09/26/24 10:27	10/08/24 14:19	1
Pentachlorophenol	<10.4		10.9	10.4	ug/L		09/26/24 10:27	10/04/24 17:44	1
Phenacetin	<2.07		10.9	2.07	ug/L		09/26/24 10:27	10/08/24 14:19	1
Phenanthrene	<0.859		10.9	0.859	ug/L		09/26/24 10:27	10/04/24 17:44	1
Phenol	<1.20		10.9	1.20	ug/L		09/26/24 10:27	10/04/24 17:44	1
Phorate	<3.48		10.9	3.48	ug/L		09/26/24 10:27	10/08/24 14:19	1
Pronamide	<2.93		10.9	2.93	ug/L		09/26/24 10:27	10/08/24 14:19	1
Pyrene	<0.859		10.9	0.859	ug/L		09/26/24 10:27	10/04/24 17:44	1
Safrole	<3.04		10.9	3.04	ug/L		09/26/24 10:27	10/08/24 14:19	1
Thionazin	<3.80		10.9	3.80	ug/L		09/26/24 10:27	10/08/24 14:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol (Surr)	*77*		*25 - 110*	*09/26/24 10:27*	*10/04/24 17:44*	*1*
Phenol-d5 (Surr)	*65*		*21 - 110*	*09/26/24 10:27*	*10/04/24 17:44*	*1*
Nitrobenzene-d5 (Surr)	*101*		*45 - 129*	*09/26/24 10:27*	*10/04/24 17:44*	*1*
2-Fluorobiphenyl (Surr)	*89*		*39 - 118*	*09/26/24 10:27*	*10/04/24 17:44*	*1*
2,4,6-Tribromophenol (Surr)	*90*		*27 - 136*	*09/26/24 10:27*	*10/04/24 17:44*	*1*
Terphenyl-d14 (Surr)	*109*		*12 - 144*	*09/26/24 10:27*	*10/04/24 17:44*	*1*

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetonitrile	<2.60		10.0	2.60	mg/L			09/28/24 15:39	1
Isobutanol	<2.40		10.0	2.40	mg/L			09/28/24 15:39	1

Method: SW846 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	<0.0281		0.0667	0.0281	ug/L		09/26/24 14:09	10/04/24 21:02	1
4,4'-DDE	<0.0281		0.0667	0.0281	ug/L		09/26/24 14:09	10/04/24 21:02	1
4,4'-DDT	<0.0438		0.0667	0.0438	ug/L		09/26/24 14:09	10/04/24 21:02	1
Aldrin	<0.0333		0.0667	0.0333	ug/L		09/26/24 14:09	10/04/24 21:02	1

Client Sample ID: MW-200_24_09
Date Collected: 09/24/24 11:06
Date Received: 09/25/24 15:05

Lab Sample ID: 310-291233-5
Matrix: Water

Method: SW846 8081B - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	<0.0302		0.0667	0.0302	ug/L		09/26/24 14:09	10/04/24 21:02	1
beta-BHC	<0.0385		0.0667	0.0385	ug/L		09/26/24 14:09	10/04/24 21:02	1
Chlordane (technical)	<0.844		2.08	0.844	ug/L		09/26/24 14:09	10/04/24 21:02	1
delta-BHC	<0.0281		0.0667	0.0281	ug/L		09/26/24 14:09	10/04/24 21:02	1
Dieldrin	<0.0271		0.0667	0.0271	ug/L		09/26/24 14:09	10/04/24 21:02	1
Endosulfan I	<0.0344		0.0667	0.0344	ug/L		09/26/24 14:09	10/04/24 21:02	1
Endosulfan II	<0.0302		0.0667	0.0302	ug/L		09/26/24 14:09	10/04/24 21:02	1
Endosulfan sulfate	<0.0313		0.0667	0.0313	ug/L		09/26/24 14:09	10/04/24 21:02	1
Endrin	<0.0271		0.0667	0.0271	ug/L		09/26/24 14:09	10/04/24 21:02	1
Endrin aldehyde	<0.0302		0.0667	0.0302	ug/L		09/26/24 14:09	10/04/24 21:02	1
gamma-BHC (Lindane)	<0.0375		0.0667	0.0375	ug/L		09/26/24 14:09	10/04/24 21:02	1
Heptachlor	<0.0344		0.0667	0.0344	ug/L		09/26/24 14:09	10/04/24 21:02	1
Heptachlor epoxide	<0.0302		0.0667	0.0302	ug/L		09/26/24 14:09	10/04/24 21:02	1
Methoxychlor	<0.0427		0.0667	0.0427	ug/L		09/26/24 14:09	10/04/24 21:02	1
Toxaphene	<0.719		2.08	0.719	ug/L		09/26/24 14:09	10/04/24 21:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*67*		*10 - 124*	*09/26/24 14:09*	*10/04/24 21:02*	*1*
Tetrachloro-m-xylene	*53*		*10 - 124*	*09/26/24 14:09*	*10/04/24 21:02*	*1*

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<0.177		0.833	0.177	ug/L		10/01/24 12:23	10/08/24 16:56	1
PCB-1221	<0.177		0.833	0.177	ug/L		10/01/24 12:23	10/08/24 16:56	1
PCB-1232	<0.177		0.833	0.177	ug/L		10/01/24 12:23	10/08/24 16:56	1
PCB-1242	<0.177		0.833	0.177	ug/L		10/01/24 12:23	10/08/24 16:56	1
PCB-1248	<0.115		0.833	0.115	ug/L		10/01/24 12:23	10/08/24 16:56	1
PCB-1254	<0.115		0.833	0.115	ug/L		10/01/24 12:23	10/08/24 16:56	1
PCB-1260	<0.115		0.833	0.115	ug/L		10/01/24 12:23	10/08/24 16:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*99*		*10 - 124*	*10/01/24 12:23*	*10/08/24 16:56*	*1*
Tetrachloro-m-xylene	*84*		*10 - 124*	*10/01/24 12:23*	*10/08/24 16:56*	*1*

Method: SW846 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silvex (2,4,5-TP)	<0.0233		0.0530	0.0233	ug/L		09/28/24 17:22	10/01/24 06:05	1
2,4-D	<0.265		0.637	0.265	ug/L		09/28/24 17:22	10/01/24 06:05	1
2,4,5-T	<0.0690		0.159	0.0690	ug/L		09/28/24 17:22	10/01/24 06:05	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100	*+	0.00200	0.00100	mg/L		09/27/24 09:00	10/03/24 19:48	1
Arsenic	<0.000530		0.00200	0.000530	mg/L		09/27/24 09:00	10/03/24 19:48	1
Barium	**0.492**		0.00200	0.000660	mg/L		09/27/24 09:00	10/03/24 19:48	1
Beryllium	<0.000330		0.00100	0.000330	mg/L		09/27/24 09:00	10/03/24 19:48	1
Cadmium	**0.000436**		0.000200	0.000100	mg/L		09/27/24 09:00	10/03/24 19:48	1
Chromium	<0.00120		0.00500	0.00120	mg/L		09/27/24 09:00	10/03/24 19:48	1
Cobalt	<0.000170		0.000500	0.000170	mg/L		09/27/24 09:00	10/03/24 19:48	1
Copper	<0.00180		0.00500	0.00180	mg/L		09/27/24 09:00	10/03/24 19:48	1
Lead	<0.000260		0.000500	0.000260	mg/L		09/27/24 09:00	10/03/24 19:48	1

Client: Foth Infrastructure & Environment, LLC
Project/Site: Carroll County Landfill Groundwater

Job ID: 310-291233-1
SDG: 24C002.00

Client Sample ID: MW-200_24_09
Date Collected: 09/24/24 11:06
Date Received: 09/25/24 15:05

Lab Sample ID: 310-291233-5
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	**0.00697**		0.00500	0.00210	mg/L		09/27/24 09:00	10/03/24 19:48	1
Selenium	<0.00140		0.00500	0.00140	mg/L		09/27/24 09:00	10/03/24 19:48	1
Silver	<0.000500	^1+	0.00100	0.000500	mg/L		09/27/24 09:00	10/03/24 19:48	1
Thallium	<0.000570		0.00100	0.000570	mg/L		09/27/24 09:00	10/03/24 19:48	1
Tin	<0.00230		0.00500	0.00230	mg/L		09/27/24 09:00	10/03/24 19:48	1
Vanadium	<0.00110		0.00500	0.00110	mg/L		09/27/24 09:00	10/03/24 19:48	1
Zinc	<0.00970		0.0200	0.00970	mg/L		09/27/24 09:00	10/03/24 19:48	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000110		0.000200	0.000110	mg/L		10/07/24 14:55	10/08/24 16:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total (SW846 9012B)	<0.00350		0.0100	0.00350	mg/L		09/26/24 10:32	09/27/24 20:22	1
Sulfide (SW846 9034)	<0.231		1.00	0.231	mg/L		09/29/24 18:20	09/30/24 02:32	1
Total Suspended Solids (USGS I-3765-85)	<1.39		1.88	1.39	mg/L			09/26/24 12:16	1

Client: Foth Infrastructure & Environment, LLC
Project/Site: Carroll County Landfill Groundwater

Job ID: 310-291233-1
SDG: 24C002.00

Client Sample ID: MW-205_24_09
Date Collected: 09/23/24 17:35
Date Received: 09/25/24 15:05

Lab Sample ID: 310-291233-6
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<3.10		10.0	3.10	ug/L			09/26/24 21:29	1
Acrylonitrile	<2.20		5.00	2.20	ug/L			09/26/24 21:29	1
Benzene	<0.220		0.500	0.220	ug/L			09/26/24 21:29	1
Bromochloromethane	<0.540		5.00	0.540	ug/L			09/26/24 21:29	1
Bromodichloromethane	<0.390		1.00	0.390	ug/L			09/26/24 21:29	1
Bromoform	<0.780		5.00	0.780	ug/L			09/26/24 21:29	1
Bromomethane	<1.10		4.00	1.10	ug/L			09/26/24 21:29	1
2-Butanone (MEK)	<2.10		10.0	2.10	ug/L			09/26/24 21:29	1
Carbon disulfide	<0.450		1.00	0.450	ug/L			09/26/24 21:29	1
Carbon tetrachloride	<0.650		2.00	0.650	ug/L			09/26/24 21:29	1
Chlorobenzene	<0.400		1.00	0.400	ug/L			09/26/24 21:29	1
Chlorodibromomethane	<0.750		5.00	0.750	ug/L			09/26/24 21:29	1
Chloroethane	<0.790		4.00	0.790	ug/L			09/26/24 21:29	1
Chloroform	<1.30		3.00	1.30	ug/L			09/26/24 21:29	1
Chloromethane	<0.610		3.00	0.610	ug/L			09/26/24 21:29	1
cis-1,2-Dichloroethene	<0.210		1.00	0.210	ug/L			09/26/24 21:29	1
cis-1,3-Dichloropropene	<0.250		5.00	0.250	ug/L			09/26/24 21:29	1
1,2-Dibromo-3-Chloropropane	<1.20		5.00	1.20	ug/L			09/26/24 21:29	1
1,2-Dibromoethane (EDB)	<0.340		1.00	0.340	ug/L			09/26/24 21:29	1
Dibromomethane	<0.330		1.00	0.330	ug/L			09/26/24 21:29	1
1,2-Dichlorobenzene	<0.370		1.00	0.370	ug/L			09/26/24 21:29	1
1,4-Dichlorobenzene	<0.230		1.00	0.230	ug/L			09/26/24 21:29	1
1,1-Dichloroethane	<0.220		1.00	0.220	ug/L			09/26/24 21:29	1
1,2-Dichloroethane	<0.390		1.00	0.390	ug/L			09/26/24 21:29	1
1,1-Dichloroethene	<0.560		2.00	0.560	ug/L			09/26/24 21:29	1
1,2-Dichloropropane	<0.270		1.00	0.270	ug/L			09/26/24 21:29	1
Ethylbenzene	<0.310		1.00	0.310	ug/L			09/26/24 21:29	1
2-Hexanone	<2.00		10.0	2.00	ug/L			09/26/24 21:29	1
Iodomethane	<7.00		10.0	7.00	ug/L			09/26/24 21:29	1
Methylene Chloride	<1.70		5.00	1.70	ug/L			09/26/24 21:29	1
4-Methyl-2-pentanone (MIBK)	<2.10		10.0	2.10	ug/L			09/26/24 21:29	1
Styrene	<0.370		1.00	0.370	ug/L			09/26/24 21:29	1
1,1,1,2-Tetrachloroethane	<0.380		1.00	0.380	ug/L			09/26/24 21:29	1
1,1,2,2-Tetrachloroethane	<0.470		1.00	0.470	ug/L			09/26/24 21:29	1
Tetrachloroethene	<0.480		1.00	0.480	ug/L			09/26/24 21:29	1
Toluene	<0.430		1.00	0.430	ug/L			09/26/24 21:29	1
trans-1,4-Dichloro-2-butene	<1.10		10.0	1.10	ug/L			09/26/24 21:29	1
trans-1,2-Dichloroethene	<0.270		1.00	0.270	ug/L			09/26/24 21:29	1
trans-1,3-Dichloropropene	<0.560		5.00	0.560	ug/L			09/26/24 21:29	1
1,1,1-Trichloroethane	<0.190		1.00	0.190	ug/L			09/26/24 21:29	1
1,1,2-Trichloroethane	<0.450		1.00	0.450	ug/L			09/26/24 21:29	1
Trichloroethene	<0.430		1.00	0.430	ug/L			09/26/24 21:29	1
Trichlorofluoromethane	<0.380		4.00	0.380	ug/L			09/26/24 21:29	1
1,2,3-Trichloropropane	<0.590		1.00	0.590	ug/L			09/26/24 21:29	1
Vinyl acetate	<2.50		10.0	2.50	ug/L			09/26/24 21:29	1
Vinyl chloride	<0.180		1.00	0.180	ug/L			09/26/24 21:29	1
Xylenes, Total	<0.400		3.00	0.400	ug/L			09/26/24 21:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*80 - 120*		*09/26/24 21:29*	*1*

Client: Foth Infrastructure & Environment, LLC
Project/Site: Carroll County Landfill Groundwater

Job ID: 310-291233-1
SDG: 24C002.00

Client Sample ID: MW-205_24_09

Lab Sample ID: 310-291233-6

Date Collected: 09/23/24 17:35

Matrix: Water

Date Received: 09/25/24 15:05

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*107*		*73 - 130*		*09/26/24 21:29*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*09/26/24 21:29*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100	*+	0.00200	0.00100	mg/L		09/27/24 09:00	10/03/24 19:50	1
Arsenic	**0.00117**	**J**	0.00200	0.000530	mg/L		09/27/24 09:00	10/03/24 19:50	1
Barium	**0.0223**		0.00200	0.000660	mg/L		09/27/24 09:00	10/03/24 19:50	1
Beryllium	<0.000330		0.00100	0.000330	mg/L		09/27/24 09:00	10/03/24 19:50	1
Cadmium	<0.000100		0.000200	0.000100	mg/L		09/27/24 09:00	10/03/24 19:50	1
Chromium	<0.00120		0.00500	0.00120	mg/L		09/27/24 09:00	10/03/24 19:50	1
Cobalt	**0.00582**		0.000500	0.000170	mg/L		09/27/24 09:00	10/03/24 19:50	1
Copper	<0.00180		0.00500	0.00180	mg/L		09/27/24 09:00	10/03/24 19:50	1
Lead	**0.000363**	**J**	0.000500	0.000260	mg/L		09/27/24 09:00	10/03/24 19:50	1
Nickel	**0.00871**		0.00500	0.00210	mg/L		09/27/24 09:00	10/03/24 19:50	1
Selenium	<0.00140		0.00500	0.00140	mg/L		09/27/24 09:00	10/03/24 19:50	1
Silver	<0.000500	^1+	0.00100	0.000500	mg/L		09/27/24 09:00	10/03/24 19:50	1
Thallium	<0.000570		0.00100	0.000570	mg/L		09/27/24 09:00	10/03/24 19:50	1
Vanadium	<0.00110		0.00500	0.00110	mg/L		09/27/24 09:00	10/03/24 19:50	1
Zinc	<0.00970		0.0200	0.00970	mg/L		09/27/24 09:00	10/03/24 19:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	**4.13**		1.88	1.39	mg/L			09/26/24 11:31	1

Client: Foth Infrastructure & Environment, LLC
Project/Site: Carroll County Landfill Groundwater

Job ID: 310-291233-1
SDG: 24C002.00

Client Sample ID: MW-206_24_09
Date Collected: 09/23/24 16:50
Date Received: 09/25/24 15:05

Lab Sample ID: 310-291233-7
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	<3.10		10.0	3.10	ug/L			09/26/24 21:51	1
Acrylonitrile	<2.20		5.00	2.20	ug/L			09/26/24 21:51	1
Benzene	<0.220		0.500	0.220	ug/L			09/26/24 21:51	1
Bromochloromethane	<0.540		5.00	0.540	ug/L			09/26/24 21:51	1
Bromodichloromethane	<0.390		1.00	0.390	ug/L			09/26/24 21:51	1
Bromoform	<0.780		5.00	0.780	ug/L			09/26/24 21:51	1
Bromomethane	<1.10		4.00	1.10	ug/L			09/26/24 21:51	1
2-Butanone (MEK)	<2.10		10.0	2.10	ug/L			09/26/24 21:51	1
Carbon disulfide	<0.450		1.00	0.450	ug/L			09/26/24 21:51	1
Carbon tetrachloride	<0.650		2.00	0.650	ug/L			09/26/24 21:51	1
Chlorobenzene	<0.400		1.00	0.400	ug/L			09/26/24 21:51	1
Chlorodibromomethane	<0.750		5.00	0.750	ug/L			09/26/24 21:51	1
Chloroethane	<0.790		4.00	0.790	ug/L			09/26/24 21:51	1
Chloroform	<1.30		3.00	1.30	ug/L			09/26/24 21:51	1
Chloromethane	<0.610		3.00	0.610	ug/L			09/26/24 21:51	1
cis-1,2-Dichloroethene	<0.210		1.00	0.210	ug/L			09/26/24 21:51	1
cis-1,3-Dichloropropene	<0.250		5.00	0.250	ug/L			09/26/24 21:51	1
1,2-Dibromo-3-Chloropropane	<1.20		5.00	1.20	ug/L			09/26/24 21:51	1
1,2-Dibromoethane (EDB)	<0.340		1.00	0.340	ug/L			09/26/24 21:51	1
Dibromomethane	<0.330		1.00	0.330	ug/L			09/26/24 21:51	1
1,2-Dichlorobenzene	<0.370		1.00	0.370	ug/L			09/26/24 21:51	1
1,4-Dichlorobenzene	<0.230		1.00	0.230	ug/L			09/26/24 21:51	1
1,1-Dichloroethane	<0.220		1.00	0.220	ug/L			09/26/24 21:51	1
1,2-Dichloroethane	<0.390		1.00	0.390	ug/L			09/26/24 21:51	1
1,1-Dichloroethene	<0.560		2.00	0.560	ug/L			09/26/24 21:51	1
1,2-Dichloropropane	<0.270		1.00	0.270	ug/L			09/26/24 21:51	1
Ethylbenzene	<0.310		1.00	0.310	ug/L			09/26/24 21:51	1
2-Hexanone	<2.00		10.0	2.00	ug/L			09/26/24 21:51	1
Iodomethane	<7.00		10.0	7.00	ug/L			09/26/24 21:51	1
Methylene Chloride	<1.70		5.00	1.70	ug/L			09/26/24 21:51	1
4-Methyl-2-pentanone (MIBK)	<2.10		10.0	2.10	ug/L			09/26/24 21:51	1
Styrene	<0.370		1.00	0.370	ug/L			09/26/24 21:51	1
1,1,1,2-Tetrachloroethane	<0.380		1.00	0.380	ug/L			09/26/24 21:51	1
1,1,2,2-Tetrachloroethane	<0.470		1.00	0.470	ug/L			09/26/24 21:51	1
Tetrachloroethene	<0.480		1.00	0.480	ug/L			09/26/24 21:51	1
Toluene	<0.430		1.00	0.430	ug/L			09/26/24 21:51	1
trans-1,4-Dichloro-2-butene	<1.10		10.0	1.10	ug/L			09/26/24 21:51	1
trans-1,2-Dichloroethene	<0.270		1.00	0.270	ug/L			09/26/24 21:51	1
trans-1,3-Dichloropropene	<0.560		5.00	0.560	ug/L			09/26/24 21:51	1
1,1,1-Trichloroethane	<0.190		1.00	0.190	ug/L			09/26/24 21:51	1
1,1,2-Trichloroethane	<0.450		1.00	0.450	ug/L			09/26/24 21:51	1
Trichloroethene	<0.430		1.00	0.430	ug/L			09/26/24 21:51	1
Trichlorofluoromethane	<0.380		4.00	0.380	ug/L			09/26/24 21:51	1
1,2,3-Trichloropropane	<0.590		1.00	0.590	ug/L			09/26/24 21:51	1
Vinyl acetate	<2.50		10.0	2.50	ug/L			09/26/24 21:51	1
Vinyl chloride	<0.180		1.00	0.180	ug/L			09/26/24 21:51	1
Xylenes, Total	<0.400		3.00	0.400	ug/L			09/26/24 21:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*80 - 120*		*09/26/24 21:51*	*1*

Client: Foth Infrastructure & Environment, LLC
Project/Site: Carroll County Landfill Groundwater

Job ID: 310-291233-1
SDG: 24C002.00

Client Sample ID: MW-206_24_09
Date Collected: 09/23/24 16:50
Date Received: 09/25/24 15:05

Lab Sample ID: 310-291233-7
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*98*		*73 - 130*		*09/26/24 21:51*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*09/26/24 21:51*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100	*+	0.00200	0.00100	mg/L		09/27/24 09:00	10/03/24 19:54	1
Arsenic	**0.00326**		0.00200	0.000530	mg/L		09/27/24 09:00	10/03/24 19:54	1
Barium	**0.0216**		0.00200	0.000660	mg/L		09/27/24 09:00	10/03/24 19:54	1
Beryllium	<0.000330		0.00100	0.000330	mg/L		09/27/24 09:00	10/03/24 19:54	1
Cadmium	**0.000122**	**J**	0.000200	0.000100	mg/L		09/27/24 09:00	10/03/24 19:54	1
Chromium	<0.00120		0.00500	0.00120	mg/L		09/27/24 09:00	10/03/24 19:54	1
Cobalt	**0.00412**		0.000500	0.000170	mg/L		09/27/24 09:00	10/03/24 19:54	1
Copper	<0.00180		0.00500	0.00180	mg/L		09/27/24 09:00	10/03/24 19:54	1
Lead	**0.00361**		0.000500	0.000260	mg/L		09/27/24 09:00	10/03/24 19:54	1
Nickel	**0.00812**		0.00500	0.00210	mg/L		09/27/24 09:00	10/03/24 19:54	1
Selenium	<0.00140		0.00500	0.00140	mg/L		09/27/24 09:00	10/03/24 19:54	1
Silver	<0.000500	^1+	0.00100	0.000500	mg/L		09/27/24 09:00	10/03/24 19:54	1
Thallium	<0.000570		0.00100	0.000570	mg/L		09/27/24 09:00	10/03/24 19:54	1
Vanadium	<0.00110		0.00500	0.00110	mg/L		09/27/24 09:00	10/03/24 19:54	1
Zinc	**0.0140**	**J**	0.0200	0.00970	mg/L		09/27/24 09:00	10/03/24 19:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids (USGS I-3765-85)	**28.6**		1.88	1.39	mg/L			09/26/24 11:31	1

Client: Foth Infrastructure & Environment, LLC
Project/Site: Carroll County Landfill Groundwater

Job ID: 310-291233-1
SDG: 24C002.00

Client Sample ID: FB-1_24_09
Date Collected: 09/24/24 08:50
Date Received: 09/25/24 15:05

Lab Sample ID: 310-291233-8
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.380		1.00	0.380	ug/L			09/27/24 03:20	1
1,1,1-Trichloroethane	<0.190		1.00	0.190	ug/L			09/27/24 03:20	1
1,1,2,2-Tetrachloroethane	<0.470		1.00	0.470	ug/L			09/27/24 03:20	1
1,1,2-Trichloroethane	<0.450		1.00	0.450	ug/L			09/27/24 03:20	1
1,1-Dichloroethane	<0.220		1.00	0.220	ug/L			09/27/24 03:20	1
1,1-Dichloroethene	<0.560		2.00	0.560	ug/L			09/27/24 03:20	1
1,1-Dichloropropene	<0.430		1.00	0.430	ug/L			09/27/24 03:20	1
1,2,3-Trichloropropane	<0.590		1.00	0.590	ug/L			09/27/24 03:20	1
1,2,4-Trichlorobenzene	<0.750		5.00	0.750	ug/L			09/27/24 03:20	1
1,2-Dibromo-3-Chloropropane	<1.20		5.00	1.20	ug/L			09/27/24 03:20	1
1,2-Dibromoethane (EDB)	<0.340		1.00	0.340	ug/L			09/27/24 03:20	1
1,2-Dichlorobenzene	<0.370		1.00	0.370	ug/L			09/27/24 03:20	1
1,2-Dichloroethane	<0.390		1.00	0.390	ug/L			09/27/24 03:20	1
1,2-Dichloropropane	<0.270		1.00	0.270	ug/L			09/27/24 03:20	1
1,3-Dichlorobenzene	<0.300		1.00	0.300	ug/L			09/27/24 03:20	1
1,3-Dichloropropane	<0.400		1.00	0.400	ug/L			09/27/24 03:20	1
1,4-Dichlorobenzene	<0.230		1.00	0.230	ug/L			09/27/24 03:20	1
2,2-Dichloropropane	<0.690		4.00	0.690	ug/L			09/27/24 03:20	1
2-Butanone (MEK)	<2.10		10.0	2.10	ug/L			09/27/24 03:20	1
2-Hexanone	<2.00		10.0	2.00	ug/L			09/27/24 03:20	1
4-Methyl-2-pentanone (MIBK)	<2.10		10.0	2.10	ug/L			09/27/24 03:20	1
Acetone	<3.10		10.0	3.10	ug/L			09/27/24 03:20	1
Acrolein	<3.60		10.0	3.60	ug/L			09/27/24 03:20	1
Acrylonitrile	<2.20		5.00	2.20	ug/L			09/27/24 03:20	1
Allyl chloride	<0.700		2.00	0.700	ug/L			09/27/24 03:20	1
Benzene	<0.220		0.500	0.220	ug/L			09/27/24 03:20	1
Bromochloromethane	<0.540		5.00	0.540	ug/L			09/27/24 03:20	1
Bromodichloromethane	<0.390		1.00	0.390	ug/L			09/27/24 03:20	1
Bromoform	<0.780		5.00	0.780	ug/L			09/27/24 03:20	1
Bromomethane	<1.10		4.00	1.10	ug/L			09/27/24 03:20	1
Carbon disulfide	<0.450		1.00	0.450	ug/L			09/27/24 03:20	1
Carbon tetrachloride	<0.650		2.00	0.650	ug/L			09/27/24 03:20	1
Chlorobenzene	<0.400		1.00	0.400	ug/L			09/27/24 03:20	1
Chlorodibromomethane	<0.750		5.00	0.750	ug/L			09/27/24 03:20	1
Chloroethane	<0.790		4.00	0.790	ug/L			09/27/24 03:20	1
Chloroform	<1.30		3.00	1.30	ug/L			09/27/24 03:20	1
Chloromethane	<0.610		3.00	0.610	ug/L			09/27/24 03:20	1
Chloroprene	<0.230		1.00	0.230	ug/L			09/27/24 03:20	1
cis-1,2-Dichloroethene	<0.210		1.00	0.210	ug/L			09/27/24 03:20	1
cis-1,3-Dichloropropene	<0.250		5.00	0.250	ug/L			09/27/24 03:20	1
Dibromomethane	<0.330		1.00	0.330	ug/L			09/27/24 03:20	1
Dichlorodifluoromethane	<0.250		3.00	0.250	ug/L			09/27/24 03:20	1
Ethyl methacrylate	<0.680		2.00	0.680	ug/L			09/27/24 03:20	1
Ethylbenzene	<0.310		1.00	0.310	ug/L			09/27/24 03:20	1
Iodomethane	<7.00		10.0	7.00	ug/L			09/27/24 03:20	1
m,p-Xylene	<0.380		2.00	0.380	ug/L			09/27/24 03:20	1
Methacrylonitrile	<3.30		10.0	3.30	ug/L			09/27/24 03:20	1
Methyl methacrylate	<0.760		2.00	0.760	ug/L			09/27/24 03:20	1
Methylene Chloride	<1.70		5.00	1.70	ug/L			09/27/24 03:20	1

Client Sample ID: FB-1_24_09
Date Collected: 09/24/24 08:50
Date Received: 09/25/24 15:05

Lab Sample ID: 310-291233-8
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	<3.00		5.00	3.00	ug/L			09/27/24 03:20	1
o-Xylene	<0.400		1.00	0.400	ug/L			09/27/24 03:20	1
Propionitrile	<3.40		10.0	3.40	ug/L			09/27/24 03:20	1
Styrene	<0.370		1.00	0.370	ug/L			09/27/24 03:20	1
Tetrachloroethene	<0.480		1.00	0.480	ug/L			09/27/24 03:20	1
Toluene	<0.430		1.00	0.430	ug/L			09/27/24 03:20	1
trans-1,2-Dichloroethene	<0.270		1.00	0.270	ug/L			09/27/24 03:20	1
trans-1,3-Dichloropropene	<0.560		5.00	0.560	ug/L			09/27/24 03:20	1
trans-1,4-Dichloro-2-butene	<1.10		10.0	1.10	ug/L			09/27/24 03:20	1
Trichloroethene	<0.430		1.00	0.430	ug/L			09/27/24 03:20	1
Trichlorofluoromethane	<0.380		4.00	0.380	ug/L			09/27/24 03:20	1
Vinyl acetate	<2.50		10.0	2.50	ug/L			09/27/24 03:20	1
Vinyl chloride	<0.180		1.00	0.180	ug/L			09/27/24 03:20	1
Xylenes, Total	<0.400		3.00	0.400	ug/L			09/27/24 03:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*107*		*73 - 130*		*09/27/24 03:20*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*09/27/24 03:20*	*1*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*09/27/24 03:20*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4,5-Tetrachlorobenzene	<0.563		10.4	0.563	ug/L		09/26/24 10:27	10/04/24 16:23	1
1,3,5-Trinitrobenzene	<2.40		10.4	2.40	ug/L		09/26/24 10:27	10/08/24 13:01	1
1,3-Dinitrobenzene	<3.33		10.4	3.33	ug/L		09/26/24 10:27	10/04/24 16:23	1
1,4-Naphthoquinone	<3.75		10.4	3.75	ug/L		09/26/24 10:27	10/08/24 13:01	1
1,4-phenylenediamine	<1.98		10.4	1.98	ug/L		09/26/24 10:27	10/08/24 13:01	1
1-Naphthylamine	<2.60		10.4	2.60	ug/L		09/26/24 10:27	10/08/24 13:01	1
2,3,4,6-Tetrachlorophenol	<5.52		10.4	5.52	ug/L		09/26/24 10:27	10/04/24 16:23	1
2,4,5-Trichlorophenol	<5.52		10.4	5.52	ug/L		09/26/24 10:27	10/04/24 16:23	1
2,4,6-Trichlorophenol	<5.21		10.4	5.21	ug/L		09/26/24 10:27	10/04/24 16:23	1
2,4-Dichlorophenol	<0.885		10.4	0.885	ug/L		09/26/24 10:27	10/04/24 16:23	1
2,4-Dimethylphenol	<0.604		10.4	0.604	ug/L		09/26/24 10:27	10/04/24 16:23	1
2,4-Dinitrophenol	<13.5	*1	20.8	13.5	ug/L		09/26/24 10:27	10/04/24 16:23	1
2,4-Dinitrotoluene	<6.67		10.4	6.67	ug/L		09/26/24 10:27	10/04/24 16:23	1
2,6-Dichlorophenol	<0.719		10.4	0.719	ug/L		09/26/24 10:27	10/04/24 16:23	1
2,6-Dinitrotoluene	<0.542		10.4	0.542	ug/L		09/26/24 10:27	10/04/24 16:23	1
2-Acetylaminofluorene	<2.81		10.4	2.81	ug/L		09/26/24 10:27	10/08/24 13:01	1
2-Chloronaphthalene	<0.667		10.4	0.667	ug/L		09/26/24 10:27	10/04/24 16:23	1
2-Chlorophenol	<0.563		10.4	0.563	ug/L		09/26/24 10:27	10/04/24 16:23	1
2-Methylnaphthalene	<0.615		10.4	0.615	ug/L		09/26/24 10:27	10/04/24 16:23	1
2-Methylphenol	<0.677		10.4	0.677	ug/L		09/26/24 10:27	10/04/24 16:23	1
2-Naphthylamine	<2.19		10.4	2.19	ug/L		09/26/24 10:27	10/08/24 13:01	1
2-Nitroaniline	<6.15		10.4	6.15	ug/L		09/26/24 10:27	10/04/24 16:23	1
2-Nitrophenol	<7.08		10.4	7.08	ug/L		09/26/24 10:27	10/04/24 16:23	1
3,3'-Dichlorobenzidine	<1.46		10.4	1.46	ug/L		09/26/24 10:27	10/04/24 16:23	1
3,3'-Dimethylbenzidine	<1.56		10.4	1.56	ug/L		09/26/24 10:27	10/08/24 13:01	1
3-Methylcholanthrene	<0.333		10.4	0.333	ug/L		09/26/24 10:27	10/08/24 13:01	1
3-Nitroaniline	<2.81		10.4	2.81	ug/L		09/26/24 10:27	10/04/24 16:23	1
4,6-Dinitro-2-methylphenol	<7.19	*1	10.4	7.19	ug/L		09/26/24 10:27	10/04/24 16:23	1

Client: Foth Infrastructure & Environment, LLC
Project/Site: Carroll County Landfill Groundwater

Job ID: 310-291233-1
SDG: 24C002.00

Client Sample ID: FB-1_24_09
Date Collected: 09/24/24 08:50
Date Received: 09/25/24 15:05

Lab Sample ID: 310-291233-8
Matrix: Water

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Aminobiphenyl	<2.29		10.4	2.29	ug/L		09/26/24 10:27	10/08/24 13:01	1
4-Bromophenyl phenyl ether	<0.729		10.4	0.729	ug/L		09/26/24 10:27	10/04/24 16:23	1
4-Chloro-3-methylphenol	<0.875		10.4	0.875	ug/L		09/26/24 10:27	10/04/24 16:23	1
4-Chloroaniline	<0.646		10.4	0.646	ug/L		09/26/24 10:27	10/04/24 16:23	1
4-Chlorophenyl phenyl ether	<0.719		10.4	0.719	ug/L		09/26/24 10:27	10/04/24 16:23	1
Methylphenol, 3 & 4	<0.729		10.4	0.729	ug/L		09/26/24 10:27	10/04/24 16:23	1
4-Nitroaniline	<1.35		10.4	1.35	ug/L		09/26/24 10:27	10/04/24 16:23	1
4-Nitrophenol	<7.92		10.4	7.92	ug/L		09/26/24 10:27	10/04/24 16:23	1
5-Nitro-o-toluidine	<2.92		10.4	2.92	ug/L		09/26/24 10:27	10/08/24 13:01	1
7,12-Dimethylbenz(a)anthracene	<1.98		10.4	1.98	ug/L		09/26/24 10:27	10/08/24 13:01	1
Acenaphthene	<0.667		10.4	0.667	ug/L		09/26/24 10:27	10/04/24 16:23	1
Acenaphthylene	<0.750		10.4	0.750	ug/L		09/26/24 10:27	10/04/24 16:23	1
Acetophenone	<0.719		10.4	0.719	ug/L		09/26/24 10:27	10/04/24 16:23	1
Anthracene	<0.906		10.4	0.906	ug/L		09/26/24 10:27	10/04/24 16:23	1
Benzo[a]anthracene	<0.885		10.4	0.885	ug/L		09/26/24 10:27	10/04/24 16:23	1
Benzo[a]pyrene	<8.44		10.4	8.44	ug/L		09/26/24 10:27	10/04/24 16:23	1
Benzo[b]fluoranthene	<5.10		10.4	5.10	ug/L		09/26/24 10:27	10/04/24 16:23	1
Benzo[g,h,i]perylene	<6.56		10.4	6.56	ug/L		09/26/24 10:27	10/04/24 16:23	1
Benzo[k]fluoranthene	<2.29		10.4	2.29	ug/L		09/26/24 10:27	10/04/24 16:23	1
Benzyl alcohol	<1.35		10.4	1.35	ug/L		09/26/24 10:27	10/04/24 16:23	1
Bis(2-chloroethoxy)methane	<0.792		10.4	0.792	ug/L		09/26/24 10:27	10/04/24 16:23	1
Bis(2-chloroethyl)ether	<0.854		10.4	0.854	ug/L		09/26/24 10:27	10/04/24 16:23	1
2,2'-oxybis[1-chloropropane]	<0.563		10.4	0.563	ug/L		09/26/24 10:27	10/04/24 16:23	1
Bis(2-ethylhexyl) phthalate	<5.73		10.4	5.73	ug/L		09/26/24 10:27	10/04/24 16:23	1
Butyl benzyl phthalate	<5.63		10.4	5.63	ug/L		09/26/24 10:27	10/04/24 16:23	1
Chlorobenzilate	<3.75		10.4	3.75	ug/L		09/26/24 10:27	10/08/24 13:01	1
Chrysene	<0.906		10.4	0.906	ug/L		09/26/24 10:27	10/04/24 16:23	1
Diallate	<4.17		10.4	4.17	ug/L		09/26/24 10:27	10/08/24 13:01	1
Dibenzo(a,h)anthracene	<4.06		10.4	4.06	ug/L		09/26/24 10:27	10/04/24 16:23	1
Dibenzofuran	<0.771		10.4	0.771	ug/L		09/26/24 10:27	10/04/24 16:23	1
Diethyl phthalate	<1.77		10.4	1.77	ug/L		09/26/24 10:27	10/04/24 16:23	1
Dimethoate	<3.75		10.4	3.75	ug/L		09/26/24 10:27	10/08/24 13:01	1
Dimethyl phthalate	<1.04		10.4	1.04	ug/L		09/26/24 10:27	10/04/24 16:23	1
Di-n-butyl phthalate	<5.83		10.4	5.83	ug/L		09/26/24 10:27	10/04/24 16:23	1
Di-n-octyl phthalate	**8.05**	**J**	20.8	7.29	ug/L		09/26/24 10:27	10/04/24 16:23	1
Dinoseb	<2.50		10.4	2.50	ug/L		09/26/24 10:27	10/08/24 13:01	1
Diphenylamine	<6.25		10.4	6.25	ug/L		09/26/24 10:27	10/04/24 16:23	1
Disulfoton	<2.50		10.4	2.50	ug/L		09/26/24 10:27	10/08/24 13:01	1
Ethyl methanesulfonate	<3.75		10.4	3.75	ug/L		09/26/24 10:27	10/08/24 13:01	1
Ethyl Parathion	<2.29		10.4	2.29	ug/L		09/26/24 10:27	10/08/24 13:01	1
Famphur	<3.96		10.4	3.96	ug/L		09/26/24 10:27	10/08/24 13:01	1
Fluoranthene	<1.77		10.4	1.77	ug/L		09/26/24 10:27	10/04/24 16:23	1
Fluorene	<0.823		10.4	0.823	ug/L		09/26/24 10:27	10/04/24 16:23	1
Hexachlorobenzene	<0.729		10.4	0.729	ug/L		09/26/24 10:27	10/04/24 16:23	1
Hexachlorobutadiene	<0.896		10.4	0.896	ug/L		09/26/24 10:27	10/04/24 16:23	1
Hexachlorocyclopentadiene	<5.31		10.4	5.31	ug/L		09/26/24 10:27	10/04/24 16:23	1
Hexachloroethane	<1.01		10.4	1.01	ug/L		09/26/24 10:27	10/04/24 16:23	1
Hexachloropropene	<2.71		10.4	2.71	ug/L		09/26/24 10:27	10/08/24 13:01	1
Indeno[1,2,3-cd]pyrene	<4.38		10.4	4.38	ug/L		09/26/24 10:27	10/04/24 16:23	1

Client Sample ID: FB-1_24_09
Date Collected: 09/24/24 08:50
Date Received: 09/25/24 15:05

Lab Sample ID: 310-291233-8
Matrix: Water

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isodrin	<4.90		10.4	4.90	ug/L		09/26/24 10:27	10/08/24 13:01	1
Isophorone	<0.969		10.4	0.969	ug/L		09/26/24 10:27	10/04/24 16:23	1
Isosafrole	<2.40		10.4	2.40	ug/L		09/26/24 10:27	10/08/24 13:01	1
Kepone	<1.04		10.4	1.04	ug/L		09/26/24 10:27	10/08/24 13:01	1
Methapyrilene	<0.792		10.4	0.792	ug/L		09/26/24 10:27	10/08/24 13:01	1
Methyl methanesulfonate	<3.44		10.4	3.44	ug/L		09/26/24 10:27	10/08/24 13:01	1
Methyl parathion	<2.40		10.4	2.40	ug/L		09/26/24 10:27	10/08/24 13:01	1
Nitrobenzene	<0.833		10.4	0.833	ug/L		09/26/24 10:27	10/04/24 16:23	1
N-Nitrosodiethylamine	<3.54		10.4	3.54	ug/L		09/26/24 10:27	10/08/24 13:01	1
N-Nitrosodimethylamine	<0.750		10.4	0.750	ug/L		09/26/24 10:27	10/04/24 16:23	1
N-Nitrosodi-n-butylamine	<4.06		10.4	4.06	ug/L		09/26/24 10:27	10/08/24 13:01	1
N-Nitrosodi-n-propylamine	<0.958		10.4	0.958	ug/L		09/26/24 10:27	10/04/24 16:23	1
N-Nitrosodiphenylamine	<0.781		10.4	0.781	ug/L		09/26/24 10:27	10/04/24 16:23	1
N-Nitrosomethylethylamine	<5.10		10.4	5.10	ug/L		09/26/24 10:27	10/08/24 13:01	1
N-Nitrosopiperidine	<2.81		10.4	2.81	ug/L		09/26/24 10:27	10/08/24 13:01	1
N-Nitrosopyrrolidine	<3.75		10.4	3.75	ug/L		09/26/24 10:27	10/08/24 13:01	1
o,o',o''-Triethylphosphorothioate	<3.33		10.4	3.33	ug/L		09/26/24 10:27	10/08/24 13:01	1
o-Toluidine	<3.02		10.4	3.02	ug/L		09/26/24 10:27	10/08/24 13:01	1
p-Dimethylamino azobenzene	<2.29		10.4	2.29	ug/L		09/26/24 10:27	10/08/24 13:01	1
Pentachlorobenzene	<2.92		10.4	2.92	ug/L		09/26/24 10:27	10/08/24 13:01	1
Pentachloronitrobenzene	<6.04		10.4	6.04	ug/L		09/26/24 10:27	10/08/24 13:01	1
Pentachlorophenol	<10.0		10.4	10.0	ug/L		09/26/24 10:27	10/04/24 16:23	1
Phenacetin	<1.98		10.4	1.98	ug/L		09/26/24 10:27	10/08/24 13:01	1
Phenanthrene	<0.823		10.4	0.823	ug/L		09/26/24 10:27	10/04/24 16:23	1
Phenol	<1.15		10.4	1.15	ug/L		09/26/24 10:27	10/04/24 16:23	1
Phorate	<3.33		10.4	3.33	ug/L		09/26/24 10:27	10/08/24 13:01	1
Pronamide	<2.81		10.4	2.81	ug/L		09/26/24 10:27	10/08/24 13:01	1
Pyrene	<0.823		10.4	0.823	ug/L		09/26/24 10:27	10/04/24 16:23	1
Safrole	<2.92		10.4	2.92	ug/L		09/26/24 10:27	10/08/24 13:01	1
Thionazin	<3.65		10.4	3.65	ug/L		09/26/24 10:27	10/08/24 13:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol (Surr)	*50*		*25 - 110*	*09/26/24 10:27*	*10/04/24 16:23*	*1*
Phenol-d5 (Surr)	*43*		*21 - 110*	*09/26/24 10:27*	*10/04/24 16:23*	*1*
Nitrobenzene-d5 (Surr)	*63*		*45 - 129*	*09/26/24 10:27*	*10/04/24 16:23*	*1*
2-Fluorobiphenyl (Surr)	*57*		*39 - 118*	*09/26/24 10:27*	*10/04/24 16:23*	*1*
2,4,6-Tribromophenol (Surr)	*53*		*27 - 136*	*09/26/24 10:27*	*10/04/24 16:23*	*1*
Terphenyl-d14 (Surr)	*73*		*12 - 144*	*09/26/24 10:27*	*10/04/24 16:23*	*1*

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetonitrile	<2.60		10.0	2.60	mg/L			09/28/24 15:59	1
Isobutanol	<2.40		10.0	2.40	mg/L			09/28/24 15:59	1

Method: SW846 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	<0.0281		0.0667	0.0281	ug/L		09/26/24 14:09	10/04/24 19:53	1
4,4'-DDE	<0.0281		0.0667	0.0281	ug/L		09/26/24 14:09	10/04/24 19:53	1
4,4'-DDT	<0.0438		0.0667	0.0438	ug/L		09/26/24 14:09	10/04/24 19:53	1
Aldrin	<0.0333		0.0667	0.0333	ug/L		09/26/24 14:09	10/04/24 19:53	1

Client Sample ID: FB-1_24_09
Date Collected: 09/24/24 08:50
Date Received: 09/25/24 15:05

Lab Sample ID: 310-291233-8
Matrix: Water

Method: SW846 8081B - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	<0.0302		0.0667	0.0302	ug/L		09/26/24 14:09	10/04/24 19:53	1
beta-BHC	<0.0385		0.0667	0.0385	ug/L		09/26/24 14:09	10/04/24 19:53	1
Chlordane (technical)	<0.844		2.08	0.844	ug/L		09/26/24 14:09	10/04/24 19:53	1
delta-BHC	<0.0281		0.0667	0.0281	ug/L		09/26/24 14:09	10/04/24 19:53	1
Dieldrin	<0.0271		0.0667	0.0271	ug/L		09/26/24 14:09	10/04/24 19:53	1
Endosulfan I	<0.0344		0.0667	0.0344	ug/L		09/26/24 14:09	10/04/24 19:53	1
Endosulfan II	<0.0302		0.0667	0.0302	ug/L		09/26/24 14:09	10/04/24 19:53	1
Endosulfan sulfate	<0.0313		0.0667	0.0313	ug/L		09/26/24 14:09	10/04/24 19:53	1
Endrin	<0.0271		0.0667	0.0271	ug/L		09/26/24 14:09	10/04/24 19:53	1
Endrin aldehyde	<0.0302		0.0667	0.0302	ug/L		09/26/24 14:09	10/04/24 19:53	1
gamma-BHC (Lindane)	<0.0375		0.0667	0.0375	ug/L		09/26/24 14:09	10/04/24 19:53	1
Heptachlor	<0.0344		0.0667	0.0344	ug/L		09/26/24 14:09	10/04/24 19:53	1
Heptachlor epoxide	<0.0302		0.0667	0.0302	ug/L		09/26/24 14:09	10/04/24 19:53	1
Methoxychlor	<0.0427		0.0667	0.0427	ug/L		09/26/24 14:09	10/04/24 19:53	1
Toxaphene	<0.719		2.08	0.719	ug/L		09/26/24 14:09	10/04/24 19:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*73*		*10 - 124*	*09/26/24 14:09*	*10/04/24 19:53*	*1*
Tetrachloro-m-xylene	*89*		*10 - 124*	*09/26/24 14:09*	*10/04/24 19:53*	*1*

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<0.185		0.870	0.185	ug/L		10/01/24 12:23	10/08/24 17:43	1
PCB-1221	<0.185		0.870	0.185	ug/L		10/01/24 12:23	10/08/24 17:43	1
PCB-1232	<0.185		0.870	0.185	ug/L		10/01/24 12:23	10/08/24 17:43	1
PCB-1242	<0.185		0.870	0.185	ug/L		10/01/24 12:23	10/08/24 17:43	1
PCB-1248	<0.120		0.870	0.120	ug/L		10/01/24 12:23	10/08/24 17:43	1
PCB-1254	<0.120		0.870	0.120	ug/L		10/01/24 12:23	10/08/24 17:43	1
PCB-1260	<0.120		0.870	0.120	ug/L		10/01/24 12:23	10/08/24 17:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*92*		*10 - 124*	*10/01/24 12:23*	*10/08/24 17:43*	*1*
Tetrachloro-m-xylene	*87*		*10 - 124*	*10/01/24 12:23*	*10/08/24 17:43*	*1*

Method: SW846 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silvex (2,4,5-TP)	<0.0240		0.0545	0.0240	ug/L		09/28/24 17:22	10/01/24 06:33	1
2,4-D	<0.272		0.654	0.272	ug/L		09/28/24 17:22	10/01/24 06:33	1
2,4,5-T	<0.0708		0.163	0.0708	ug/L		09/28/24 17:22	10/01/24 06:33	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100	*+	0.00200	0.00100	mg/L		09/27/24 09:00	10/03/24 20:05	1
Arsenic	<0.000530		0.00200	0.000530	mg/L		09/27/24 09:00	10/03/24 20:05	1
Barium	<0.000660		0.00200	0.000660	mg/L		09/27/24 09:00	10/03/24 20:05	1
Beryllium	<0.000330		0.00100	0.000330	mg/L		09/27/24 09:00	10/03/24 20:05	1
Cadmium	<0.000100		0.000200	0.000100	mg/L		09/27/24 09:00	10/03/24 20:05	1
Chromium	<0.00120		0.00500	0.00120	mg/L		09/27/24 09:00	10/03/24 20:05	1
Cobalt	<0.000170		0.000500	0.000170	mg/L		09/27/24 09:00	10/03/24 20:05	1
Copper	<0.00180		0.00500	0.00180	mg/L		09/27/24 09:00	10/03/24 20:05	1
Lead	<0.000260		0.000500	0.000260	mg/L		09/27/24 09:00	10/03/24 20:05	1

Client: Foth Infrastructure & Environment, LLC
Project/Site: Carroll County Landfill Groundwater

Job ID: 310-291233-1
SDG: 24C002.00

Client Sample ID: FB-1_24_09
Date Collected: 09/24/24 08:50
Date Received: 09/25/24 15:05

Lab Sample ID: 310-291233-8
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	<0.00210		0.00500	0.00210	mg/L		09/27/24 09:00	10/03/24 20:05	1
Selenium	<0.00140		0.00500	0.00140	mg/L		09/27/24 09:00	10/03/24 20:05	1
Silver	<0.000500	^1+	0.00100	0.000500	mg/L		09/27/24 09:00	10/03/24 20:05	1
Thallium	<0.000570		0.00100	0.000570	mg/L		09/27/24 09:00	10/03/24 20:05	1
Tin	<0.00230		0.00500	0.00230	mg/L		09/27/24 09:00	10/03/24 20:05	1
Vanadium	<0.00110		0.00500	0.00110	mg/L		09/27/24 09:00	10/03/24 20:05	1
Zinc	<0.00970		0.0200	0.00970	mg/L		09/27/24 09:00	10/03/24 20:05	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000110		0.000200	0.000110	mg/L		10/07/24 14:55	10/08/24 16:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total (SW846 9012B)	<0.00350		0.0100	0.00350	mg/L		09/26/24 10:32	09/27/24 20:18	1
Sulfide (SW846 9034)	<0.231		1.00	0.231	mg/L		09/29/24 18:23	09/30/24 02:40	1
Total Suspended Solids (USGS I-3765-85)	<1.39		1.88	1.39	mg/L			09/26/24 12:16	1

Client: Foth Infrastructure & Environment, LLC
Project/Site: Carroll County Landfill Groundwater

Job ID: 310-291233-1
SDG: 24C002.00

Client Sample ID: FD-1_24_09
Date Collected: 09/24/24 00:00
Date Received: 09/25/24 15:05

Lab Sample ID: 310-291233-9
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.380		1.00	0.380	ug/L			09/27/24 03:42	1
1,1,1-Trichloroethane	<0.190		1.00	0.190	ug/L			09/27/24 03:42	1
1,1,2,2-Tetrachloroethane	<0.470		1.00	0.470	ug/L			09/27/24 03:42	1
1,1,2-Trichloroethane	<0.450		1.00	0.450	ug/L			09/27/24 03:42	1
1,1-Dichloroethane	<0.220		1.00	0.220	ug/L			09/27/24 03:42	1
1,1-Dichloroethene	<0.560		2.00	0.560	ug/L			09/27/24 03:42	1
1,1-Dichloropropene	<0.430		1.00	0.430	ug/L			09/27/24 03:42	1
1,2,3-Trichloropropane	<0.590		1.00	0.590	ug/L			09/27/24 03:42	1
1,2,4-Trichlorobenzene	<0.750		5.00	0.750	ug/L			09/27/24 03:42	1
1,2-Dibromo-3-Chloropropane	<1.20		5.00	1.20	ug/L			09/27/24 03:42	1
1,2-Dibromoethane (EDB)	<0.340		1.00	0.340	ug/L			09/27/24 03:42	1
1,2-Dichlorobenzene	<0.370		1.00	0.370	ug/L			09/27/24 03:42	1
1,2-Dichloroethane	<0.390		1.00	0.390	ug/L			09/27/24 03:42	1
1,2-Dichloropropane	<0.270		1.00	0.270	ug/L			09/27/24 03:42	1
1,3-Dichlorobenzene	<0.300		1.00	0.300	ug/L			09/27/24 03:42	1
1,3-Dichloropropane	<0.400		1.00	0.400	ug/L			09/27/24 03:42	1
1,4-Dichlorobenzene	<0.230		1.00	0.230	ug/L			09/27/24 03:42	1
2,2-Dichloropropane	<0.690		4.00	0.690	ug/L			09/27/24 03:42	1
2-Butanone (MEK)	<2.10		10.0	2.10	ug/L			09/27/24 03:42	1
2-Hexanone	<2.00		10.0	2.00	ug/L			09/27/24 03:42	1
4-Methyl-2-pentanone (MIBK)	<2.10		10.0	2.10	ug/L			09/27/24 03:42	1
Acetone	<3.10		10.0	3.10	ug/L			09/27/24 03:42	1
Acrolein	<3.60		10.0	3.60	ug/L			09/27/24 03:42	1
Acrylonitrile	<2.20		5.00	2.20	ug/L			09/27/24 03:42	1
Allyl chloride	<0.700		2.00	0.700	ug/L			09/27/24 03:42	1
Benzene	**1.13**		0.500	0.220	ug/L			09/27/24 03:42	1
Bromochloromethane	<0.540		5.00	0.540	ug/L			09/27/24 03:42	1
Bromodichloromethane	<0.390		1.00	0.390	ug/L			09/27/24 03:42	1
Bromoform	<0.780		5.00	0.780	ug/L			09/27/24 03:42	1
Bromomethane	<1.10		4.00	1.10	ug/L			09/27/24 03:42	1
Carbon disulfide	<0.450		1.00	0.450	ug/L			09/27/24 03:42	1
Carbon tetrachloride	<0.650		2.00	0.650	ug/L			09/27/24 03:42	1
Chlorobenzene	<0.400		1.00	0.400	ug/L			09/27/24 03:42	1
Chlorodibromomethane	<0.750		5.00	0.750	ug/L			09/27/24 03:42	1
Chloroethane	<0.790		4.00	0.790	ug/L			09/27/24 03:42	1
Chloroform	<1.30		3.00	1.30	ug/L			09/27/24 03:42	1
Chloromethane	<0.610		3.00	0.610	ug/L			09/27/24 03:42	1
Chloroprene	<0.230		1.00	0.230	ug/L			09/27/24 03:42	1
cis-1,2-Dichloroethene	**9.74**		1.00	0.210	ug/L			09/27/24 03:42	1
cis-1,3-Dichloropropene	<0.250		5.00	0.250	ug/L			09/27/24 03:42	1
Dibromomethane	<0.330		1.00	0.330	ug/L			09/27/24 03:42	1
Dichlorodifluoromethane	<0.250		3.00	0.250	ug/L			09/27/24 03:42	1
Ethyl methacrylate	<0.680		2.00	0.680	ug/L			09/27/24 03:42	1
Ethylbenzene	<0.310		1.00	0.310	ug/L			09/27/24 03:42	1
Iodomethane	<7.00		10.0	7.00	ug/L			09/27/24 03:42	1
m,p-Xylene	<0.380		2.00	0.380	ug/L			09/27/24 03:42	1
Methacrylonitrile	<3.30		10.0	3.30	ug/L			09/27/24 03:42	1
Methyl methacrylate	<0.760		2.00	0.760	ug/L			09/27/24 03:42	1
Methylene Chloride	<1.70		5.00	1.70	ug/L			09/27/24 03:42	1

Client Sample ID: FD-1_24_09
Date Collected: 09/24/24 00:00
Date Received: 09/25/24 15:05

Lab Sample ID: 310-291233-9
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	<3.00		5.00	3.00	ug/L			09/27/24 03:42	1
o-Xylene	<0.400		1.00	0.400	ug/L			09/27/24 03:42	1
Propionitrile	<3.40		10.0	3.40	ug/L			09/27/24 03:42	1
Styrene	<0.370		1.00	0.370	ug/L			09/27/24 03:42	1
Tetrachloroethene	<0.480		1.00	0.480	ug/L			09/27/24 03:42	1
Toluene	<0.430		1.00	0.430	ug/L			09/27/24 03:42	1
trans-1,2-Dichloroethene	<0.270		1.00	0.270	ug/L			09/27/24 03:42	1
trans-1,3-Dichloropropene	<0.560		5.00	0.560	ug/L			09/27/24 03:42	1
trans-1,4-Dichloro-2-butene	<1.10		10.0	1.10	ug/L			09/27/24 03:42	1
Trichloroethene	<0.430		1.00	0.430	ug/L			09/27/24 03:42	1
Trichlorofluoromethane	<0.380		4.00	0.380	ug/L			09/27/24 03:42	1
Vinyl acetate	<2.50		10.0	2.50	ug/L			09/27/24 03:42	1
Vinyl chloride	**0.626**	**J**	1.00	0.180	ug/L			09/27/24 03:42	1
Xylenes, Total	<0.400		3.00	0.400	ug/L			09/27/24 03:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*107*		*73 - 130*		*09/27/24 03:42*	*1*
Toluene-d8 (Surr)	*98*		*80 - 120*		*09/27/24 03:42*	*1*
4-Bromofluorobenzene (Surr)	*92*		*80 - 120*		*09/27/24 03:42*	*1*

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4,5-Tetrachlorobenzene	<0.563		10.4	0.563	ug/L		09/26/24 10:27	10/04/24 17:17	1
1,3,5-Trinitrobenzene	<2.40		10.4	2.40	ug/L		09/26/24 10:27	10/08/24 13:53	1
1,3-Dinitrobenzene	<3.33		10.4	3.33	ug/L		09/26/24 10:27	10/04/24 17:17	1
1,4-Naphthoquinone	<3.75		10.4	3.75	ug/L		09/26/24 10:27	10/08/24 13:53	1
1,4-phenylenediamine	<1.98		10.4	1.98	ug/L		09/26/24 10:27	10/08/24 13:53	1
1-Naphthylamine	<2.60		10.4	2.60	ug/L		09/26/24 10:27	10/08/24 13:53	1
2,3,4,6-Tetrachlorophenol	<5.52		10.4	5.52	ug/L		09/26/24 10:27	10/04/24 17:17	1
2,4,5-Trichlorophenol	<5.52		10.4	5.52	ug/L		09/26/24 10:27	10/04/24 17:17	1
2,4,6-Trichlorophenol	<5.21		10.4	5.21	ug/L		09/26/24 10:27	10/04/24 17:17	1
2,4-Dichlorophenol	<0.885		10.4	0.885	ug/L		09/26/24 10:27	10/04/24 17:17	1
2,4-Dimethylphenol	<0.604		10.4	0.604	ug/L		09/26/24 10:27	10/04/24 17:17	1
2,4-Dinitrophenol	<13.5	*1	20.8	13.5	ug/L		09/26/24 10:27	10/04/24 17:17	1
2,4-Dinitrotoluene	<6.67		10.4	6.67	ug/L		09/26/24 10:27	10/04/24 17:17	1
2,6-Dichlorophenol	<0.719		10.4	0.719	ug/L		09/26/24 10:27	10/04/24 17:17	1
2,6-Dinitrotoluene	<0.542		10.4	0.542	ug/L		09/26/24 10:27	10/04/24 17:17	1
2-Acetylaminofluorene	<2.81		10.4	2.81	ug/L		09/26/24 10:27	10/08/24 13:53	1
2-Chloronaphthalene	<0.667		10.4	0.667	ug/L		09/26/24 10:27	10/04/24 17:17	1
2-Chlorophenol	<0.563		10.4	0.563	ug/L		09/26/24 10:27	10/04/24 17:17	1
2-Methylnaphthalene	<0.615		10.4	0.615	ug/L		09/26/24 10:27	10/04/24 17:17	1
2-Methylphenol	<0.677		10.4	0.677	ug/L		09/26/24 10:27	10/04/24 17:17	1
2-Naphthylamine	<2.19		10.4	2.19	ug/L		09/26/24 10:27	10/08/24 13:53	1
2-Nitroaniline	<6.15		10.4	6.15	ug/L		09/26/24 10:27	10/04/24 17:17	1
2-Nitrophenol	<7.08		10.4	7.08	ug/L		09/26/24 10:27	10/04/24 17:17	1
3,3'-Dichlorobenzidine	<1.46		10.4	1.46	ug/L		09/26/24 10:27	10/04/24 17:17	1
3,3'-Dimethylbenzidine	<1.56		10.4	1.56	ug/L		09/26/24 10:27	10/08/24 13:53	1
3-Methylcholanthrene	<0.333		10.4	0.333	ug/L		09/26/24 10:27	10/08/24 13:53	1
3-Nitroaniline	<2.81		10.4	2.81	ug/L		09/26/24 10:27	10/04/24 17:17	1
4,6-Dinitro-2-methylphenol	<7.19	*1	10.4	7.19	ug/L		09/26/24 10:27	10/04/24 17:17	1

Client: Foth Infrastructure & Environment, LLC
Project/Site: Carroll County Landfill Groundwater

Job ID: 310-291233-1
SDG: 24C002.00

Client Sample ID: FD-1_24_09
Date Collected: 09/24/24 00:00
Date Received: 09/25/24 15:05

Lab Sample ID: 310-291233-9
Matrix: Water

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Aminobiphenyl	<2.29		10.4	2.29	ug/L		09/26/24 10:27	10/08/24 13:53	1
4-Bromophenyl phenyl ether	<0.729		10.4	0.729	ug/L		09/26/24 10:27	10/04/24 17:17	1
4-Chloro-3-methylphenol	<0.875		10.4	0.875	ug/L		09/26/24 10:27	10/04/24 17:17	1
4-Chloroaniline	<0.646		10.4	0.646	ug/L		09/26/24 10:27	10/04/24 17:17	1
4-Chlorophenyl phenyl ether	<0.719		10.4	0.719	ug/L		09/26/24 10:27	10/04/24 17:17	1
Methylphenol, 3 & 4	<0.729		10.4	0.729	ug/L		09/26/24 10:27	10/04/24 17:17	1
4-Nitroaniline	<1.35		10.4	1.35	ug/L		09/26/24 10:27	10/04/24 17:17	1
4-Nitrophenol	<7.92		10.4	7.92	ug/L		09/26/24 10:27	10/04/24 17:17	1
5-Nitro-o-toluidine	<2.92		10.4	2.92	ug/L		09/26/24 10:27	10/08/24 13:53	1
7,12-Dimethylbenz(a)anthracene	<1.98		10.4	1.98	ug/L		09/26/24 10:27	10/08/24 13:53	1
Acenaphthene	<0.667		10.4	0.667	ug/L		09/26/24 10:27	10/04/24 17:17	1
Acenaphthylene	<0.750		10.4	0.750	ug/L		09/26/24 10:27	10/04/24 17:17	1
Acetophenone	<0.719		10.4	0.719	ug/L		09/26/24 10:27	10/04/24 17:17	1
Anthracene	<0.906		10.4	0.906	ug/L		09/26/24 10:27	10/04/24 17:17	1
Benzo[a]anthracene	<0.885		10.4	0.885	ug/L		09/26/24 10:27	10/04/24 17:17	1
Benzo[a]pyrene	<8.44		10.4	8.44	ug/L		09/26/24 10:27	10/04/24 17:17	1
Benzo[b]fluoranthene	<5.10		10.4	5.10	ug/L		09/26/24 10:27	10/04/24 17:17	1
Benzo[g,h,i]perylene	<6.56		10.4	6.56	ug/L		09/26/24 10:27	10/04/24 17:17	1
Benzo[k]fluoranthene	<2.29		10.4	2.29	ug/L		09/26/24 10:27	10/04/24 17:17	1
Benzyl alcohol	<1.35		10.4	1.35	ug/L		09/26/24 10:27	10/04/24 17:17	1
Bis(2-chloroethoxy)methane	<0.792		10.4	0.792	ug/L		09/26/24 10:27	10/04/24 17:17	1
Bis(2-chloroethyl)ether	<0.854		10.4	0.854	ug/L		09/26/24 10:27	10/04/24 17:17	1
2,2'-oxybis[1-chloropropane]	<0.563		10.4	0.563	ug/L		09/26/24 10:27	10/04/24 17:17	1
Bis(2-ethylhexyl) phthalate	<5.73		10.4	5.73	ug/L		09/26/24 10:27	10/04/24 17:17	1
Butyl benzyl phthalate	<5.63		10.4	5.63	ug/L		09/26/24 10:27	10/04/24 17:17	1
Chlorobenzilate	<3.75		10.4	3.75	ug/L		09/26/24 10:27	10/08/24 13:53	1
Chrysene	<0.906		10.4	0.906	ug/L		09/26/24 10:27	10/04/24 17:17	1
Diallate	<4.17		10.4	4.17	ug/L		09/26/24 10:27	10/08/24 13:53	1
Dibenzo(a,h)anthracene	<4.06		10.4	4.06	ug/L		09/26/24 10:27	10/04/24 17:17	1
Dibenzofuran	<0.771		10.4	0.771	ug/L		09/26/24 10:27	10/04/24 17:17	1
Diethyl phthalate	<1.77		10.4	1.77	ug/L		09/26/24 10:27	10/04/24 17:17	1
Dimethoate	<3.75		10.4	3.75	ug/L		09/26/24 10:27	10/08/24 13:53	1
Dimethyl phthalate	<1.04		10.4	1.04	ug/L		09/26/24 10:27	10/04/24 17:17	1
Di-n-butyl phthalate	<5.83		10.4	5.83	ug/L		09/26/24 10:27	10/04/24 17:17	1
Di-n-octyl phthalate	<7.29		20.8	7.29	ug/L		09/26/24 10:27	10/04/24 17:17	1
Dinoseb	<2.50		10.4	2.50	ug/L		09/26/24 10:27	10/08/24 13:53	1
Diphenylamine	<6.25		10.4	6.25	ug/L		09/26/24 10:27	10/04/24 17:17	1
Disulfoton	<2.50		10.4	2.50	ug/L		09/26/24 10:27	10/08/24 13:53	1
Ethyl methanesulfonate	<3.75		10.4	3.75	ug/L		09/26/24 10:27	10/08/24 13:53	1
Ethyl Parathion	<2.29		10.4	2.29	ug/L		09/26/24 10:27	10/08/24 13:53	1
Famphur	<3.96		10.4	3.96	ug/L		09/26/24 10:27	10/08/24 13:53	1
Fluoranthene	<1.77		10.4	1.77	ug/L		09/26/24 10:27	10/04/24 17:17	1
Fluorene	<0.823		10.4	0.823	ug/L		09/26/24 10:27	10/04/24 17:17	1
Hexachlorobenzene	<0.729		10.4	0.729	ug/L		09/26/24 10:27	10/04/24 17:17	1
Hexachlorobutadiene	<0.896		10.4	0.896	ug/L		09/26/24 10:27	10/04/24 17:17	1
Hexachlorocyclopentadiene	<5.31		10.4	5.31	ug/L		09/26/24 10:27	10/04/24 17:17	1
Hexachloroethane	<1.01		10.4	1.01	ug/L		09/26/24 10:27	10/04/24 17:17	1
Hexachloropropene	<2.71		10.4	2.71	ug/L		09/26/24 10:27	10/08/24 13:53	1
Indeno[1,2,3-cd]pyrene	<4.38		10.4	4.38	ug/L		09/26/24 10:27	10/04/24 17:17	1

Client Sample ID: FD-1_24_09
Date Collected: 09/24/24 00:00
Date Received: 09/25/24 15:05

Lab Sample ID: 310-291233-9
Matrix: Water

Method: SW846 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isodrin	<4.90		10.4	4.90	ug/L		09/26/24 10:27	10/08/24 13:53	1
Isophorone	<0.969		10.4	0.969	ug/L		09/26/24 10:27	10/04/24 17:17	1
Isosafrole	<2.40		10.4	2.40	ug/L		09/26/24 10:27	10/08/24 13:53	1
Kepone	<1.04		10.4	1.04	ug/L		09/26/24 10:27	10/08/24 13:53	1
Methapyrilene	<0.792		10.4	0.792	ug/L		09/26/24 10:27	10/08/24 13:53	1
Methyl methanesulfonate	<3.44		10.4	3.44	ug/L		09/26/24 10:27	10/08/24 13:53	1
Methyl parathion	<2.40		10.4	2.40	ug/L		09/26/24 10:27	10/08/24 13:53	1
Nitrobenzene	<0.833		10.4	0.833	ug/L		09/26/24 10:27	10/04/24 17:17	1
N-Nitrosodiethylamine	<3.54		10.4	3.54	ug/L		09/26/24 10:27	10/08/24 13:53	1
N-Nitrosodimethylamine	<0.750		10.4	0.750	ug/L		09/26/24 10:27	10/04/24 17:17	1
N-Nitrosodi-n-butylamine	<4.06		10.4	4.06	ug/L		09/26/24 10:27	10/08/24 13:53	1
N-Nitrosodi-n-propylamine	<0.958		10.4	0.958	ug/L		09/26/24 10:27	10/04/24 17:17	1
N-Nitrosodiphenylamine	<0.781		10.4	0.781	ug/L		09/26/24 10:27	10/04/24 17:17	1
N-Nitrosomethylethylamine	<5.10		10.4	5.10	ug/L		09/26/24 10:27	10/08/24 13:53	1
N-Nitrosopiperidine	<2.81		10.4	2.81	ug/L		09/26/24 10:27	10/08/24 13:53	1
N-Nitrosopyrrolidine	<3.75		10.4	3.75	ug/L		09/26/24 10:27	10/08/24 13:53	1
o,o',o''-Triethylphosphorothioate	<3.33		10.4	3.33	ug/L		09/26/24 10:27	10/08/24 13:53	1
o-Toluidine	<3.02		10.4	3.02	ug/L		09/26/24 10:27	10/08/24 13:53	1
p-Dimethylamino azobenzene	<2.29		10.4	2.29	ug/L		09/26/24 10:27	10/08/24 13:53	1
Pentachlorobenzene	<2.92		10.4	2.92	ug/L		09/26/24 10:27	10/08/24 13:53	1
Pentachloronitrobenzene	<6.04		10.4	6.04	ug/L		09/26/24 10:27	10/08/24 13:53	1
Pentachlorophenol	<10.0		10.4	10.0	ug/L		09/26/24 10:27	10/04/24 17:17	1
Phenacetin	<1.98		10.4	1.98	ug/L		09/26/24 10:27	10/08/24 13:53	1
Phenanthrene	<0.823		10.4	0.823	ug/L		09/26/24 10:27	10/04/24 17:17	1
Phenol	<1.15		10.4	1.15	ug/L		09/26/24 10:27	10/04/24 17:17	1
Phorate	<3.33		10.4	3.33	ug/L		09/26/24 10:27	10/08/24 13:53	1
Pronamide	<2.81		10.4	2.81	ug/L		09/26/24 10:27	10/08/24 13:53	1
Pyrene	<0.823		10.4	0.823	ug/L		09/26/24 10:27	10/04/24 17:17	1
Safrole	<2.92		10.4	2.92	ug/L		09/26/24 10:27	10/08/24 13:53	1
Thionazin	<3.65		10.4	3.65	ug/L		09/26/24 10:27	10/08/24 13:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol (Surr)	*69*		*25 - 110*	*09/26/24 10:27*	*10/04/24 17:17*	*1*
Phenol-d5 (Surr)	*59*		*21 - 110*	*09/26/24 10:27*	*10/04/24 17:17*	*1*
Nitrobenzene-d5 (Surr)	*94*		*45 - 129*	*09/26/24 10:27*	*10/04/24 17:17*	*1*
2-Fluorobiphenyl (Surr)	*80*		*39 - 118*	*09/26/24 10:27*	*10/04/24 17:17*	*1*
2,4,6-Tribromophenol (Surr)	*83*		*27 - 136*	*09/26/24 10:27*	*10/04/24 17:17*	*1*
Terphenyl-d14 (Surr)	*101*		*12 - 144*	*09/26/24 10:27*	*10/04/24 17:17*	*1*

Method: SW846 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetonitrile	<2.60		10.0	2.60	mg/L			09/28/24 16:18	1
Isobutanol	<2.40		10.0	2.40	mg/L			09/28/24 16:18	1

Method: SW846 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	<0.0281		0.0667	0.0281	ug/L		09/26/24 14:09	10/04/24 20:39	1
4,4'-DDE	<0.0281		0.0667	0.0281	ug/L		09/26/24 14:09	10/04/24 20:39	1
4,4'-DDT	<0.0438		0.0667	0.0438	ug/L		09/26/24 14:09	10/04/24 20:39	1
Aldrin	<0.0333		0.0667	0.0333	ug/L		09/26/24 14:09	10/04/24 20:39	1

Client Sample ID: FD-1_24_09
Date Collected: 09/24/24 00:00
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Lab Sample ID: 310-291233-9
Matrix: Water

Method: SW846 8081B - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	<0.0302		0.0667	0.0302	ug/L		09/26/24 14:09	10/04/24 20:39	1
beta-BHC	<0.0385		0.0667	0.0385	ug/L		09/26/24 14:09	10/04/24 20:39	1
Chlordane (technical)	<0.844		2.08	0.844	ug/L		09/26/24 14:09	10/04/24 20:39	1
delta-BHC	<0.0281		0.0667	0.0281	ug/L		09/26/24 14:09	10/04/24 20:39	1
Dieldrin	<0.0271		0.0667	0.0271	ug/L		09/26/24 14:09	10/04/24 20:39	1
Endosulfan I	<0.0344		0.0667	0.0344	ug/L		09/26/24 14:09	10/04/24 20:39	1
Endosulfan II	<0.0302		0.0667	0.0302	ug/L		09/26/24 14:09	10/04/24 20:39	1
Endosulfan sulfate	<0.0313		0.0667	0.0313	ug/L		09/26/24 14:09	10/04/24 20:39	1
Endrin	<0.0271		0.0667	0.0271	ug/L		09/26/24 14:09	10/04/24 20:39	1
Endrin aldehyde	<0.0302		0.0667	0.0302	ug/L		09/26/24 14:09	10/04/24 20:39	1
gamma-BHC (Lindane)	<0.0375		0.0667	0.0375	ug/L		09/26/24 14:09	10/04/24 20:39	1
Heptachlor	<0.0344		0.0667	0.0344	ug/L		09/26/24 14:09	10/04/24 20:39	1
Heptachlor epoxide	<0.0302		0.0667	0.0302	ug/L		09/26/24 14:09	10/04/24 20:39	1
Methoxychlor	<0.0427		0.0667	0.0427	ug/L		09/26/24 14:09	10/04/24 20:39	1
Toxaphene	<0.719		2.08	0.719	ug/L		09/26/24 14:09	10/04/24 20:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*91*		*10 - 124*	*09/26/24 14:09*	*10/04/24 20:39*	*1*
Tetrachloro-m-xylene	*74*		*10 - 124*	*09/26/24 14:09*	*10/04/24 20:39*	*1*

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<0.177		0.833	0.177	ug/L		10/01/24 12:25	10/08/24 17:20	1
PCB-1221	<0.177		0.833	0.177	ug/L		10/01/24 12:25	10/08/24 17:20	1
PCB-1232	<0.177		0.833	0.177	ug/L		10/01/24 12:25	10/08/24 17:20	1
PCB-1242	<0.177		0.833	0.177	ug/L		10/01/24 12:25	10/08/24 17:20	1
PCB-1248	<0.115		0.833	0.115	ug/L		10/01/24 12:25	10/08/24 17:20	1
PCB-1254	<0.115		0.833	0.115	ug/L		10/01/24 12:25	10/08/24 17:20	1
PCB-1260	<0.115		0.833	0.115	ug/L		10/01/24 12:25	10/08/24 17:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*67*		*10 - 124*	*10/01/24 12:25*	*10/08/24 17:20*	*1*
Tetrachloro-m-xylene	*59*		*10 - 124*	*10/01/24 12:25*	*10/08/24 17:20*	*1*

Method: SW846 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silvex (2,4,5-TP)	<0.0243		0.0553	0.0243	ug/L		09/28/24 17:22	10/01/24 07:02	1
2,4-D	<0.277		0.664	0.277	ug/L		09/28/24 17:22	10/01/24 07:02	1
2,4,5-T	<0.0719		0.166	0.0719	ug/L		09/28/24 17:22	10/01/24 07:02	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100	*+	0.00200	0.00100	mg/L		09/27/24 09:00	10/03/24 20:07	1
Arsenic	**0.0210**		0.00200	0.000530	mg/L		09/27/24 09:00	10/03/24 20:07	1
Barium	**0.741**		0.00200	0.000660	mg/L		09/27/24 09:00	10/03/24 20:07	1
Beryllium	<0.000330		0.00100	0.000330	mg/L		09/27/24 09:00	10/03/24 20:07	1
Cadmium	<0.000100		0.000200	0.000100	mg/L		09/27/24 09:00	10/03/24 20:07	1
Chromium	<0.00120		0.00500	0.00120	mg/L		09/27/24 09:00	10/03/24 20:07	1
Cobalt	**0.00214**		0.000500	0.000170	mg/L		09/27/24 09:00	10/03/24 20:07	1
Copper	<0.00180		0.00500	0.00180	mg/L		09/27/24 09:00	10/03/24 20:07	1
Lead	<0.000260		0.000500	0.000260	mg/L		09/27/24 09:00	10/03/24 20:07	1

Client: Foth Infrastructure & Environment, LLC
Project/Site: Carroll County Landfill Groundwater

Job ID: 310-291233-1
SDG: 24C002.00

Client Sample ID: FD-1_24_09
Date Collected: 09/24/24 00:00
Date Received: 09/25/24 15:05

Lab Sample ID: 310-291233-9
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	**0.0427**		0.00500	0.00210	mg/L		09/27/24 09:00	10/03/24 20:07	1
Selenium	<0.00140		0.00500	0.00140	mg/L		09/27/24 09:00	10/03/24 20:07	1
Silver	<0.000500	^1+	0.00100	0.000500	mg/L		09/27/24 09:00	10/03/24 20:07	1
Thallium	<0.000570		0.00100	0.000570	mg/L		09/27/24 09:00	10/03/24 20:07	1
Tin	<0.00230		0.00500	0.00230	mg/L		09/27/24 09:00	10/03/24 20:07	1
Vanadium	<0.00110		0.00500	0.00110	mg/L		09/27/24 09:00	10/03/24 20:07	1
Zinc	<0.00970		0.0200	0.00970	mg/L		09/27/24 09:00	10/03/24 20:07	1

Method: SW846 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000110		0.000200	0.000110	mg/L		10/07/24 14:55	10/08/24 16:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total (SW846 9012B)	<0.00350		0.0100	0.00350	mg/L		09/26/24 10:32	09/27/24 20:19	1
Sulfide (SW846 9034)	<0.231		1.00	0.231	mg/L		09/29/24 18:26	09/30/24 02:49	1
Total Suspended Solids (USGS I-3765-85)	**1.63**	**J**	1.88	1.39	mg/L			09/26/24 12:16	1

Client: Foth Infrastructure & Environment, LLC
Project/Site: Carroll County Landfill Groundwater

Job ID: 310-291233-1
SDG: 24C002.00

Client Sample ID: TB-1_24_09
Date Collected: 09/24/24 00:00
Date Received: 09/25/24 15:05

Lab Sample ID: 310-291233-10
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	<0.380		1.00	0.380	ug/L			09/26/24 16:23	1
1,1,1-Trichloroethane	<0.190		1.00	0.190	ug/L			09/26/24 16:23	1
1,1,2,2-Tetrachloroethane	<0.470		1.00	0.470	ug/L			09/26/24 16:23	1
1,1,2-Trichloroethane	<0.450		1.00	0.450	ug/L			09/26/24 16:23	1
1,1-Dichloroethane	<0.220		1.00	0.220	ug/L			09/26/24 16:23	1
1,1-Dichloroethene	<0.560		2.00	0.560	ug/L			09/26/24 16:23	1
1,1-Dichloropropene	<0.430		1.00	0.430	ug/L			09/26/24 16:23	1
1,2,3-Trichloropropane	<0.590		1.00	0.590	ug/L			09/26/24 16:23	1
1,2,4-Trichlorobenzene	<0.750		5.00	0.750	ug/L			09/26/24 16:23	1
1,2-Dibromo-3-Chloropropane	<1.20		5.00	1.20	ug/L			09/26/24 16:23	1
1,2-Dibromoethane (EDB)	<0.340		1.00	0.340	ug/L			09/26/24 16:23	1
1,2-Dichlorobenzene	<0.370		1.00	0.370	ug/L			09/26/24 16:23	1
1,2-Dichloroethane	<0.390		1.00	0.390	ug/L			09/26/24 16:23	1
1,2-Dichloropropane	<0.270		1.00	0.270	ug/L			09/26/24 16:23	1
1,3-Dichlorobenzene	<0.300		1.00	0.300	ug/L			09/26/24 16:23	1
1,3-Dichloropropane	<0.400		1.00	0.400	ug/L			09/26/24 16:23	1
1,4-Dichlorobenzene	<0.230		1.00	0.230	ug/L			09/26/24 16:23	1
2,2-Dichloropropane	<0.690		4.00	0.690	ug/L			09/26/24 16:23	1
2-Butanone (MEK)	<2.10		10.0	2.10	ug/L			09/26/24 16:23	1
2-Hexanone	<2.00		10.0	2.00	ug/L			09/26/24 16:23	1
4-Methyl-2-pentanone (MIBK)	<2.10		10.0	2.10	ug/L			09/26/24 16:23	1
Acetone	<3.10		10.0	3.10	ug/L			09/26/24 16:23	1
Acrolein	<3.60		10.0	3.60	ug/L			09/26/24 16:23	1
Acrylonitrile	<2.20		5.00	2.20	ug/L			09/26/24 16:23	1
Allyl chloride	<0.700		2.00	0.700	ug/L			09/26/24 16:23	1
Benzene	<0.220		0.500	0.220	ug/L			09/26/24 16:23	1
Bromochloromethane	<0.540		5.00	0.540	ug/L			09/26/24 16:23	1
Bromodichloromethane	<0.390		1.00	0.390	ug/L			09/26/24 16:23	1
Bromoform	<0.780		5.00	0.780	ug/L			09/26/24 16:23	1
Bromomethane	<1.10		4.00	1.10	ug/L			09/26/24 16:23	1
Carbon disulfide	<0.450		1.00	0.450	ug/L			09/26/24 16:23	1
Carbon tetrachloride	<0.650		2.00	0.650	ug/L			09/26/24 16:23	1
Chlorobenzene	<0.400		1.00	0.400	ug/L			09/26/24 16:23	1
Chlorodibromomethane	<0.750		5.00	0.750	ug/L			09/26/24 16:23	1
Chloroethane	<0.790		4.00	0.790	ug/L			09/26/24 16:23	1
Chloroform	<1.30		3.00	1.30	ug/L			09/26/24 16:23	1
Chloromethane	<0.610		3.00	0.610	ug/L			09/26/24 16:23	1
Chloroprene	<0.230		1.00	0.230	ug/L			09/26/24 16:23	1
cis-1,2-Dichloroethene	<0.210		1.00	0.210	ug/L			09/26/24 16:23	1
cis-1,3-Dichloropropene	<0.250		5.00	0.250	ug/L			09/26/24 16:23	1
Dibromomethane	<0.330		1.00	0.330	ug/L			09/26/24 16:23	1
Dichlorodifluoromethane	<0.250		3.00	0.250	ug/L			09/26/24 16:23	1
Ethyl methacrylate	<0.680		2.00	0.680	ug/L			09/26/24 16:23	1
Ethylbenzene	<0.310		1.00	0.310	ug/L			09/26/24 16:23	1
Iodomethane	<7.00		10.0	7.00	ug/L			09/26/24 16:23	1
m,p-Xylene	<0.380		2.00	0.380	ug/L			09/26/24 16:23	1
Methacrylonitrile	<3.30		10.0	3.30	ug/L			09/26/24 16:23	1
Methyl methacrylate	<0.760		2.00	0.760	ug/L			09/26/24 16:23	1
Methylene Chloride	<1.70		5.00	1.70	ug/L			09/26/24 16:23	1

Client: Foth Infrastructure & Environment, LLC
Project/Site: Carroll County Landfill Groundwater

Job ID: 310-291233-1
SDG: 24C002.00

Client Sample ID: TB-1_24_09
Date Collected: 09/24/24 00:00
Date Received: 09/25/24 15:05

Lab Sample ID: 310-291233-10
Matrix: Water

Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	<3.00		5.00	3.00	ug/L			09/26/24 16:23	1
o-Xylene	<0.400		1.00	0.400	ug/L			09/26/24 16:23	1
Propionitrile	<3.40		10.0	3.40	ug/L			09/26/24 16:23	1
Styrene	<0.370		1.00	0.370	ug/L			09/26/24 16:23	1
Tetrachloroethene	<0.480		1.00	0.480	ug/L			09/26/24 16:23	1
Toluene	<0.430		1.00	0.430	ug/L			09/26/24 16:23	1
trans-1,2-Dichloroethene	<0.270		1.00	0.270	ug/L			09/26/24 16:23	1
trans-1,3-Dichloropropene	<0.560		5.00	0.560	ug/L			09/26/24 16:23	1
trans-1,4-Dichloro-2-butene	<1.10		10.0	1.10	ug/L			09/26/24 16:23	1
Trichloroethene	<0.430		1.00	0.430	ug/L			09/26/24 16:23	1
Trichlorofluoromethane	<0.380		4.00	0.380	ug/L			09/26/24 16:23	1
Vinyl acetate	<2.50		10.0	2.50	ug/L			09/26/24 16:23	1
Vinyl chloride	<0.180		1.00	0.180	ug/L			09/26/24 16:23	1
Xylenes, Total	<0.400		3.00	0.400	ug/L			09/26/24 16:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*102*		*73 - 130*		*09/26/24 16:23*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*09/26/24 16:23*	*1*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*09/26/24 16:23*	*1*

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
*1	LCS/LCSD RPD exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
^1+	Initial Calibration Verification (ICV) is outside acceptance limits, high biased.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Surrogate Summary

Client: Foth Infrastructure & Environment, LLC
Project/Site: Carroll County Landfill Groundwater

Job ID: 310-291233-1
SDG: 24C002.00

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)									
		BFB	DBFM	TOL							
Lab Sample ID	Client Sample ID	(80-120)	(73-130)	(80-120)							
310-291233-1	GU-2A_24_09	96	100	96							
310-291233-1 MS	GU-2A_24_09	100	90	105							
310-291233-1 MSD	GU-2A_24_09	98	92	104							
310-291233-2	MW-119RR_24_09	95	104	98							
310-291233-3	MW-121R_24_09	97	103	98							
310-291233-4	MW-122R_24_09	93	105	99							
310-291233-5	MW-200_24_09	92	102	96							
310-291233-6	MW-205_24_09	93	107	98							
310-291233-7	MW-206_24_09	91	98	96							
310-291233-8	FB-1_24_09	94	107	96							
310-291233-9	FD-1_24_09	92	107	98							
310-291233-10	TB-1_24_09	94	102	99							
LCS 310-434388/6	Lab Control Sample	98	92	104							
LCS 310-434388/7	Lab Control Sample	93	102	99							
LCS 310-434391/6	Lab Control Sample	97	92	105							
LCS 310-434391/7	Lab Control Sample	93	104	98							
MB 310-434388/5	Method Blank	94	99	99							
MB 310-434391/5	Method Blank	94	106	100							

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
		2FP	PHL	NBZ	FBP	TBP	TPHL		
Lab Sample ID	Client Sample ID	(25-110)	(21-110)	(45-129)	(39-118)	(27-136)	(12-144)		
310-291233-3	MW-121R_24_09	48	39	68	61	64	71		
310-291233-4	MW-122R_24_09	64	54	79	69	76	84		
310-291233-5	MW-200_24_09	77	65	101	89	90	109		
310-291233-8	FB-1_24_09	50	43	63	57	53	73		
310-291233-9	FD-1_24_09	69	59	94	80	83	101		
LCS 310-434383/2-A	Lab Control Sample	64	53	82	70	84	94		
LCSD 310-434383/3-A	Lab Control Sample Dup	76	63	92	78	95	106		
MB 310-434383/1-A	Method Blank	69	58	92	76	87	105		

Surrogate Legend

2FP = 2-Fluorophenol (Surr)
PHL = Phenol-d5 (Surr)
NBZ = Nitrobenzene-d5 (Surr)
FBP = 2-Fluorobiphenyl (Surr)
TBP = 2,4,6-Tribromophenol (Surr)
TPHL = Terphenyl-d14 (Surr)

Surrogate Summary

Client: Foth Infrastructure & Environment, LLC
Job ID: 310-291233-1
Project/Site: Carroll County Landfill Groundwater
SDG: 24C002.00

Method: 8081B - Organochlorine Pesticides (GC)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)									
		DCB1	TCX1								
Lab Sample ID	Client Sample ID	(10-124)	(10-124)								
310-291233-3	MW-121R_24_09	79	67								
310-291233-4	MW-122R_24_09	80	73								
310-291233-5	MW-200_24_09	67	53								
310-291233-8	FB-1_24_09	73	89								
310-291233-9	FD-1_24_09	91	74								
LCS 310-434423/2-A	Lab Control Sample	75	53								
LCSD 310-434423/3-A	Lab Control Sample Dup	84	57								
MB 310-434423/1-A	Method Blank	85	69								

Surrogate Legend

DCB = DCB Decachlorobiphenyl (Surr)

TCX = Tetrachloro-m-xylene

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)									
		DCB1	TCX1								
Lab Sample ID	Client Sample ID	(10-124)	(10-124)								
310-291233-3	MW-121R_24_09	77	68								
310-291233-4	MW-122R_24_09	102	88								
310-291233-5	MW-200_24_09	99	84								
310-291233-8	FB-1_24_09	92	87								
310-291233-9	FD-1_24_09	67	59								
LCS 310-434841/2-A	Lab Control Sample	90	84								
LCSD 310-434841/3-A	Lab Control Sample Dup	66	64								
MB 310-434841/1-A	Method Blank	96	83								

Surrogate Legend

DCB = DCB Decachlorobiphenyl (Surr)

TCX = Tetrachloro-m-xylene

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 310-434388/5
Matrix: Water
Analysis Batch: 434388

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloropropene	<0.430		1.00	0.430	ug/L			09/26/24 14:33	1
1,2,4-Trichlorobenzene	<0.750		5.00	0.750	ug/L			09/26/24 14:33	1
1,3-Dichlorobenzene	<0.300		1.00	0.300	ug/L			09/26/24 14:33	1
1,3-Dichloropropane	<0.400		1.00	0.400	ug/L			09/26/24 14:33	1
2,2-Dichloropropane	<0.690		4.00	0.690	ug/L			09/26/24 14:33	1
1,2-Dibromo-3-Chloropropane	<1.20		5.00	1.20	ug/L			09/26/24 14:33	1
2-Butanone (MEK)	<2.10		10.0	2.10	ug/L			09/26/24 14:33	1
1,2-Dibromoethane (EDB)	<0.340		1.00	0.340	ug/L			09/26/24 14:33	1
Acetone	<3.10		10.0	3.10	ug/L			09/26/24 14:33	1
1,2-Dichlorobenzene	<0.370		1.00	0.370	ug/L			09/26/24 14:33	1
Acrolein	<3.60		10.0	3.60	ug/L			09/26/24 14:33	1
1,4-Dichlorobenzene	<0.230		1.00	0.230	ug/L			09/26/24 14:33	1
Acrylonitrile	<2.20		5.00	2.20	ug/L			09/26/24 14:33	1
Allyl chloride	<0.700		2.00	0.700	ug/L			09/26/24 14:33	1
1,1-Dichloroethane	<0.220		1.00	0.220	ug/L			09/26/24 14:33	1
Benzene	<0.220		0.500	0.220	ug/L			09/26/24 14:33	1
1,2-Dichloroethane	<0.390		1.00	0.390	ug/L			09/26/24 14:33	1
Bromochloromethane	<0.540		5.00	0.540	ug/L			09/26/24 14:33	1
1,1-Dichloroethene	<0.560		2.00	0.560	ug/L			09/26/24 14:33	1
Bromodichloromethane	<0.390		1.00	0.390	ug/L			09/26/24 14:33	1
1,2-Dichloropropane	<0.270		1.00	0.270	ug/L			09/26/24 14:33	1
Bromoform	<0.780		5.00	0.780	ug/L			09/26/24 14:33	1
Bromomethane	<1.10		4.00	1.10	ug/L			09/26/24 14:33	1
2-Hexanone	<2.00		10.0	2.00	ug/L			09/26/24 14:33	1
Carbon disulfide	<0.450		1.00	0.450	ug/L			09/26/24 14:33	1
Carbon tetrachloride	<0.650		2.00	0.650	ug/L			09/26/24 14:33	1
Chlorobenzene	<0.400		1.00	0.400	ug/L			09/26/24 14:33	1
4-Methyl-2-pentanone (MIBK)	<2.10		10.0	2.10	ug/L			09/26/24 14:33	1
Chlorodibromomethane	<0.750		5.00	0.750	ug/L			09/26/24 14:33	1
Chloroethane	<0.790		4.00	0.790	ug/L			09/26/24 14:33	1
Chloroform	<1.30		3.00	1.30	ug/L			09/26/24 14:33	1
Chloromethane	<0.610		3.00	0.610	ug/L			09/26/24 14:33	1
1,1,1,2-Tetrachloroethane	<0.380		1.00	0.380	ug/L			09/26/24 14:33	1
Chloroprene	<0.230		1.00	0.230	ug/L			09/26/24 14:33	1
1,1,2,2-Tetrachloroethane	<0.470		1.00	0.470	ug/L			09/26/24 14:33	1
cis-1,2-Dichloroethene	<0.210		1.00	0.210	ug/L			09/26/24 14:33	1
cis-1,3-Dichloropropene	<0.250		5.00	0.250	ug/L			09/26/24 14:33	1
Dibromomethane	<0.330		1.00	0.330	ug/L			09/26/24 14:33	1
Dichlorodifluoromethane	<0.250		3.00	0.250	ug/L			09/26/24 14:33	1
Ethyl methacrylate	<0.680		2.00	0.680	ug/L			09/26/24 14:33	1
Ethylbenzene	<0.310		1.00	0.310	ug/L			09/26/24 14:33	1
Iodomethane	<7.00		10.0	7.00	ug/L			09/26/24 14:33	1
1,1,1-Trichloroethane	<0.190		1.00	0.190	ug/L			09/26/24 14:33	1
m,p-Xylene	<0.380		2.00	0.380	ug/L			09/26/24 14:33	1
1,1,2-Trichloroethane	<0.450		1.00	0.450	ug/L			09/26/24 14:33	1
Methacrylonitrile	<3.30		10.0	3.30	ug/L			09/26/24 14:33	1
Methyl methacrylate	<0.760		2.00	0.760	ug/L			09/26/24 14:33	1
Methylene Chloride	<1.70		5.00	1.70	ug/L			09/26/24 14:33	1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 310-434388/5
Matrix: Water
Analysis Batch: 434388

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	<0.590		1.00	0.590	ug/L			09/26/24 14:33	1
Naphthalene	<3.00		5.00	3.00	ug/L			09/26/24 14:33	1
o-Xylene	<0.400		1.00	0.400	ug/L			09/26/24 14:33	1
Propionitrile	<3.40		10.0	3.40	ug/L			09/26/24 14:33	1
Styrene	<0.370		1.00	0.370	ug/L			09/26/24 14:33	1
Tetrachloroethene	<0.480		1.00	0.480	ug/L			09/26/24 14:33	1
Toluene	<0.430		1.00	0.430	ug/L			09/26/24 14:33	1
trans-1,2-Dichloroethene	<0.270		1.00	0.270	ug/L			09/26/24 14:33	1
trans-1,3-Dichloropropene	<0.560		5.00	0.560	ug/L			09/26/24 14:33	1
trans-1,4-Dichloro-2-butene	<1.10		10.0	1.10	ug/L			09/26/24 14:33	1
Trichloroethene	<0.430		1.00	0.430	ug/L			09/26/24 14:33	1
Trichlorofluoromethane	<0.380		4.00	0.380	ug/L			09/26/24 14:33	1
Vinyl acetate	<2.50		10.0	2.50	ug/L			09/26/24 14:33	1
Vinyl chloride	<0.180		1.00	0.180	ug/L			09/26/24 14:33	1
Xylenes, Total	<0.400		3.00	0.400	ug/L			09/26/24 14:33	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*99*		*73 - 130*		*09/26/24 14:33*	*1*
Toluene-d8 (Surr)	*99*		*80 - 120*		*09/26/24 14:33*	*1*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*09/26/24 14:33*	*1*

Lab Sample ID: LCS 310-434388/6
Matrix: Water
Analysis Batch: 434388

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1-Dichloropropene	20.0	19.51		ug/L		98	69 - 132
1,2,4-Trichlorobenzene	20.0	18.41		ug/L		92	68 - 124
1,3-Dichlorobenzene	20.0	16.66		ug/L		83	72 - 120
1,3-Dichloropropane	20.0	18.44		ug/L		92	72 - 125
2,2-Dichloropropane	20.0	18.99		ug/L		95	50 - 150
1,2-Dibromo-3-Chloropropane	20.0	21.56		ug/L		108	50 - 150
2-Butanone (MEK)	40.0	38.62		ug/L		97	50 - 150
1,2-Dibromoethane (EDB)	20.0	17.76		ug/L		89	75 - 125
Acetone	40.0	45.80		ug/L		114	50 - 150
1,2-Dichlorobenzene	20.0	17.88		ug/L		89	74 - 120
Acrolein	94.8	105.1		ug/L		111	49 - 150
1,4-Dichlorobenzene	20.0	18.28		ug/L		91	72 - 120
Acrylonitrile	200	205.9		ug/L		103	50 - 150
Allyl chloride	20.0	16.93		ug/L		85	49 - 150
1,1-Dichloroethane	20.0	19.68		ug/L		98	70 - 127
Benzene	20.0	19.01		ug/L		95	72 - 124
1,2-Dichloroethane	20.0	17.55		ug/L		88	71 - 125
Bromochloromethane	20.0	16.65		ug/L		83	73 - 130
1,1-Dichloroethene	20.0	18.96		ug/L		95	63 - 132
Bromodichloromethane	20.0	16.66		ug/L		83	74 - 122
1,2-Dichloropropane	20.0	19.64		ug/L		98	73 - 124
Bromoform	20.0	16.80		ug/L		84	61 - 122

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 310-434388/6
Matrix: Water
Analysis Batch: 434388

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2-Hexanone	40.0	45.78		ug/L		114	60 - 140
Carbon disulfide	20.0	20.31		ug/L		102	59 - 135
Carbon tetrachloride	20.0	16.68		ug/L		83	67 - 132
Chlorobenzene	20.0	18.09		ug/L		90	76 - 120
4-Methyl-2-pentanone (MIBK)	40.0	45.01		ug/L		113	60 - 139
Chlorodibromomethane	20.0	15.48		ug/L		77	71 - 121
Chloroform	20.0	18.27		ug/L		91	72 - 125
1,1,1,2-Tetrachloroethane	20.0	17.01		ug/L		85	71 - 120
Chloroprene	20.0	21.81		ug/L		109	69 - 133
1,1,2,2-Tetrachloroethane	20.0	21.44		ug/L		107	68 - 124
cis-1,2-Dichloroethene	20.0	17.72		ug/L		89	74 - 123
cis-1,3-Dichloropropene	20.0	18.25		ug/L		91	71 - 125
Dibromomethane	20.0	17.04		ug/L		85	74 - 125
Ethyl methacrylate	20.0	19.86		ug/L		99	70 - 129
Ethylbenzene	20.0	20.08		ug/L		100	74 - 122
Iodomethane	20.0	13.10		ug/L		66	10 - 150
1,1,1-Trichloroethane	20.0	18.01		ug/L		90	73 - 129
1,1,2-Trichloroethane	20.0	18.09		ug/L		90	73 - 123
Methacrylonitrile	200	167.8		ug/L		84	69 - 129
Methyl methacrylate	40.0	40.42		ug/L		101	68 - 131
Methylene Chloride	20.0	19.51		ug/L		98	50 - 150
1,2,3-Trichloropropane	20.0	19.57		ug/L		98	65 - 127
Naphthalene	20.0	19.30		ug/L		96	50 - 150
Propionitrile	200	207.2		ug/L		104	63 - 135
Styrene	20.0	19.12		ug/L		96	74 - 121
Tetrachloroethene	20.0	17.43		ug/L		87	71 - 130
Toluene	20.0	18.69		ug/L		93	74 - 123
trans-1,2-Dichloroethene	20.0	18.30		ug/L		91	70 - 126
trans-1,3-Dichloropropene	20.0	20.84		ug/L		104	69 - 123
trans-1,4-Dichloro-2-butene	20.0	21.46		ug/L		107	50 - 150
Trichloroethene	20.0	18.00		ug/L		90	72 - 126
Vinyl acetate	40.0	36.84		ug/L		92	50 - 150
Xylenes, Total	40.0	37.10		ug/L		93	73 - 123

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*92*		*73 - 130*
Toluene-d8 (Surr)	*104*		*80 - 120*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*

Lab Sample ID: LCS 310-434388/7
Matrix: Water
Analysis Batch: 434388

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromomethane	20.0	17.01		ug/L		85	23 - 150
Chloroethane	20.0	19.18		ug/L		96	54 - 136
Chloromethane	20.0	24.36		ug/L		122	38 - 150
Dichlorodifluoromethane	20.0	18.63		ug/L		93	39 - 150

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 310-434388/7
Matrix: Water
Analysis Batch: 434388

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Trichlorofluoromethane			20.0	18.13		ug/L		91	54 - 149		
Vinyl chloride			20.0	21.00		ug/L		105	56 - 140		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*102*		*73 - 130*
Toluene-d8 (Surr)	*99*		*80 - 120*
4-Bromofluorobenzene (Surr)	*93*		*80 - 120*

Lab Sample ID: MB 310-434391/5
Matrix: Water
Analysis Batch: 434391

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloropropene	<0.430		1.00	0.430	ug/L			09/27/24 01:08	1
1,2,4-Trichlorobenzene	<0.750		5.00	0.750	ug/L			09/27/24 01:08	1
1,3-Dichlorobenzene	<0.300		1.00	0.300	ug/L			09/27/24 01:08	1
1,3-Dichloropropane	<0.400		1.00	0.400	ug/L			09/27/24 01:08	1
2,2-Dichloropropane	<0.690		4.00	0.690	ug/L			09/27/24 01:08	1
1,2-Dibromo-3-Chloropropane	<1.20		5.00	1.20	ug/L			09/27/24 01:08	1
2-Butanone (MEK)	<2.10		10.0	2.10	ug/L			09/27/24 01:08	1
1,2-Dibromoethane (EDB)	<0.340		1.00	0.340	ug/L			09/27/24 01:08	1
Acetone	<3.10		10.0	3.10	ug/L			09/27/24 01:08	1
1,2-Dichlorobenzene	<0.370		1.00	0.370	ug/L			09/27/24 01:08	1
Acrolein	<3.60		10.0	3.60	ug/L			09/27/24 01:08	1
1,4-Dichlorobenzene	<0.230		1.00	0.230	ug/L			09/27/24 01:08	1
Acrylonitrile	<2.20		5.00	2.20	ug/L			09/27/24 01:08	1
Allyl chloride	<0.700		2.00	0.700	ug/L			09/27/24 01:08	1
1,1-Dichloroethane	<0.220		1.00	0.220	ug/L			09/27/24 01:08	1
Benzene	<0.220		0.500	0.220	ug/L			09/27/24 01:08	1
1,2-Dichloroethane	<0.390		1.00	0.390	ug/L			09/27/24 01:08	1
Bromochloromethane	<0.540		5.00	0.540	ug/L			09/27/24 01:08	1
1,1-Dichloroethene	<0.560		2.00	0.560	ug/L			09/27/24 01:08	1
Bromodichloromethane	<0.390		1.00	0.390	ug/L			09/27/24 01:08	1
1,2-Dichloropropane	<0.270		1.00	0.270	ug/L			09/27/24 01:08	1
Bromoform	<0.780		5.00	0.780	ug/L			09/27/24 01:08	1
Bromomethane	<1.10		4.00	1.10	ug/L			09/27/24 01:08	1
2-Hexanone	<2.00		10.0	2.00	ug/L			09/27/24 01:08	1
Carbon disulfide	<0.450		1.00	0.450	ug/L			09/27/24 01:08	1
Carbon tetrachloride	<0.650		2.00	0.650	ug/L			09/27/24 01:08	1
Chlorobenzene	<0.400		1.00	0.400	ug/L			09/27/24 01:08	1
4-Methyl-2-pentanone (MIBK)	<2.10		10.0	2.10	ug/L			09/27/24 01:08	1
Chlorodibromomethane	<0.750		5.00	0.750	ug/L			09/27/24 01:08	1
Chloroethane	<0.790		4.00	0.790	ug/L			09/27/24 01:08	1
Chloroform	<1.30		3.00	1.30	ug/L			09/27/24 01:08	1
Chloromethane	<0.610		3.00	0.610	ug/L			09/27/24 01:08	1
1,1,1,2-Tetrachloroethane	<0.380		1.00	0.380	ug/L			09/27/24 01:08	1
Chloroprene	<0.230		1.00	0.230	ug/L			09/27/24 01:08	1
1,1,2,2-Tetrachloroethane	<0.470		1.00	0.470	ug/L			09/27/24 01:08	1

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 310-434391/5
Matrix: Water
Analysis Batch: 434391

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	<0.210		1.00	0.210	ug/L			09/27/24 01:08	1
cis-1,3-Dichloropropene	<0.250		5.00	0.250	ug/L			09/27/24 01:08	1
Dibromomethane	<0.330		1.00	0.330	ug/L			09/27/24 01:08	1
Dichlorodifluoromethane	<0.250		3.00	0.250	ug/L			09/27/24 01:08	1
Ethyl methacrylate	<0.680		2.00	0.680	ug/L			09/27/24 01:08	1
Ethylbenzene	<0.310		1.00	0.310	ug/L			09/27/24 01:08	1
Iodomethane	<7.00		10.0	7.00	ug/L			09/27/24 01:08	1
1,1,1-Trichloroethane	<0.190		1.00	0.190	ug/L			09/27/24 01:08	1
m,p-Xylene	<0.380		2.00	0.380	ug/L			09/27/24 01:08	1
1,1,2-Trichloroethane	<0.450		1.00	0.450	ug/L			09/27/24 01:08	1
Methacrylonitrile	<3.30		10.0	3.30	ug/L			09/27/24 01:08	1
Methyl methacrylate	<0.760		2.00	0.760	ug/L			09/27/24 01:08	1
Methylene Chloride	<1.70		5.00	1.70	ug/L			09/27/24 01:08	1
1,2,3-Trichloropropane	<0.590		1.00	0.590	ug/L			09/27/24 01:08	1
Naphthalene	<3.00		5.00	3.00	ug/L			09/27/24 01:08	1
o-Xylene	<0.400		1.00	0.400	ug/L			09/27/24 01:08	1
Propionitrile	<3.40		10.0	3.40	ug/L			09/27/24 01:08	1
Styrene	<0.370		1.00	0.370	ug/L			09/27/24 01:08	1
Tetrachloroethene	<0.480		1.00	0.480	ug/L			09/27/24 01:08	1
Toluene	<0.430		1.00	0.430	ug/L			09/27/24 01:08	1
trans-1,2-Dichloroethene	<0.270		1.00	0.270	ug/L			09/27/24 01:08	1
trans-1,3-Dichloropropene	<0.560		5.00	0.560	ug/L			09/27/24 01:08	1
trans-1,4-Dichloro-2-butene	<1.10		10.0	1.10	ug/L			09/27/24 01:08	1
Trichloroethene	<0.430		1.00	0.430	ug/L			09/27/24 01:08	1
Trichlorofluoromethane	<0.380		4.00	0.380	ug/L			09/27/24 01:08	1
Vinyl acetate	<2.50		10.0	2.50	ug/L			09/27/24 01:08	1
Vinyl chloride	<0.180		1.00	0.180	ug/L			09/27/24 01:08	1
Xylenes, Total	<0.400		3.00	0.400	ug/L			09/27/24 01:08	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*106*		*73 - 130*		*09/27/24 01:08*	*1*
Toluene-d8 (Surr)	*100*		*80 - 120*		*09/27/24 01:08*	*1*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*09/27/24 01:08*	*1*

Lab Sample ID: LCS 310-434391/6
Matrix: Water
Analysis Batch: 434391

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1-Dichloropropene	20.0	19.90		ug/L		99	69 - 132
1,2,4-Trichlorobenzene	20.0	17.67		ug/L		88	68 - 124
1,3-Dichlorobenzene	20.0	16.94		ug/L		85	72 - 120
1,3-Dichloropropane	20.0	19.87		ug/L		99	72 - 125
2,2-Dichloropropane	20.0	16.37		ug/L		82	50 - 150
1,2-Dibromo-3-Chloropropane	20.0	22.56		ug/L		113	50 - 150
2-Butanone (MEK)	40.0	39.61		ug/L		99	50 - 150
1,2-Dibromoethane (EDB)	20.0	18.28		ug/L		91	75 - 125
Acetone	40.0	47.82		ug/L		120	50 - 150

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 310-434391/6
Matrix: Water
Analysis Batch: 434391

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2-Dichlorobenzene	20.0	17.97		ug/L		90	74 - 120
Acrolein	94.8	95.97		ug/L		101	49 - 150
1,4-Dichlorobenzene	20.0	17.96		ug/L		90	72 - 120
Acrylonitrile	200	215.6		ug/L		108	50 - 150
Allyl chloride	20.0	17.35		ug/L		87	49 - 150
1,1-Dichloroethane	20.0	20.80		ug/L		104	70 - 127
Benzene	20.0	18.91		ug/L		95	72 - 124
1,2-Dichloroethane	20.0	18.02		ug/L		90	71 - 125
Bromochloromethane	20.0	16.88		ug/L		84	73 - 130
1,1-Dichloroethene	20.0	18.28		ug/L		91	63 - 132
Bromodichloromethane	20.0	16.93		ug/L		85	74 - 122
1,2-Dichloropropane	20.0	19.38		ug/L		97	73 - 124
Bromoform	20.0	18.52		ug/L		93	61 - 122
2-Hexanone	40.0	45.75		ug/L		114	60 - 140
Carbon disulfide	20.0	20.39		ug/L		102	59 - 135
Carbon tetrachloride	20.0	16.12		ug/L		81	67 - 132
Chlorobenzene	20.0	18.45		ug/L		92	76 - 120
4-Methyl-2-pentanone (MIBK)	40.0	43.79		ug/L		109	60 - 139
Chlorodibromomethane	20.0	16.28		ug/L		81	71 - 121
Chloroform	20.0	18.67		ug/L		93	72 - 125
1,1,1,2-Tetrachloroethane	20.0	17.36		ug/L		87	71 - 120
Chloroprene	20.0	22.65		ug/L		113	69 - 133
1,1,2,2-Tetrachloroethane	20.0	21.58		ug/L		108	68 - 124
cis-1,2-Dichloroethene	20.0	17.80		ug/L		89	74 - 123
cis-1,3-Dichloropropene	20.0	18.80		ug/L		94	71 - 125
Dibromomethane	20.0	16.67		ug/L		83	74 - 125
Ethyl methacrylate	20.0	19.86		ug/L		99	70 - 129
Ethylbenzene	20.0	20.36		ug/L		102	74 - 122
Iodomethane	20.0	13.28		ug/L		66	10 - 150
1,1,1-Trichloroethane	20.0	17.41		ug/L		87	73 - 129
1,1,2-Trichloroethane	20.0	19.13		ug/L		96	73 - 123
Methacrylonitrile	200	173.7		ug/L		87	69 - 129
Methyl methacrylate	40.0	39.51		ug/L		99	68 - 131
Methylene Chloride	20.0	20.00		ug/L		100	50 - 150
1,2,3-Trichloropropane	20.0	19.45		ug/L		97	65 - 127
Naphthalene	20.0	19.21		ug/L		96	50 - 150
Propionitrile	200	215.3		ug/L		108	63 - 135
Styrene	20.0	19.68		ug/L		98	74 - 121
Tetrachloroethene	20.0	16.96		ug/L		85	71 - 130
Toluene	20.0	18.68		ug/L		93	74 - 123
trans-1,2-Dichloroethene	20.0	16.34		ug/L		82	70 - 126
trans-1,3-Dichloropropene	20.0	20.54		ug/L		103	69 - 123
trans-1,4-Dichloro-2-butene	20.0	22.78		ug/L		114	50 - 150
Trichloroethene	20.0	17.92		ug/L		90	72 - 126
Vinyl acetate	40.0	37.68		ug/L		94	50 - 150
Xylenes, Total	40.0	37.87		ug/L		95	73 - 123

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 310-434391/6
Matrix: Water
Analysis Batch: 434391

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

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Dibromofluoromethane (Surr)	*92*		*73 - 130*
Toluene-d8 (Surr)	*105*		*80 - 120*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*

Lab Sample ID: LCS 310-434391/7
Matrix: Water
Analysis Batch: 434391

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromomethane	20.0	17.51		ug/L		88	23 - 150
Chloroethane	20.0	20.79		ug/L		104	54 - 136
Chloromethane	20.0	25.02		ug/L		125	38 - 150
Dichlorodifluoromethane	20.0	19.53		ug/L		98	39 - 150
Trichlorofluoromethane	20.0	18.98		ug/L		95	54 - 149
Vinyl chloride	20.0	22.29		ug/L		111	56 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Dibromofluoromethane (Surr)	*104*		*73 - 130*
Toluene-d8 (Surr)	*98*		*80 - 120*
4-Bromofluorobenzene (Surr)	*93*		*80 - 120*

Lab Sample ID: 310-291233-1 MS
Matrix: Water
Analysis Batch: 434391

Client Sample ID: GU-2A_24_09
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,1-Dichloropropene	<0.430		25.0	22.70		ug/L		91	50 - 132
1,2,4-Trichlorobenzene	<0.750		25.0	21.87		ug/L		87	55 - 130
1,3-Dichlorobenzene	<0.300		25.0	19.82		ug/L		79	57 - 130
1,3-Dichloropropane	<0.400		25.0	24.67		ug/L		99	56 - 130
2,2-Dichloropropane	<0.690		25.0	17.21		ug/L		69	25 - 150
1,2-Dibromo-3-Chloropropane	<1.20		25.0	29.78		ug/L		119	38 - 150
2-Butanone (MEK)	<2.10		50.0	52.20		ug/L		104	38 - 150
1,2-Dibromoethane (EDB)	<0.340		25.0	23.54		ug/L		94	60 - 130
Acetone	<3.10		50.0	63.87		ug/L		128	31 - 150
1,2-Dichlorobenzene	<0.370		25.0	22.43		ug/L		90	59 - 130
Acrolein	<3.60		119	138.2		ug/L		117	25 - 150
1,4-Dichlorobenzene	<0.230		25.0	22.02		ug/L		88	57 - 130
Acrylonitrile	<2.20		250	277.5		ug/L		111	40 - 150
Allyl chloride	<0.700		25.0	22.07		ug/L		88	28 - 150
1,1-Dichloroethane	<0.220		25.0	25.16		ug/L		101	49 - 130
Benzene	<0.220		25.0	22.75		ug/L		91	46 - 130
1,2-Dichloroethane	<0.390		25.0	23.06		ug/L		92	51 - 130
Bromochloromethane	<0.540		25.0	20.16		ug/L		81	57 - 130
1,1-Dichloroethene	<0.560		25.0	23.03		ug/L		92	37 - 132
Bromodichloromethane	<0.390		25.0	20.24		ug/L		81	57 - 130
1,2-Dichloropropane	<0.270		25.0	24.41		ug/L		98	57 - 130
Bromoform	<0.780		25.0	21.46		ug/L		86	44 - 130

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 310-291233-1 MS
Matrix: Water
Analysis Batch: 434391

Client Sample ID: GU-2A_24_09
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
2-Hexanone	<2.00		50.0	64.96		ug/L		130	46 - 140
Carbon disulfide	<0.450		25.0	25.23		ug/L		101	38 - 135
Carbon tetrachloride	<0.650		25.0	17.37		ug/L		69	45 - 132
Chlorobenzene	<0.400		25.0	21.54		ug/L		86	59 - 130
4-Methyl-2-pentanone (MIBK)	<2.10		50.0	58.38		ug/L		117	47 - 139
Chlorodibromomethane	<0.750		25.0	18.54		ug/L		74	54 - 130
Chloroform	<1.30		25.0	22.36		ug/L		89	51 - 130
1,1,1,2-Tetrachloroethane	<0.380		25.0	20.08		ug/L		80	55 - 130
Chloroprene	<0.230		25.0	26.28		ug/L		105	43 - 133
1,1,2,2-Tetrachloroethane	<0.470		25.0	28.75		ug/L		115	54 - 130
cis-1,2-Dichloroethene	<0.210		25.0	22.04		ug/L		88	45 - 130
cis-1,3-Dichloropropene	<0.250		25.0	23.13		ug/L		93	53 - 130
Dibromomethane	<0.330		25.0	20.73		ug/L		83	59 - 130
Ethyl methacrylate	<0.680		25.0	26.82		ug/L		107	54 - 130
Ethylbenzene	<0.310		25.0	23.28		ug/L		93	45 - 130
Iodomethane	<7.00		25.0	21.19		ug/L		85	10 - 150
1,1,1-Trichloroethane	<0.190		25.0	19.83		ug/L		79	52 - 130
1,1,2-Trichloroethane	<0.450		25.0	23.41		ug/L		94	58 - 130
Methacrylonitrile	<3.30		250	222.1		ug/L		89	55 - 130
Methyl methacrylate	<0.760		50.0	53.14		ug/L		106	44 - 139
Methylene Chloride	<1.70		25.0	24.75		ug/L		99	37 - 150
1,2,3-Trichloropropane	<0.590		25.0	25.47		ug/L		102	49 - 130
Naphthalene	<3.00		25.0	26.47		ug/L		106	40 - 150
Propionitrile	<3.40		250	283.6		ug/L		113	49 - 135
Styrene	<0.370		25.0	23.70		ug/L		95	47 - 130
Tetrachloroethene	<0.480		25.0	17.25		ug/L		69	47 - 130
Toluene	<0.430		25.0	22.14		ug/L		89	51 - 130
trans-1,2-Dichloroethene	<0.270		25.0	21.92		ug/L		88	48 - 130
trans-1,3-Dichloropropene	<0.560		25.0	26.26		ug/L		105	50 - 130
trans-1,4-Dichloro-2-butene	<1.10		25.0	28.45		ug/L		114	26 - 150
Trichloroethene	<0.430		25.0	20.67		ug/L		83	51 - 130
Vinyl acetate	<2.50		50.0	44.57		ug/L		89	29 - 150
Xylenes, Total	<0.400		50.0	43.92		ug/L		88	43 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*90*		*73 - 130*
Toluene-d8 (Surr)	*105*		*80 - 120*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*

Lab Sample ID: 310-291233-1 MSD
Matrix: Water
Analysis Batch: 434391

Client Sample ID: GU-2A_24_09
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1-Dichloropropene	<0.430		25.0	21.40		ug/L		86	50 - 132	6	20
1,2,4-Trichlorobenzene	<0.750		25.0	21.11		ug/L		84	55 - 130	4	20
1,3-Dichlorobenzene	<0.300		25.0	19.69		ug/L		79	57 - 130	1	20
1,3-Dichloropropane	<0.400		25.0	23.36		ug/L		93	56 - 130	5	20

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 310-291233-1 MSD
Matrix: Water
Analysis Batch: 434391

Client Sample ID: GU-2A_24_09
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,2-Dichloropropane	<0.690		25.0	17.74		ug/L		71	25 - 150	3	25
1,2-Dibromo-3-Chloropropane	<1.20		25.0	29.05		ug/L		116	38 - 150	2	20
2-Butanone (MEK)	<2.10		50.0	52.46		ug/L		105	38 - 150	1	20
1,2-Dibromoethane (EDB)	<0.340		25.0	22.25		ug/L		89	60 - 130	6	20
Acetone	<3.10		50.0	62.92		ug/L		126	31 - 150	2	29
1,2-Dichlorobenzene	<0.370		25.0	22.23		ug/L		89	59 - 130	1	20
Acrolein	<3.60		119	139.9		ug/L		118	25 - 150	1	31
1,4-Dichlorobenzene	<0.230		25.0	21.76		ug/L		87	57 - 130	1	20
Acrylonitrile	<2.20		250	270.2		ug/L		108	40 - 150	3	20
Allyl chloride	<0.700		25.0	20.53		ug/L		82	28 - 150	7	35
1,1-Dichloroethane	<0.220		25.0	25.06		ug/L		100	49 - 130	0	20
Benzene	<0.220		25.0	21.78		ug/L		87	46 - 130	4	20
1,2-Dichloroethane	<0.390		25.0	20.19		ug/L		81	51 - 130	13	20
Bromochloromethane	<0.540		25.0	19.81		ug/L		79	57 - 130	2	20
1,1-Dichloroethene	<0.560		25.0	21.32		ug/L		85	37 - 132	8	26
Bromodichloromethane	<0.390		25.0	20.01		ug/L		80	57 - 130	1	20
1,2-Dichloropropane	<0.270		25.0	22.61		ug/L		90	57 - 130	8	20
Bromoform	<0.780		25.0	20.90		ug/L		84	44 - 130	3	20
2-Hexanone	<2.00		50.0	63.11		ug/L		126	46 - 140	3	20
Carbon disulfide	<0.450		25.0	22.81		ug/L		91	38 - 135	10	30
Carbon tetrachloride	<0.650		25.0	17.17		ug/L		69	45 - 132	1	20
Chlorobenzene	<0.400		25.0	20.66		ug/L		83	59 - 130	4	20
4-Methyl-2-pentanone (MIBK)	<2.10		50.0	57.49		ug/L		115	47 - 139	2	20
Chlorodibromomethane	<0.750		25.0	18.73		ug/L		75	54 - 130	1	20
Chloroform	<1.30		25.0	21.37		ug/L		85	51 - 130	5	20
1,1,1,2-Tetrachloroethane	<0.380		25.0	19.97		ug/L		80	55 - 130	1	20
Chloroprene	<0.230		25.0	24.26		ug/L		97	43 - 133	8	20
1,1,2,2-Tetrachloroethane	<0.470		25.0	27.74		ug/L		111	54 - 130	4	20
cis-1,2-Dichloroethene	<0.210		25.0	20.88		ug/L		84	45 - 130	5	20
cis-1,3-Dichloropropene	<0.250		25.0	22.64		ug/L		91	53 - 130	2	20
Dibromomethane	<0.330		25.0	20.46		ug/L		82	59 - 130	1	20
Ethyl methacrylate	<0.680		25.0	26.62		ug/L		106	54 - 130	1	20
Ethylbenzene	<0.310		25.0	22.36		ug/L		89	45 - 130	4	20
Iodomethane	<7.00		25.0	20.22		ug/L		81	10 - 150	5	35
1,1,1-Trichloroethane	<0.190		25.0	18.74		ug/L		75	52 - 130	6	20
1,1,2-Trichloroethane	<0.450		25.0	22.42		ug/L		90	58 - 130	4	20
Methacrylonitrile	<3.30		250	219.2		ug/L		88	55 - 130	1	20
Methyl methacrylate	<0.760		50.0	51.87		ug/L		104	44 - 139	2	20
Methylene Chloride	<1.70		25.0	23.63		ug/L		95	37 - 150	5	24
1,2,3-Trichloropropane	<0.590		25.0	23.71		ug/L		95	49 - 130	7	26
Naphthalene	<3.00		25.0	25.52		ug/L		102	40 - 150	4	30
Propionitrile	<3.40		250	274.9		ug/L		110	49 - 135	3	20
Styrene	<0.370		25.0	22.77		ug/L		91	47 - 130	4	20
Tetrachloroethene	<0.480		25.0	17.39		ug/L		70	47 - 130	1	20
Toluene	<0.430		25.0	20.71		ug/L		83	51 - 130	7	20
trans-1,2-Dichloroethene	<0.270		25.0	20.69		ug/L		83	48 - 130	6	22
trans-1,3-Dichloropropene	<0.560		25.0	24.58		ug/L		98	50 - 130	7	20
trans-1,4-Dichloro-2-butene	<1.10		25.0	27.39		ug/L		110	26 - 150	4	23
Trichloroethene	<0.430		25.0	19.81		ug/L		79	51 - 130	4	20

Method: 8260D - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: 310-291233-1 MSD
Matrix: Water
Analysis Batch: 434391

Client Sample ID: GU-2A_24_09
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Vinyl acetate	<2.50		50.0	44.18		ug/L		88	29 - 150	1	23
Xylenes, Total	<0.400		50.0	42.11		ug/L		84	43 - 130	4	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Dibromofluoromethane (Surr)	*92*		*73 - 130*
Toluene-d8 (Surr)	*104*		*80 - 120*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 310-434383/1-A
Matrix: Water
Analysis Batch: 435275

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 434383

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4,5-Tetrachlorobenzene	<0.540		10.0	0.540	ug/L		09/26/24 10:27	10/04/24 15:03	1
1,3,5-Trinitrobenzene	NC		10.0	2.30	ug/L		09/26/24 10:27	10/04/24 15:03	1
1,3-Dinitrobenzene	<3.20		10.0	3.20	ug/L		09/26/24 10:27	10/04/24 15:03	1
1,4-Naphthoquinone	NC		10.0	3.60	ug/L		09/26/24 10:27	10/04/24 15:03	1
1,4-phenylenediamine	NC		10.0	1.90	ug/L		09/26/24 10:27	10/04/24 15:03	1
1-Naphthylamine	NC		10.0	2.50	ug/L		09/26/24 10:27	10/04/24 15:03	1
2,3,4,6-Tetrachlorophenol	<5.30		10.0	5.30	ug/L		09/26/24 10:27	10/04/24 15:03	1
2,4,5-Trichlorophenol	<5.30		10.0	5.30	ug/L		09/26/24 10:27	10/04/24 15:03	1
2,4,6-Trichlorophenol	<5.00		10.0	5.00	ug/L		09/26/24 10:27	10/04/24 15:03	1
2,4-Dichlorophenol	<0.850		10.0	0.850	ug/L		09/26/24 10:27	10/04/24 15:03	1
2,4-Dimethylphenol	<0.580		10.0	0.580	ug/L		09/26/24 10:27	10/04/24 15:03	1
2,4-Dinitrophenol	<13.0		20.0	13.0	ug/L		09/26/24 10:27	10/04/24 15:03	1
2,4-Dinitrotoluene	<6.40		10.0	6.40	ug/L		09/26/24 10:27	10/04/24 15:03	1
2,6-Dichlorophenol	<0.690		10.0	0.690	ug/L		09/26/24 10:27	10/04/24 15:03	1
2,6-Dinitrotoluene	<0.520		10.0	0.520	ug/L		09/26/24 10:27	10/04/24 15:03	1
2-Acetylaminofluorene	NC		10.0	2.70	ug/L		09/26/24 10:27	10/04/24 15:03	1
2-Chloronaphthalene	<0.640		10.0	0.640	ug/L		09/26/24 10:27	10/04/24 15:03	1
2-Chlorophenol	<0.540		10.0	0.540	ug/L		09/26/24 10:27	10/04/24 15:03	1
2-Methylnaphthalene	<0.590		10.0	0.590	ug/L		09/26/24 10:27	10/04/24 15:03	1
2-Methylphenol	<0.650		10.0	0.650	ug/L		09/26/24 10:27	10/04/24 15:03	1
2-Naphthylamine	NC		10.0	2.10	ug/L		09/26/24 10:27	10/04/24 15:03	1
2-Nitroaniline	<5.90		10.0	5.90	ug/L		09/26/24 10:27	10/04/24 15:03	1
2-Nitrophenol	<6.80		10.0	6.80	ug/L		09/26/24 10:27	10/04/24 15:03	1
3,3'-Dichlorobenzidine	<1.40		10.0	1.40	ug/L		09/26/24 10:27	10/04/24 15:03	1
3,3'-Dimethylbenzidine	NC		10.0	1.50	ug/L		09/26/24 10:27	10/04/24 15:03	1
3-Methylcholanthrene	NC		10.0	0.320	ug/L		09/26/24 10:27	10/04/24 15:03	1
3-Nitroaniline	<2.70		10.0	2.70	ug/L		09/26/24 10:27	10/04/24 15:03	1
4,6-Dinitro-2-methylphenol	<6.90		10.0	6.90	ug/L		09/26/24 10:27	10/04/24 15:03	1
4-Aminobiphenyl	NC		10.0	2.20	ug/L		09/26/24 10:27	10/04/24 15:03	1
4-Bromophenyl phenyl ether	<0.700		10.0	0.700	ug/L		09/26/24 10:27	10/04/24 15:03	1
4-Chloro-3-methylphenol	<0.840		10.0	0.840	ug/L		09/26/24 10:27	10/04/24 15:03	1
4-Chloroaniline	<0.620		10.0	0.620	ug/L		09/26/24 10:27	10/04/24 15:03	1
4-Chlorophenyl phenyl ether	<0.690		10.0	0.690	ug/L		09/26/24 10:27	10/04/24 15:03	1
Methylphenol, 3 & 4	<0.700		10.0	0.700	ug/L		09/26/24 10:27	10/04/24 15:03	1

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 310-434383/1-A
Matrix: Water
Analysis Batch: 435275

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 434383

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitroaniline	<1.30		10.0	1.30	ug/L		09/26/24 10:27	10/04/24 15:03	1
4-Nitrophenol	<7.60		10.0	7.60	ug/L		09/26/24 10:27	10/04/24 15:03	1
5-Nitro-o-toluidine	NC		10.0	2.80	ug/L		09/26/24 10:27	10/04/24 15:03	1
7,12-Dimethylbenz(a)anthracene	NC		10.0	1.90	ug/L		09/26/24 10:27	10/04/24 15:03	1
Acenaphthene	<0.640		10.0	0.640	ug/L		09/26/24 10:27	10/04/24 15:03	1
Acenaphthylene	<0.720		10.0	0.720	ug/L		09/26/24 10:27	10/04/24 15:03	1
Acetophenone	<0.690		10.0	0.690	ug/L		09/26/24 10:27	10/04/24 15:03	1
Anthracene	<0.870		10.0	0.870	ug/L		09/26/24 10:27	10/04/24 15:03	1
Benzo[a]anthracene	<0.850		10.0	0.850	ug/L		09/26/24 10:27	10/04/24 15:03	1
Benzo[a]pyrene	<8.10		10.0	8.10	ug/L		09/26/24 10:27	10/04/24 15:03	1
Benzo[b]fluoranthene	<4.90		10.0	4.90	ug/L		09/26/24 10:27	10/04/24 15:03	1
Benzo[g,h,i]perylene	<6.30		10.0	6.30	ug/L		09/26/24 10:27	10/04/24 15:03	1
Benzo[k]fluoranthene	<2.20		10.0	2.20	ug/L		09/26/24 10:27	10/04/24 15:03	1
Benzyl alcohol	<1.30		10.0	1.30	ug/L		09/26/24 10:27	10/04/24 15:03	1
Bis(2-chloroethoxy)methane	<0.760		10.0	0.760	ug/L		09/26/24 10:27	10/04/24 15:03	1
Bis(2-chloroethyl)ether	<0.820		10.0	0.820	ug/L		09/26/24 10:27	10/04/24 15:03	1
2,2'-oxybis[1-chloropropane]	<0.540		10.0	0.540	ug/L		09/26/24 10:27	10/04/24 15:03	1
Bis(2-ethylhexyl) phthalate	<5.50		10.0	5.50	ug/L		09/26/24 10:27	10/04/24 15:03	1
Butyl benzyl phthalate	<5.40		10.0	5.40	ug/L		09/26/24 10:27	10/04/24 15:03	1
Chlorobenzilate	NC		10.0	3.60	ug/L		09/26/24 10:27	10/04/24 15:03	1
Chrysene	<0.870		10.0	0.870	ug/L		09/26/24 10:27	10/04/24 15:03	1
Dibenzo(a,h)anthracene	<3.90		10.0	3.90	ug/L		09/26/24 10:27	10/04/24 15:03	1
Dibenzofuran	<0.740		10.0	0.740	ug/L		09/26/24 10:27	10/04/24 15:03	1
Diethyl phthalate	<1.70		10.0	1.70	ug/L		09/26/24 10:27	10/04/24 15:03	1
Dimethoate	NC		10.0	3.60	ug/L		09/26/24 10:27	10/04/24 15:03	1
Dimethyl phthalate	<1.00		10.0	1.00	ug/L		09/26/24 10:27	10/04/24 15:03	1
Di-n-butyl phthalate	<5.60		10.0	5.60	ug/L		09/26/24 10:27	10/04/24 15:03	1
Di-n-octyl phthalate	<7.00		20.0	7.00	ug/L		09/26/24 10:27	10/04/24 15:03	1
Dinoseb	NC		10.0	2.40	ug/L		09/26/24 10:27	10/04/24 15:03	1
Diphenylamine	<6.00		10.0	6.00	ug/L		09/26/24 10:27	10/04/24 15:03	1
Disulfoton	NC		10.0	2.40	ug/L		09/26/24 10:27	10/04/24 15:03	1
Ethyl methanesulfonate	NC		10.0	3.60	ug/L		09/26/24 10:27	10/04/24 15:03	1
Ethyl Parathion	NC		10.0	2.20	ug/L		09/26/24 10:27	10/04/24 15:03	1
Famphur	NC		10.0	3.80	ug/L		09/26/24 10:27	10/04/24 15:03	1
Fluoranthene	<1.70		10.0	1.70	ug/L		09/26/24 10:27	10/04/24 15:03	1
Fluorene	<0.790		10.0	0.790	ug/L		09/26/24 10:27	10/04/24 15:03	1
Hexachlorobenzene	<0.700		10.0	0.700	ug/L		09/26/24 10:27	10/04/24 15:03	1
Hexachlorobutadiene	<0.860		10.0	0.860	ug/L		09/26/24 10:27	10/04/24 15:03	1
Hexachlorocyclopentadiene	<5.10		10.0	5.10	ug/L		09/26/24 10:27	10/04/24 15:03	1
Hexachloroethane	<0.970		10.0	0.970	ug/L		09/26/24 10:27	10/04/24 15:03	1
Hexachloropropene	NC		10.0	2.60	ug/L		09/26/24 10:27	10/04/24 15:03	1
Indeno[1,2,3-cd]pyrene	<4.20		10.0	4.20	ug/L		09/26/24 10:27	10/04/24 15:03	1
Isodrin	NC		10.0	4.70	ug/L		09/26/24 10:27	10/04/24 15:03	1
Isophorone	<0.930		10.0	0.930	ug/L		09/26/24 10:27	10/04/24 15:03	1
Kepone	NC		10.0	1.00	ug/L		09/26/24 10:27	10/04/24 15:03	1
Methapyrilene	NC		10.0	0.760	ug/L		09/26/24 10:27	10/04/24 15:03	1
Methyl methanesulfonate	NC		10.0	3.30	ug/L		09/26/24 10:27	10/04/24 15:03	1
Methyl parathion	NC		10.0	2.30	ug/L		09/26/24 10:27	10/04/24 15:03	1
Nitrobenzene	<0.800		10.0	0.800	ug/L		09/26/24 10:27	10/04/24 15:03	1

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 310-434383/1-A
Matrix: Water
Analysis Batch: 435275

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 434383

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodiethylamine	NC		10.0	3.40	ug/L		09/26/24 10:27	10/04/24 15:03	1
N-Nitrosodimethylamine	<0.720		10.0	0.720	ug/L		09/26/24 10:27	10/04/24 15:03	1
N-Nitrosodi-n-butylamine	NC		10.0	3.90	ug/L		09/26/24 10:27	10/04/24 15:03	1
N-Nitrosodi-n-propylamine	<0.920		10.0	0.920	ug/L		09/26/24 10:27	10/04/24 15:03	1
N-Nitrosodiphenylamine	<0.750		10.0	0.750	ug/L		09/26/24 10:27	10/04/24 15:03	1
N-Nitrosomethylethylamine	NC		10.0	4.90	ug/L		09/26/24 10:27	10/04/24 15:03	1
N-Nitrosopiperidine	NC		10.0	2.70	ug/L		09/26/24 10:27	10/04/24 15:03	1
N-Nitrosopyrrolidine	NC		10.0	3.60	ug/L		09/26/24 10:27	10/04/24 15:03	1
o,o',o''-Triethylphosphorothioate	NC		10.0	3.20	ug/L		09/26/24 10:27	10/04/24 15:03	1
o-Toluidine	NC		10.0	2.90	ug/L		09/26/24 10:27	10/04/24 15:03	1
p-Dimethylamino azobenzene	NC		10.0	2.20	ug/L		09/26/24 10:27	10/04/24 15:03	1
Pentachlorobenzene	NC		10.0	2.80	ug/L		09/26/24 10:27	10/04/24 15:03	1
Pentachloronitrobenzene	NC		10.0	5.80	ug/L		09/26/24 10:27	10/04/24 15:03	1
Pentachlorophenol	<9.60		10.0	9.60	ug/L		09/26/24 10:27	10/04/24 15:03	1
Phenacetin	NC		10.0	1.90	ug/L		09/26/24 10:27	10/04/24 15:03	1
Phenanthrene	<0.790		10.0	0.790	ug/L		09/26/24 10:27	10/04/24 15:03	1
Phenol	<1.10		10.0	1.10	ug/L		09/26/24 10:27	10/04/24 15:03	1
Phorate	NC		10.0	3.20	ug/L		09/26/24 10:27	10/04/24 15:03	1
Pronamide	NC		10.0	2.70	ug/L		09/26/24 10:27	10/04/24 15:03	1
Pyrene	<0.790		10.0	0.790	ug/L		09/26/24 10:27	10/04/24 15:03	1
Safrole	NC		10.0	2.80	ug/L		09/26/24 10:27	10/04/24 15:03	1
Thionazin	NC		10.0	3.50	ug/L		09/26/24 10:27	10/04/24 15:03	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorophenol (Surr)	*69*		*25 - 110*	*09/26/24 10:27*	*10/04/24 15:03*	*1*
Phenol-d5 (Surr)	*58*		*21 - 110*	*09/26/24 10:27*	*10/04/24 15:03*	*1*
Nitrobenzene-d5 (Surr)	*92*		*45 - 129*	*09/26/24 10:27*	*10/04/24 15:03*	*1*
2-Fluorobiphenyl (Surr)	*76*		*39 - 118*	*09/26/24 10:27*	*10/04/24 15:03*	*1*
2,4,6-Tribromophenol (Surr)	*87*		*27 - 136*	*09/26/24 10:27*	*10/04/24 15:03*	*1*
Terphenyl-d14 (Surr)	*105*		*12 - 144*	*09/26/24 10:27*	*10/04/24 15:03*	*1*

Lab Sample ID: MB 310-434383/1-A
Matrix: Water
Analysis Batch: 435538

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 434383

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trinitrobenzene	<2.30		10.0	2.30	ug/L		09/26/24 10:27	10/08/24 11:43	1
1,4-Naphthoquinone	<3.60		10.0	3.60	ug/L		09/26/24 10:27	10/08/24 11:43	1
1,4-phenylenediamine	<1.90		10.0	1.90	ug/L		09/26/24 10:27	10/08/24 11:43	1
1-Naphthylamine	<2.50		10.0	2.50	ug/L		09/26/24 10:27	10/08/24 11:43	1
2-Acetylaminofluorene	<2.70		10.0	2.70	ug/L		09/26/24 10:27	10/08/24 11:43	1
2-Naphthylamine	<2.10		10.0	2.10	ug/L		09/26/24 10:27	10/08/24 11:43	1
3,3'-Dimethylbenzidine	<1.50		10.0	1.50	ug/L		09/26/24 10:27	10/08/24 11:43	1
3-Methylcholanthrene	<0.320		10.0	0.320	ug/L		09/26/24 10:27	10/08/24 11:43	1
4-Aminobiphenyl	<2.20		10.0	2.20	ug/L		09/26/24 10:27	10/08/24 11:43	1
5-Nitro-o-toluidine	<2.80		10.0	2.80	ug/L		09/26/24 10:27	10/08/24 11:43	1
7,12-Dimethylbenz(a)anthracene	<1.90		10.0	1.90	ug/L		09/26/24 10:27	10/08/24 11:43	1
2,2'-oxybis[1-chloropropane]	<0.540		10.0	0.540	ug/L		09/26/24 10:27	10/08/24 11:43	1

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 310-434383/1-A
Matrix: Water
Analysis Batch: 435538

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 434383

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzilate	<3.60		10.0	3.60	ug/L		09/26/24 10:27	10/08/24 11:43	1
Diallate	<4.00		10.0	4.00	ug/L		09/26/24 10:27	10/08/24 11:43	1
Dimethoate	<3.60		10.0	3.60	ug/L		09/26/24 10:27	10/08/24 11:43	1
Dinoseb	<2.40		10.0	2.40	ug/L		09/26/24 10:27	10/08/24 11:43	1
Disulfoton	<2.40		10.0	2.40	ug/L		09/26/24 10:27	10/08/24 11:43	1
Ethyl methanesulfonate	<3.60		10.0	3.60	ug/L		09/26/24 10:27	10/08/24 11:43	1
Ethyl Parathion	<2.20		10.0	2.20	ug/L		09/26/24 10:27	10/08/24 11:43	1
Famphur	<3.80		10.0	3.80	ug/L		09/26/24 10:27	10/08/24 11:43	1
Hexachloropropene	<2.60		10.0	2.60	ug/L		09/26/24 10:27	10/08/24 11:43	1
Isodrin	<4.70		10.0	4.70	ug/L		09/26/24 10:27	10/08/24 11:43	1
Isosafrole	<2.30		10.0	2.30	ug/L		09/26/24 10:27	10/08/24 11:43	1
Kepone	<1.00		10.0	1.00	ug/L		09/26/24 10:27	10/08/24 11:43	1
Methapyrilene	<0.760		10.0	0.760	ug/L		09/26/24 10:27	10/08/24 11:43	1
Methyl methanesulfonate	<3.30		10.0	3.30	ug/L		09/26/24 10:27	10/08/24 11:43	1
Methyl parathion	<2.30		10.0	2.30	ug/L		09/26/24 10:27	10/08/24 11:43	1
N-Nitrosodiethylamine	<3.40		10.0	3.40	ug/L		09/26/24 10:27	10/08/24 11:43	1
N-Nitrosodi-n-butylamine	<3.90		10.0	3.90	ug/L		09/26/24 10:27	10/08/24 11:43	1
N-Nitrosomethylethylamine	<4.90		10.0	4.90	ug/L		09/26/24 10:27	10/08/24 11:43	1
N-Nitrosopiperidine	<2.70		10.0	2.70	ug/L		09/26/24 10:27	10/08/24 11:43	1
N-Nitrosopyrrolidine	<3.60		10.0	3.60	ug/L		09/26/24 10:27	10/08/24 11:43	1
o,o',o''-Triethylphosphorothioate	<3.20		10.0	3.20	ug/L		09/26/24 10:27	10/08/24 11:43	1
o-Toluidine	<2.90		10.0	2.90	ug/L		09/26/24 10:27	10/08/24 11:43	1
p-Dimethylamino azobenzene	<2.20		10.0	2.20	ug/L		09/26/24 10:27	10/08/24 11:43	1
Pentachlorobenzene	<2.80		10.0	2.80	ug/L		09/26/24 10:27	10/08/24 11:43	1
Pentachloronitrobenzene	<5.80		10.0	5.80	ug/L		09/26/24 10:27	10/08/24 11:43	1
Pentachlorophenol	<9.60		10.0	9.60	ug/L		09/26/24 10:27	10/08/24 11:43	1
Phenacetin	<1.90		10.0	1.90	ug/L		09/26/24 10:27	10/08/24 11:43	1
Phorate	<3.20		10.0	3.20	ug/L		09/26/24 10:27	10/08/24 11:43	1
Pronamide	<2.70		10.0	2.70	ug/L		09/26/24 10:27	10/08/24 11:43	1
Safrole	<2.80		10.0	2.80	ug/L		09/26/24 10:27	10/08/24 11:43	1
Thionazin	<3.50		10.0	3.50	ug/L		09/26/24 10:27	10/08/24 11:43	1

Lab Sample ID: LCS 310-434383/2-A
Matrix: Water
Analysis Batch: 435275

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 434383

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,4,5-Tetrachlorobenzene	100	72.23		ug/L		72	36 - 110
1,3-Dinitrobenzene	100	105.8		ug/L		106	45 - 138
2,3,4,6-Tetrachlorophenol	100	94.84		ug/L		95	33 - 134
2,4,5-Trichlorophenol	100	95.98		ug/L		96	35 - 133
2,4,6-Trichlorophenol	100	99.54		ug/L		100	28 - 139
2,4-Dichlorophenol	100	98.33		ug/L		98	41 - 124
2,4-Dimethylphenol	100	60.35		ug/L		60	31 - 142
2,4-Dinitrophenol	200	168.9		ug/L		84	10 - 138
2,4-Dinitrotoluene	100	91.78		ug/L		92	47 - 137
2,6-Dichlorophenol	100	94.08		ug/L		94	30 - 130
2,6-Dinitrotoluene	100	94.06		ug/L		94	51 - 130
2-Chloronaphthalene	100	86.75		ug/L		87	37 - 110

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 310-434383/2-A
Matrix: Water
Analysis Batch: 435275

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 434383

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2-Chlorophenol	100	97.51		ug/L		98	44 - 117
2-Methylnaphthalene	100	88.81		ug/L		89	33 - 110
2-Methylphenol	100	84.50		ug/L		85	47 - 118
2-Nitroaniline	100	97.18		ug/L		97	50 - 135
2-Nitrophenol	100	100.5		ug/L		100	41 - 129
3-Nitroaniline	100	92.01		ug/L		92	42 - 139
4,6-Dinitro-2-methylphenol	200	213.2		ug/L		107	22 - 143
4-Bromophenyl phenyl ether	100	94.99		ug/L		95	45 - 119
4-Chloro-3-methylphenol	100	102.7		ug/L		103	49 - 130
4-Chloroaniline	100	82.03		ug/L		82	21 - 139
4-Chlorophenyl phenyl ether	100	93.55		ug/L		94	44 - 116
Methylphenol, 3 & 4	100	92.50		ug/L		93	46 - 117
4-Nitroaniline	100	85.67		ug/L		86	31 - 145
4-Nitrophenol	200	120.6		ug/L		60	18 - 110
Acenaphthene	100	78.25		ug/L		78	43 - 110
Acenaphthylene	100	77.54		ug/L		78	40 - 110
Acetophenone	100	91.20		ug/L		91	48 - 119
Anthracene	100	92.93		ug/L		93	51 - 120
Benzo[a]anthracene	100	95.21		ug/L		95	51 - 123
Benzo[a]pyrene	100	95.42		ug/L		95	48 - 125
Benzo[b]fluoranthene	100	97.73		ug/L		98	49 - 129
Benzo[g,h,i]perylene	100	93.54		ug/L		94	43 - 139
Benzo[k]fluoranthene	100	98.33		ug/L		98	47 - 130
Benzyl alcohol	100	95.09		ug/L		95	39 - 128
Bis(2-chloroethoxy)methane	100	88.68		ug/L		89	48 - 121
Bis(2-chloroethyl)ether	100	85.06		ug/L		85	43 - 123
2,2'-oxybis[1-chloropropane]	100	76.41		ug/L		76	34 - 123
Bis(2-ethylhexyl) phthalate	100	99.08		ug/L		99	43 - 143
Butyl benzyl phthalate	100	98.23		ug/L		98	46 - 135
Chrysene	100	94.70		ug/L		95	51 - 125
Dibenzo(a,h)anthracene	100	114.8		ug/L		115	38 - 149
Dibenzofuran	100	92.39		ug/L		92	45 - 112
Diethyl phthalate	100	83.09		ug/L		83	43 - 135
Dimethyl phthalate	100	89.97		ug/L		90	43 - 129
Di-n-butyl phthalate	100	93.69		ug/L		94	50 - 133
Di-n-octyl phthalate	100	98.90		ug/L		99	34 - 150
Fluoranthene	100	88.11		ug/L		88	47 - 128
Fluorene	100	92.61		ug/L		93	45 - 119
Hexachlorobenzene	100	98.45		ug/L		98	48 - 119
Hexachlorobutadiene	100	65.64		ug/L		66	32 - 110
Hexachlorocyclopentadiene	100	14.68		ug/L		15	10 - 110
Hexachloroethane	100	61.11		ug/L		61	31 - 110
Indeno[1,2,3-cd]pyrene	100	115.4		ug/L		115	37 - 150
Isophorone	100	89.56		ug/L		90	50 - 125
Nitrobenzene	100	90.64		ug/L		91	47 - 116
N-Nitrosodimethylamine	100	78.57		ug/L		79	37 - 110
N-Nitrosodi-n-propylamine	100	96.62		ug/L		97	45 - 130
N-Nitrosodiphenylamine	100	98.69		ug/L		99	49 - 121
Pentachlorophenol	200	198.8		ug/L		99	26 - 133

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 310-434383/2-A
Matrix: Water
Analysis Batch: 435275

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 434383

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Phenanthrene			100	91.53		ug/L		92	51 - 117		
Phenol			100	63.33		ug/L		63	29 - 110		
Pyrene			100	103.4		ug/L		103	48 - 127		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorophenol (Surr)	*64*		*25 - 110*
Phenol-d5 (Surr)	*53*		*21 - 110*
Nitrobenzene-d5 (Surr)	*82*		*45 - 129*
2-Fluorobiphenyl (Surr)	*70*		*39 - 118*
2,4,6-Tribromophenol (Surr)	*84*		*27 - 136*
Terphenyl-d14 (Surr)	*94*		*12 - 144*

Lab Sample ID: LCSD 310-434383/3-A
Matrix: Water
Analysis Batch: 435275

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 434383

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,2,4,5-Tetrachlorobenzene			100	71.38		ug/L		71	36 - 110	1	35
1,3-Dinitrobenzene			100	95.64		ug/L		96	45 - 138	10	35
2,3,4,6-Tetrachlorophenol			100	81.97		ug/L		82	33 - 134	15	35
2,4,5-Trichlorophenol			100	83.45		ug/L		83	35 - 133	14	35
2,4,6-Trichlorophenol			100	88.39		ug/L		88	28 - 139	12	35
2,4-Dichlorophenol			100	88.72		ug/L		89	41 - 124	10	35
2,4-Dimethylphenol			100	52.90		ug/L		53	31 - 142	13	35
2,4-Dinitrophenol			200	91.15	*1	ug/L		46	10 - 138	60	35
2,4-Dinitrotoluene			100	81.53		ug/L		82	47 - 137	12	35
2,6-Dichlorophenol			100	83.82		ug/L		84	30 - 130	12	35
2,6-Dinitrotoluene			100	84.67		ug/L		85	51 - 130	11	35
2-Chloronaphthalene			100	80.36		ug/L		80	37 - 110	8	35
2-Chlorophenol			100	85.20		ug/L		85	44 - 117	13	35
2-Methylnaphthalene			100	82.29		ug/L		82	33 - 110	8	35
2-Methylphenol			100	74.50		ug/L		74	47 - 118	13	35
2-Nitroaniline			100	86.72		ug/L		87	50 - 135	11	35
2-Nitrophenol			100	89.27		ug/L		89	41 - 129	12	35
3-Nitroaniline			100	80.43		ug/L		80	42 - 139	13	35
4,6-Dinitro-2-methylphenol			200	142.3	*1	ug/L		71	22 - 143	40	35
4-Bromophenyl phenyl ether			100	84.45		ug/L		84	45 - 119	12	35
4-Chloro-3-methylphenol			100	93.66		ug/L		94	49 - 130	9	35
4-Chloroaniline			100	67.95		ug/L		68	21 - 139	19	35
4-Chlorophenyl phenyl ether			100	84.41		ug/L		84	44 - 116	10	35
Methylphenol, 3 & 4			100	82.39		ug/L		82	46 - 117	12	35
4-Nitroaniline			100	80.86		ug/L		81	31 - 145	6	35
4-Nitrophenol			200	104.6		ug/L		52	18 - 110	14	35
Acenaphthene			100	73.05		ug/L		73	43 - 110	7	35
Acenaphthylene			100	70.82		ug/L		71	40 - 110	9	35
Acetophenone			100	80.01		ug/L		80	48 - 119	13	35
Anthracene			100	83.36		ug/L		83	51 - 120	11	35
Benzo[a]anthracene			100	85.23		ug/L		85	51 - 123	11	35

Method: 8270E - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 310-434383/3-A
Matrix: Water
Analysis Batch: 435275

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 434383

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzo[a]pyrene			100	83.79		ug/L		84	48 - 125	13	35
Benzo[b]fluoranthene			100	89.72		ug/L		90	49 - 129	9	35
Benzo[g,h,i]perylene			100	82.08		ug/L		82	43 - 139	13	35
Benzo[k]fluoranthene			100	84.29		ug/L		84	47 - 130	15	35
Benzyl alcohol			100	82.35		ug/L		82	39 - 128	14	35
Bis(2-chloroethoxy)methane			100	78.10		ug/L		78	48 - 121	13	35
Bis(2-chloroethyl)ether			100	75.30		ug/L		75	43 - 123	12	35
2,2'-oxybis[1-chloropropane]			100	66.51		ug/L		67	34 - 123	14	35
Bis(2-ethylhexyl) phthalate			100	88.07		ug/L		88	43 - 143	12	35
Butyl benzyl phthalate			100	86.63		ug/L		87	46 - 135	13	35
Chrysene			100	85.21		ug/L		85	51 - 125	11	35
Dibenzo(a,h)anthracene			100	102.7		ug/L		103	38 - 149	11	35
Dibenzofuran			100	83.77		ug/L		84	45 - 112	10	35
Diethyl phthalate			100	75.31		ug/L		75	43 - 135	10	35
Dimethyl phthalate			100	81.61		ug/L		82	43 - 129	10	35
Di-n-butyl phthalate			100	83.70		ug/L		84	50 - 133	11	35
Di-n-octyl phthalate			100	86.18		ug/L		86	34 - 150	14	35
Fluoranthene			100	77.24		ug/L		77	47 - 128	13	35
Fluorene			100	83.79		ug/L		84	45 - 119	10	35
Hexachlorobenzene			100	86.45		ug/L		86	48 - 119	13	35
Hexachlorobutadiene			100	66.41		ug/L		66	32 - 110	1	35
Hexachlorocyclopentadiene			100	13.42		ug/L		13	10 - 110	9	35
Hexachloroethane			100	61.02		ug/L		61	31 - 110	0	35
Indeno[1,2,3-cd]pyrene			100	100.0		ug/L		100	37 - 150	14	35
Isophorone			100	79.68		ug/L		80	50 - 125	12	35
Nitrobenzene			100	80.22		ug/L		80	47 - 116	12	35
N-Nitrosodimethylamine			100	68.74		ug/L		69	37 - 110	13	35
N-Nitrosodi-n-propylamine			100	84.51		ug/L		85	45 - 130	13	35
N-Nitrosodiphenylamine			100	89.75		ug/L		90	49 - 121	9	35
Pentachlorophenol			200	154.1		ug/L		77	26 - 133	25	35
Phenanthrene			100	82.31		ug/L		82	51 - 117	11	35
Phenol			100	56.55		ug/L		57	29 - 110	11	35
Pyrene			100	91.89		ug/L		92	48 - 127	12	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorophenol (Surr)	*76*		*25 - 110*
Phenol-d5 (Surr)	*63*		*21 - 110*
Nitrobenzene-d5 (Surr)	*92*		*45 - 129*
2-Fluorobiphenyl (Surr)	*78*		*39 - 118*
2,4,6-Tribromophenol (Surr)	*95*		*27 - 136*
Terphenyl-d14 (Surr)	*106*		*12 - 144*

Method: 8015C - Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)

Lab Sample ID: MB 310-434610/4
Matrix: Water
Analysis Batch: 434610

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetonitrile	<2.60		10.0	2.60	mg/L			09/28/24 13:44	1
Isobutanol	<2.40		10.0	2.40	mg/L			09/28/24 13:44	1

Lab Sample ID: LCS 310-434610/5
Matrix: Water
Analysis Batch: 434610

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acetonitrile	113	132.0		mg/L		117	67 - 132
Isobutanol	104	112.0		mg/L		107	80 - 121

Lab Sample ID: 310-291233-3 MS
Matrix: Water
Analysis Batch: 434610

Client Sample ID: MW-121R_24_09
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Acetonitrile	<2.60		113	129.3		mg/L		114	60 - 138
Isobutanol	<2.40		104	107.5		mg/L		103	72 - 131

Lab Sample ID: 310-291233-3 MSD
Matrix: Water
Analysis Batch: 434610

Client Sample ID: MW-121R_24_09
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acetonitrile	<2.60		113	130.5		mg/L		115	60 - 138	1	30
Isobutanol	<2.40		104	110.2		mg/L		106	72 - 131	3	30

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 310-434423/1-A
Matrix: Water
Analysis Batch: 435301

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 434423

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	<0.0270		0.0640	0.0270	ug/L		09/26/24 14:09	10/04/24 18:21	1
4,4'-DDE	<0.0270		0.0640	0.0270	ug/L		09/26/24 14:09	10/04/24 18:21	1
4,4'-DDT	<0.0420		0.0640	0.0420	ug/L		09/26/24 14:09	10/04/24 18:21	1
Aldrin	<0.0320		0.0640	0.0320	ug/L		09/26/24 14:09	10/04/24 18:21	1
alpha-BHC	<0.0290		0.0640	0.0290	ug/L		09/26/24 14:09	10/04/24 18:21	1
beta-BHC	<0.0370		0.0640	0.0370	ug/L		09/26/24 14:09	10/04/24 18:21	1
Chlordane (technical)	<0.810		2.00	0.810	ug/L		09/26/24 14:09	10/04/24 18:21	1
delta-BHC	<0.0270		0.0640	0.0270	ug/L		09/26/24 14:09	10/04/24 18:21	1
Dieldrin	<0.0260		0.0640	0.0260	ug/L		09/26/24 14:09	10/04/24 18:21	1
Endosulfan I	<0.0330		0.0640	0.0330	ug/L		09/26/24 14:09	10/04/24 18:21	1
Endosulfan II	<0.0290		0.0640	0.0290	ug/L		09/26/24 14:09	10/04/24 18:21	1
Endosulfan sulfate	<0.0300		0.0640	0.0300	ug/L		09/26/24 14:09	10/04/24 18:21	1
Endrin	<0.0260		0.0640	0.0260	ug/L		09/26/24 14:09	10/04/24 18:21	1
Endrin aldehyde	<0.0290		0.0640	0.0290	ug/L		09/26/24 14:09	10/04/24 18:21	1
gamma-BHC (Lindane)	<0.0360		0.0640	0.0360	ug/L		09/26/24 14:09	10/04/24 18:21	1
Heptachlor	<0.0330		0.0640	0.0330	ug/L		09/26/24 14:09	10/04/24 18:21	1

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 310-434423/1-A
Matrix: Water
Analysis Batch: 435301

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 434423

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Heptachlor epoxide	<0.0290		0.0640	0.0290	ug/L		09/26/24 14:09	10/04/24 18:21	1
Methoxychlor	<0.0410		0.0640	0.0410	ug/L		09/26/24 14:09	10/04/24 18:21	1
Toxaphene	<0.690		2.00	0.690	ug/L		09/26/24 14:09	10/04/24 18:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*85*		*10 - 124*	*09/26/24 14:09*	*10/04/24 18:21*	*1*
Tetrachloro-m-xylene	*69*		*10 - 124*	*09/26/24 14:09*	*10/04/24 18:21*	*1*

Lab Sample ID: LCS 310-434423/2-A
Matrix: Water
Analysis Batch: 435301

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 434423

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
4,4'-DDD			1.00	0.6987		ug/L		70	35 - 128		
4,4'-DDE			1.00	0.6606		ug/L		66	35 - 111		
4,4'-DDT			1.00	0.7019		ug/L		70	19 - 132		
Aldrin			1.00	0.5532		ug/L		55	15 - 110		
alpha-BHC			1.00	0.6637		ug/L		66	38 - 110		
beta-BHC			1.00	0.6835		ug/L		68	40 - 112		
delta-BHC			1.00	0.6979		ug/L		70	36 - 111		
Dieldrin			1.00	0.6927		ug/L		69	39 - 112		
Endosulfan I			1.00	0.6832		ug/L		68	10 - 110		
Endosulfan II			1.00	0.6698		ug/L		67	14 - 110		
Endosulfan sulfate			1.00	0.7017		ug/L		70	34 - 128		
Endrin			1.00	0.7505		ug/L		75	36 - 121		
Endrin aldehyde			1.00	0.6629		ug/L		66	38 - 110		
gamma-BHC (Lindane)			1.00	0.6838		ug/L		68	37 - 110		
Heptachlor			1.00	0.6232		ug/L		62	27 - 110		
Heptachlor epoxide			1.00	0.6997		ug/L		70	39 - 112		
Methoxychlor			1.00	0.7153		ug/L		72	10 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*75*		*10 - 124*
Tetrachloro-m-xylene	*53*		*10 - 124*

Lab Sample ID: LCSD 310-434423/3-A
Matrix: Water
Analysis Batch: 435301

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 434423

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
4,4'-DDD			1.00	0.6392		ug/L		64	35 - 128	9	35
4,4'-DDE			1.00	0.6132		ug/L		61	35 - 111	7	35
4,4'-DDT			1.00	0.6517		ug/L		65	19 - 132	7	35
Aldrin			1.00	0.5141		ug/L		51	15 - 110	7	35
alpha-BHC			1.00	0.6046		ug/L		60	38 - 110	9	35
beta-BHC			1.00	0.6240		ug/L		62	40 - 112	9	34
delta-BHC			1.00	0.6373		ug/L		64	36 - 111	7	35
Dieldrin			1.00	0.6388		ug/L		64	39 - 112	7	35

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCSD 310-434423/3-A
Matrix: Water
Analysis Batch: 435301

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 434423

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Endosulfan I			1.00	0.6309		ug/L		63	10 - 110	8	35
Endosulfan II			1.00	0.6141		ug/L		61	14 - 110	9	35
Endosulfan sulfate			1.00	0.6448		ug/L		64	34 - 128	8	35
Endrin			1.00	0.6892		ug/L		69	36 - 121	9	35
Endrin aldehyde			1.00	0.6111		ug/L		61	38 - 110	8	35
gamma-BHC (Lindane)			1.00	0.6245		ug/L		62	37 - 110	9	35
Heptachlor			1.00	0.5832		ug/L		58	27 - 110	7	35
Heptachlor epoxide			1.00	0.6410		ug/L		64	39 - 112	9	35
Methoxychlor			1.00	0.6497		ug/L		65	10 - 150	10	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*84*		*10 - 124*
Tetrachloro-m-xylene	*57*		*10 - 124*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 310-434841/1-A
Matrix: Water
Analysis Batch: 435515

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 434841

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	<0.170		0.800	0.170	ug/L		10/01/24 12:23	10/08/24 14:59	1
PCB-1221	<0.170		0.800	0.170	ug/L		10/01/24 12:23	10/08/24 14:59	1
PCB-1232	<0.170		0.800	0.170	ug/L		10/01/24 12:23	10/08/24 14:59	1
PCB-1242	<0.170		0.800	0.170	ug/L		10/01/24 12:23	10/08/24 14:59	1
PCB-1248	<0.110		0.800	0.110	ug/L		10/01/24 12:23	10/08/24 14:59	1
PCB-1254	<0.110		0.800	0.110	ug/L		10/01/24 12:23	10/08/24 14:59	1
PCB-1260	<0.110		0.800	0.110	ug/L		10/01/24 12:23	10/08/24 14:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl (Surr)	*96*		*10 - 124*	*10/01/24 12:23*	*10/08/24 14:59*	*1*
Tetrachloro-m-xylene	*83*		*10 - 124*	*10/01/24 12:23*	*10/08/24 14:59*	*1*

Lab Sample ID: LCS 310-434841/2-A
Matrix: Water
Analysis Batch: 435515

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 434841

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
PCB-1016			10.0	7.961		ug/L		80	32 - 134
PCB-1260			10.0	7.699		ug/L		77	34 - 124

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*90*		*10 - 124*
Tetrachloro-m-xylene	*84*		*10 - 124*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Lab Sample ID: LCSD 310-434841/3-A
Matrix: Water
Analysis Batch: 435515

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 434841

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
PCB-1016			10.0	6.897		ug/L		69	32 - 134	14	35
PCB-1260			10.0	6.588		ug/L		66	34 - 124	16	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCB Decachlorobiphenyl (Surr)	*66*		*10 - 124*
Tetrachloro-m-xylene	*64*		*10 - 124*

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 410-556888/1-A
Matrix: Water
Analysis Batch: 557038

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 556888

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silvex (2,4,5-TP)	<0.0220		0.0500	0.0220	ug/L		09/28/24 17:22	09/30/24 13:33	1
2,4-D	<0.250		0.600	0.250	ug/L		09/28/24 17:22	09/30/24 13:33	1
2,4,5-T	<0.0650		0.150	0.0650	ug/L		09/28/24 17:22	09/30/24 13:33	1

Lab Sample ID: LCS 410-556888/2-A
Matrix: Water
Analysis Batch: 557038

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 556888

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Silvex (2,4,5-TP)			0.250	0.3012		ug/L		120	62 - 170
2,4-D			2.50	2.609		ug/L		104	53 - 159
2,4,5-T			0.250	0.2866		ug/L		115	57 - 171

Lab Sample ID: LCSD 410-556888/3-A
Matrix: Water
Analysis Batch: 557038

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 556888

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Silvex (2,4,5-TP)			0.250	0.3105		ug/L		124	62 - 170	3	30
2,4-D			2.50	2.711		ug/L		108	53 - 159	4	30
2,4,5-T			0.250	0.2935		ug/L		117	57 - 171	2	30

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 310-434436/1-A
Matrix: Water
Analysis Batch: 435214

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 434436

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	<0.00100		0.00200	0.00100	mg/L		09/27/24 09:00	10/03/24 19:09	1
Arsenic	<0.000530		0.00200	0.000530	mg/L		09/27/24 09:00	10/03/24 19:09	1
Barium	<0.000660		0.00200	0.000660	mg/L		09/27/24 09:00	10/03/24 19:09	1
Beryllium	<0.000330		0.00100	0.000330	mg/L		09/27/24 09:00	10/03/24 19:09	1
Cadmium	<0.000100		0.000200	0.000100	mg/L		09/27/24 09:00	10/03/24 19:09	1
Chromium	<0.00120		0.00500	0.00120	mg/L		09/27/24 09:00	10/03/24 19:09	1

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

Lab Sample ID: MB 310-434436/1-A
Matrix: Water
Analysis Batch: 435214

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 434436

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	<0.000170		0.000500	0.000170	mg/L		09/27/24 09:00	10/03/24 19:09	1
Copper	<0.00180		0.00500	0.00180	mg/L		09/27/24 09:00	10/03/24 19:09	1
Lead	<0.000260		0.000500	0.000260	mg/L		09/27/24 09:00	10/03/24 19:09	1
Nickel	<0.00210		0.00500	0.00210	mg/L		09/27/24 09:00	10/03/24 19:09	1
Selenium	<0.00140		0.00500	0.00140	mg/L		09/27/24 09:00	10/03/24 19:09	1
Silver	<0.000500	^1+	0.00100	0.000500	mg/L		09/27/24 09:00	10/03/24 19:09	1
Thallium	<0.000570		0.00100	0.000570	mg/L		09/27/24 09:00	10/03/24 19:09	1
Tin	<0.00230		0.00500	0.00230	mg/L		09/27/24 09:00	10/03/24 19:09	1
Vanadium	<0.00110		0.00500	0.00110	mg/L		09/27/24 09:00	10/03/24 19:09	1
Zinc	<0.00970		0.0200	0.00970	mg/L		09/27/24 09:00	10/03/24 19:09	1

Lab Sample ID: LCS 310-434436/2-A
Matrix: Water
Analysis Batch: 435214

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 434436

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Antimony	0.200	0.2416	*+	mg/L		121	80 - 120
Arsenic	0.200	0.2205		mg/L		110	80 - 120
Barium	0.100	0.1091		mg/L		109	80 - 120
Beryllium	0.100	0.1020		mg/L		102	80 - 120
Cadmium	0.100	0.1047		mg/L		105	80 - 120
Chromium	0.100	0.09716		mg/L		97	80 - 120
Cobalt	0.100	0.1124		mg/L		112	80 - 120
Copper	0.200	0.2190		mg/L		110	80 - 120
Lead	0.200	0.2133		mg/L		107	80 - 120
Nickel	0.200	0.2105		mg/L		105	80 - 120
Selenium	0.400	0.4182		mg/L		105	80 - 120
Silver	0.100	0.1117	^1+	mg/L		112	80 - 120
Thallium	0.100	0.09618		mg/L		96	80 - 120
Tin	0.200	0.2209		mg/L		110	80 - 120
Vanadium	0.100	0.09333		mg/L		93	80 - 120
Zinc	0.200	0.1966		mg/L		98	80 - 120

Lab Sample ID: 310-291233-6 DU
Matrix: Water
Analysis Batch: 435214

Client Sample ID: MW-205_24_09
Prep Type: Total/NA
Prep Batch: 434436

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Antimony	<0.00100	*+	<0.00100	*+	mg/L		NC	20
Arsenic	0.00117	J	0.001183	J	mg/L		1	20
Barium	0.0223		0.02314		mg/L		4	20
Beryllium	<0.000330		<0.000330		mg/L		NC	20
Cadmium	<0.000100		<0.000100		mg/L		NC	20
Chromium	<0.00120		<0.00120		mg/L		NC	20
Cobalt	0.00582		0.005978		mg/L		3	20
Copper	<0.00180		<0.00180		mg/L		NC	20
Lead	0.000363	J	0.0003730	J	mg/L		3	20
Nickel	0.00871		0.009083		mg/L		4	20
Selenium	<0.00140		<0.00140		mg/L		NC	20

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

Lab Sample ID: 310-291233-6 DU — **Client Sample ID: MW-205_24_09**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 435214 — **Prep Batch: 434436**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Silver	<0.000500	^1+	<0.000500	^1+	mg/L		NC	20
Thallium	<0.000570		<0.000570		mg/L		NC	20
Tin	<0.00230		<0.00230		mg/L		NC	20
Vanadium	<0.00110		<0.00110		mg/L		NC	20
Zinc	<0.00970		<0.00970		mg/L		NC	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 310-435419/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 435592 — **Prep Batch: 435419**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	<0.000110		0.000200	0.000110	mg/L		10/07/24 14:55	10/08/24 15:25	1

Lab Sample ID: LCS 310-435419/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 435592 — **Prep Batch: 435419**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	0.00167	0.001539		mg/L		92	80 - 120

Method: 9012B - Cyanide, Total andor Amenable

Lab Sample ID: MB 310-434384/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 434597 — **Prep Batch: 434384**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	<0.00350		0.0100	0.00350	mg/L		09/26/24 10:32	09/27/24 20:14	1

Lab Sample ID: LCS 310-434384/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 434597 — **Prep Batch: 434384**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cyanide, Total	0.200	0.1859		mg/L		93	90 - 110

Method: 9034 - Sulfide, Acid soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 500-788237/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 788238 — **Prep Batch: 788237**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	<0.231		1.00	0.231	mg/L		09/29/24 18:00	09/30/24 01:40	1

Method: 9034 - Sulfide, Acid soluble and Insoluble (Titrimetric) (Continued)

Lab Sample ID: LCS 500-788237/2-A
Matrix: Water
Analysis Batch: 788238

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 788237

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Sulfide			3.64	3.664		mg/L		101	80 - 120		

Lab Sample ID: 310-291233-3 MS
Matrix: Water
Analysis Batch: 788238

Client Sample ID: MW-121R_24_09
Prep Type: Total/NA
Prep Batch: 788237

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Sulfide	<0.231		9.09	8.720		mg/L		96	75 - 125		

Lab Sample ID: 310-291233-3 MSD
Matrix: Water
Analysis Batch: 788238

Client Sample ID: MW-121R_24_09
Prep Type: Total/NA
Prep Batch: 788237

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfide	<0.231		9.09	8.120		mg/L		89	75 - 125	7	20

Method: I-3765-85 - Residue, Non-filterable (TSS)

Lab Sample ID: MB 310-434395/1
Matrix: Water
Analysis Batch: 434395

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<3.70		5.00	3.70	mg/L			09/26/24 11:31	1

Lab Sample ID: LCS 310-434395/2
Matrix: Water
Analysis Batch: 434395

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Suspended Solids			100	97.00		mg/L		97	81 - 116		

Lab Sample ID: MB 310-434408/1
Matrix: Water
Analysis Batch: 434408

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	<3.70		5.00	3.70	mg/L			09/26/24 12:16	1

Lab Sample ID: LCS 310-434408/2
Matrix: Water
Analysis Batch: 434408

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Suspended Solids			100	98.00		mg/L		98	81 - 116		

GC/MS VOA

Analysis Batch: 434388

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-291233-2	MW-119RR_24_09	Total/NA	Water	8260D	
310-291233-3	MW-121R_24_09	Total/NA	Water	8260D	
310-291233-4	MW-122R_24_09	Total/NA	Water	8260D	
310-291233-5	MW-200_24_09	Total/NA	Water	8260D	
310-291233-6	MW-205_24_09	Total/NA	Water	8260D	
310-291233-7	MW-206_24_09	Total/NA	Water	8260D	
310-291233-10	TB-1_24_09	Total/NA	Water	8260D	
MB 310-434388/5	Method Blank	Total/NA	Water	8260D	
LCS 310-434388/6	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-434388/7	Lab Control Sample	Total/NA	Water	8260D	

Analysis Batch: 434391

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-291233-1	GU-2A_24_09	Total/NA	Water	8260D	
310-291233-8	FB-1_24_09	Total/NA	Water	8260D	
310-291233-9	FD-1_24_09	Total/NA	Water	8260D	
MB 310-434391/5	Method Blank	Total/NA	Water	8260D	
LCS 310-434391/6	Lab Control Sample	Total/NA	Water	8260D	
LCS 310-434391/7	Lab Control Sample	Total/NA	Water	8260D	
310-291233-1 MS	GU-2A_24_09	Total/NA	Water	8260D	
310-291233-1 MSD	GU-2A_24_09	Total/NA	Water	8260D	

GC/MS Semi VOA

Prep Batch: 434383

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-291233-3	MW-121R_24_09	Total/NA	Water	3510C	
310-291233-4	MW-122R_24_09	Total/NA	Water	3510C	
310-291233-5	MW-200_24_09	Total/NA	Water	3510C	
310-291233-8	FB-1_24_09	Total/NA	Water	3510C	
310-291233-9	FD-1_24_09	Total/NA	Water	3510C	
MB 310-434383/1-A	Method Blank	Total/NA	Water	3510C	
LCS 310-434383/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 310-434383/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 435275

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-291233-3	MW-121R_24_09	Total/NA	Water	8270E	434383
310-291233-4	MW-122R_24_09	Total/NA	Water	8270E	434383
310-291233-5	MW-200_24_09	Total/NA	Water	8270E	434383
310-291233-8	FB-1_24_09	Total/NA	Water	8270E	434383
310-291233-9	FD-1_24_09	Total/NA	Water	8270E	434383
MB 310-434383/1-A	Method Blank	Total/NA	Water	8270E	434383
LCS 310-434383/2-A	Lab Control Sample	Total/NA	Water	8270E	434383
LCSD 310-434383/3-A	Lab Control Sample Dup	Total/NA	Water	8270E	434383

Analysis Batch: 435538

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-291233-3	MW-121R_24_09	Total/NA	Water	8270E	434383
310-291233-4	MW-122R_24_09	Total/NA	Water	8270E	434383
310-291233-5	MW-200_24_09	Total/NA	Water	8270E	434383

GC/MS Semi VOA (Continued)

Analysis Batch: 435538 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-291233-8	FB-1_24_09	Total/NA	Water	8270E	434383
310-291233-9	FD-1_24_09	Total/NA	Water	8270E	434383
MB 310-434383/1-A	Method Blank	Total/NA	Water	8270E	434383

GC Semi VOA

Prep Batch: 434423

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-291233-3	MW-121R_24_09	Total/NA	Water	3510C	
310-291233-4	MW-122R_24_09	Total/NA	Water	3510C	
310-291233-5	MW-200_24_09	Total/NA	Water	3510C	
310-291233-8	FB-1_24_09	Total/NA	Water	3510C	
310-291233-9	FD-1_24_09	Total/NA	Water	3510C	
MB 310-434423/1-A	Method Blank	Total/NA	Water	3510C	
LCS 310-434423/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 310-434423/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 434610

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-291233-3	MW-121R_24_09	Total/NA	Water	8015C	
310-291233-4	MW-122R_24_09	Total/NA	Water	8015C	
310-291233-5	MW-200_24_09	Total/NA	Water	8015C	
310-291233-8	FB-1_24_09	Total/NA	Water	8015C	
310-291233-9	FD-1_24_09	Total/NA	Water	8015C	
MB 310-434610/4	Method Blank	Total/NA	Water	8015C	
LCS 310-434610/5	Lab Control Sample	Total/NA	Water	8015C	
310-291233-3 MS	MW-121R_24_09	Total/NA	Water	8015C	
310-291233-3 MSD	MW-121R_24_09	Total/NA	Water	8015C	

Prep Batch: 434841

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-291233-3	MW-121R_24_09	Total/NA	Water	3510C	
310-291233-4	MW-122R_24_09	Total/NA	Water	3510C	
310-291233-5	MW-200_24_09	Total/NA	Water	3510C	
310-291233-8	FB-1_24_09	Total/NA	Water	3510C	
310-291233-9	FD-1_24_09	Total/NA	Water	3510C	
MB 310-434841/1-A	Method Blank	Total/NA	Water	3510C	
LCS 310-434841/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 310-434841/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

Analysis Batch: 435301

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-291233-3	MW-121R_24_09	Total/NA	Water	8081B	434423
310-291233-4	MW-122R_24_09	Total/NA	Water	8081B	434423
310-291233-5	MW-200_24_09	Total/NA	Water	8081B	434423
310-291233-8	FB-1_24_09	Total/NA	Water	8081B	434423
310-291233-9	FD-1_24_09	Total/NA	Water	8081B	434423
MB 310-434423/1-A	Method Blank	Total/NA	Water	8081B	434423
LCS 310-434423/2-A	Lab Control Sample	Total/NA	Water	8081B	434423
LCSD 310-434423/3-A	Lab Control Sample Dup	Total/NA	Water	8081B	434423

GC Semi VOA

Analysis Batch: 435515

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-291233-3	MW-121R_24_09	Total/NA	Water	8082A	434841
310-291233-4	MW-122R_24_09	Total/NA	Water	8082A	434841
310-291233-5	MW-200_24_09	Total/NA	Water	8082A	434841
310-291233-8	FB-1_24_09	Total/NA	Water	8082A	434841
310-291233-9	FD-1_24_09	Total/NA	Water	8082A	434841
MB 310-434841/1-A	Method Blank	Total/NA	Water	8082A	434841
LCS 310-434841/2-A	Lab Control Sample	Total/NA	Water	8082A	434841
LCSD 310-434841/3-A	Lab Control Sample Dup	Total/NA	Water	8082A	434841

Prep Batch: 556888

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-291233-3	MW-121R_24_09	Total/NA	Water	8151A	
310-291233-4	MW-122R_24_09	Total/NA	Water	8151A	
310-291233-5	MW-200_24_09	Total/NA	Water	8151A	
310-291233-8	FB-1_24_09	Total/NA	Water	8151A	
310-291233-9	FD-1_24_09	Total/NA	Water	8151A	
MB 410-556888/1-A	Method Blank	Total/NA	Water	8151A	
LCS 410-556888/2-A	Lab Control Sample	Total/NA	Water	8151A	
LCSD 410-556888/3-A	Lab Control Sample Dup	Total/NA	Water	8151A	

Analysis Batch: 557038

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-291233-3	MW-121R_24_09	Total/NA	Water	8151A	556888
310-291233-4	MW-122R_24_09	Total/NA	Water	8151A	556888
310-291233-5	MW-200_24_09	Total/NA	Water	8151A	556888
310-291233-8	FB-1_24_09	Total/NA	Water	8151A	556888
310-291233-9	FD-1_24_09	Total/NA	Water	8151A	556888
MB 410-556888/1-A	Method Blank	Total/NA	Water	8151A	556888
LCS 410-556888/2-A	Lab Control Sample	Total/NA	Water	8151A	556888
LCSD 410-556888/3-A	Lab Control Sample Dup	Total/NA	Water	8151A	556888

Metals

Prep Batch: 434436

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-291233-1	GU-2A_24_09	Total/NA	Water	3005A	
310-291233-2	MW-119RR_24_09	Total/NA	Water	3005A	
310-291233-3	MW-121R_24_09	Total/NA	Water	3005A	
310-291233-4	MW-122R_24_09	Total/NA	Water	3005A	
310-291233-5	MW-200_24_09	Total/NA	Water	3005A	
310-291233-6	MW-205_24_09	Total/NA	Water	3005A	
310-291233-7	MW-206_24_09	Total/NA	Water	3005A	
310-291233-8	FB-1_24_09	Total/NA	Water	3005A	
310-291233-9	FD-1_24_09	Total/NA	Water	3005A	
MB 310-434436/1-A	Method Blank	Total/NA	Water	3005A	
LCS 310-434436/2-A	Lab Control Sample	Total/NA	Water	3005A	
310-291233-6 DU	MW-205_24_09	Total/NA	Water	3005A	

Analysis Batch: 435214

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-291233-1	GU-2A_24_09	Total/NA	Water	6020B	434436

Metals (Continued)

Analysis Batch: 435214 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-291233-2	MW-119RR_24_09	Total/NA	Water	6020B	434436
310-291233-3	MW-121R_24_09	Total/NA	Water	6020B	434436
310-291233-4	MW-122R_24_09	Total/NA	Water	6020B	434436
310-291233-5	MW-200_24_09	Total/NA	Water	6020B	434436
310-291233-6	MW-205_24_09	Total/NA	Water	6020B	434436
310-291233-7	MW-206_24_09	Total/NA	Water	6020B	434436
310-291233-8	FB-1_24_09	Total/NA	Water	6020B	434436
310-291233-9	FD-1_24_09	Total/NA	Water	6020B	434436
MB 310-434436/1-A	Method Blank	Total/NA	Water	6020B	434436
LCS 310-434436/2-A	Lab Control Sample	Total/NA	Water	6020B	434436
310-291233-6 DU	MW-205_24_09	Total/NA	Water	6020B	434436

Prep Batch: 435419

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-291233-3	MW-121R_24_09	Total/NA	Water	7470A	
310-291233-4	MW-122R_24_09	Total/NA	Water	7470A	
310-291233-5	MW-200_24_09	Total/NA	Water	7470A	
310-291233-8	FB-1_24_09	Total/NA	Water	7470A	
310-291233-9	FD-1_24_09	Total/NA	Water	7470A	
MB 310-435419/1-A	Method Blank	Total/NA	Water	7470A	
LCS 310-435419/2-A	Lab Control Sample	Total/NA	Water	7470A	

Analysis Batch: 435592

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-291233-3	MW-121R_24_09	Total/NA	Water	7470A	435419
310-291233-4	MW-122R_24_09	Total/NA	Water	7470A	435419
310-291233-5	MW-200_24_09	Total/NA	Water	7470A	435419
310-291233-8	FB-1_24_09	Total/NA	Water	7470A	435419
310-291233-9	FD-1_24_09	Total/NA	Water	7470A	435419
MB 310-435419/1-A	Method Blank	Total/NA	Water	7470A	435419
LCS 310-435419/2-A	Lab Control Sample	Total/NA	Water	7470A	435419

General Chemistry

Prep Batch: 434384

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-291233-3	MW-121R_24_09	Total/NA	Water	9012B	
310-291233-4	MW-122R_24_09	Total/NA	Water	9012B	
310-291233-5	MW-200_24_09	Total/NA	Water	9012B	
310-291233-8	FB-1_24_09	Total/NA	Water	9012B	
310-291233-9	FD-1_24_09	Total/NA	Water	9012B	
MB 310-434384/1-A	Method Blank	Total/NA	Water	9012B	
LCS 310-434384/2-A	Lab Control Sample	Total/NA	Water	9012B	

Analysis Batch: 434395

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-291233-1	GU-2A_24_09	Total/NA	Water	I-3765-85	
310-291233-2	MW-119RR_24_09	Total/NA	Water	I-3765-85	
310-291233-6	MW-205_24_09	Total/NA	Water	I-3765-85	
310-291233-7	MW-206_24_09	Total/NA	Water	I-3765-85	
MB 310-434395/1	Method Blank	Total/NA	Water	I-3765-85	

General Chemistry (Continued)

Analysis Batch: 434395 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 310-434395/2	Lab Control Sample	Total/NA	Water	I-3765-85	

Analysis Batch: 434408

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-291233-3	MW-121R_24_09	Total/NA	Water	I-3765-85	
310-291233-4	MW-122R_24_09	Total/NA	Water	I-3765-85	
310-291233-5	MW-200_24_09	Total/NA	Water	I-3765-85	
310-291233-8	FB-1_24_09	Total/NA	Water	I-3765-85	
310-291233-9	FD-1_24_09	Total/NA	Water	I-3765-85	
MB 310-434408/1	Method Blank	Total/NA	Water	I-3765-85	
LCS 310-434408/2	Lab Control Sample	Total/NA	Water	I-3765-85	

Analysis Batch: 434597

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-291233-3	MW-121R_24_09	Total/NA	Water	9012B	434384
310-291233-4	MW-122R_24_09	Total/NA	Water	9012B	434384
310-291233-5	MW-200_24_09	Total/NA	Water	9012B	434384
310-291233-8	FB-1_24_09	Total/NA	Water	9012B	434384
310-291233-9	FD-1_24_09	Total/NA	Water	9012B	434384
MB 310-434384/1-A	Method Blank	Total/NA	Water	9012B	434384
LCS 310-434384/2-A	Lab Control Sample	Total/NA	Water	9012B	434384

Prep Batch: 788237

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-291233-3	MW-121R_24_09	Total/NA	Water	9030B	
310-291233-4	MW-122R_24_09	Total/NA	Water	9030B	
310-291233-5	MW-200_24_09	Total/NA	Water	9030B	
310-291233-8	FB-1_24_09	Total/NA	Water	9030B	
310-291233-9	FD-1_24_09	Total/NA	Water	9030B	
MB 500-788237/1-A	Method Blank	Total/NA	Water	9030B	
LCS 500-788237/2-A	Lab Control Sample	Total/NA	Water	9030B	
310-291233-3 MS	MW-121R_24_09	Total/NA	Water	9030B	
310-291233-3 MSD	MW-121R_24_09	Total/NA	Water	9030B	

Analysis Batch: 788238

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
310-291233-3	MW-121R_24_09	Total/NA	Water	9034	788237
310-291233-4	MW-122R_24_09	Total/NA	Water	9034	788237
310-291233-5	MW-200_24_09	Total/NA	Water	9034	788237
310-291233-8	FB-1_24_09	Total/NA	Water	9034	788237
310-291233-9	FD-1_24_09	Total/NA	Water	9034	788237
MB 500-788237/1-A	Method Blank	Total/NA	Water	9034	788237
LCS 500-788237/2-A	Lab Control Sample	Total/NA	Water	9034	788237
310-291233-3 MS	MW-121R_24_09	Total/NA	Water	9034	788237
310-291233-3 MSD	MW-121R_24_09	Total/NA	Water	9034	788237

Lab Chronicle

Client: Foth Infrastructure & Environment, LLC
Project/Site: Carroll County Landfill Groundwater

Job ID: 310-291233-1
SDG: 24C002.00

Client Sample ID: GU-2A_24_09

Lab Sample ID: 310-291233-1

Date Collected: 09/23/24 18:00
Matrix: Water
Date Received: 09/25/24 15:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	434391	WSE8	EET CF	09/27/24 02:58
Total/NA	Prep	3005A			434436	F5MW	EET CF	09/27/24 09:00
Total/NA	Analysis	6020B		1	435214	NFT2	EET CF	10/03/24 19:39
Total/NA	Analysis	I-3765-85		1	434395	DGU1	EET CF	09/26/24 11:31

Client Sample ID: MW-119RR_24_09

Lab Sample ID: 310-291233-2

Date Collected: 09/24/24 11:15
Matrix: Water
Date Received: 09/25/24 15:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	434388	WSE8	EET CF	09/26/24 20:02
Total/NA	Prep	3005A			434436	F5MW	EET CF	09/27/24 09:00
Total/NA	Analysis	6020B		1	435214	NFT2	EET CF	10/03/24 19:41
Total/NA	Analysis	I-3765-85		1	434395	DGU1	EET CF	09/26/24 11:31

Client Sample ID: MW-121R_24_09

Lab Sample ID: 310-291233-3

Date Collected: 09/24/24 09:40
Matrix: Water
Date Received: 09/25/24 15:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	434388	WSE8	EET CF	09/26/24 20:24
Total/NA	Prep	3510C			434383	AYK7	EET CF	09/26/24 10:27
Total/NA	Analysis	8270E		1	435538	L0FS	EET CF	10/08/24 14:45
Total/NA	Prep	3510C			434383	AYK7	EET CF	09/26/24 10:27
Total/NA	Analysis	8270E		1	435275	L0FS	EET CF	10/04/24 18:11
Total/NA	Analysis	8015C		1	434610	V7YZ	EET CF	09/28/24 15:01
Total/NA	Prep	3510C			434423	AYK7	EET CF	09/26/24 14:09
Total/NA	Analysis	8081B		1	435301	BW2O	EET CF	10/04/24 21:21
Total/NA	Prep	3510C			434841	AYK7	EET CF	10/01/24 12:23
Total/NA	Analysis	8082A		1	435515	D2YP	EET CF	10/08/24 16:08
Total/NA	Prep	8151A			556888	UKL2	ELLE	09/28/24 17:22
Total/NA	Analysis	8151A		1	557038	UAMZ	ELLE	10/01/24 05:09
Total/NA	Prep	3005A			434436	F5MW	EET CF	09/27/24 09:00
Total/NA	Analysis	6020B		1	435214	NFT2	EET CF	10/03/24 19:44
Total/NA	Prep	7470A			435419	QTZ5	EET CF	10/07/24 14:55
Total/NA	Analysis	7470A		1	435592	QTZ5	EET CF	10/08/24 16:04
Total/NA	Prep	9012B			434384	ENB7	EET CF	09/26/24 10:32
Total/NA	Analysis	9012B		1	434597	ZJX4	EET CF	09/27/24 20:18
Total/NA	Prep	9030B			788237	CLB	EET CHI	09/29/24 18:06 - 09/29/24 18:10 [1]
Total/NA	Analysis	9034		1	788238	CLB	EET CHI	09/30/24 01:57 - 09/30/24 02:06 [1]
Total/NA	Analysis	I-3765-85		1	434408	DGU1	EET CF	09/26/24 12:16

Client Sample ID: MW-122R_24_09

Lab Sample ID: 310-291233-4

Date Collected: 09/23/24 15:25
Matrix: Water
Date Received: 09/25/24 15:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	434388	WSE8	EET CF	09/26/24 20:46
Total/NA	Prep	3510C			434383	AYK7	EET CF	09/26/24 10:27
Total/NA	Analysis	8270E		1	435538	L0FS	EET CF	10/08/24 13:27
Total/NA	Prep	3510C			434383	AYK7	EET CF	09/26/24 10:27
Total/NA	Analysis	8270E		1	435275	L0FS	EET CF	10/04/24 16:50
Total/NA	Analysis	8015C		1	434610	V7YZ	EET CF	09/28/24 15:19
Total/NA	Prep	3510C			434423	AYK7	EET CF	09/26/24 14:09
Total/NA	Analysis	8081B		1	435301	BW2O	EET CF	10/04/24 20:16
Total/NA	Prep	3510C			434841	AYK7	EET CF	10/01/24 12:23
Total/NA	Analysis	8082A		1	435515	D2YP	EET CF	10/08/24 16:32
Total/NA	Prep	8151A			556888	UKL2	ELLE	09/28/24 17:22
Total/NA	Analysis	8151A		1	557038	UAMZ	ELLE	10/01/24 05:37
Total/NA	Prep	3005A			434436	F5MW	EET CF	09/27/24 09:00
Total/NA	Analysis	6020B		1	435214	NFT2	EET CF	10/03/24 19:46
Total/NA	Prep	7470A			435419	QTZ5	EET CF	10/07/24 14:55
Total/NA	Analysis	7470A		1	435592	QTZ5	EET CF	10/08/24 16:06
Total/NA	Prep	9012B			434384	ENB7	EET CF	09/26/24 10:32
Total/NA	Analysis	9012B		1	434597	ZJX4	EET CF	09/27/24 20:22
Total/NA	Prep	9030B			788237	CLB	EET CHI	09/29/24 18:16 - 09/29/24 18:20 [1]
Total/NA	Analysis	9034		1	788238	CLB	EET CHI	09/30/24 02:23 - 09/30/24 02:32 [1]
Total/NA	Analysis	I-3765-85		1	434408	DGU1	EET CF	09/26/24 12:16

Client Sample ID: MW-200_24_09

Lab Sample ID: 310-291233-5

Date Collected: 09/24/24 11:06
Matrix: Water
Date Received: 09/25/24 15:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	434388	WSE8	EET CF	09/26/24 21:08
Total/NA	Prep	3510C			434383	AYK7	EET CF	09/26/24 10:27
Total/NA	Analysis	8270E		1	435538	L0FS	EET CF	10/08/24 14:19
Total/NA	Prep	3510C			434383	AYK7	EET CF	09/26/24 10:27
Total/NA	Analysis	8270E		1	435275	L0FS	EET CF	10/04/24 17:44
Total/NA	Analysis	8015C		1	434610	V7YZ	EET CF	09/28/24 15:39
Total/NA	Prep	3510C			434423	AYK7	EET CF	09/26/24 14:09
Total/NA	Analysis	8081B		1	435301	BW2O	EET CF	10/04/24 21:02
Total/NA	Prep	3510C			434841	AYK7	EET CF	10/01/24 12:23
Total/NA	Analysis	8082A		1	435515	D2YP	EET CF	10/08/24 16:56
Total/NA	Prep	8151A			556888	UKL2	ELLE	09/28/24 17:22
Total/NA	Analysis	8151A		1	557038	UAMZ	ELLE	10/01/24 06:05
Total/NA	Prep	3005A			434436	F5MW	EET CF	09/27/24 09:00
Total/NA	Analysis	6020B		1	435214	NFT2	EET CF	10/03/24 19:48
Total/NA	Prep	7470A			435419	QTZ5	EET CF	10/07/24 14:55
Total/NA	Analysis	7470A		1	435592	QTZ5	EET CF	10/08/24 16:08

Client Sample ID: MW-200_24_09

Lab Sample ID: 310-291233-5

Date Collected: 09/24/24 11:06

Matrix: Water

Date Received: 09/25/24 15:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	9012B			434384	ENB7	EET CF	09/26/24 10:32
Total/NA	Analysis	9012B		1	434597	ZJX4	EET CF	09/27/24 20:22
Total/NA	Prep	9030B			788237	CLB	EET CHI	09/29/24 18:20 - 09/29/24 18:23 [1]
Total/NA	Analysis	9034		1	788238	CLB	EET CHI	09/30/24 02:32 - 09/30/24 02:40 [1]
Total/NA	Analysis	I-3765-85		1	434408	DGU1	EET CF	09/26/24 12:16

Client Sample ID: MW-205_24_09

Lab Sample ID: 310-291233-6

Date Collected: 09/23/24 17:35

Matrix: Water

Date Received: 09/25/24 15:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	434388	WSE8	EET CF	09/26/24 21:29
Total/NA	Prep	3005A			434436	F5MW	EET CF	09/27/24 09:00
Total/NA	Analysis	6020B		1	435214	NFT2	EET CF	10/03/24 19:50
Total/NA	Analysis	I-3765-85		1	434395	DGU1	EET CF	09/26/24 11:31

Client Sample ID: MW-206_24_09

Lab Sample ID: 310-291233-7

Date Collected: 09/23/24 16:50

Matrix: Water

Date Received: 09/25/24 15:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	434388	WSE8	EET CF	09/26/24 21:51
Total/NA	Prep	3005A			434436	F5MW	EET CF	09/27/24 09:00
Total/NA	Analysis	6020B		1	435214	NFT2	EET CF	10/03/24 19:54
Total/NA	Analysis	I-3765-85		1	434395	DGU1	EET CF	09/26/24 11:31

Client Sample ID: FB-1_24_09

Lab Sample ID: 310-291233-8

Date Collected: 09/24/24 08:50

Matrix: Water

Date Received: 09/25/24 15:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	434391	WSE8	EET CF	09/27/24 03:20
Total/NA	Prep	3510C			434383	AYK7	EET CF	09/26/24 10:27
Total/NA	Analysis	8270E		1	435538	L0FS	EET CF	10/08/24 13:01
Total/NA	Prep	3510C			434383	AYK7	EET CF	09/26/24 10:27
Total/NA	Analysis	8270E		1	435275	L0FS	EET CF	10/04/24 16:23
Total/NA	Analysis	8015C		1	434610	V7YZ	EET CF	09/28/24 15:59
Total/NA	Prep	3510C			434423	AYK7	EET CF	09/26/24 14:09
Total/NA	Analysis	8081B		1	435301	BW2O	EET CF	10/04/24 19:53
Total/NA	Prep	3510C			434841	AYK7	EET CF	10/01/24 12:23
Total/NA	Analysis	8082A		1	435515	D2YP	EET CF	10/08/24 17:43
Total/NA	Prep	8151A			556888	UKL2	ELLE	09/28/24 17:22
Total/NA	Analysis	8151A		1	557038	UAMZ	ELLE	10/01/24 06:33
Total/NA	Prep	3005A			434436	F5MW	EET CF	09/27/24 09:00
Total/NA	Analysis	6020B		1	435214	NFT2	EET CF	10/03/24 20:05

Client Sample ID: FB-1_24_09

Lab Sample ID: 310-291233-8

Date Collected: 09/24/24 08:50

Matrix: Water

Date Received: 09/25/24 15:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	7470A			435419	QTZ5	EET CF	10/07/24 14:55
Total/NA	Analysis	7470A		1	435592	QTZ5	EET CF	10/08/24 16:10
Total/NA	Prep	9012B			434384	ENB7	EET CF	09/26/24 10:32
Total/NA	Analysis	9012B		1	434597	ZJX4	EET CF	09/27/24 20:18
Total/NA	Prep	9030B			788237	CLB	EET CHI	09/29/24 18:23 - 09/29/24 18:26 [1]
Total/NA	Analysis	9034		1	788238	CLB	EET CHI	09/30/24 02:40 - 09/30/24 02:49 [1]
Total/NA	Analysis	I-3765-85		1	434408	DGU1	EET CF	09/26/24 12:16

Client Sample ID: FD-1_24_09

Lab Sample ID: 310-291233-9

Date Collected: 09/24/24 00:00

Matrix: Water

Date Received: 09/25/24 15:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	434391	WSE8	EET CF	09/27/24 03:42
Total/NA	Prep	3510C			434383	AYK7	EET CF	09/26/24 10:27
Total/NA	Analysis	8270E		1	435538	L0FS	EET CF	10/08/24 13:53
Total/NA	Prep	3510C			434383	AYK7	EET CF	09/26/24 10:27
Total/NA	Analysis	8270E		1	435275	L0FS	EET CF	10/04/24 17:17
Total/NA	Analysis	8015C		1	434610	V7YZ	EET CF	09/28/24 16:18
Total/NA	Prep	3510C			434423	AYK7	EET CF	09/26/24 14:09
Total/NA	Analysis	8081B		1	435301	BW2O	EET CF	10/04/24 20:39
Total/NA	Prep	3510C			434841	AYK7	EET CF	10/01/24 12:25
Total/NA	Analysis	8082A		1	435515	D2YP	EET CF	10/08/24 17:20
Total/NA	Prep	8151A			556888	UKL2	ELLE	09/28/24 17:22
Total/NA	Analysis	8151A		1	557038	UAMZ	ELLE	10/01/24 07:02
Total/NA	Prep	3005A			434436	F5MW	EET CF	09/27/24 09:00
Total/NA	Analysis	6020B		1	435214	NFT2	EET CF	10/03/24 20:07
Total/NA	Prep	7470A			435419	QTZ5	EET CF	10/07/24 14:55
Total/NA	Analysis	7470A		1	435592	QTZ5	EET CF	10/08/24 16:13
Total/NA	Prep	9012B			434384	ENB7	EET CF	09/26/24 10:32
Total/NA	Analysis	9012B		1	434597	ZJX4	EET CF	09/27/24 20:19
Total/NA	Prep	9030B			788237	CLB	EET CHI	09/29/24 18:26 - 09/29/24 18:30 [1]
Total/NA	Analysis	9034		1	788238	CLB	EET CHI	09/30/24 02:49 - 09/30/24 02:58 [1]
Total/NA	Analysis	I-3765-85		1	434408	DGU1	EET CF	09/26/24 12:16

Client Sample ID: TB-1_24_09

Lab Sample ID: 310-291233-10

Date Collected: 09/24/24 00:00

Matrix: Water

Date Received: 09/25/24 15:05

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	434388	WSE8	EET CF	09/26/24 16:23

[1] This procedure uses a method stipulated length of time for the process. Both start and end times are displayed.

Lab Chronicle

Client: Foth Infrastructure & Environment, LLC
Project/Site: Carroll County Landfill Groundwater

Job ID: 310-291233-1
SDG: 24C002.00

Laboratory References:

EET CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Accreditation/Certification Summary

Client: Foth Infrastructure & Environment, LLC
Project/Site: Carroll County Landfill Groundwater

Job ID: 310-291233-1
SDG: 24C002.00

Laboratory: Eurofins Cedar Falls

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Iowa	State	007	12-01-25

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8260D		Water	1,2,4-Trichlorobenzene
8260D		Water	Allyl chloride
8260D		Water	Ethyl methacrylate
8260D		Water	m,p-Xylene
8260D		Water	o-Xylene

Laboratory: Eurofins Chicago

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Iowa	State	082	05-01-26

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

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

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	0001.01	11-30-24
A2LA	ISO/IEC 17025	0001.01	11-30-24
Alabama	State	43200	01-31-25
Alaska	State	PA00009	06-30-25
Alaska (UST)	State	17-027	02-28-25
Arizona	State	AZ0780	03-12-25
Arkansas DEQ	State	88-00660	08-09-25
California	State	2792	11-30-24
Colorado	State	PA00009	06-30-25
Connecticut	State	PH-0746	06-30-25
DE Haz. Subst. Cleanup Act (HSCA)	State	019-006 (PA cert)	01-31-25
Delaware (DW)	State	N/A	01-31-25
Florida	NELAP	E87997	06-30-25
Georgia (DW)	State	C048	01-31-25
Hawaii	State	N/A	01-31-25
Illinois	NELAP	200027	01-31-25
Iowa	State	361	03-01-26
Kansas	NELAP	E-10151	10-31-24
Kentucky (DW)	State	KY90088	12-31-24
Kentucky (UST)	State	0001.01	11-30-24
Kentucky (WW)	State	KY90088	12-31-24
Louisiana (All)	NELAP	02055	06-30-25
Maine	State	2019012	03-12-25
Maryland	State	100	06-30-25
Massachusetts	State	M-PA009	06-30-25
Michigan	State	9930	01-31-25
Minnesota	NELAP	042-999-487	12-31-24
Mississippi	State	023	01-31-25
Missouri	State	450	01-31-25
Montana (DW)	State	0098	01-01-25

Accreditation/Certification Summary

Client: Foth Infrastructure & Environment, LLC
Job ID: 310-291233-1
Project/Site: Carroll County Landfill Groundwater
SDG: 24C002.00

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC (Continued)

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

Authority	Program	Identification Number	Expiration Date
Nebraska	State	NE-OS-32-17	01-31-25
New Hampshire	NELAP	2730	01-10-25
New Jersey	NELAP	PA011	06-30-25
New York	NELAP	10670	04-01-25
North Carolina (DW)	State	42705	07-31-25
North Carolina (WW/SW)	State	521	12-31-25
North Dakota	State	R-205	01-31-24 *
Oklahoma	NELAP	9804	08-31-24 *
Oregon	NELAP	PA200001	09-11-25
Pennsylvania	NELAP	36-00037	01-31-25
Quebec Ministry of Environment and Fight against Climate Change	PALA	507	09-16-29
Rhode Island	State	LAO00338	12-30-24
South Carolina	State	89002	01-31-25
Tennessee	State	02838	01-31-25
Texas	NELAP	T104704194-23-46	08-31-25
USDA	US Federal Programs	525-22-298-19481	10-25-25
Vermont	State	VT - 36037	10-28-24
Virginia	NELAP	460182	06-14-25
Washington	State	C457	04-11-25
West Virginia (DW)	State	9906 C	01-31-25
West Virginia DEP	State	055	07-31-25
Wyoming	State	8TMS-L	01-31-25
Wyoming (UST)	A2LA	0001.01	11-30-24

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

Method Summary

Client: Foth Infrastructure & Environment, LLC
Project/Site: Carroll County Landfill Groundwater

Job ID: 310-291233-1
SDG: 24C002.00

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET CF
8270E	Semivolatile Organic Compounds (GC/MS)	SW846	EET CF
8015C	Nonhalogenated Organic using GC/FID (Direct Aqueous Injection)	SW846	EET CF
8081B	Organochlorine Pesticides (GC)	SW846	EET CF
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	EET CF
8151A	Herbicides (GC)	SW846	ELLE
6020B	Metals (ICP/MS)	SW846	EET CF
7470A	Mercury (CVAA)	SW846	EET CF
9012B	Cyanide, Total andor Amenable	SW846	EET CF
9034	Sulfide, Acid soluble and Insoluble (Titrimetric)	SW846	EET CHI
I-3765-85	Residue, Non-filterable (TSS)	USGS	EET CF
3005A	Preparation, Total Metals	SW846	EET CF
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	EET CF
5030B	Purge and Trap	SW846	EET CF
7470A	Preparation, Mercury	SW846	EET CF
8151A	Extraction (Herbicides)	SW846	ELLE
9012B	Cyanide, Total and/or Amenable, Distillation	SW846	EET CF
9030B	Sulfide, Distillation (Acid Soluble and Insoluble)	SW846	EET CHI

Protocol References:

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

USGS = "Methods For Analysis Of Water And Fluvial Sediments", USGS, 1989

Laboratory References:

EET CF = Eurofins Cedar Falls, 3019 Venture Way, Cedar Falls, IA 50613, TEL (319)277-2401

EET CHI = Eurofins Chicago, 2417 Bond Street, University Park, IL 60484, TEL (708)534-5200

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

eurofins | Environment Testing America

310-291233 Chain of Custody

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Foth

City/State: CITY Cedar Rapids STATE IA | Project:

Receipt Information

Date/Time Received: DATE 9/25/24 TIME 1505 | Received By: PH

Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee
☑ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other: _____

Condition of Cooler/Containers

Sample(s) received in Cooler? ☑ Yes ☐ No *If yes:* Cooler ID:

Multiple Coolers? ☑ Yes ☐ No *If yes:* Cooler # 1 of 4

Cooler Custody Seals Present? ☑ Yes ☐ No *If yes:* Cooler custody seals intact? ☐ Yes ☐ No

Sample Custody Seals Present? ☐ Yes ☑ No *If yes:* Sample custody seals intact? ☐ Yes ☐ No

Trip Blank Present? ☑ Yes ☐ No *If yes:* Which VOA samples are in cooler? ↓

GW2A, MW-11R, 205, 206

Temperature Record

Coolant: ☑ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: _____ ☐ NONE

Thermometer ID: R | Correction Factor (°C): 0

• **Temp Blank Temperature** – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C): 1.0 | Corrected Temp (°C): 1.0

• **Sample Container Temperature**

	CONTAINER 1	CONTAINER 2
Container(s) used:		
Uncorrected Temp (°C):		
Corrected Temp (°C):		

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes:* Is there evidence that the chilling process began? ☐ Yes ☐ No

2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No

NOTE If yes, contact PM before proceeding If no, proceed with login

Additional Comments

eurofins | Environment Testing America

Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Foth

City/State: CITY Cedar Rapids STATE IA | Project:

Receipt Information

Date/Time Received: DATE 9/25/24 TIME 1505 | Received By: PH

Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee
☒ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other: _____

Condition of Cooler/Containers

Sample(s) received in Cooler? ☒ Yes ☐ No *If yes:* Cooler ID:

Multiple Coolers? ☒ Yes ☐ No *If yes:* Cooler # 2 of 4

Cooler Custody Seals Present? ☒ Yes ☐ No *If yes:* Cooler custody seals intact? ☐ Yes ☐ No

Sample Custody Seals Present? ☐ Yes ☒ No *If yes:* Sample custody seals intact? ☐ Yes ☐ No

Trip Blank Present? ☐ Yes ☒ No *If yes.* Which VOA samples are in cooler? ↓

Temperature Record

Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other: _____ ☐ NONE

Thermometer ID: R | Correction Factor (°C): 0

• Temp Blank Temperature – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C): ~~1.0~~ 1.3 | Corrected Temp (°C): ~~1.0~~ 1.3

• Sample Container Temperature

	CONTAINER 1	CONTAINER 2
Container(s) used:		
Uncorrected Temp (°C):		
Corrected Temp (°C):		

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes:* Is there evidence that the chilling process began? ☐ Yes ☐ No

2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No

NOTE If yes, contact PM before proceeding If no, proceed with login

Additional Comments

eurofins | Environment Testing America

Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Foth

City/State: CITY Cedar Rapids STATE IA | Project:

Receipt Information

Date/Time Received: DATE 9/25/24 TIME 1505 | Received By: PH

Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee
☒ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other:_____

Condition of Cooler/Containers

Sample(s) received in Cooler? ☒ Yes ☐ No *If yes:* Cooler ID:

Multiple Coolers? ☒ Yes ☐ No *If yes:* Cooler # 3 of 4

Cooler Custody Seals Present? ☒ Yes ☐ No *If yes:* Cooler custody seals intact? ☐ Yes ☐ No

Sample Custody Seals Present? ☐ Yes ☒ No *If yes:* Sample custody seals intact? ☐ Yes ☐ No

Trip Blank Present? ☐ Yes ☒ No *If yes:* Which VOA samples are in cooler? ↓

Temperature Record

Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other:_____ ☐ NONE

Thermometer ID: R | Correction Factor (°C): 0

• **Temp Blank Temperature** – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C): ~~5.9~~ | Corrected Temp (°C): ~~5.9~~

• **Sample Container Temperature**

	CONTAINER 1	CONTAINER 2
Container(s) used:		
Uncorrected Temp (°C):		
Corrected Temp (°C):		

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes:* Is there evidence that the chilling process began? ☐ Yes ☐ No

2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No

NOTE If yes, contact PM before proceeding If no, proceed with login

Additional Comments

eurofins | Environment Testing America

Place COC scanning label here

Cooler/Sample Receipt and Temperature Log Form

Client Information

Client: Foth

City/State: CITY Cedar Rapids STATE IA | Project:

Receipt Information

Date/Time Received: DATE 9/25/24 TIME 1505 | Received By: PH

Delivery Type: ☐ UPS ☐ FedEx ☐ FedEx Ground ☐ US Mail ☐ Spee-Dee
☒ Lab Courier ☐ Lab Field Services ☐ Client Drop-off ☐ Other _____

Condition of Cooler/Containers

Sample(s) received in Cooler? ☒ Yes ☐ No *If yes:* Cooler ID:

Multiple Coolers? ☒ Yes ☐ No *If yes:* Cooler # 4 of 4

Cooler Custody Seals Present? ☒ Yes ☐ No *If yes:* Cooler custody seals intact? ☐ Yes ☐ No

Sample Custody Seals Present? ☐ Yes ☒ No *If yes:* Sample custody seals intact? ☐ Yes ☐ No

Trip Blank Present? ☐ Yes ☒ No *If yes:* Which VOA samples are in cooler? ↓

Temperature Record

Coolant: ☒ Wet ice ☐ Blue ice ☐ Dry ice ☐ Other:_____ ☐ NONE

Thermometer ID: R | Correction Factor (°C): 0

• **Temp Blank Temperature** – If no temp blank, or temp blank temperature above criteria, proceed to Sample Container Temperature

Uncorrected Temp (°C): ~~NA~~ 3.3 | Corrected Temp (°C): ~~NA~~ 3.3

• **Sample Container Temperature**

	CONTAINER 1	CONTAINER 2
Container(s) used:		
Uncorrected Temp (°C):		
Corrected Temp (°C).		

Exceptions Noted

1) If temperature exceeds criteria, was sample(s) received same day of sampling? ☐ Yes ☐ No
   a) *If yes:* Is there evidence that the chilling process began? ☐ Yes ☐ No

2) If temperature is <0°C, are there obvious signs that the integrity of sample containers is compromised? (e.g., bulging septa, broken/cracked bottles, frozen solid?) ☐ Yes ☐ No

NOTE If yes, contact PM before proceeding If no, proceed with login

Additional Comments

Foth

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT All relevant fields must be completed accurately

Page: 1 of 1 **COC Number:** 1-3865545471-082324-865435

Company: Foth Infrastructure & Environment, LLC	Report To: Gina Wilming/Hannah Dubbs (Foth)	Requested Due Date:	Quote Reference:
Address: 411 6th Avenue SE, Suite 400	Copy To:	*TAT: Standard	Project Manager: Gina Wimling
Cedar Rapids IA 52401	Invoice To: Mary Wittry (CCSWMC)		Project #: 24C002.00
Phone: (319) 365-9565	P O		Profile #:
Email Addresses: gina wilming@foth com	Project Name: Carroll County Landfill Groundwater	Regulatory Agency: Iowa DNR	Sampling Team Members: Tyler Merritt
hannah dubbs@foth com	Task #: 24C002_24_09	State Location: Iowa	

ITEM NUMBER	SAMPLE ID	Sample Location	MATRIX CODE	SAMPLE TYPE G = Grab C = Composite	DATE COLLECTED MM/DD/YYYY	TIME COLLECTED (Military time)	Preservatives: Total # Containers	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Requested Analysis: N	N	N	IA Appendix I List	TSS	IA App II VOCs Only	IA Appendix II List	Filtered (Y/N)	REMARKS / Lab ID
1	GU-2A_24_09	GU-2A	WG	G	9/23	1800	5	1		1	3							X	X				
2	GU-4A_24_09	GU-4A	WG	G	—	—												X	X				No Sample Submitted
3	MW-119RR_24_09	MW-119RR	WG	G	9/24	1115	5	1		1	3							X	X				
4	MW-121R_24_09	MW-121R	WG	G	9/24	0940	14	8		1	3	2							X		X		
5	MW-122R_24_09	MW-122R	WG	G	9/23	1525	14	8		1	3	2							X		X		
6	MW-200_24_09	MW-200	WG	G	9/24	1160	14	8		1	3	2							X		X		
7	MW-205_24_09	MW-205	WG	G	9/23	1735	5	1		1	3							X	X				
8	MW-206_24_09	MW-206	WG	G	9/23	1650	5	1		1	3							X	X				
9	FB-1_24_09	FB-1	WG	G	9/24	0850	14	8		1	3	2							X		X		
10	FD-1_24_09		WQ	G	9/24	—	14	8		1	3	2							X		X		
11	TB-1_24_09	Trip Blank	WG	G	—	—	2				2									X			
12																							

SAMPLE CONDITION:

Temp in C	
Received on Ice	Y / N
Sealed Cooler	Y / N
Sample Intact	Y / N

SAMPLE NOTES:

Additional Comments:

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Tyler Merritt

SIGNATURE of SAMPLER: Tyler Merritt

DATE Signed: 9/24/24

Received: YH 9/25/24 1505

Eurofins Cedar Falls
3019 Venture Way
Cedar Falls, IA 50613
Phone 319-277-2401 Fax: 319-277-2425

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Calhoun, Conner M	Carrier Tracking No(s):	COC No: 310-76759 1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Conner Calhoun@et eurofinsus com	State of Origin: Iowa	Page: Page 1 of 1
Company: Eurofins Environment Testing North Centr		Accreditations Required (See note): State Program - Iowa		Job #: 310-291233-1
Address: 2417 Bond Street, ,	Due Date Requested: 10/10/2024			Preservation Codes:
City: University Park	TAT Requested (days):			
State, Zip: IL, 60484				
Phone: 708-534-5200(Tel) 708-534-5211(Fax	PO #:			
Email:	WO #:			
Project Name: Carroll County Landfill Groundwater	Project #: 31017298			
Site:	SSOW#:			Other:

310-291233 COC

Analysis Requested

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	9034_Calc/9030B Sulfide, Acid soluble and Insoluble (Tit	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MW-121R_24_09 (310-291233-3)	9/24/24	09 40 Central	G	Water			X X	3	
MW-122R_24_09 (310-291233-4)	9/23/24	15 25 Central	G	Water			X X	3	
MW-200_24_09 (310-291233-5)	9/24/24	11 06 Central	G	Water			X X	3	
FB-1_24_09 (310-291233-8)	9/24/24	08 50 Central	G	Water			X X	3	
FD-1_24_09 (310-291233-9)	9/24/24	Central	G	Water			X X	3	

Note: Since laboratory accreditations are subject to change Eurofins Environment Testing North Central LLC places the ownership of method analyte & accreditation compliance upon our subcontract laboratories This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed the samples must be shipped back to the Eurofins Environment Testing North Central, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing North Central LLC attention immediately If all requested accreditations are current to date return the signed Chain of Custody attesting to said compliance to Eurofins Environment Testing North Central LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested I, II, III, IV, Other (specify) Primary Deliverable Rank 2	Special Instructions/QC Requirements

Empty Kit Relinquished by:	Date	Time	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		9/24/24 1115			9/24/24 0900	EETA
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact. Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks:
		4.3-1.2

Login Sample Receipt Checklist

Client: Foth Infrastructure & Environment, LLC

Job Number: 310-291233-1
SDG Number: 24C002.00

Login Number: 291233
List Number: 1
Creator: Homolar, Dana J

List Source: Eurofins Cedar Falls

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Foth Infrastructure & Environment, LLC

Job Number: 310-291233-1
SDG Number: 24C002.00

Login Number: 291233
List Number: 3
Creator: Scott, Sherri L

List Source: Eurofins Chicago
List Creation: 09/27/24 04:14 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.2
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	True	

Login Sample Receipt Checklist

Client: Foth Infrastructure & Environment, LLC

Job Number: 310-291233-1
SDG Number: 24C002.00

Login Number: 291233
List Number: 2
Creator: Arroyo, Haley

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC
List Creation: 09/27/24 10:18 AM

Question	Answer	Comment
The cooler's custody seal is intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature acceptable,where thermal pres is required(</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV:Container Temp acceptable,where thermal pres is required (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	False	Received project as a subcontract.
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	N/A	

Data Validation Report

Project Name:	Carroll County Landfill Western Expansion Area (24C002.00)
Task Name:	24C002_24_09
Data Set Description:	Fall 2024 Groundwater Event
Laboratory(s):	Eurofins – Cedar Falls, IA; Chicago, IL; and Lancaster, PA
Laboratory Sample Delivery Group (SDG) ID(s):	310-291233-1
Sample Collection Date(s):	9/23/2024 - 9/24/2024
Sample Analysis Dates:	9/26/2024 – 10/8/2024
Sample Matrices:	Groundwater
Sample IDs Reviewed:	See Table 1
Verification and Validation Stage, 100% data:	☐ 1 ☒ 2A ☐ 2B ☐ 3 ☐ 4
Verified and Validated By:	Hannah Dubbs, Project Environmental Scientist 11/8/2024

The analytical data were validated to verify that laboratory quality assurance and quality control (QA/QC) procedures were documented and to evaluate the overall quality of the data reported. The analytical report includes seven investigative groundwater samples collected via low-flow or no-purge sampling techniques at the Carroll County Landfill Western Expansion Area on September 23 and 24, 2024; samples are listed in Table 1. The data were collected in accordance with the Hydrologic Monitoring System Plan (HMSP) for the Carroll County Landfill Western Expansion Area (Foth, 2008), Iowa Department of Natural Resources (IDNR) Sanitary Disposal Permit Number 14-SDP-01-74P (including Permit Revisions), and 567 Iowa Administrative Code (IAC) 113.10.

Validation Summary

Stage 2A data validation was performed on 100% of the data from this SDG, with review tasks and items of note documented in the summary table below.

Validation Task and Description	Review Notes	Action
Chain of Custody (COC) and Sample Receipt Form Confirm relinquish & receipt signatures. Confirm parameters and analytical methods match COC and Hydrologic Monitoring System Plan (HMSP).	All appropriate relinquish and receipt signatures were present. Parameters and analytical methods match the COC and HMSP. For MW-200_24_09, the field files and COC noted the sample was taken at 11:50; however, the laboratory reported the sample time as 11:06. A revised laboratory report was not requested. The sample time for MW-200_24_09 will be updated on the lab EDD prior to upload.	MW-200_24_09 sample time will be updated in the lab EDD prior to data upload.
Case Narrative Review for items noted by the laboratory that may impact the validation process.	The quality control issues noted in the case narrative were reviewed and found acceptable. Issues either were addressed in the comments below, had no impact on investigative samples, or were corrected/qualified by the laboratory. No additional actions are required. Note: continuing calibration verification (CCV) evaluation is not part of Stage 2A validation.	Not applicable

Validation Task and Description	Review Notes	Action
Sample Condition Upon Receipt (SCUR) Confirm samples in acceptable condition and no discrepancies noted. Confirm preservation meets method requirements.	Samples were received by Eurofins – Cedar Falls, IA in acceptable conditions. In addition, the sulfide shipment from Eurofins – Cedar Falls, IA to Eurofins – Chicago, IL and the herbicide shipment from Eurofins – Cedar Falls, IA to Eurofins – Lancaster, PA were received in acceptable conditions.	Not applicable
Methods Requested Confirm methods match project requirements and lab provided all methods ordered.	The methods ordered and analyzed were performed in accordance with the project requirements. Methods include United States Environmental Protection Agency (USEPA) 8260D Volatile Organic Compounds (VOCs), USEPA 8270E Semivolatile Organic Compounds (SVOCs), USEPA 8015C Nonhalogenated Organics, USEPA 8081B Pesticides, USEPA 8082A Polychlorinated Biphenyls (PCBs), USEPA 8151A Herbicides, USEPA 6020B Total Metals, USEPA 7470A Mercury, USEPA 9012B Cyanide, USEPA 9034 Sulfide, and United States Geological Survey (USGS) I-3765-85 Total Suspended Solids.	Not applicable
Analytes Requested Confirm analytes ordered match project requirements and lab provided all analytes ordered.	The analytes requested were analyzed in accordance with the project requirements. The laboratory provided all the analytes ordered.	Not applicable
Holding Times Confirm laboratory performed extractions and analyses within method-required holding times.	Eurofins performed analysis within the method-required holding times.	Not applicable
Blanks Confirm no detections in laboratory method blanks, field blanks, and trip blanks.	Table 3 presents analytes detected in the method, field, and trip blanks. No detections were found in the method and trip blanks for this SDG. No qualifiers are assigned in Table 9. Di-n-octyl phthalate was detected in the field blank (FB-1_24_09) at a concentration of 8.05 J micrograms per liter (ug/L). In accordance with the *National Functional Guidelines for Organic Superfund Methods Data Review* (USEPA, 2020a) for SVOCs, when the blank contamination concentration is J-flagged, associated non-detect sample results are not qualified.	No qualifiers assigned
Surrogates or Deuterated Monitoring Compounds For *organic analyses only*, confirm surrogates analyzed and surrogate recovery within QC limits.	Table 4 is intended to present surrogate recoveries that were outside the control limits. Surrogate recoveries were within control limits for this SDG.	Not applicable

Validation Task and Description	Review Notes	Action
Matrix Spike/Matrix Spike Duplicates (MS/MSDs) Confirm MS/MSDs analyzed at frequency specified by project requirements and MS/MSD percent recovery within lab specified limits.	MS/MSD quality control samples are not required for this project. As a result, no MS/MSD samples were collected or submitted for analysis. Where analyzed and reported by the laboratory, MS/MSD results associated with the samples in 310-291233-1 are reviewed under Stage 2A validation guidelines. Table 5 is intended to present MS/MSD recoveries and relative percent differences (RPDs) that were outside the control limits. MS/MSD recoveries and RPDs were within control limits for this SDG.	Not applicable
Laboratory Control Sample/Laboratory Control Sample Duplicate (LCS/LCSD) Confirm LCS analyzed and LCS/LCSD recovery and RPD within lab specified limits.	LCS/LCSD quality control samples are not required for this project. Where analyzed and reported by the laboratory, LCS/LCSD results associated with method batches in 310-291233-1 are reviewed under Stage 2A validation guidelines. Table 6 presents the LCS/LCSD recoveries and RPDs that were outside the control limits. No qualifiers are assigned in Table 9. The 2,4-dinitrophenol and 4,6-dinitro-2-methylphenol RPDs associated with prep batch 434383 are above the RPD limit. In accordance with the *National Functional Guidelines for Organic Superfund Methods Data Review* (USEPA, 2020a) for SVOCs, when RPDs are above the acceptance limits, associated non-detect results are not qualified. LCS recovery was above the recovery limits for antimony associated with prep batch 434436, indicating potential high bias. No associated LCSD was reported. In accordance with the *National Functional Guidelines for Inorganic Superfund Methods Data Review* (USEPA, 2020a) for inductively coupled plasma – mass spectrometry (ICP-MS) metals, when LCS recovery is above the acceptance limits (80–120%) and no LCSD is reported, qualifiers are not assigned if LCS recovery is within 70-130%.	No qualifiers assigned No qualifiers assigned
Laboratory Duplicates Confirm lab duplicates analyzed and RPD within lab specified limits.	Laboratory duplicate quality control samples are not required for this project. Where analyzed and reported by the laboratory, laboratory duplicate results associated with the samples in 310-291233-1 are reviewed under Stage 2A validation guidelines. Table 7 is intended to present the lab duplicate sample RPDs that were outside the RPD limits. Laboratory duplicate RPDs were within control limits for this SDG.	Not applicable
Field Duplicates Confirm field duplicates collected at required frequency and field duplicate RPD within acceptable limits.	Field duplicate samples were collected at 1 per 10 frequencies, in accordance with the project requirements. Table 8 contains the precision evaluation of the parent/field duplicate samples. The RPDs between the investigative and field duplicate samples were within the duplicate sample validation criteria.	Not applicable

Abbreviations:
COC = chain of custody
CCV = continuing calibration verification
HMSP = Hydrologic Monitoring System Plan
ICP-MS = inductively coupled plasma – mass spectrometry
LCS = laboratory control sample
LCSD = laboratory control sample duplicate
MS = matrix spike
MSD = matrix spike duplicate
PCB = polychlorinated biphenyls
RPD = relative percent difference
SVOC = semivolatile organic compound
SCUR = sample condition upon receipt
SDG = sample delivery group
SOP = Standard Operating Procedure
ug/L = micrograms per liter
USEPA = United States Environmental Protection Agency
USGS = United States Geological Survey
VOC = volatile organic compound

Overall Assessment of Data

Item	Acceptable Yes	Acceptable No	Comments
1. Method Criteria	X		Samples were collected, preserved, shipped/delivered, and analyzed within the method protocols.
2. Precision	X		Field precision was evaluated through investigative and field duplicate RPDs. The RPDs between the investigative and field duplicate samples were within the duplicate sample validation criteria. Laboratory precision was evaluated through MS/MSD, LCS/LCSD, and laboratory duplicate RPDs. Where analyzed and reported by the laboratory, MS/MSD and laboratory duplicate RPDs were within control limits. LCS/LCSD RPDs were within control limits with the exception below. The 2,4-dinitrophenol and 4,6-dinitro-2-methylphenol RPDs associated with prep batch 434383 are above the RPD limit. In accordance with the *National Functional Guidelines for Organic Superfund Methods Data Review* (USEPA, 2020a) for SVOCs, when RPDs are above the acceptance limits, associated non-detect results are not qualified.
3. Accuracy	X		Accuracy was evaluated through surrogate, MS/MSD, and LCS/LCD recovery. The percent recoveries for surrogate samples were within control limits. Where analyzed and reported by the laboratory, MS/MSD and LCS/LCSD percent recoveries were within control limits when required with the exception listed below. As listed in Table 6, LCS recovery was above the recovery limits for antimony associated with prep batch 434436, indicating potential high bias. In accordance with the *National Functional Guidelines for Inorganic Superfund Methods Data Review* (USEPA, 2020a) for ICP-MS metals, qualifiers are not assigned if LCS recovery is within 70-130%.
4. Representativeness	X		Sampling was conducted in accordance with the sample collection procedures described in the approved HMSP, approved HMSP revisions, and standard operating procedures (SOPs).
5. Comparability	X		Collection techniques, measurement procedures, methods, and reporting were equivalent to currently approved procedures and are comparable to historical data.
6. Completeness	X		Valid analytical results exceeded 90%.
7. Suitability for Intended Use	X		No evidence of gross contamination or significant issues with the method criteria, precision, accuracy, representativeness, comparability, or completeness were identified.

Overall, the data reported are of good quality and the results for the applicable quality assurance/quality control (QA/QC) measurements that were used by the laboratories during the analysis of the samples were generally acceptable. Table 2 provides a definition of the qualifiers that may be assigned by the validator and/or retained from the laboratory. No sample results were qualified during data validation because method-specific QA/QC criteria were met. 100% of the data is usable for project data quality objectives.

Attachment 1

Tables

Table 1
Sample IDs Reviewed

Project Sample ID	Analyzed Lab Sample ID	Project Sample ID Matches Lab Client Sample ID	Lab Sample Date/Time Match COC/Logbook	Parameters and Analytical Methods Match COC	Within Hold Times	Sample Type
GU-2A_24_10	310-291233-1	Yes	Yes	Yes	Yes	Normal
MW-119RR_24_10	310-291233-2	Yes	Yes	Yes	Yes	Normal
MW-121R_24_10	310-291233-3	Yes	Yes	Yes	Yes	Normal
MW-122R_24_10	310-291233-4	Yes	Yes	Yes	Yes	Normal
MW-200_24_10	310-291233-5	Yes	**No**	Yes	Yes	Normal
MW-205_24_10	310-291233-6	Yes	Yes	Yes	Yes	Normal
MW-206_24_10	310-291233-7	Yes	Yes	Yes	Yes	Normal
FB-1_24_10	310-291233-8	Yes	Yes	Yes	Yes	FB
FD-1_24_10	310-291233-9	Yes	Yes	Yes	Yes	FD
TB-1_24_10	310-291233-10	Yes	Yes	Yes	Yes	TB

Notes:
FB = field blank
FD = field duplicate
TB = trip blank

Table 2
Explanation of Qualifiers

Qualifier	Explanation
U	The analyte was analyzed for and was not detected above the numerical quantitation limit.
J	The analyte was analyzed for and was positively identified, but the analytical result (i.e., quantitation) is an estimated value. In some cases it is recognized that the estimated value is biased high (J+) suggesting the actual value is lower than estimated; or biased low (J-) suggesting the actual value is higher than estimated.
UJ	The analyte was analyzed for and was not detected above the reporting limit, but the reporting limit is an estimated value.
R	The analyte was analyzed for but may or may not be present and/or quantifiable due to quality control issues. The analytical result is not usable and should be rejected.
N	The analysis indicates presumptive evidence of the presence of the analyte.
NJ	The analysis indicates presumptive evidence of the presence of the analyte, but the numerical value is an estimated quantity.

Notes:
Results qualified as “J” or “UJ” are of acceptable data quality and may be used quantitatively per United States Environmental Protection Agency guidelines.

Table 3
Method, Field, and Trip Blank Exceedances

Lab Report	Blank Type	Lab Sample ID	Client Sample ID	Analysis Batch	Prep Batch	Parameter	Result	Units	Lab Qualifier	MDL	PQL	Associated Samples
310-291233-1	FB	310-291233-8	FB-1_24_09	435275	434383	Di-n-octyl phthalate	8.05	ug/L	J	7.29	20.8	Investigative and FD samples in 310-291233-1

Notes:
FB = field blank
MDL = minimum detection limit
PQL = practical quantitation limit

Table 4
Surrogate Recovery Exceedances

Lab Sample ID	Parent Sample	Parameter	Surrogate % Recovery	% Recovery Limits
Surrogate recoveries were within control limits for this Sample Delivery Group.				

Notes:
% = percent

Table 5
Matrix Spike - Matrix Spike Duplicate Exceedances

Lab Sample ID	Parent Sample	Parameter	MS % Recovery	MSD % Recovery	% Recovery Limits	RPD	RPD Limit
MS/MSD recoveries and RPDs were within control limits for this Sample Delivery Group.							

Notes:
% = percent
MS = matrix spike
MSD = matrix spike duplicate
RPD = relative percent difference

Table 6
Laboratory Control Sample and Laboratory Control Sample Duplicate Exceedances

Lab Sample ID	Associated SDG Batch	Parameter	LCS % Recovery	LCSD % Recovery	% Recovery Limits		RPD	RPD Limit
LCS 310-434383/2-A	310-291233-1	2,4-Dinitrophenol	84	46	10	138	60	35
LCSD 310-434383/3-A								
LCS 310-434383/2-A	310-291233-1	4,6-Dinitro-2-methylphenol	107	71	22	143	40	35
LCSD 310-434383/3-A								
LCS 310-434436/2-A	310-291233-1	Antimony	121	N/A	80	120	N/A	N/A
No LCSD Reported								

Notes:
% = percent
LCS = laboratory control sample
LSCD = laboratory control sample duplicate
RPD = relative percent difference

Table 7
Laboratory Duplicate Sample Exceedances

Lab Sample ID	Client Sample ID	Parameter	RPD	RPD Limit
Laboratory duplicate sample RPDs were within control limits for this Sample Delivery Group.				

Notes:
RPD = relative percent difference

Table 8
Relative Percent Difference (RPD) Analysis for Field Duplicate Samples
Appendix II Constituents & TSS

RPD = $\dfrac{\text{absolute value (a - b)}}{\text{(a + b)/2}} \times 100\%$

Acceptance Criteria*: 35%

* Unless otherwise noted in project planning documents, the acceptance criteria for field duplicates RPD is as follows:
- For analytes with concentrations greater than 5x (2x for soil matrices) the reporting limit, the RPD should be within 35% for water matrices (50% for soil matrices).
- For analytes with either or both concentrations less than 5x (2x for soil matrices) the reporting limit (indicated below by "low-level"), the absolute difference between the sample and field duplicate should not exceed 5x the reporting limit.

Duplicate Result Analysis:

Parameter	Unit	Parent	Duplicate Sample	RPD	Acceptable?
		MW-121R_24_09	FD-1_24_09		
Benzene	ug/L	1.00	1.13	low-level	Yes
cis-1,2-Dichloroethene	ug/L	8.47	9.74	13.9%	Yes
Vinyl Chloride	ug/L	J 0.592	J 0.626	low-level	Yes
Arsenic	mg/L	0.0183	0.0210	13.7%	Yes
Barium	mg/L	0.708	0.741	4.6%	Yes
Cobalt	mg/L	0.00206	0.00214	low-level	Yes
Nickel	mg/L	0.0422	0.0427	1.2%	Yes
Total Suspended Solids	mg/L	2.00	J 1.63	low-level	Yes

Table 9
Qualified Results from Data Validation

Sample ID	Lab Sample ID	Method	Parameter	Result	Lab Qualifier	Units	Qualified Result	Validator Qualifier	Explanation
No qualifiers were assigned to data in this Sample Delivery Group.									

Attachment 2

References

References

Foth, 2008. *Hydrologic Monitoring System and Gas Monitoring Plan, Carroll County Sanitary Landfill Western Expansion Area*. January. [Doc #16450].

USEPA, 2020. *National Functional Guidelines for Inorganic Superfund Methods Data Review*. EPA-542-R-20-006. Office of Superfund Remediation and Technology Innovation, Washington, D.C. Revised November 2020.

USEPA, 2020. *National Functional Guidelines for Organic Superfund Methods Data Review*. EPA-542-R-20-005. Office of Superfund Remediation and Technology Innovation, Washington, D.C. Revised November 2020.

Appendix B

Statistical Reports

Carroll County Western Expansion Area – Spring 2024 Evaluation
Carroll County Western Expansion Area – Fall 2024 Evaluation

Memorandum

411 6th Avenue SE, Suite 400
Cedar Rapids, IA 52401
(319) 365-9565
foth.com

June 6, 2024

TO: Iowa Department of Natural Resources

FR: Gina Wilming, CGP; Hannah Dubbs

RE: Carroll County Western Expansion Area - Spring 2024 Statistical Evaluation

1. Memorandum Organization

This memo addresses the statistical analysis of the groundwater monitoring data collected during April 2024. The statistical methods and results are summarized, with the memo organization given as follows:

Tables

Tables (Continued)

Attachments

2. Background

The groundwater monitoring locations and the status of the Appendix I and II sampling schedules are summarized in Table 1. The Appendix I and II analytical results will be provided in Table 13 of the 2024 Annual Water Quality Report (AWQR).

Table 1
Groundwater Monitoring Locations & Sampling Schedules
Apr. 2008 – Apr. 2024 Appendix I and II Data

Monitoring Location	Monitoring Program	Current Schedule (Apr. 2024) [1]	Appendix I Initiated	# Events to Complete Baseline Appendix I or Completion Date [113.10(5)b]	Appendix II Initiated	# Events to Complete Baseline Appendix II or Completion Date [113.10(6)b]	Returned to Detection Monitoring
Downgradient Monitoring Locations							
GU-2A	Detection	Appendix I	Sep-11	Sep-12	N/A	N/A	N/A
GU-4A	Detection	Dry	---	5	N/A	N/A	N/A
MW-119RR	Detection	Appendix I	Oct-19	Sep-21	N/A	N/A	N/A
MW-121R	Assessment	Appendix II	Sep-11	Sep-12	Jun-14	Apr-15	No
MW-200 [2]	Detection	Appendix I	Sep-09	Sep-10	Jul-16	Jul-16 [3]	Sep-18
MW-205 [4]	Detection	Appendix I	Apr-20	Apr-21	N/A	N/A	N/A
MW-206	Detection	Appendix I	Oct-19	Dec-20	N/A	N/A	N/A
Background Monitoring Locations							
MW-122R	Background	Appendix II	Apr-08	Mar-09	Mar-09	Mar-10	N/A
MW-200 [2]	Background	Appendix II	Sep-09	Sep-10	Jul-16 [6]	Jul-16 [6]	N/A

N/A = Not applicable

[1] In Apr. 2024, the Appendix II locations were sampled for the Appendix I and detected Appendix II constituents. The next 5-year resampling for the full Appendix II list at the assessment and background monitoring wells is scheduled for Fall 2024.

[2] MW-200 primarily serves as a downgradient monitoring location; however, MW-200 is also used to supplement the background data set.

[3] MW-200 triggered assessment monitoring in Jul. 2016. Note that one round of background monitoring for the full Appendix II list had previously been conducted at MW-200 in October 2015 as part of the five-year full Appendix II resampling at the Closed Eastern Area. In accordance with Special Provision X.4.e, baseline assessment monitoring was completed after the June 2016 event since at least two rounds of analysis using the entire Appendix II list were completed in October 2015 and June 2016.

[4] In the *2023 AWQR* (Foth, 2024), Foth requested to replace MW-204RR with MW-205 in the permitted groundwater monitoring network for the Western Expansion Area due to the dry to limited water depths consistently observed at MW-204RR. Therefore, MW-205 was sampled in Apr. 2024 for the Appendix I list. MW-204RR is being retained as a water level only location.

In April 2024, semiannual detection, assessment, and background monitoring were conducted at the downgradient and background monitoring locations as indicated in Table 1. Assessment

monitoring well MW-121R and background wells MW-122R and MW-200 were sampled for the Appendix I and detected Appendix II constituents. As discussed in the Report Priority of the *2023 AWQR* (Foth, 2024), Foth requested MW-205 permanently replace detection monitoring well MW-204RR in the permitted groundwater monitoring network for the Western Expansion Area due to the dry to limited water depths consistently observed at MW-204RR. Therefore, MW-205 was sampled for the Appendix I list in April 2024 in place of MW-204RR. MW-204RR is being retained as a water level only location.

Underdrain sample location GU-4A remained dry in April 2024. Baseline detection monitoring will be initiated once the water level is at or above the elevation of the horizontal underdrain discharge pipe connected perpendicular to the vertical sample pipe.

Under the detection and assessment monitoring programs of 567 Iowa Administrative Code (IAC) 113.10(5) and 113.10(6), Appendix I and II monitoring results are statistically compared to background levels as given in 567 IAC 113.10(5)c and 113.10(6)e and to the groundwater protection standard (GWPS) as given in 567 IAC 113.10(6)g and h. A well may return to detection monitoring when all Appendix II constituents are "shown to be at or below background values, using the statistical procedures in 567 IAC 113.10(4)g for two consecutive sampling events." Consequently, to return to detection monitoring in accordance with 567 IAC 113.10(6)e, all Appendix II constituents must be below the interwell prediction limit (for constituents which are detected in the background data set) or below the laboratory reporting limit (for constituents which are not detected in the background data set) during two consecutive sampling events. Three consecutive sampling events may be utilized to make the determination to return to detection monitoring to limit the frequent fluctuation of wells moving between the detection and assessment monitoring programs. Assessment monitoring continues when Appendix II concentrations are above background values but below the GWPS using the statistical procedures in 567 IAC 113.10(4)g.

If Appendix II constituents are detected at statistically significant levels (SSLs) above the GWPS, characterization [567 IAC 113.10(6)g] is initiated, and the owners or operators are required to initiate an assessment of corrective measures, select a remedy, and implement a remedy in accordance with 567 IAC 113.10(7), (8), and (9). For remedy completion [567 IAC 113.10(9)e(2)], compliance with the GWPS is considered achieved by demonstrating that concentrations of Appendix II constituents have not exceeded the GWPS for a period of three consecutive years or an alternate length of time established by the Department.

Based on the April 2008 through April 2024 results, this memo presents an evaluation of statistically significant increases (SSIs) and SSLs under the requirements of 567 IAC 113.10(4)g and h.

3. Statistical Methodology

The statistical methods utilized for locations in detection and assessment monitoring were consistent with the methods used in previous statistical evaluations. Detailed descriptions of the statistical methods are provided in Attachment 1. Sanitas® v10 (Sanitas Technologies) software was utilized to complete the statistical comparisons.

Note that statistical comparisons were not conducted at GU-4A since the location was dry in April 2024.

3.1 Background Data Set

The combined background data set of MW-122R and MW-200 was utilized to evaluate SSIs over background for metals. The background data set for non-metal constituents is defined by MW-122R only.

3.1.1 Turbidity and the Background Data Set

No background data set adjustments are recommended based on a review of the field turbidity and total suspended solids (TSS) data from the April 2024 sampling event. TSS concentrations in MW-122R and MW-200 were below the 5 mg/L level for acceptable sample quality in April 2024. A detailed discussion regarding compliance with Permit Special Provision X.4.g will be provided in the 2024 AWQR.

3.1.2 Background Data Set Review for Prediction Limits

The practical quantitation limit (PQL) has been lowered for several metal constituents since the start of Appendix I monitoring in March 2008. This lowering of the PQL has enabled laboratory quantitation limits to be lower than the GWPS. As a result of the shifting PQLs, the background datasets were reviewed to determine whether some of the earlier non-detect data with elevated PQLs may need to be removed from the background data due to the increased uncertainty this adds. For example, removing earlier non-detect data with elevated PQLs when that value is larger than any existing detected values ensures that the maximum order statistic is a quantified concentration for non-parametric prediction limits. However, data set adjustments are typically not recommended if detections are identified at concentrations above the earlier elevated PQLs, or in cases where the PQL remains relatively consistent over time. Also, consideration is given as to whether the elevated PQL is greater than or less than the GWPS. No background data set adjustments have been previously or are currently recommended based on shifting PQLs.

3.2 MW-200 Evaluation

The following statistical comparisons were conducted to provide ongoing documentation that MW-200 is suitable for inclusion in the background metals data set.

- Review MW-200 data for detection of non-metal constituents.
- Conduct Mann-Kendall trend tests on detected metals constituents.
- Conduct intrawell prediction limits on detected metals constituents.

3.2.1 Detection of Non-Metal Constituents in MW-200

No non-metal Appendix I or II constituents were detected above the laboratory PQL at MW-200 in April 2024.

The background data set adjustments previously recommended and incorporated based on a review of single background detections include:

- Removal of the September 2020 metals concentrations in MW-200 from interwell statistical comparisons (initiated with the Fall 2020 statistical evaluation) and intrawell statistical comparisons (initiated with the Fall 2021 statistical evaluation).

These data set adjustments were maintained in the current statistical evaluation.

3.2.2 Trend Tests and Intrawell Prediction Limits – MW-200

3.2.2.1 Updating Intrawell Background

Intrawell background was not updated during this statistical evaluation. Intrawell background was last updated during the Fall 2023 statistical evaluation. The Unified Guidance (Section 5.3.2) recommends that the intrawell background data set be updated periodically, after 4 to 8 new compliance observations have been collected. The guidance also states that "a potential update is predicated on there being no statistically significant increase [SSI] recorded for that well constituent, including since the last update." Intrawell background will be updated in Fall 2025 if there continue to be no SSIs identified at MW-200.

3.2.2.2 Trend Tests and Intrawell Prediction Limits

Mann-Kendall trend tests and intrawell prediction limits were used to statistically compare the detected metals concentrations in MW-200. These analytes are antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, vanadium, and zinc. Note: tin was not sampled and included in the analysis for MW-200 because tin has not been detected in any downgradient wells or in the background data set above the PQL since 2013. The trend test and prediction limit statistical outputs are included in Attachment 2.

For constituents where notable changes in the reporting limit have occurred (i.e., antimony, chromium, cobalt, copper, lead, nickel, and vanadium), the earlier non-detect values with higher reporting limits were not included in the Mann-Kendall trend tests since this may artificially introduce variation into the trend test. Trend test results developed through Sanitas indicated a decreasing trend for zinc that is significant at the 98% confidence level (two-tailed test, α=0.01 per tail). Trends are not significant at the 98% confidence level for the other detected metals constituents in MW-200.

For zinc, a decreasing trend is reported even when a common value below the lowest detected value is used for non-detects since the results in 2016-2024 are non-detect except for September 2022. However, zinc is still considered suitable for inclusion in the background dataset since the trend is decreasing as opposed to increasing, and since periods of non-detects for zinc have been previously observed between 2011 and 2012, and during portions of 2014 and 2015. In addition, the decreasing trend is primarily driven by the earlier maximum concentration of 0.224 mg/L on 12/1/09. When the 12/1/09 zinc concentration is removed, no trend is identified.

The April 2024 results were below their respective intrawell prediction limits. Based on the Mann-Kendall trend test and intrawell prediction limit results, MW-200 remains suitable for inclusion in the background metals data set.

3.3 Abandoned and Replacement Well Data Sets

MW-119R and MW-204 were abandoned in April 2019, and replacement wells MW-119RR and MW-204R were installed in August 2019. The first round of detection monitoring for the Appendix I list was conducted at replacement wells MW-119RR and MW-204R in October 2019.

As discussed in the Spring 2021 Statistical Evaluation, the MW-119RR data was not combined with the abandoned well MW-119R data. Only the MW-119RR data was utilized to conduct statistical comparisons in the current evaluation.

MW-204R has been abandoned and removed from the groundwater monitoring network due to a well compromise identified during the April 2020 event. Replacement well MW-204RR was installed in July 2020. MW-204RR was dry at the time of installation and remained dry through the Winter 2020 sampling event. Groundwater was measured in the casing from 2021 through 2023; however, the volumes were insufficient for sample collection. The confining hydrogeologic conditions have been exacerbated by clay placement and compaction activities from the construction of Phases 5B and 6 and ongoing drought conditions. As discussed in the Report Priority of the *2023 AWQR* (Foth, 2024), Foth requested MW-205 permanently replace detection monitoring well MW-204RR in the permitted groundwater monitoring network for the Western Expansion Area due to the dry to limited water depths consistently observed at MW-204RR. MW-204RR is being retained as a water level only location.

4. Comparison to Background

Comparisons to background levels were conducted using interwell prediction limits and the Double Quantification Rule (DQR).

4.1 Interwell Prediction Limits

Interwell prediction limits were used to formally assess SSIs over background for analytes that have been detected above the reporting limit in the background data set (MW-122R and MW-200). These analytes were antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, vanadium, and zinc. Note: tin was not sampled and included in the interwell prediction limit analysis because tin has not been detected in any downgradient wells or in the background data set above the PQL since 2013.

Prediction limits calculated utilizing background sample data collected from April 2008 through April 2024 are summarized in Table 2. The MW-200 background data set adjustments discussed in Section 3.2.1 were utilized.

Non-parametric prediction limits were used since either normality assumptions could not be met, or there were less than 50% detects in the combined background data.

Table 2
Interwell Prediction Limit Summary
Apr. 2008 – Apr. 2024 Interwell Data [(1)]

Chemical Name	Prediction Limit	Units	Prediction Limit Type	Retesting Plan	Prediction Limit Method
Antimony	0.0101	mg/L	Non-Parametric	1-of-2	Maximum Order Statistic
Arsenic	0.00801	mg/L	Non-Parametric	1-of-2	Maximum Order Statistic
Barium	1.05	mg/L	Non-Parametric	1-of-2	Maximum Order Statistic
Beryllium	0.00348	mg/L	Non-Parametric	1-of-2	Maximum Order Statistic
Cadmium	0.00179	mg/L	Non-Parametric	1-of-2	Maximum Order Statistic
Chromium	0.0343	mg/L	Non-Parametric	1-of-2	Maximum Order Statistic
Cobalt	0.026	mg/L	Non-Parametric	1-of-2	Maximum Order Statistic
Copper	0.0536	mg/L	Non-Parametric	1-of-2	Maximum Order Statistic
Lead	0.0362	mg/L	Non-Parametric	1-of-2	Maximum Order Statistic
Nickel	0.0545	mg/L	Non-Parametric	1-of-2	Maximum Order Statistic
Vanadium	0.0921	mg/L	Non-Parametric	1-of-2	Maximum Order Statistic
Zinc	0.224	mg/L	Non-Parametric	1-of-2	Maximum Order Statistic

(1) Interwell data consists of the Appendix I and II parameters that have been detected in the combined background data set (MW-122R and MW-200). Note that the MW-200 background data set adjustments were incorporated in accordance with Section 3.2.1.

Interwell prediction limit output is included in Attachment 3. The monitoring locations exhibiting a prediction limit exceedance during the April 2024 event are listed in Table 3.

Table 3
Apr. 2024 Prediction Limit Exceedances

Prediction Limit	Arsenic (mg/L) 0.00801
Detection Monitoring Locations	
None	
Assessment Monitoring Locations	
MW-121R	0.0222

4.2 Double Quantification Rule

The DQR was used to evaluate SSIs over background for the Appendix I and II metal constituents which have not been detected above the reporting limit in the combined background data set (MW-122R and MW-200), and for the non-metal constituents which have not been detected above the reporting limit in MW-122R (i.e., DQR is applied to constituents which have not been evaluated using interwell prediction limits.)

The DQR output is included in Attachment 4, with a summary of the April 2024 DQR detections listed in Table 4.

Table 4
Double Quantification Rule
Apr. 2024 Detections

Well	Constituent(s)
Detection Monitoring Locations	
None	
Assessment Monitoring Locations	
MW-121R	Benzene; cis-1,2-Dichloroethene

4.3 Summary of Comparison to Background

4.3.1 Detection Monitoring Locations

No prediction limit exceedances or DQR detections were identified at GU-2A, MW-119RR, MW-200, MW-205, and MW-206.

4.3.2 Assessment Monitoring Locations

An interwell prediction limit exceedance was identified for arsenic in MW-121R. DQR detections were identified for benzene and cis-1,2-dichloroethene in MW-121R. In lieu of retesting for the prediction limit exceedance and DQR detections, SSIs were declared and evaluated for SSLs in Section 5.

4.3.2.1 Exiting Assessment Monitoring

Table 5 presents a summary of the assessment monitoring locations and statistical comparisons required for exiting assessment monitoring. As discussed in Section 2, assessment monitoring locations may return to detection monitoring when Appendix II

constituents fall below the current interwell prediction limit (for constituents which are detected in the background data set) and below the laboratory reporting limit (for constituents which are not detected in the background data set) for three consecutive sampling events.

Table 5
Evaluation to Exit Assessment Monitoring

Monitoring Location	Apr. 2023	Sep. 2023	Apr. 2024
MW-121R			
Constituents Detected in Background are Below Prediction Limits	No	No	No
DQR Constituents are Below Reporting Limit	No	No	No

All Appendix II constituents were not below the interwell prediction limit or laboratory reporting limit for three consecutive sampling events at MW-121R. As a result, MW-121R will not exit assessment monitoring at this time.

5. Comparison to Groundwater Protection Standard

The prediction limit exceedances and DQR detections listed in Tables 3 and 4 were evaluated for SSLs over the GWPS per IAC 113.10(6)f and g. Comparisons to the GWPS were evaluated through statistical confidence intervals under the assessment monitoring null hypothesis. SSLs are declared to exist with statistical certainty when the lower confidence limit exceeds the GWPS.

Confidence interval output is included in Attachment 5 and summarized in Table 6. SSLs were not identified at MW-121R.

Table 6
SSL Summary

Chemical Name	Wells with SSL [1]	Wells without SSL	Groundwater Protection Standard [2]
Assessment Monitoring Locations			
Arsenic (mg/L)		MW-121R	0.01
Benzene (ug/L)		MW-121R	5
cis-1,2-Dichloroethene (ug/L)		MW-121R	70

[1] Under assessment mode, an SSL is indicated when the lower confidence limit exceeds the GWPS.
[2] Values are the 40 CFR Part 141 Safe Drinking Water Act MCL or IAC 567 Chapter 137 Statewide Standard for a Protected Groundwater Source.

6. Effective Power and Site-Wide False Positive Rate

Statistical power calculations, effective power curves for the 1-of-2 prediction limit plan, and the current SWFPR are discussed in detail in Attachment 6. The intrawell and interwell non-parametric prediction limits currently have good power ratings. The current cumulative annual SWFPR for the plan is 8%. The current annual SWFPR is in compliance with the Unified Guidance target 10% false positive.

Statistical power calculations for confidence intervals in assessment mode are included in the confidence interval output of Attachment 5. Details regarding the purpose and procedures for these calculations are provided in Attachment 1. Confidence limits are calculated to meet

statistical power levels of 50% for increases in the true concentration mean of 1.5 times a fixed standard, and 80% for increases in the true concentration mean of 2.0 times a fixed standard, as discussed in the Unified Guidance Chapter 22 (USEPA, 2009).

7. Conclusions

The methodology described in Attachment 1 was utilized to conduct the statistical evaluations for locations in the detection and assessment monitoring programs. The combined background data set of MW-122R and MW-200 was utilized to evaluate SSIs over background for metals. The background data set for non-metal constituents is defined by MW-122R only.

A summary of the Spring 2024 statistical results is presented in Table 7 and detailed in the following subsections.

Table 7
Summary of the Spring 2024 Evaluation

Monitoring Location	Monitoring Program	Current Schedule (Apr. 2024) [1]	Current SSIs	Current SSLs	Retesting Parameter [2]	Monitoring Program Changes
Downgradient Monitoring Locations						
GU-2A	Detection	Appendix I				
GU-4A	Detection	Dry				
MW-119RR	Detection	Appendix I				
MW-121R	Assessment	Appendix II	Arsenic; Benzene; cis-1,2-Dichloroethene			
MW-200 [3]	Detection	Appendix I				
MW-205 [5]	Detection	Appendix I				
MW-206	Detection	Appendix I				
Background Monitoring Locations						
MW-122R	Background	Appendix II				
MW-200 [2]	Background	Appendix II				

[1] In Apr. 2024, the Appendix II locations were sampled for the Appendix I and detected Appendix II constituents. The next 5-year resampling for the full Appendix II list at the assessment and background monitoring wells is scheduled for Fall 2024.
[2] Retest samples will be collected prior to the next semiannual event and will be utilized to determine if any monitoring program changes will be initiated.
[3] MW-200 primarily serves as a downgradient monitoring location; however, MW-200 is also used to supplement the background data set.
[4] In the *2023 AWQR* (Foth, 2024), Foth requested to replace MW-204RR with MW-205 in the permitted groundwater monitoring network for the Western Expansion Area due to the dry to limited water depths consistently observed at MW-204RR. Therefore, MW-205 was sampled in Apr. 2024 for the Appendix I list. MW-204RR is being retained as a water level only location.

7.1 Detection Monitoring

Semiannual detection monitoring for the Appendix I list was conducted at GU-2A, MW-119RR, MW-200, and MW-206 in April 2024. As discussed in the Report Priority of the *2023 AWQR* (Foth, 2024), Foth requested MW-205 permanently replace detection monitoring well MW-204RR in the permitted groundwater monitoring network for the Western Expansion Area due to the dry to limited water depths consistently observed at MW-204RR. Therefore, MW-205 was sampled for the Appendix I list in April 2024 in place of MW-204RR. MW-204RR is being retained as a water level only location.

At GU-4A, baseline detection monitoring will be initiated once the water level is at or above the elevation of the horizontal underdrain discharge pipe connected perpendicular to the vertical sample pipe.

No SSIs were identified at GU-2A, MW-119RR, MW-200, MW-205, and MW-206. Semiannual detection monitoring for the Appendix I list will be conducted at GU-2A, MW-119RR, MW-200, MW-205, and MW-206 in Fall 2024.

7.2 Assessment Monitoring

Semiannual assessment monitoring for the Appendix I and detected Appendix II constituents was conducted at MW-121R in April 2024. SSIs were identified for arsenic, benzene, and cis-1,2-dichloroethene at MW-121R. SSLs were not identified.

The Spring 2024 statistical evaluation did not identify all Appendix II constituents below the interwell prediction limit or laboratory reporting limit for three consecutive sampling events at MW-121R. As a result, MW-121R will not exit assessment monitoring at this time. In accordance with Permit Special Provision X.4.e, assessment monitoring well MW-121R will be sampled for the full set of Appendix II constituents in Fall 2024.

7.3 Background Monitoring

Semiannual background monitoring for the Appendix I and detected Appendix II constituents was conducted at MW-122R and MW-200 in April 2024. Note that while MW-200 primarily serves as a downgradient monitoring location, MW-200 is also used to supplement the background data set. Mann-Kendal trend tests and intrawell prediction limit results indicated that MW-200 remains suitable for inclusion in the background metals data set.

Background monitoring wells MW-122R and MW-200 will be sampled for the full set of Appendix II constituents in Fall 2024.

Attachment 1
Detailed Discussion of Statistical Methods

Statistical Methodology

1. Comparison to Background

For determining which parameters will need a formal statistical treatment, the Unified Guidance (USEPA, 2009) suggests splitting monitoring parameters into three distinct groups: a) reliable indicators selected for formal testing; b) other analytes which are monitored for general groundwater quality information but not statistically tested; and c) those meeting the "never-detected" criteria. Only those parameters with some historically detected presence in background need to be included in the first group and treated with a formal statistical test. Any parameter that has never been detected in background is eligible for the third group of "never-detected" constituents. Constituents with detection below the reporting limit (J-flagged data) will be considered "never-detected." As a means of evaluating the third group, the Unified Guidance suggests the Double Quantification Rule (DQR). The DQR is stated in the Unified Guidance as:

"A confirmed exceedance is registered if any well-constituent pair in the '100% non-detect' group exhibits quantified measurements (i.e., at or above the reporting limit [RL]) in two consecutive sample and resample events."

The Unified Guidance also recommends establishing background sample sizes as large as feasible. The guidance recognizes that small sample sizes in background can be "particularly" troublesome, especially in controlling statistical test false positive and negative rates. With parametric tests (such as parametric prediction limits), the false positive rate may be controlled, but at the expense of statistical power. With non-parametric tests (such as non-parametric prediction limits or the "quasi-statistical" DQR), the false positive rate may be unacceptably high. The Unified Guidance suggests that generally at least 8 to 10 separate background measurements be available, recognizing that statistical power continues to increase with larger sample sizes.

In reports prior to the *2011 AWQR* (Foth, 2012), the ANOVA and a "2x2 contingency table" methods were used to evaluate SSIs over background. These methods met the criteria of IAC 113.10(4)g and h. The ANOVA and "2x2 contingency table" methods were used to maximize the statistical power while minimizing potentially large false positive rates as a result of the smaller sample sizes.

Starting with the *2011 AWQR* (Foth, 2012), the statistical analysis methods utilized for comparison to background were the DQR and "1-of-2" interwell prediction limits as recommended in the Unified Guidance (USEPA, 2009).

Expansion of the Background Data Set

During the statistical evaluation for the 2012 Annual Water Quality Report, the Commission elected to expand the background metals data set by including metals data from MW-200 with upgradient well MW-122R data. The Department approved the secondary use of MW-200 for interwell background providing the sampling results are assessed using intrawell statistics to justify its suitability. The suitability of MW-200 for inclusion in the background data set will be verified by review of volatile organic compound data, Mann-Kendal trend tests, and intrawell prediction limits (further discussed below).

Double Quantification Rule

The DQR will be used to evaluate SSIs over background for the Appendix I and II constituents that have not been detected above the reporting limit in the background data set. An SSI will be indicated for any well-constituent pair with quantified measurements at or above the reporting limit noted for two consecutive sample and resample events. If applicable, the resample will be collected prior to next semiannual sampling event.

Interwell Prediction Limits

Interwell prediction limits will be used to statistically evaluate SSIs over background for the Appendix I and II constituents which have been detected above the reporting limit in the background data set. A "1-of-2" retesting plan will be utilized on individual sample results. The 1-of-2 retesting plan as defined in the Unified Guidance concludes that an SSI has occurred when two out of two sample results exceed the prediction limit, while no SSI is concluded if 1-of-2 is below the limit. If applicable, resamples will be collected prior to next semiannual sampling event. The prediction limit for each constituent will be recalculated semiannually.

For interwell constituents with less than or equal to 50% detects in the background data set, a non-parametric prediction limit will be utilized. The non-parametric prediction limit will be taken as the maximum order statistic (maximum value) of the background data. The background data set will consist of data collected from April 2008 through the current sampling event.

For interwell constituents with greater than 50% detects in the background data set, normality assumptions will be verified using the Shapiro-Wilk normality test. If the background data is not normally distributed, a non-parametric prediction limit will be utilized (as described in the paragraph above). If the background data is normally distributed or can be fit to a normal distribution utilizing a normalizing transformation, then a normal-based parametric prediction limit will be applied.

When considering a lognormal prediction limit, a comparison will be made to the maximum order statistic for the background data set. Lognormal prediction limits can be sensitive to smaller departures from lognormality. That is, if data are not truly lognormal, but also not rejected as lognormal, the prediction limit may be inflated because of the transformation. In choosing a lognormal limit, in addition to the percent detections and lognormal goodness of fit criteria, an additional convention will be applied. If the lognormal limit exceeds the level of twice the maximum background concentration, it is assumed that the lognormal model does not adequately fit the background distribution and a non-parametric prediction limit will be selected.

For interwell constituents with 50% to 85% detects in the background data set, Kaplan-Meier estimation will be applied to manage statistical bias introduced by non-detects. For interwell constituents with over 85% detects in the background data set, half the reporting limit will be used for non-detect data. These estimation methods follow Unified Guidance recommendations and are given in detail in Unified Guidance Chapter 15 (USEPA, 2009).

The parametric prediction limit will be calculated as:

$$PL = \bar{x} + k \cdot s$$

where $\bar{x}$ is the sample mean of the April 2008 through current event background data, *s* is the sample standard deviation, and *k* is the multiplier obtained from the Unified Guidance Table 19-1 (USEPA, 2009) for 1-of-2 interwell prediction limits on observations. In determining *k*, the number of constituents of concern (COCs) for formal statistical evaluation along with the

number of downgradient wells need to be identified. Per the basic subdivision discussion presented in Section 19.2.1 of the Unified Guidance, along with the discussion regarding the use of the appendix tables for parametric retesting plans given on pages 19-13 through 19-15 of the Unified Guidance (USEPA, 2009), the *k*-multiplier is chosen based on the number of constituents, wells and evaluations performed annually. When an exact well and COC configuration is not given in the appendix tables, the *k*-multiplier is linearly interpolated as described on page 19-14 of the Unified Guidance (USEPA, 2009).

Sanitas v10 software (Sanitas Technologies) is used to check distributional assumptions, perform Kaplan-Meier estimation in the case of 50% to 85% detects in the upgradient well, and calculate the *k*-multipliers and subsequent prediction limits.

Intrawell Prediction Limits

Intrawell prediction limits are calculated in a similar manner to that described above for the interwell case. A main difference between the two methods is the intrawell limit is calculated from a collection of background measurements within the compliance well. A minimum of eight compliance well background samples will be used when calculating the limit.

A second difference is for the parametric prediction limit, in which the *k*-multiplier is modified from the interwell case, as given in Appendix D Tables 19-10 through 19-18 of the Unified Guidance (USEPA, 2009).

Updating intrawell background is performed periodically. The Unified Guidance (Section 5.3.2) recommends that 4 to 8 new compliance observations be collected prior to updating the background dataset. The guidance also states that "a potential update is predicated on there being no statistically significant increase [SSI] recorded for that well constituent, including since the last update." A two-sample t-test or Wilcoxon rank-sum test between existing intrawell background data and the potential set of newer background data is performed, and a non-significant result (α = 0.05) implies that the newer compliance data can be re-classified as background measurements.

For Wilcoxon rank-sum tests, non-detect results cannot be ranked with certainty and the problem is compounded with multiple PQLs and/or J-flagged values (USEPA, 2009). In comparisons where a substantial fraction of non-detect and/or J-flagged measurements or changing PQLs occur, professional judgment will be utilized for evaluating significant differences between the existing intrawell background data and the potential newer set of background data. Consideration will be given to whether significant differences are due to artificial variation introduced by censored data.

2. Comparison to Groundwater Protection Standard – Assessment Monitoring

According to IAC 113.10(6)f and g, under the assessment monitoring program Appendix II results which have been determined to be statistically above background are also statistically compared to the GWPS. If "Appendix II constituents are detected at statistically significant levels above the GWPS" a notice is placed in the operating record and characterization is begun.

Under IAC 113.10(6)h, the GWPS is the maximum contaminant level (MCL) promulgated under Section 1412 of the Safe Drinking Water Act in 40 Code of Federal Regulations (CFR) Part 141. If no MCL exists, or if background concentrations are higher than the MCL, the GWPS is defined as background. Also, per IAC 113.10(6)i, an alternative GWPS may be established by the Department for constituents for which there is no MCL such as the "health-based

concentrations that comply with the statewide standards for groundwater established pursuant to 567-Chapter 137."

When the GWPS is background concentrations, the statistical methods discussed in the above "1. Comparison to Background" are used. When the GWPS is the MCL or an alternative health-based concentration, per the Unified Guidance (USEPA, 2009), "confidence intervals are the recommended general statistical strategy in compliance/assessment or corrective action monitoring." In the case of normally distributed data, a normal-based parametric confidence interval is used. If the data are not normally distributed a non-parametric confidence interval on the median is used. A lower 99% confidence limit falling above the GWPS implies that concentrations are detected at statistically significant levels above the GWPS with an α-level of 0.01, which is the minimum RCRA regulatory limit from §264.97(i)(2) for an individual test false positive error rate.

The Unified Guidance recognizes that statistical power is also of prime concern to USEPA and that there "should be a high probability that the statistical test will positively identify concentrations that have exceeded a fixed regulatory standard." In compliance/assessment monitoring, instead of pre-specifying the false positive rate prior to computing confidence interval limits, the Unified Guidance suggests the desired level of power (1-β) should be set as an initial target.

For compliance/assessment monitoring purposes, the Unified Guidance (Chapter 22) suggests evaluating increases in the true concentration mean of 1.5 and 2.0 times a fixed standard. (This is similar in concept to the critical power targets in detection monitoring, i.e., 55-60% power at 3σ above background and 80-85% power at 4σ over background). As a general guide, the Unified Guidance suggests there should be at least 70-80% statistical power for detecting increases of 2 times a fixed standard. Specifically, the Unified Guidance recommends there be 50% power of detecting increases in the true concentration mean of 1.5 times a fixed standard (risk ratio of 1.5) and 80% power of detecting increases in the true concentration mean of 2.0 times a fixed standard (risk ratio of 2.0).

To meet these levels of statistical power, α is chosen based on either Unified Guidance Equation 22.1:

$$1 - \beta = G_{T,n-1}\left(t_{1-\alpha,n-1}\middle|\Delta - \sqrt{n}(R-1)\right);$$

where R is the desired risk ratio, $t_{(1-\alpha,n-1)}$ is the (1–α) Student's t-quantile with (n–1) degrees of freedom and G represents the cumulative non-central t-distribution with (n–1) degrees of freedom and noncentrality parameter Δ;

or Unified Guidance Equation 22.2:

$$\alpha \sim 1 - F_{T,n-1}\left(\frac{(R-1)\sqrt{n}}{R\cdot\widehat{CV}} - t_{1-\beta,n-1}\right);$$

where R is the desired risk ratio, n is the sample size, CV is the estimated sample coefficient of variation, $t_{(1-\beta,n-1)}$ is the (1–β) Student's t-quantile with (n–1) degrees of freedom, and F is the cumulative (central) Student's t-distribution function.

The first equation (Unified Guidance Equation 22.1) assumes a coefficient of variation (CV) =1. This version is used if only poorer estimates of the true CV are available. In practice, a

convention has been adopted with the statistical updates to utilize Unified Guidance Equation 22.2 in all cases where a parametric confidence interval is calculated and use Unified Guidance Equation 22.1 when non-parametric confidence intervals are calculated. Since a non-parametric confidence interval is based on the median, it is not as sensitive to departures from normality, and the assumption of a CV=1 in Unified Guidance Equation 22.1 should provide a conservative estimate.

Since 0.01 is the minimum RCRA regulatory limit for α, it is never set lower than this. Conversely, the Unified Guidance recognizes the "difficulty of simultaneously attaining the recommended level of power while controlling the false positive rate, especially for small sample sizes and highly variable data." The Unified Guidance suggests a maximum false positive rate of α=0.2 is a reasonable upper bound.

Finally, like the need for defining a SWFPR under detection monitoring, the Unified Guidance (Chapter 7) recognizes there may be concern about the "use of relatively high individual test-wise false positive rates (α) in order to meet a pre-specified power, especially when considering the cumulative false positive error rate across multiple wells and/or constituents." However, "the Unified Guidance considers computation of cumulative SWFPRs in compliance/assessment testing to be problematic, and reliance on individual test false positive rates preferable." Notwithstanding, if several confidence limit calculations are compared to the GWPS with high α-levels, caution should be taken in the interpretation.

For calculation of confidence intervals, Sanitas® v10 software is again used to check distributional assumptions, perform Kaplan-Meier estimation in the case of 50% to 85% detects, and calculate either parametric or nonparametric confidence limits.

3. Comparison to Groundwater Protection Standard – Corrective Action Monitoring

As stated above, if "Appendix II constituents are detected at statistically significant levels above the GWPS" a notice is placed in the operating record and characterization is begun. Owners or operators are required to initiate an assessment of corrective measures, select a remedy, and implement a remedy in accordance with IAC 113.10(7), (8), and (9). For remedy completion in accordance with IAC 113.10(9)e(2), compliance with the GWPS is considered achieved by demonstrating that concentrations of Appendix II constituents have not exceeded the GWPS for a period of three consecutive years or an alternate length of time established by the Department.

Starting with the Fall 2019 statistical evaluation, individual analyte/well pairs may return to assessment constituents (at the corrective action monitoring location) once compliance with the GWPS has been achieved for a period of 3 years. Note that monitoring wells will not move out of the corrective action monitoring program until all Appendix II constituents have achieved compliance with the GWPS for a period of three consecutive years.

Confidence Intervals in Corrective Action Mode

In the case of the GWPS being a fixed standard as either the 40 CFR Part 141 Safe Drinking Water Act MCL or the IAC 567 Chapter 137 Statewide Standard for a Protected Groundwater Source, "confidence intervals are the recommended general statistical strategy in compliance/assessment or corrective action monitoring" (USEPA, 2009). However, a primary difference between confidence intervals as used under assessment monitoring and confidence intervals used under corrective action is reversal of the null hypothesis. As detailed in Section 7.2 of the Unified Guidance (USEPA, 2009), the hypothesis testing structure under assessment

monitoring is to presume compliance point concentrations do not to exceed the fixed standard unless sampling data indicates otherwise. As a formal statistical hypothesis, this is written as:

$$H_0: \Theta \leq G \quad \text{vs.} \quad H_A: \Theta > G$$

In corrective action mode, the hypothesis is reversed. Namely, compliance point concentrations are presumed to exceed the fixed standard and evidence must be presented to demonstrate regulatory compliance. In the case of corrective action, the statistical hypothesis is written as:

$$H_0: \Theta > G \quad \text{vs.} \quad H_A: \Theta \leq G$$

For testing under assessment monitoring, a lower confidence limit (LCL) is compared to the compliance standard *G*. If the LCL is larger than the standard *G*, it is concluded that the compliance standard has been violated.

However, under corrective action monitoring, the upper confidence limit (UCL) is compared to the compliance standard *G*. In this case, the UCL should lie below the standard to accept the alternative hypothesis that concentration levels are in compliance.

The UCL α-level under corrective action monitoring is set so that a high degree of confidence is achieved in declaring successful remediation. Per the Unified Guidance (Section 7.4.2) "EPA's overriding concern in corrective action is that remediation efforts are not declared successful without sufficient statistical proof." The Unified Guidance "recommends the use of a reasonably low, fixed test-wide false positive rate (e.g., α = 0.05 or 0.10)." In this case, α = 0.10 corresponds to a 90% UCL.

<u>GWPS as Background</u>
Pursuant to IAC 113.10(6)h, when background concentrations of an analyte exceed the applicable MCL or IAC Statewide Standard for a Protected Groundwater Source, the GWPS is the background concentration. In this case, the GWPS is not a fixed standard but based on a distribution of background sample results.

Section 7.5 of the Unified Guidance (USEPA, 2009) details statistical hypothesis testing under corrective action when the GWPS is background. The Unified Guidance offers two alternative statistical approaches to hypothesis testing in this case. These alternatives are as follows:

A. The first represents a *two-sample* test of two distinct populations, namely the compliance well to background populations. Similar to the statistical tests used under detection and assessment monitoring, with this alternative under corrective action, the Unified Guidance states that "one highly recommended statistical test approach is a prediction limit." The Unified Guidance also states, "whatever the critical value for a selected background test, it becomes the GWPS under compliance/assessment or corrective action monitoring." Further, "the only allowable hypothesis test structure for the two-sample approach follows that of detection and compliance monitoring. Once exceeded and in corrective action, a return to compliance is through evidence that future samples lie below the GWPS using the same hypothesis structure." Therefore, with this approach in corrective action, prediction limits are calculated similarly as in assessment monitoring. Compliance well concentrations below a prediction limit indicate a return to concentrations below the background GWPS.

B. The second involves computation of a fixed statistic from the background data as the GWPS. The Unified Guidance recommendation in this case is to define a fixed GWPS based on a background upper tolerance limit with 95% confidence and 95% coverage. This is designed to be a "reasonable maximum on the likely range of background concentrations." This upper tolerance limit based on background data is then used as a fixed standard in statistical comparisons with 90% or 95% UCLs from compliance wells as discussed previously. Also, with the UCL method, the null hypothesis is reversed from that of assessment monitoring, assuming contamination is above the GWPS. A UCL falling below the background GWPS offers evidence of a return to concentrations below the GWPS. The Unified Guidance refers to this approach as a *single-sample* testing method, since the compliance well population is tested against a defined fixed standard.

The Unified Guidance discusses tradeoffs between the two approaches and does not necessarily prescribe either approach over the other. The Unified Guidance suggests that both approaches may be used, where "the background GWPS would be a range based on the two testing methods rather than a single value."

Normality

For calculation of confidence intervals, Sanitas® v10 software is again used to check distributional assumptions, perform Kaplan-Meier estimation in the case of 50% to 85% detects, and calculate either parametric or nonparametric confidence limits. "Corrective Action Mode" is selected for this analysis.

Non-Corrective Action Constituents

As recommended in the Unified Guidance (USEPA, 2009), confidence intervals in corrective action mode will be utilized to evaluate only constituents and monitoring locations with previously identified SSLs over the GWPS. Other compliance constituents (i.e., those without SSLs over the GWPS during prior statistical evaluations) will continue to be evaluated using the "1. Comparison to Background" and "2. Comparison to Groundwater Protection Standard – Assessment Monitoring" methods described above.

Note: The Unified Guidance (USEPA, 2009) states: "it should be recognized that once corrective action or remediation activities are initiated, there will be a considerable time during which the GWPS may still be exceeded. As provided in the RCRA regulations, it is at the conclusion of remediation activities that formal corrective action monitoring evaluation is appropriate. However, in the intervening period of remedial activity, well constituents can still be monitored, and the relative efficacy of remediation measures tracked. The same corrective action hypothesis can be assumed for the targeted constituents; techniques such as trend testing may be appropriate interim applications." Given the statement above and the intentions of IAC 113.10(6)g, as soon as an SSL is identified for an assessment monitoring constituent/location, then the next statistical evaluation will utilize corrective action monitoring (confidence intervals in corrective action mode).

Data Concentration Shifts During Corrective Action

Confidence intervals assume that the population is stable over time. As a result, confidence intervals may not accurately represent the current well concentrations if increasing or decreasing trends are observed (i.e., during a release or under active remediation). Per the Unified Guidance (USEPA, 2009), lower or upper confidence limits constructed on accumulated data may be overly wide (due to high sample variability caused by combining pre- and post-shift data) and may not be reflective of more recent upward/downward shifts in the contaminant distribution.

Alternative procedures may be applied to data sets with shifting distributions. For example, where trends tests are significant, pre-shift data may be removed from the well/parameter data set for the purposes of constructing the confidence interval. “The reduction in sample size will often be more than offset by the gain in statistical power. More recent measurements may exhibit less variation around the shifted mean value, resulting in a shorter confidence interval” (USEPA, 2009).

Another alternative is to construct confidence bands around the trend line to track progress towards exceeding or meeting a fixed standard. As suggested in the Unified Guidance (Chapter 22), if a trend is present, a 90% confidence band (upper 95% confidence limit) is placed on the linear trend line. If the upper 95% confidence limit on the trend line falls below the GWPS, the well is found to have reduced to levels statistically below the GWPS.

As the discussed in the Unified Guidance, “inferences concerning a linear regression are generally appropriate when two conditions hold: 1) the residuals from the regression are approximately normal or at least reasonably symmetric in distribution; and 2) a plot of residuals versus concentrations indicates a scatter cloud of essentially uniform vertical thickness or width.” These conditions are assessed through normal probability plots of the regression residuals and plots of residuals against the predicted concentrations.

Data Adjustments Due to Exiting Corrective Action

When analyte/well pairs exit corrective action and return to assessment constituents, the hypothesis testing structure is reversed again. In corrective action mode, compliance point concentrations were presumed to exceed the GWPS, and evidence must be presented to demonstrated regulatory compliance (i.e., UCLs below the GWPS for three consecutive years). With the return to assessment constituents, analyte/well pairs have demonstrated regulatory compliance. The hypothesis testing structure reverts to the assessment monitoring structure where compliance point concentrations are presumed to not exceed the GWPS unless sampling data indicates otherwise (i.e., LCL is above the GWPS). With this reversion in hypothesis, the focus shifts to evaluating concentration changes in the analyte/well pair that would indicate an increase over the GWPS and re-trigger corrective action. For constituents with historical SSLs, earlier concentrations that had previously triggered corrective action are no longer providing useful information regarding the current assessment monitoring hypothesis. Retaining the historical data during the timeframe in which the GWPS was exceeded will result in the regression or confidence interval methods being slower to respond to new increases. As a result, the historical data prior to when statistical compliance with the GWPS was first achieved will be removed when analyte/well pairs exit corrective action and return to assessment constituents.

Attachment 2
MW-200 Intrawell Statistics

Trend Tests
Sep. 2009 Through Apr. 2024 Data [1]

Constituent Name	Well	Slope	Mann-Kendall	Critical Value	Trend	N	Alpha
Antimony (mg/L) [2]	MW-200	0	73	84	No	22	0.02
Arsenic (mg/l)	MW-200	0	143	171	No	36	0.02
Barium (mg/l)	MW-200	-0.002031	-127	-171	No	36	0.02
Beryllium (mg/l)	MW-200	0	-66	-171	No	36	0.02
Cadmium (mg/l)	MW-200	-0.000005090	-123	-171	No	36	0.02
Chromium (mg/L) [2]	MW-200	0	4	101	No	25	0.02
Cobalt (mg/L) [2]	MW-200	0	-2	-89	No	23	0.02
Copper (mg/L) [2]	MW-200	0	-6	-89	No	23	0.02
Lead (mg/L) [2]	MW-200	0	-48	-95	No	24	0.02
Nickel (mg/L) [2]	MW-200	0.00003632	18	101	No	25	0.02
Vanadium (mg/L) [2]	MW-200	0.000004473	37	89	No	23	0.02
Zinc (mg/l)	MW-200	-0.0004724	-174	-171	Yes	36	0.02
		-0.001116	-131	-132	No	30	0.02

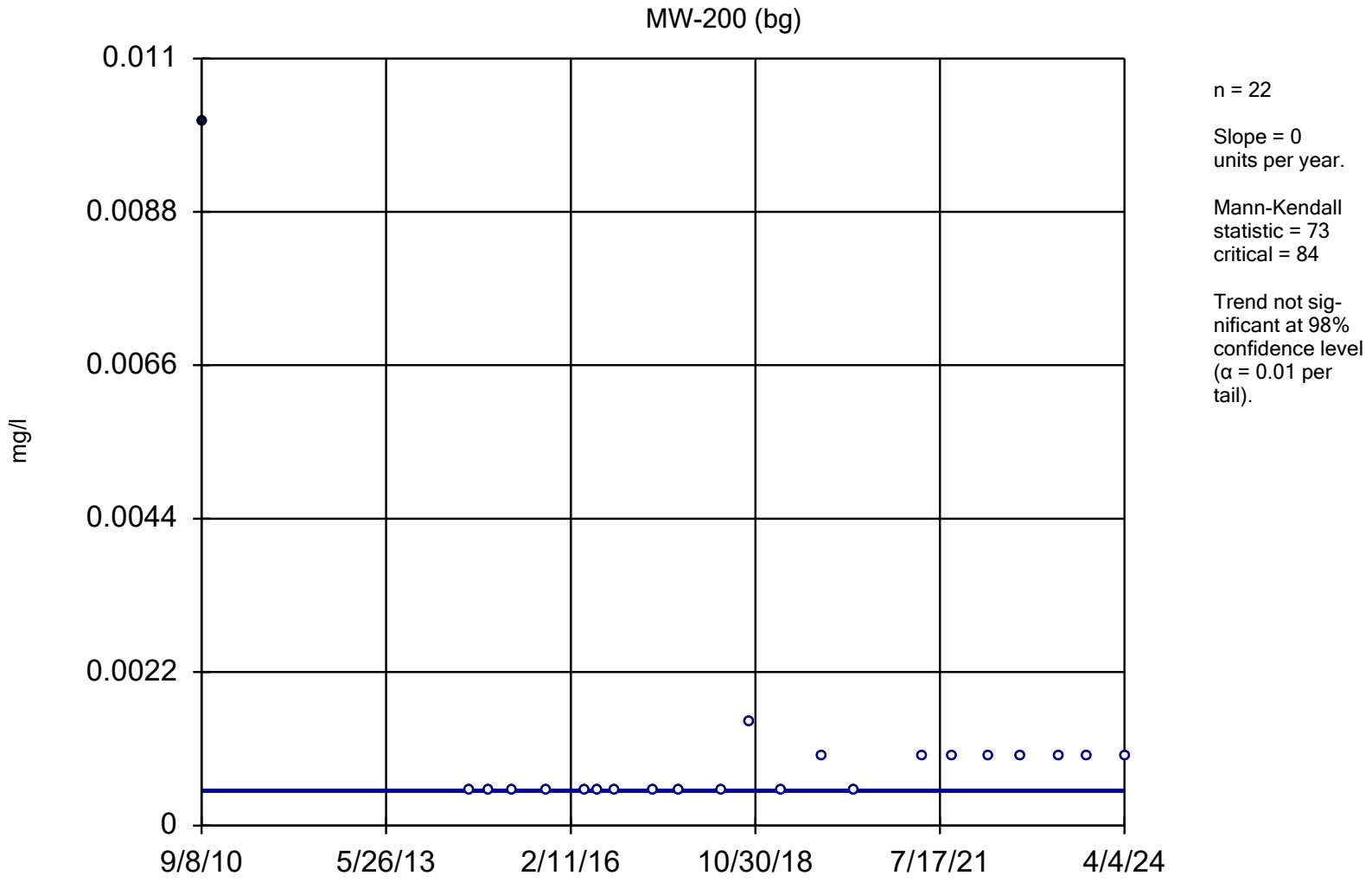
[1] Per Section 3.2, the Sep. 2020 metals data in MW-200 were removed from the intrawell background data set.

[2] By default, Sanitas software utilizes half the reporting limit for non-detected values. In the case of changing reporting limits, this may artificially introduce variation into the trend test. For constituents where notable changes in the reporting limit have occurred, the earlier non-detect values with higher report limits were not included in the trend evaluation.

[4] For zinc, a decreasing trend is reported even when a common value below the lowest detected value is used for non-detects since the results in 2016-2022 are non-detect with the exception of Sep. 2022. However, zinc is still considered suitable for inclusion in the background dataset since the trend is decreasing and not increasing, and since periods of non-detects for zinc have been previously observed between 2011 and 2012, and during portions of 2014 and 2015. In addition, the decreasing trend is primarily driven by the earlier maximum concentration of 0.224 mg/L on 12/1/09. When the 12/1/09 zinc concentration is removed, no trend is identified.

Hollow symbols indicate censored values.

Sen's Slope Estimator

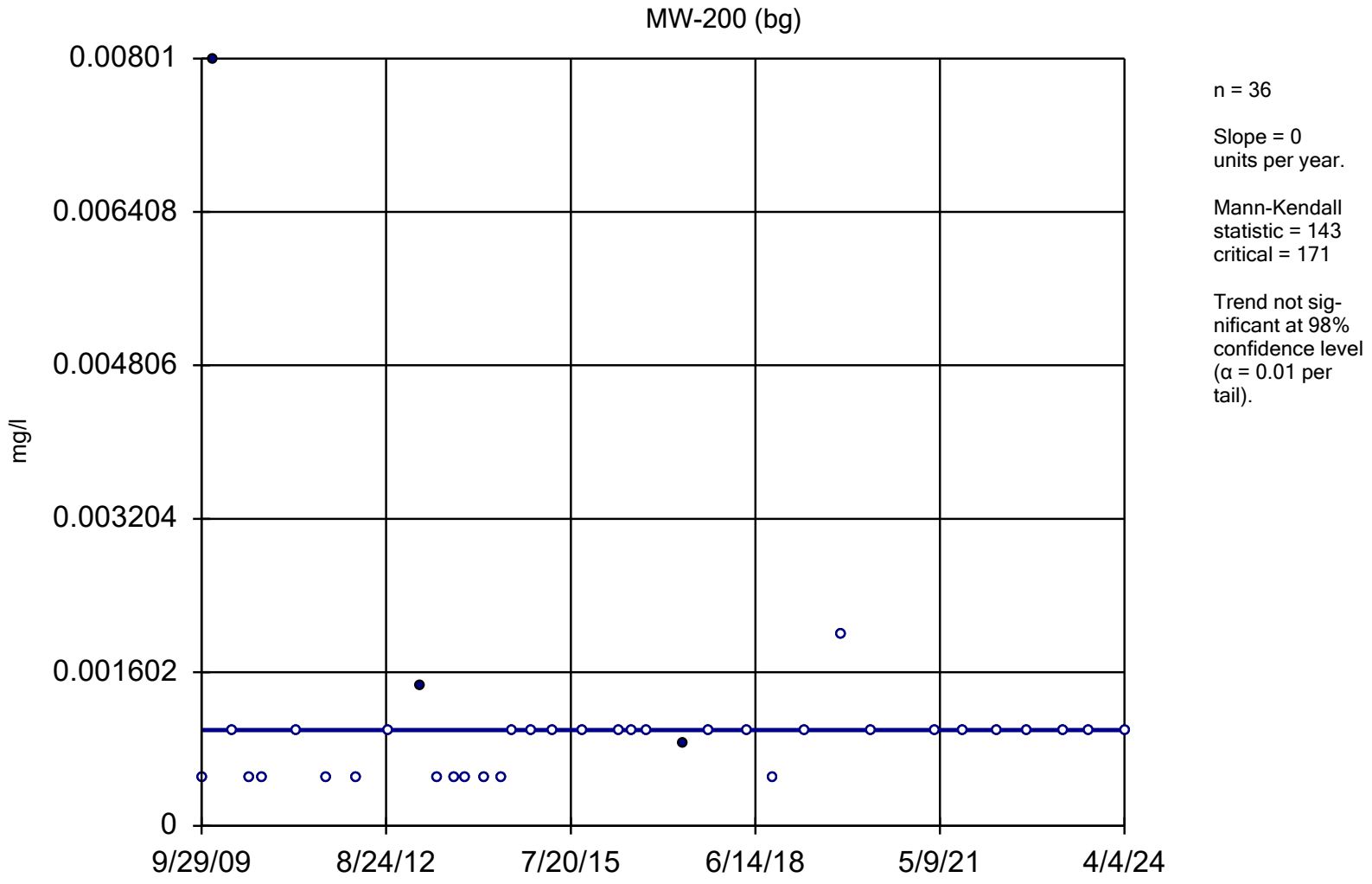


Constituent: Antimony Analysis Run 6/6/2024 2:27 PM

Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Hollow symbols indicate censored values.

Sen's Slope Estimator

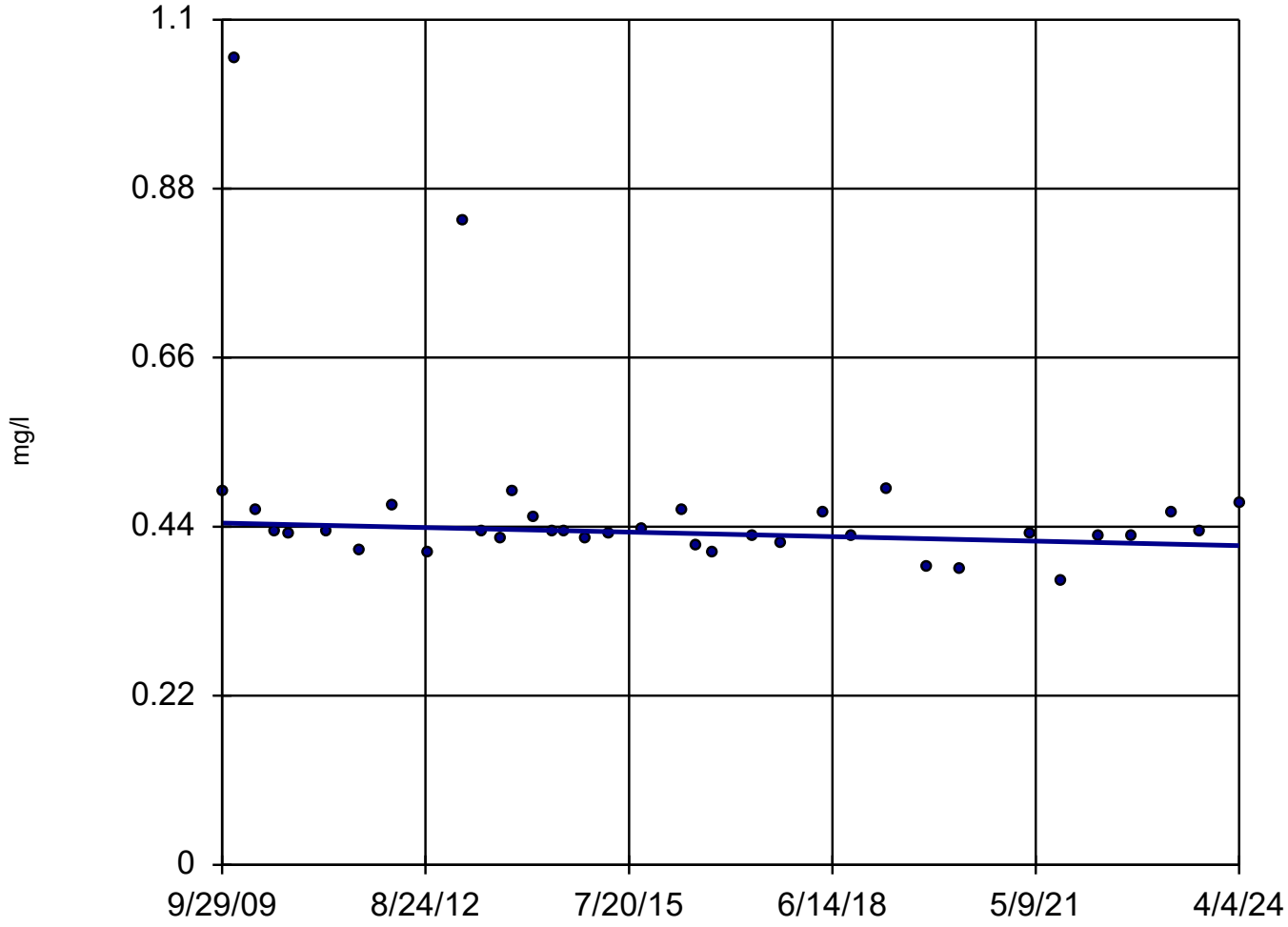


Constituent: Arsenic Analysis Run 6/6/2024 2:07 PM

Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Sen's Slope Estimator

MW-200 (bg)



n = 36

Slope = -0.002031 units per year.

Mann-Kendall statistic = -127
critical = -171

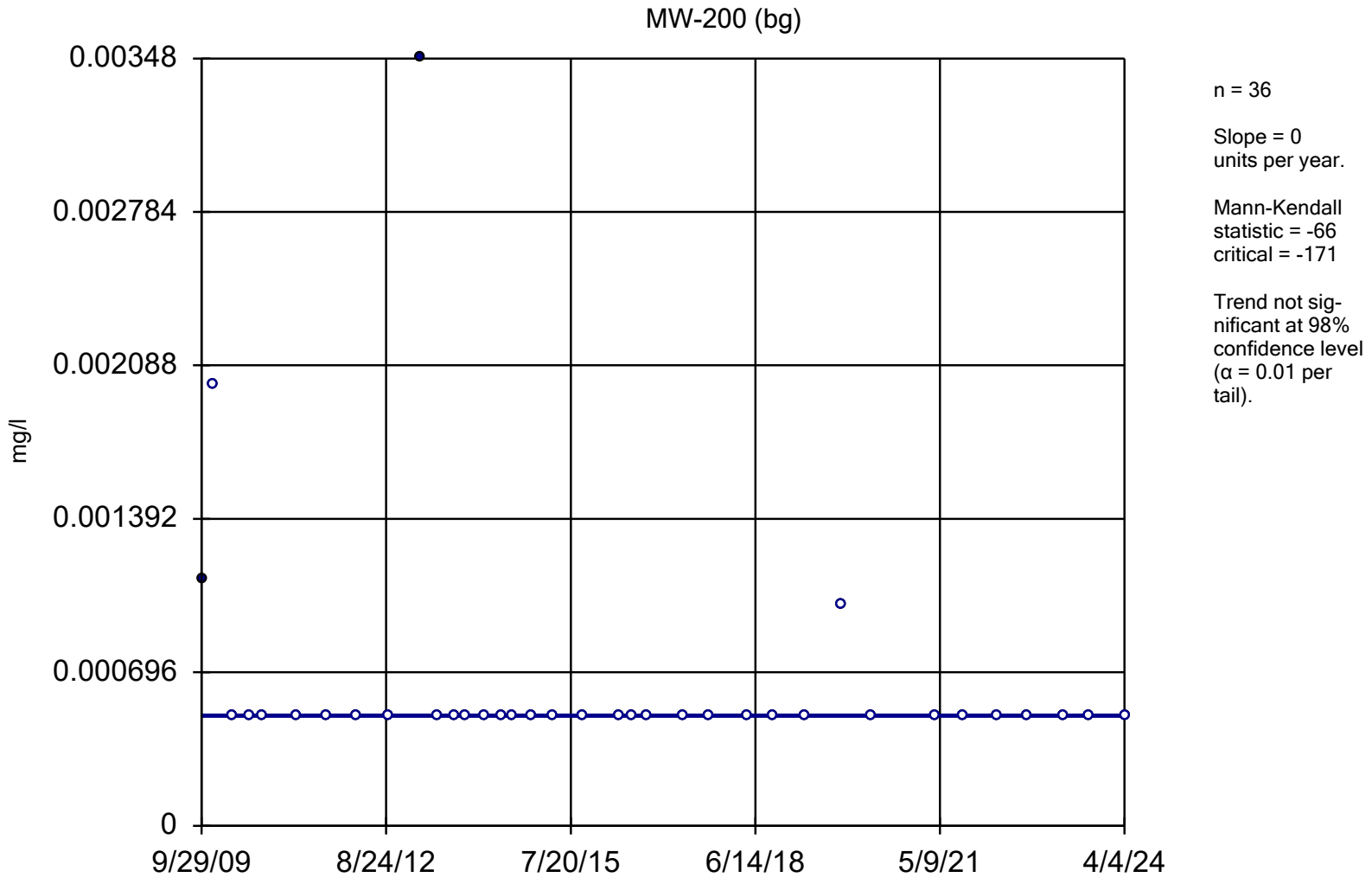
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Barium Analysis Run 6/6/2024 2:07 PM

Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Hollow symbols indicate censored values.

Sen's Slope Estimator

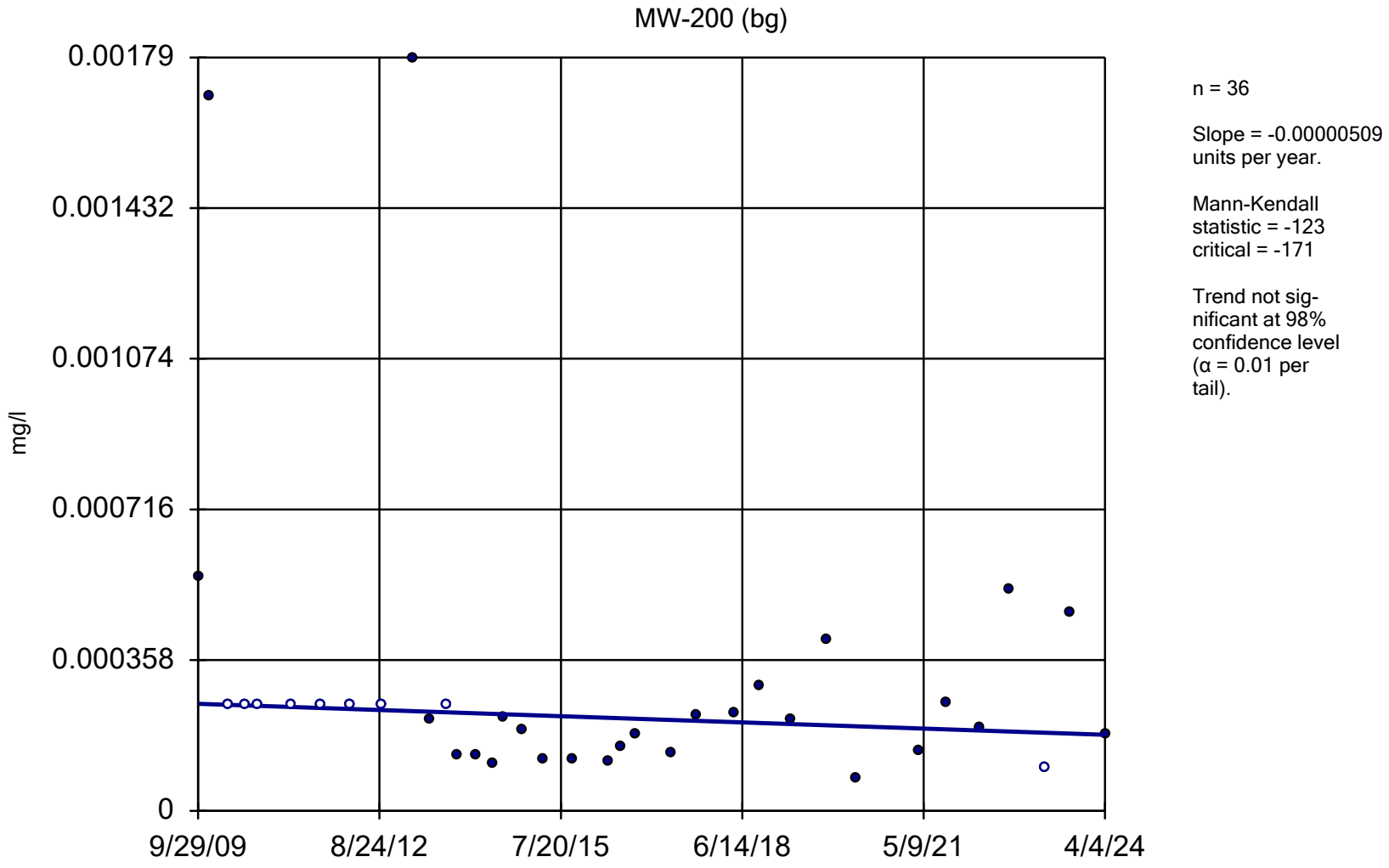


Constituent: Beryllium Analysis Run 6/6/2024 2:07 PM

Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Hollow symbols indicate censored values.

Sen's Slope Estimator



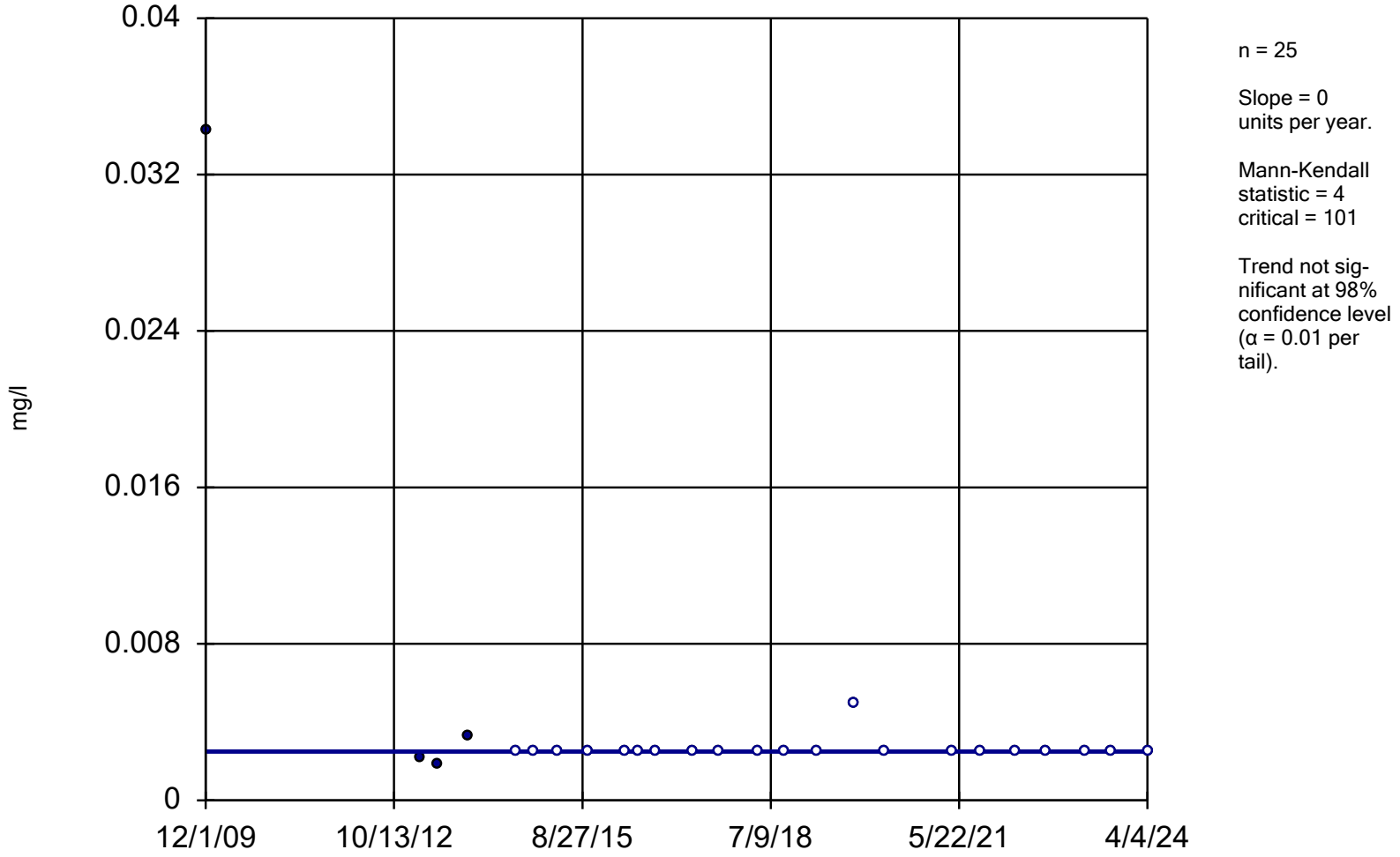
Constituent: Cadmium Analysis Run 6/6/2024 2:07 PM

Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-200 (bg)



n = 25

Slope = 0
units per year.

Mann-Kendall
statistic = 4
critical = 101

Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

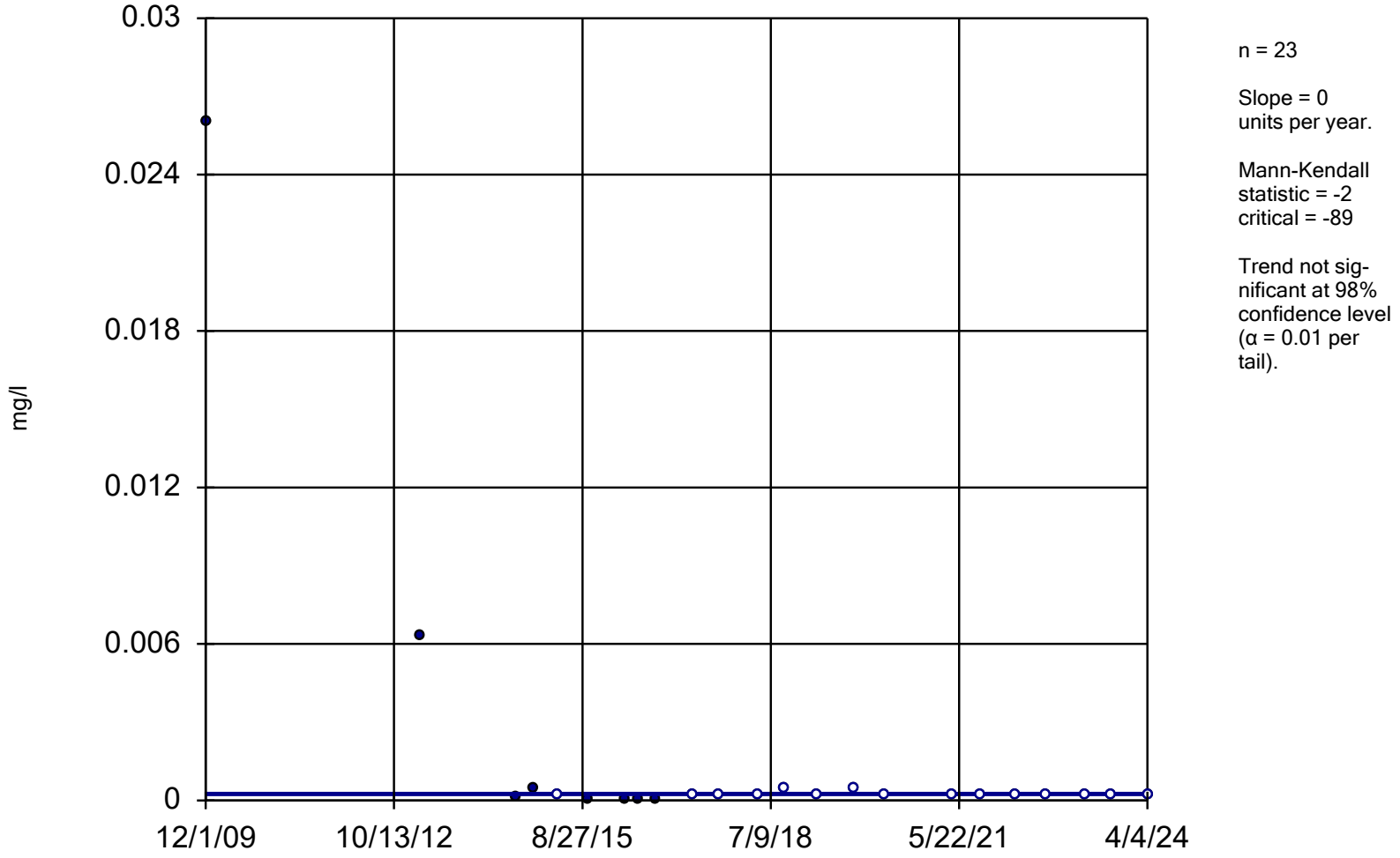
Constituent: Chromium Analysis Run 6/6/2024 2:32 PM

Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-200 (bg)



n = 23

Slope = 0
units per year.

Mann-Kendall
statistic = -2
critical = -89

Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

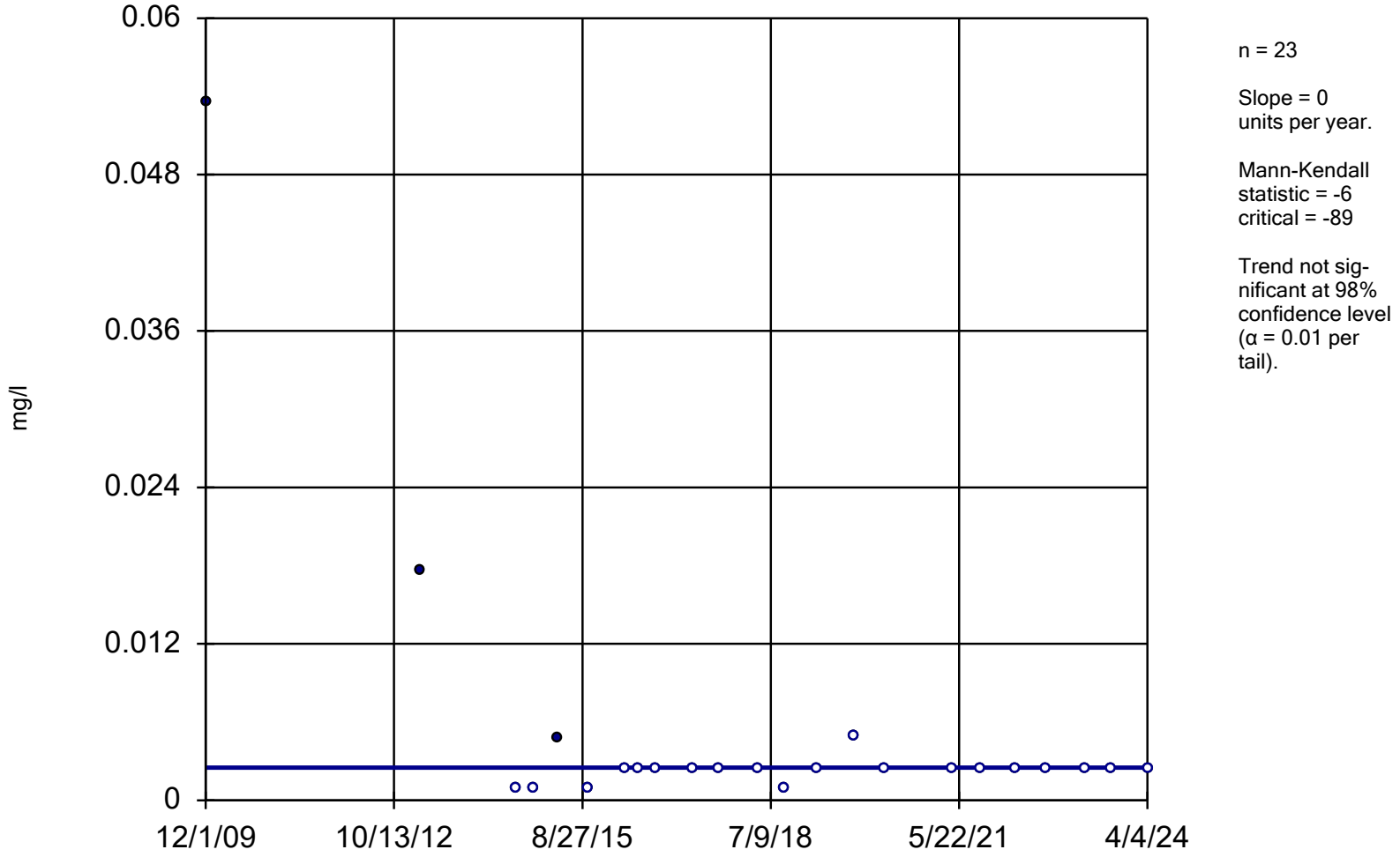
Constituent: Cobalt Analysis Run 6/6/2024 2:44 PM

Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-200 (bg)



n = 23

Slope = 0
units per year.

Mann-Kendall
statistic = -6
critical = -89

Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

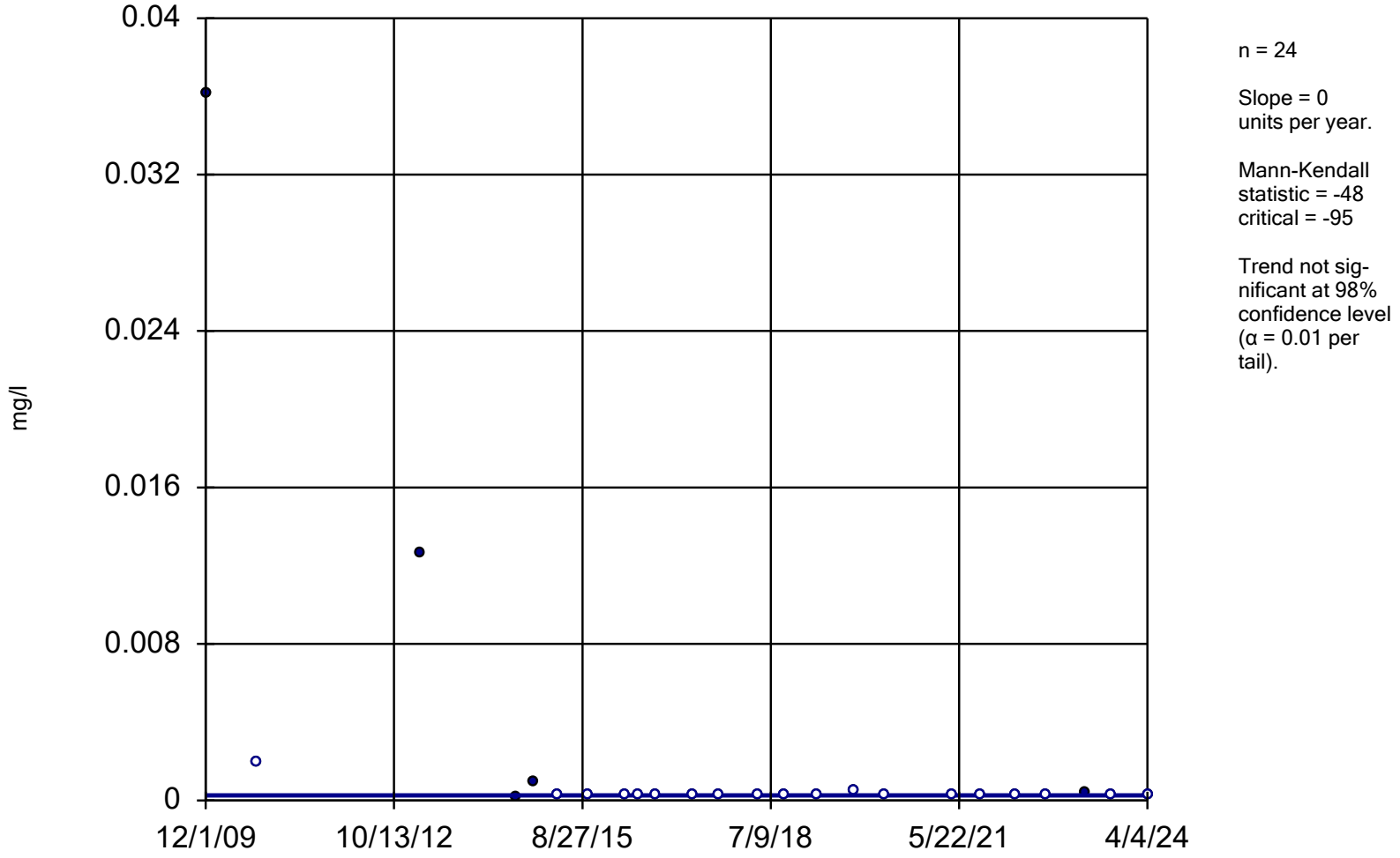
Constituent: Copper Analysis Run 6/6/2024 2:54 PM

Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-200 (bg)



n = 24

Slope = 0
units per year.

Mann-Kendall
statistic = -48
critical = -95

Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

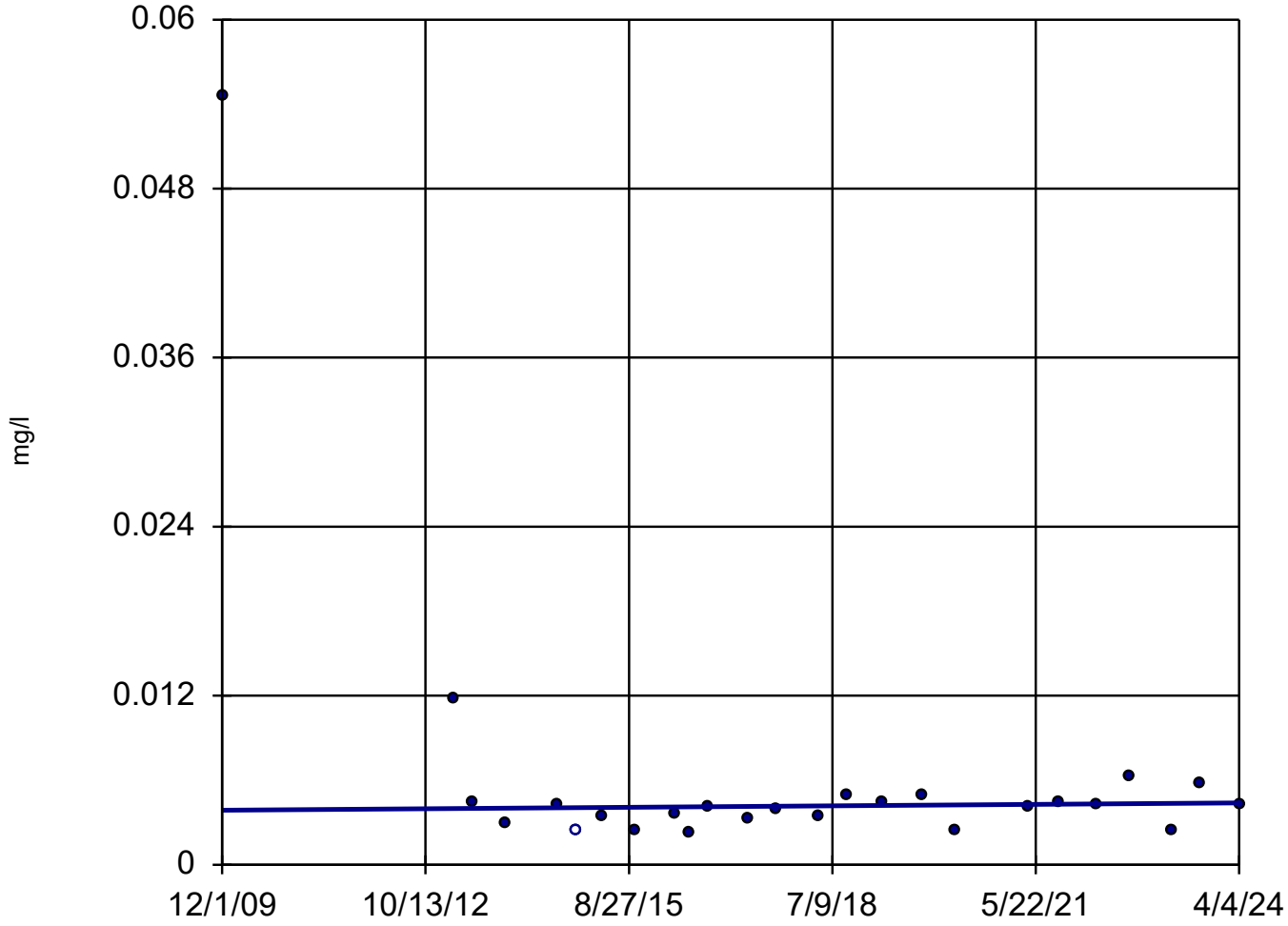
Constituent: Lead Analysis Run 6/6/2024 3:00 PM

Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-200 (bg)



n = 25

Slope = 0.00003632 units per year.

Mann-Kendall statistic = 18
critical = 101

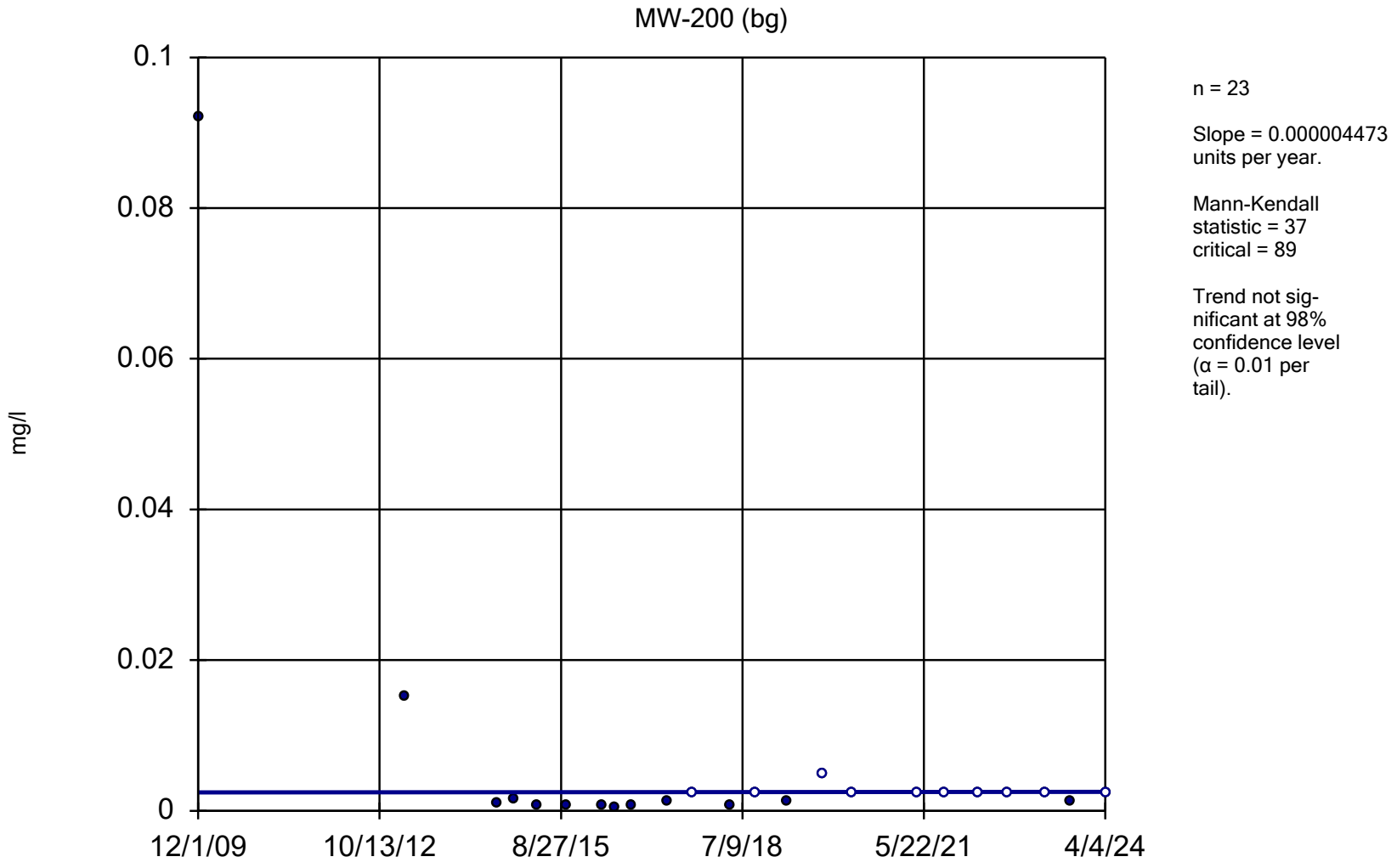
Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Nickel Analysis Run 6/6/2024 3:05 PM

Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Hollow symbols indicate censored values.

Sen's Slope Estimator



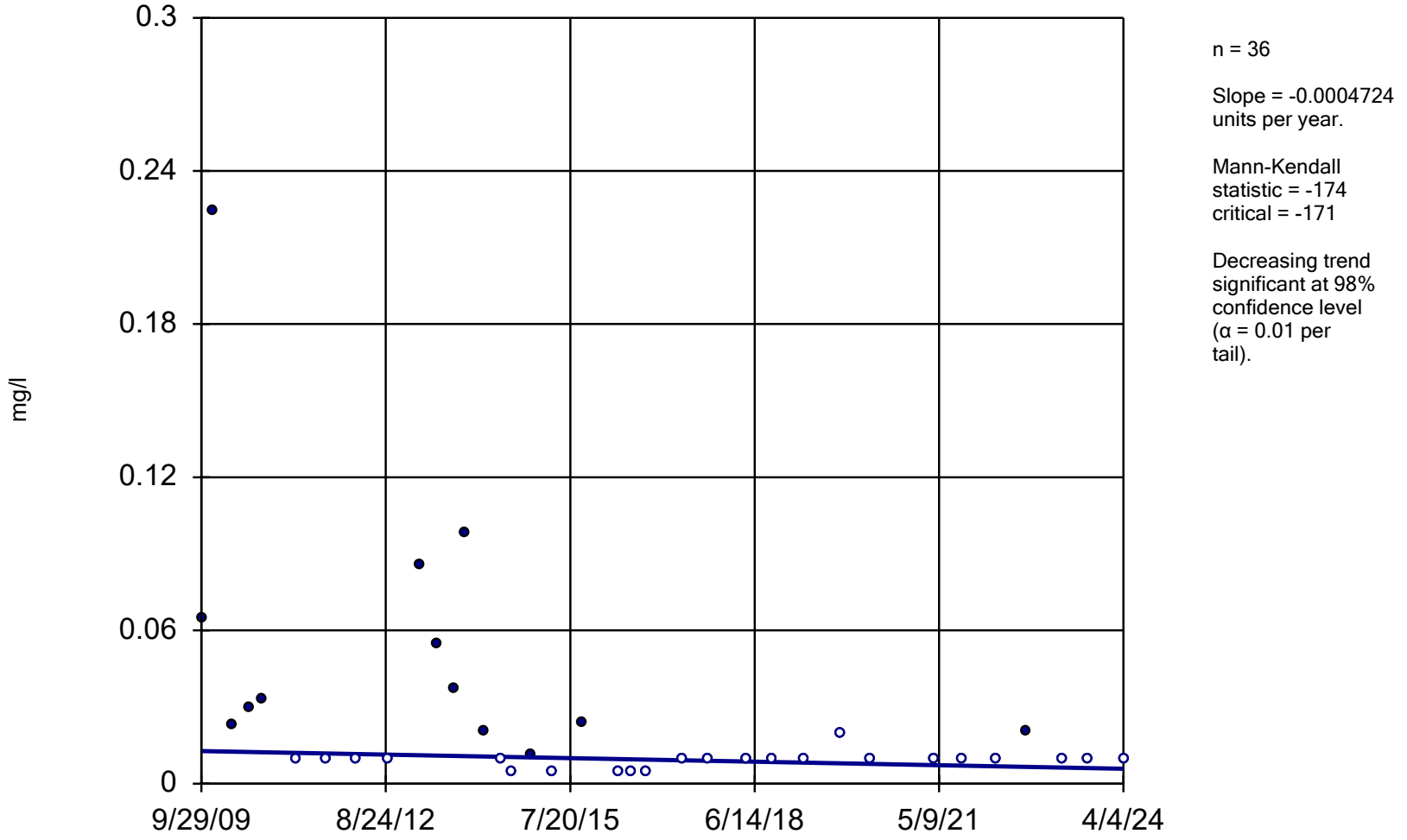
Constituent: Vanadium Analysis Run 6/6/2024 3:09 PM

Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-200 (bg)



n = 36

Slope = -0.0004724 units per year.

Mann-Kendall statistic = -174
critical = -171

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

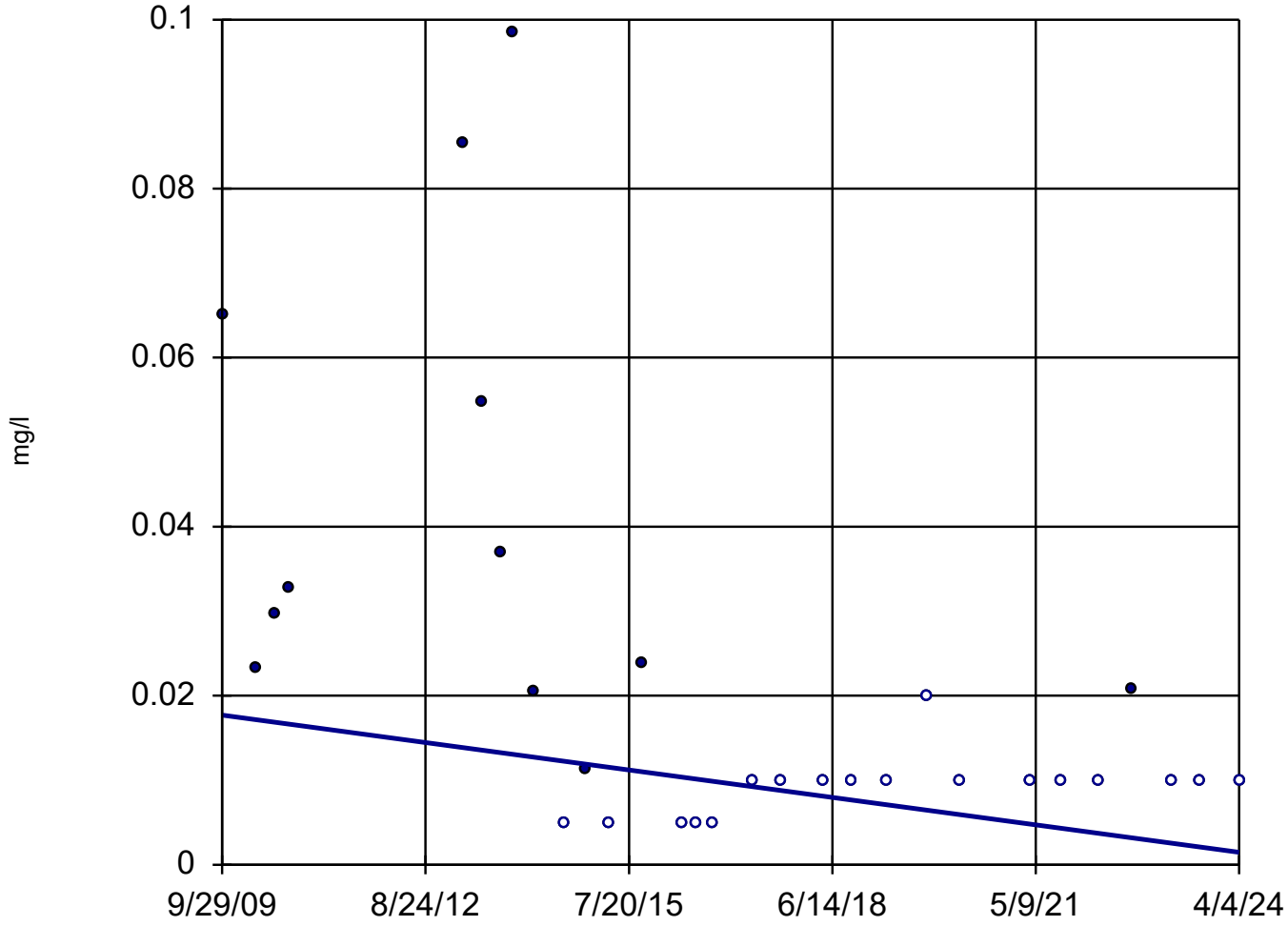
Constituent: Zinc Analysis Run 6/6/2024 3:13 PM

Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-200 (bg)



n = 30

Slope = -0.001116 units per year.

Mann-Kendall statistic = -131
critical = -132

Trend not significant at 98% confidence level (α = 0.01 per tail).

Constituent: Zinc Analysis Run 6/6/2024 3:22 PM

Carroll County Landfill Data: Carroll West Spring 2024 Evaluation

Intrawell Prediction Limit

Utilizing Background Data from Sep. 2009 Through Apr. 2023 [1]

Constituent Name	Well	Upper Limit	Date	Observation	Exceeds	Background N	Background Wells	Background Mean	Standard Deviation	% Non-detects	Non-detect Adjustment	Transformation	Alpha	Method
Antimony (mg/l)	MW-200	0.0101	4/4/2024	0.001ND	No	34	n/a	n/a	n/a	97	n/a	n/a	0.001599	NP Intra (NDs) 1 of 2
Arsenic (mg/l)	MW-200	0.00801	4/4/2024	0.001ND	No	34	n/a	n/a	n/a	91	n/a	n/a	0.001599	NP Intra (NDs) 1 of 2
Barium (mg/l)	MW-200	1.05	4/4/2024	0.471	No	34	n/a	n/a	n/a	0	n/a	n/a	0.001599	NP Intra (normality) 1 of 2
Beryllium (mg/l)	MW-200	0.00348	4/4/2024	0.0005ND	No	34	n/a	n/a	n/a	94	n/a	n/a	0.001599	NP Intra (NDs) 1 of 2
Cadmium (mg/l)	MW-200	0.00179	4/4/2024	0.000184J	No	34	n/a	n/a	n/a	26	n/a	n/a	0.001599	NP Intra (normality) 1 of 2
Chromium (mg/l)	MW-200	0.0343	4/4/2024	0.0025ND	No	34	n/a	n/a	n/a	88	n/a	n/a	0.001599	NP Intra (NDs) 1 of 2
Cobalt (mg/l)	MW-200	0.026	4/4/2024	0.00025ND	No	34	n/a	n/a	n/a	76	n/a	n/a	0.001599	NP Intra (NDs) 1 of 2
Copper (mg/l)	MW-200	0.0536	4/4/2024	0.0025ND	No	34	n/a	n/a	n/a	91	n/a	n/a	0.001599	NP Intra (NDs) 1 of 2
Lead (mg/l)	MW-200	0.0362	4/4/2024	0.00025ND	No	34	n/a	n/a	n/a	82	n/a	n/a	0.001599	NP Intra (NDs) 1 of 2
Nickel (mg/l)	MW-200	0.0545	4/4/2024	0.00429J	No	34	n/a	n/a	n/a	35	n/a	n/a	0.001599	NP Intra (normality) 1 of 2
Vanadium (mg/l)	MW-200	0.0921	4/4/2024	0.0025ND	No	34	n/a	n/a	n/a	65	n/a	n/a	0.001599	NP Intra (NDs) 1 of 2
Zinc (mg/l)	MW-200	0.224	4/4/2024	0.01ND	No	34	n/a	n/a	n/a	62	n/a	n/a	0.001599	NP Intra (NDs) 1 of 2

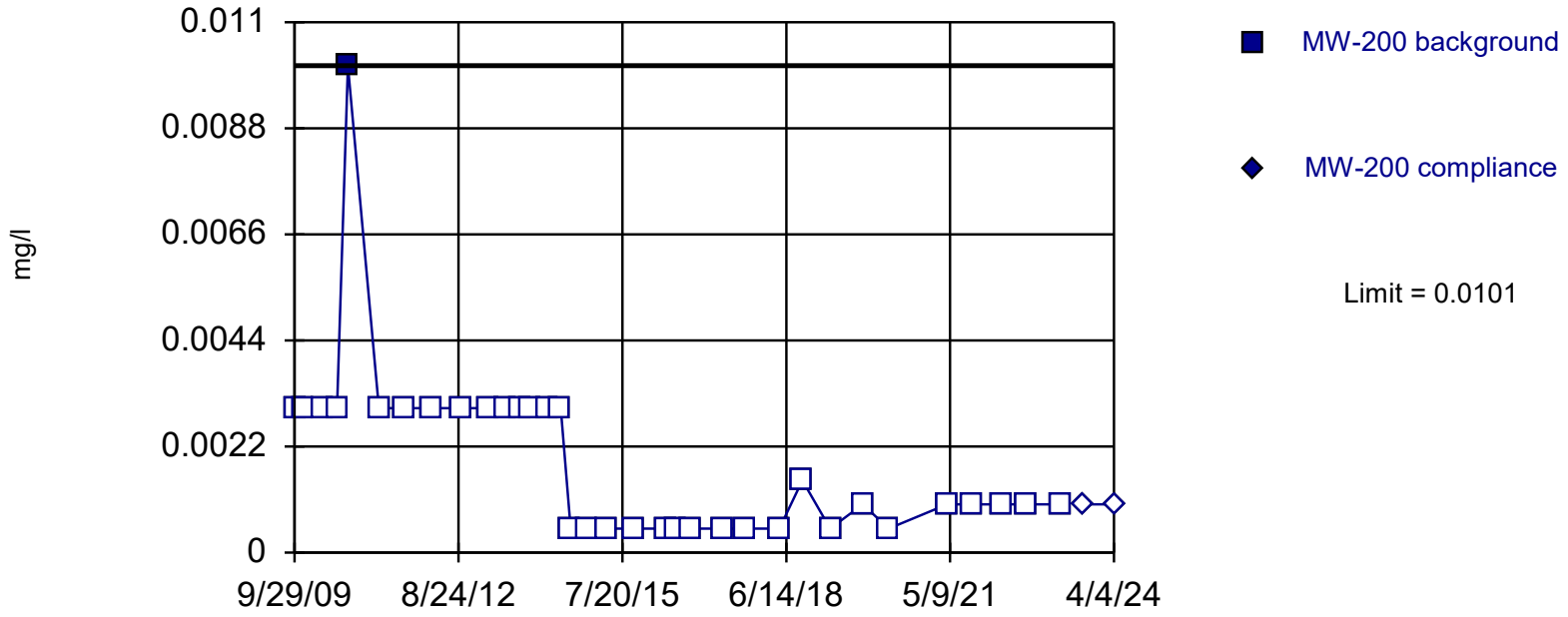
[1] Per Section 3.2, the Sep. 2020 metals data in MW-200 were removed from the intrawell background data set.

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 34 background values. 97.06% NDs. Well-constituent pair annual alpha = 0.003195. Individual comparison alpha = 0.001599 (1 of 2).

Constituent: Antimony Analysis Run 6/6/2024 3:29 PM

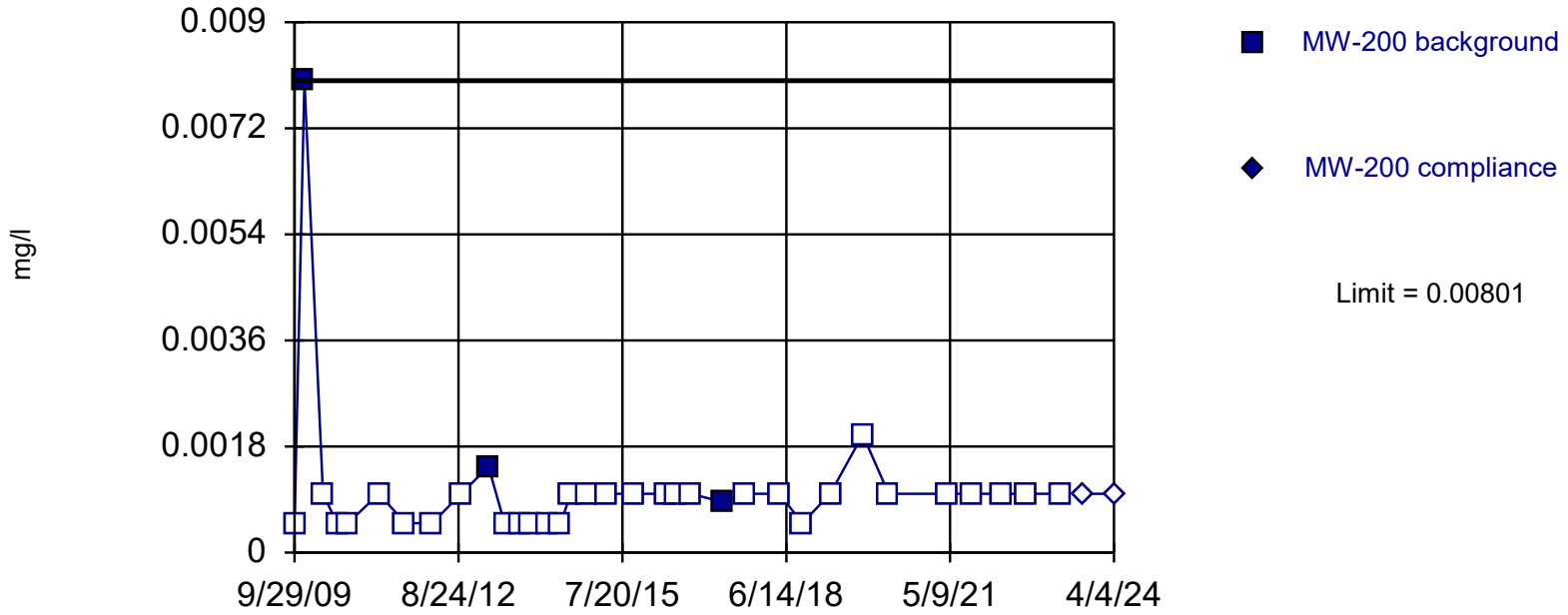
Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 34 background values. 91.18% NDs. Well-constituent pair annual alpha = 0.003195. Individual comparison alpha = 0.001599 (1 of 2).

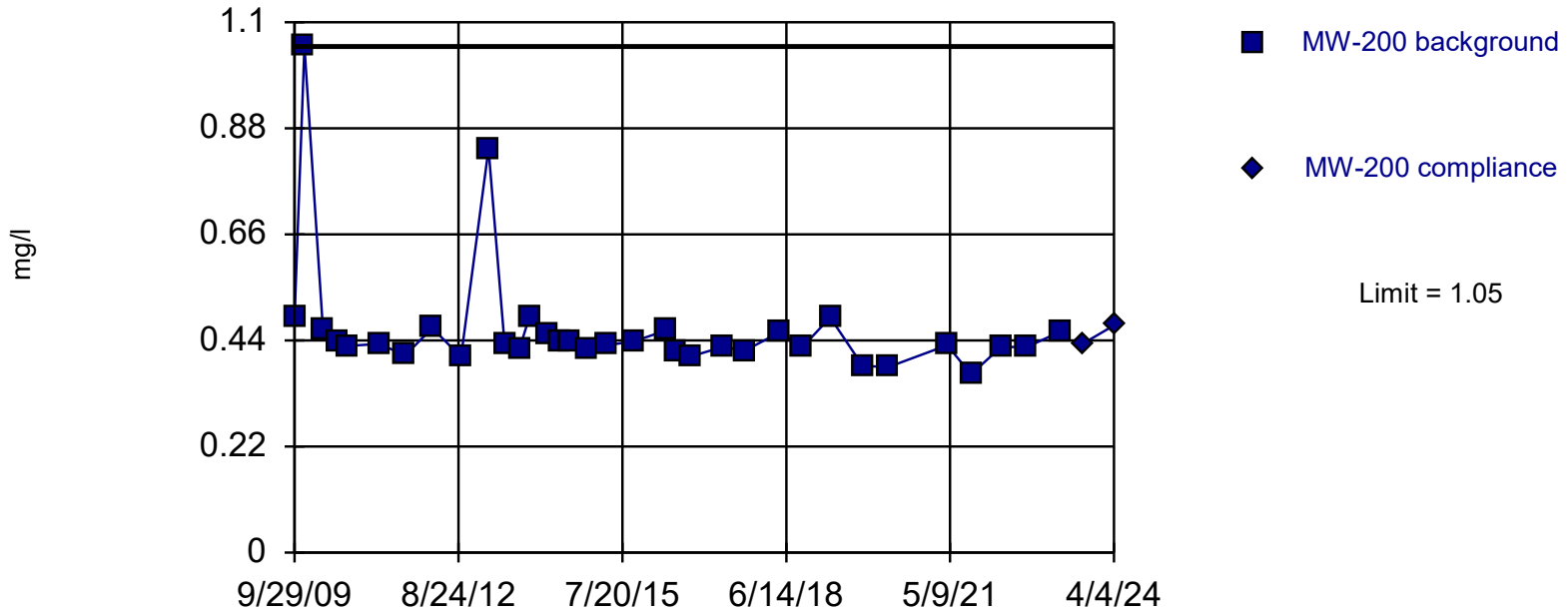
Constituent: Arsenic Analysis Run 6/6/2024 3:29 PM

Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 34 background values. Well-constituent pair annual alpha = 0.003195. Individual comparison alpha = 0.001599 (1 of 2).

Constituent: Barium Analysis Run 6/6/2024 3:29 PM

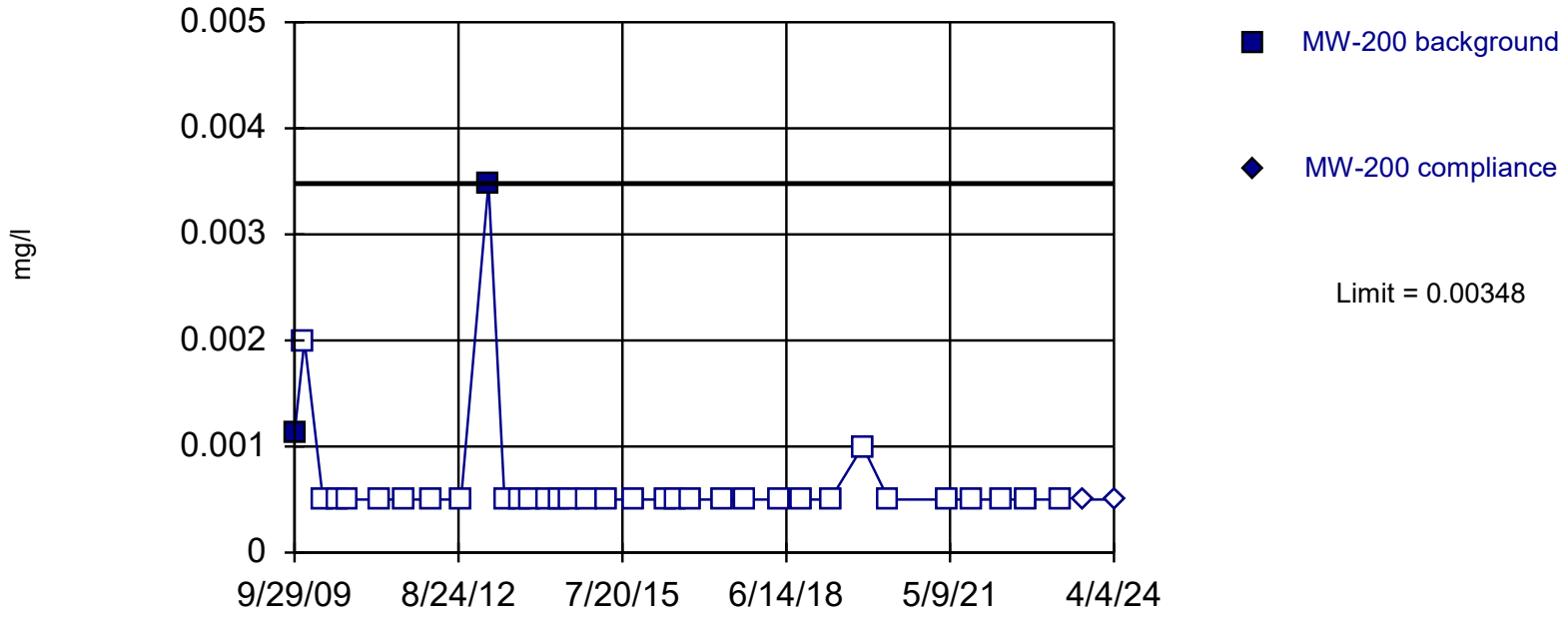
Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 34 background values. 94.12% NDs. Well-constituent pair annual alpha = 0.003195. Individual comparison alpha = 0.001599 (1 of 2).

Constituent: Beryllium Analysis Run 6/6/2024 3:29 PM

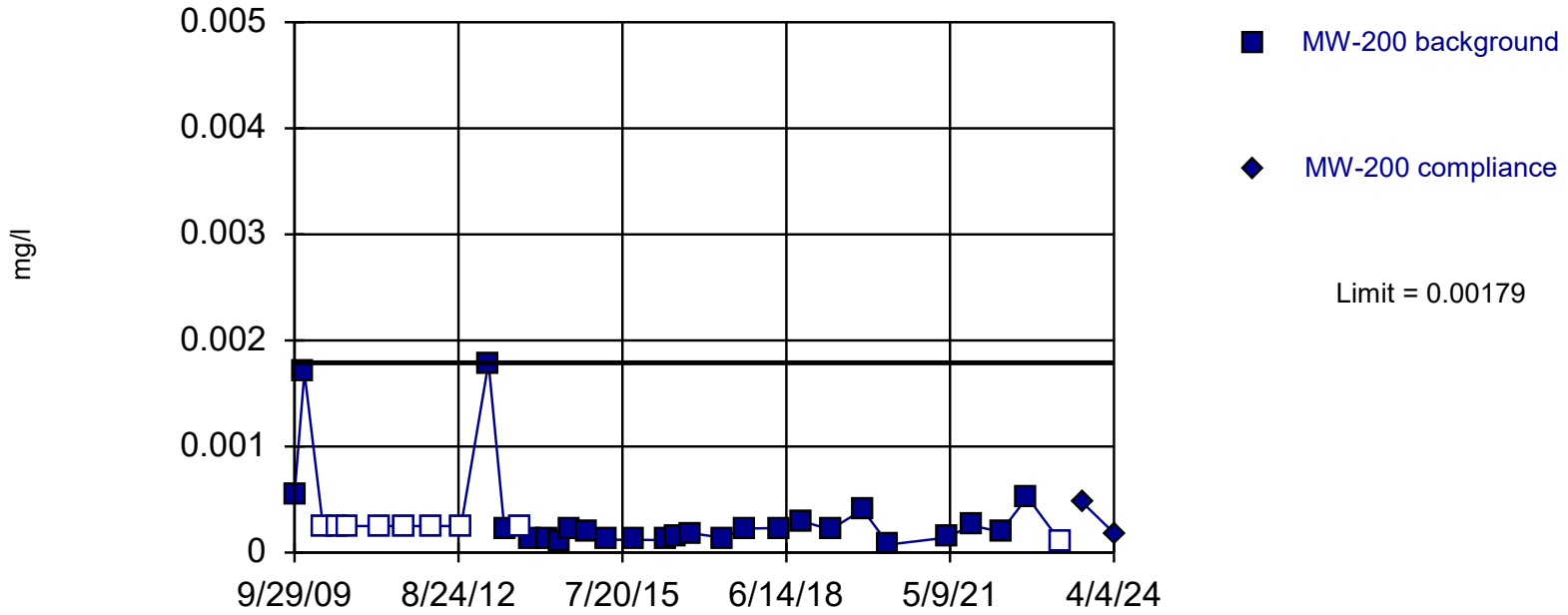
Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 34 background values. 26.47% NDs. Well-constituent pair annual alpha = 0.003195. Individual comparison alpha = 0.001599 (1 of 2).

Constituent: Cadmium Analysis Run 6/6/2024 3:30 PM

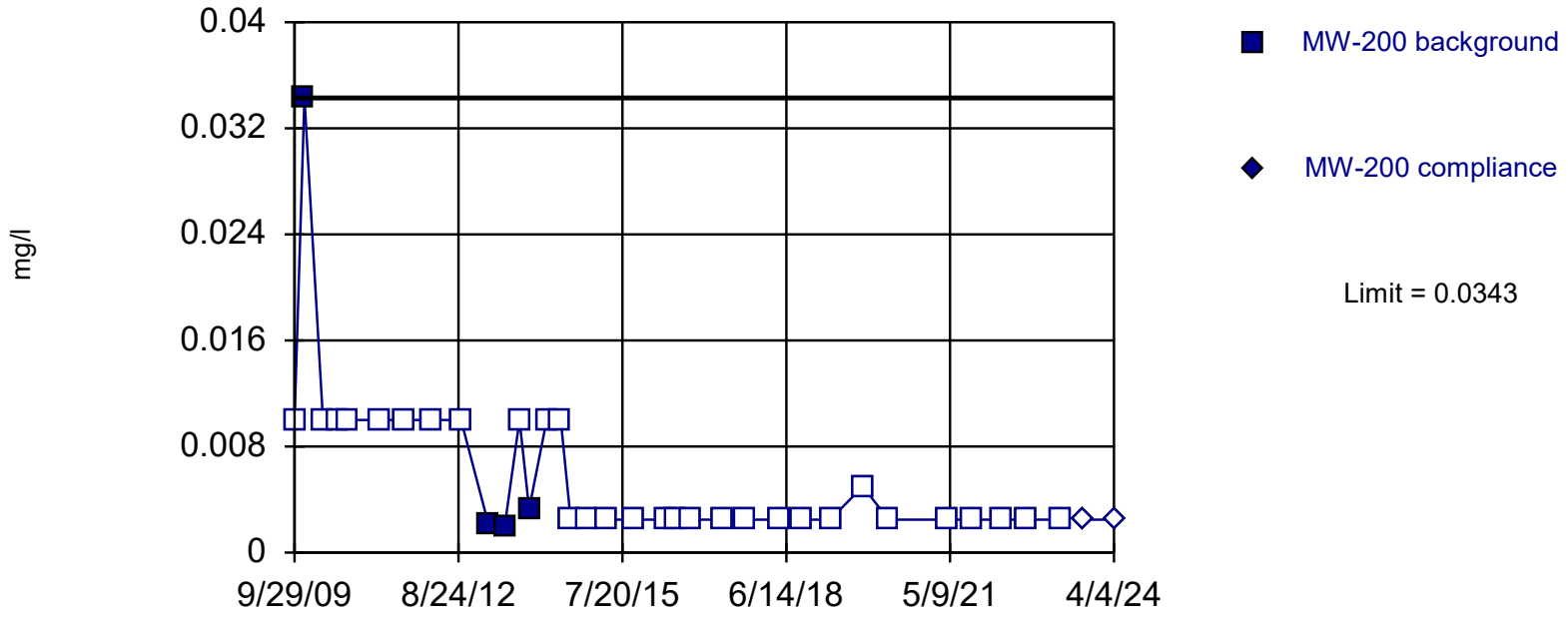
Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 34 background values. 88.24% NDs. Well-constituent pair annual alpha = 0.003195. Individual comparison alpha = 0.001599 (1 of 2).

Constituent: Chromium Analysis Run 6/6/2024 3:30 PM

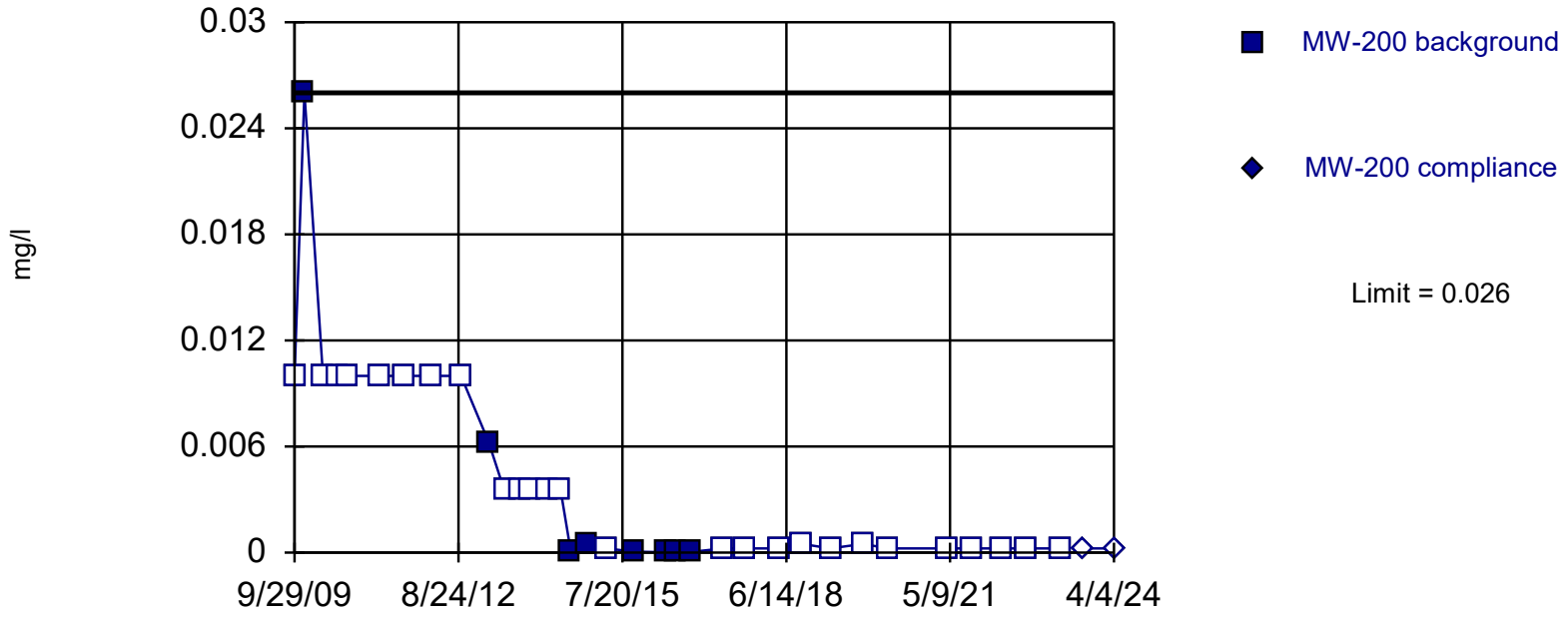
Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 34 background values. 76.47% NDs. Well-constituent pair annual alpha = 0.003195. Individual comparison alpha = 0.001599 (1 of 2).

Constituent: Cobalt Analysis Run 6/6/2024 3:30 PM

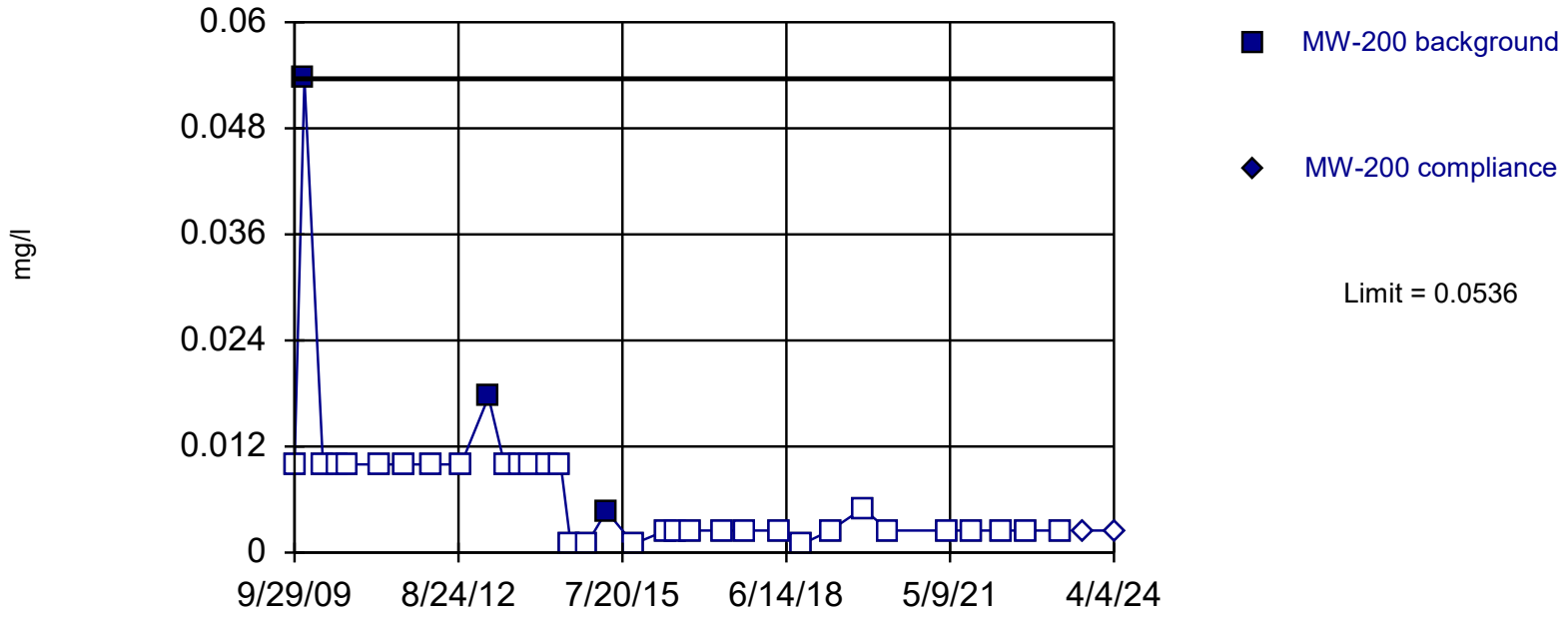
Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 34 background values. 91.18% NDs. Well-constituent pair annual alpha = 0.003195. Individual comparison alpha = 0.001599 (1 of 2).

Constituent: Copper Analysis Run 6/6/2024 3:30 PM

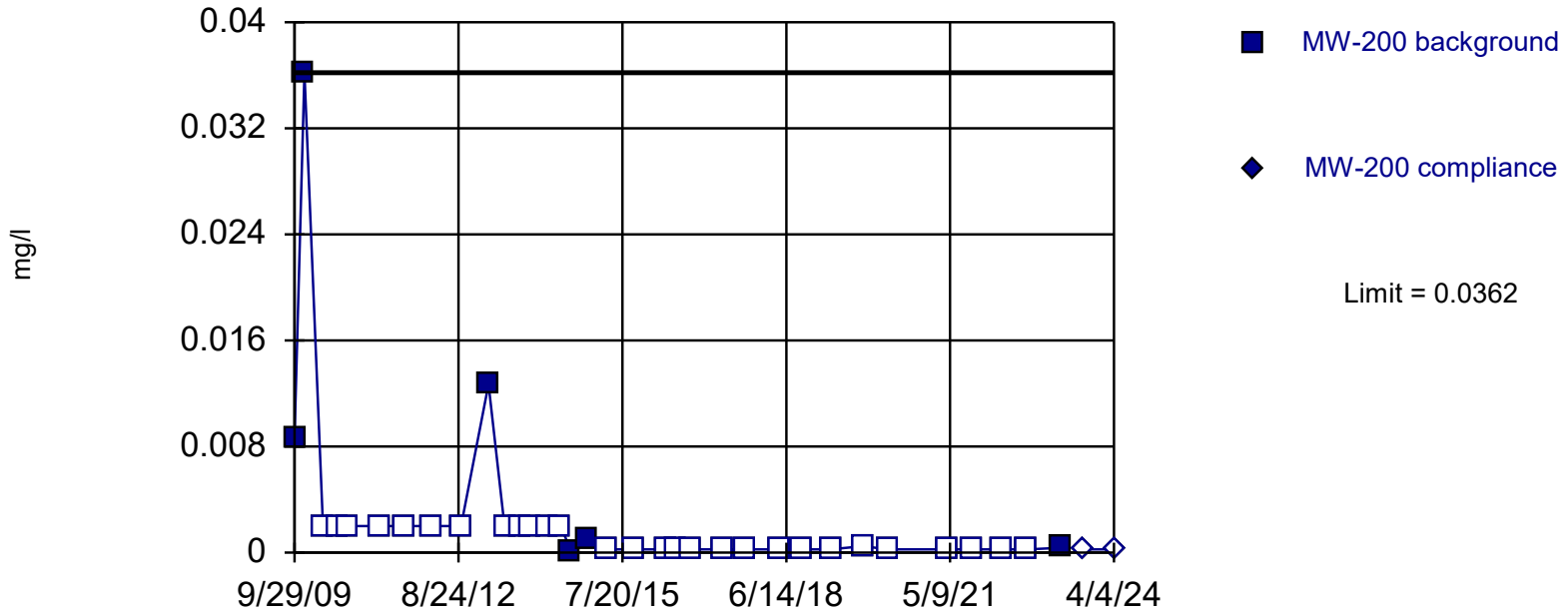
Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 34 background values. 82.35% NDs. Well-constituent pair annual alpha = 0.003195. Individual comparison alpha = 0.001599 (1 of 2).

Constituent: Lead Analysis Run 6/6/2024 3:30 PM

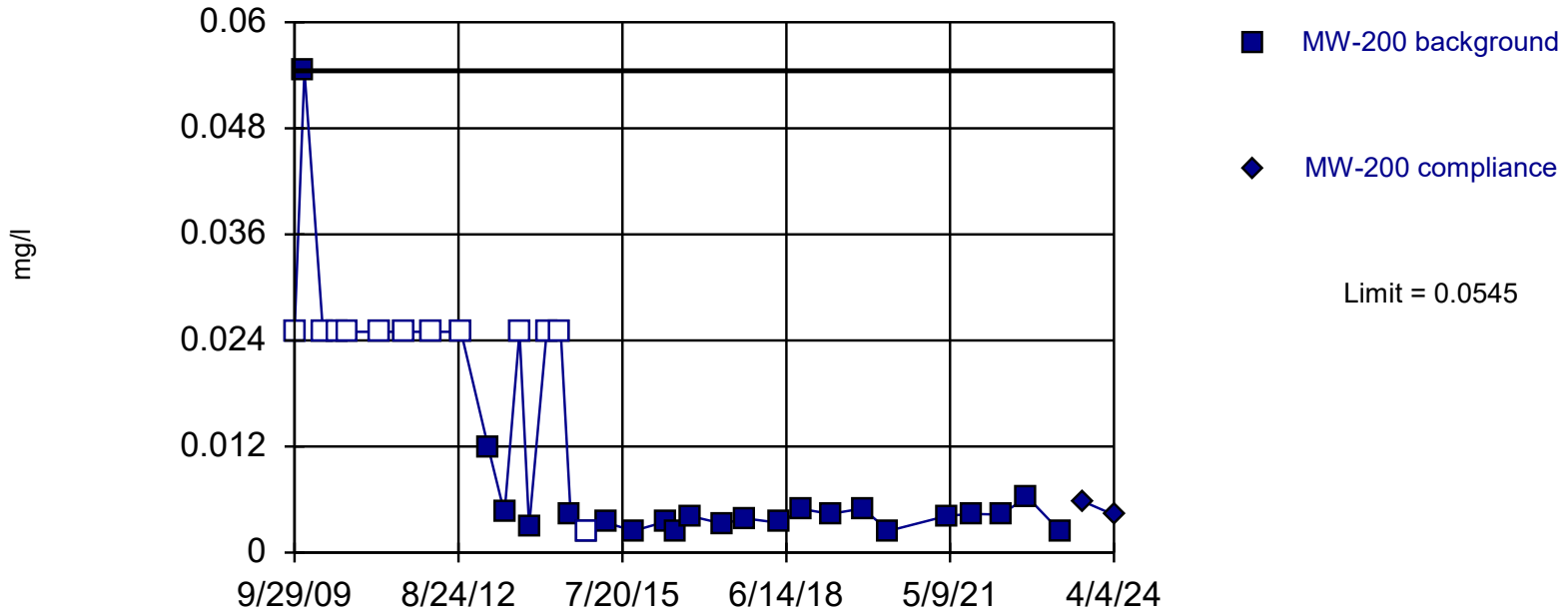
Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 34 background values. 35.29% NDs. Well-constituent pair annual alpha = 0.003195. Individual comparison alpha = 0.001599 (1 of 2).

Constituent: Nickel Analysis Run 6/6/2024 3:30 PM

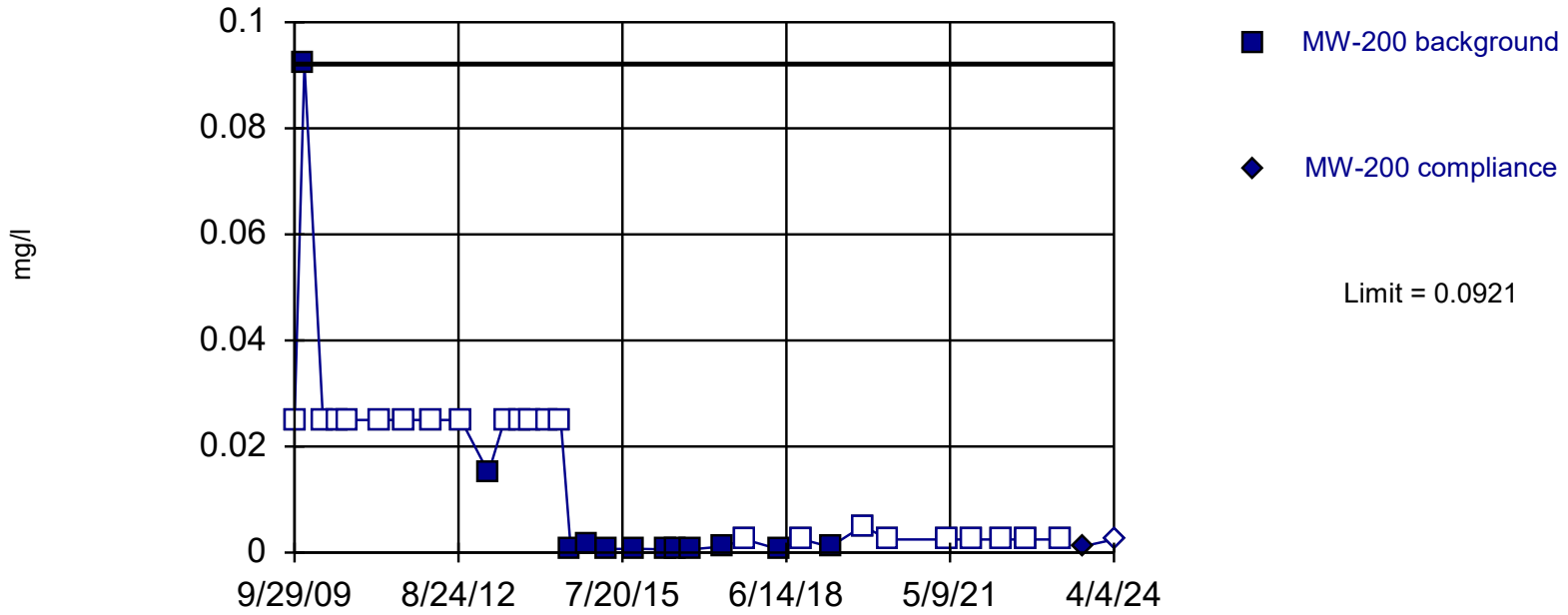
Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 34 background values. 64.71% NDs. Well-constituent pair annual alpha = 0.003195. Individual comparison alpha = 0.001599 (1 of 2).

Constituent: Vanadium Analysis Run 6/6/2024 3:30 PM

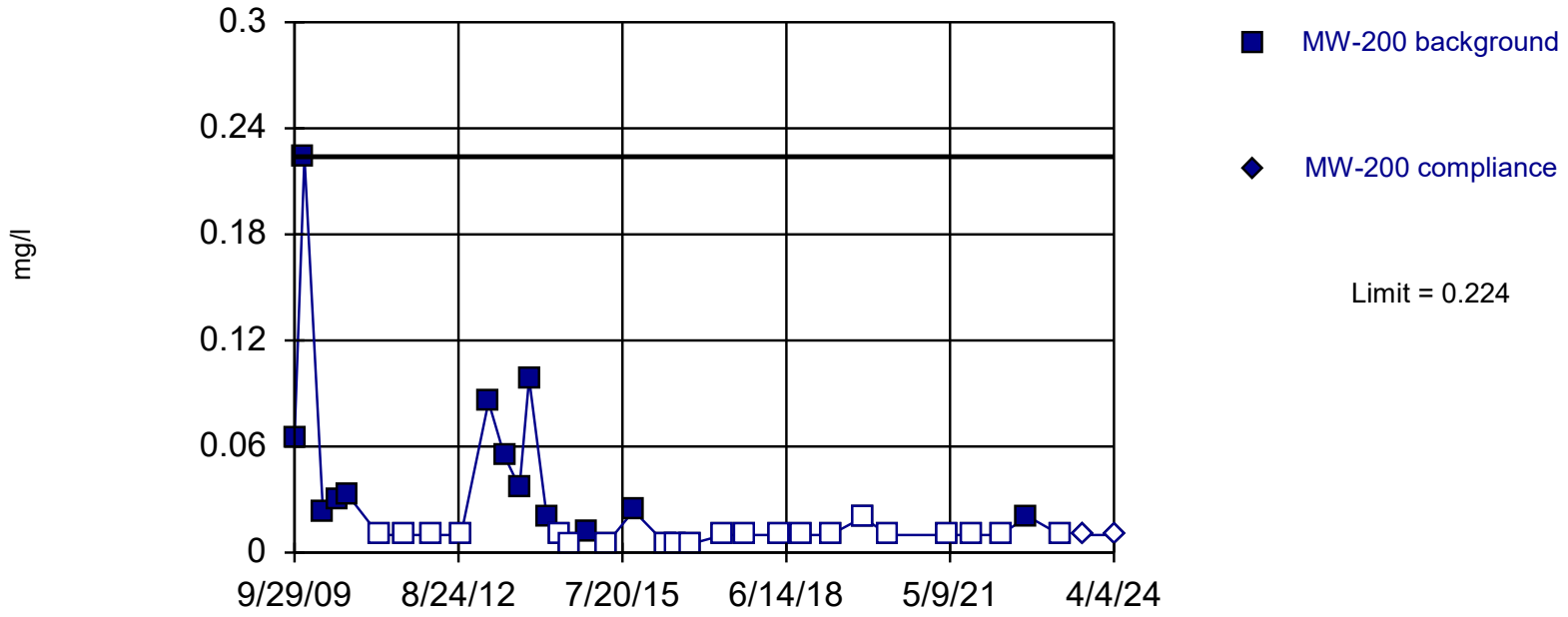
Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 34 background values. 61.76% NDs. Well-constituent pair annual alpha = 0.003195. Individual comparison alpha = 0.001599 (1 of 2).

Constituent: Zinc Analysis Run 6/6/2024 3:30 PM

Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Attachment 3
Sanitas Report Output for Interwell Prediction Limit Calculations

Interwell Prediction Limit

Constituent Name	Well	Upper Limit	Date	Observation	Exceed	Background N	Background Wells	Background Mean	Standard Deviation	% Non-detects	Non-detect Adjustment	Transformation	Alpha	Method
Detection Monitoring Locations														
Antimony (mg/l)	GU-2A	0.0101	4/4/2024	0.001ND	No	73	122R, 200	n/a	n/a	99	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Antimony (mg/l)	MW-119RR	0.0101	4/4/2024	0.001ND	No	73	122R, 200	n/a	n/a	99	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Antimony (mg/l)	MW-205	0.0101	4/4/2024	0.001ND	No	73	122R, 200	n/a	n/a	99	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Antimony (mg/l)	MW-206	0.0101	4/4/2024	0.001ND	No	73	122R, 200	n/a	n/a	99	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Arsenic (mg/l)	GU-2A	0.00801	4/4/2024	0.000535J	No	73	122R, 200	n/a	n/a	90	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Arsenic (mg/l)	MW-119RR	0.00801	4/4/2024	0.00187J	No	73	122R, 200	n/a	n/a	90	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Arsenic (mg/l)	MW-205	0.00801	4/4/2024	0.00105J	No	73	122R, 200	n/a	n/a	90	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Arsenic (mg/l)	MW-206	0.00801	4/4/2024	0.00271	No	73	122R, 200	n/a	n/a	90	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Barium (mg/l)	GU-2A	1.05	4/4/2024	0.229	No	73	122R, 200	n/a	n/a	0	n/a	n/a	0.0003608	NP Inter (normality) 1 of 2
Barium (mg/l)	MW-119RR	1.05	4/4/2024	0.614	No	73	122R, 200	n/a	n/a	0	n/a	n/a	0.0003608	NP Inter (normality) 1 of 2
Barium (mg/l)	MW-205	1.05	4/4/2024	0.0244	No	73	122R, 200	n/a	n/a	0	n/a	n/a	0.0003608	NP Inter (normality) 1 of 2
Barium (mg/l)	MW-206	1.05	4/4/2024	0.0227	No	73	122R, 200	n/a	n/a	0	n/a	n/a	0.0003608	NP Inter (normality) 1 of 2
Beryllium (mg/l)	GU-2A	0.00348	4/4/2024	0.0005ND	No	73	122R, 200	n/a	n/a	97	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Beryllium (mg/l)	MW-119RR	0.00348	4/4/2024	0.0005ND	No	73	122R, 200	n/a	n/a	97	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Beryllium (mg/l)	MW-205	0.00348	4/4/2024	0.0005ND	No	73	122R, 200	n/a	n/a	97	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Beryllium (mg/l)	MW-206	0.00348	4/4/2024	0.0005ND	No	73	122R, 200	n/a	n/a	97	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Cadmium (mg/l)	GU-2A	0.00179	4/4/2024	0.0001ND	No	73	122R, 200	n/a	n/a	63	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Cadmium (mg/l)	MW-119RR	0.00179	4/4/2024	0.0001ND	No	73	122R, 200	n/a	n/a	63	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Cadmium (mg/l)	MW-205	0.00179	4/4/2024	0.0001ND	No	73	122R, 200	n/a	n/a	63	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Cadmium (mg/l)	MW-206	0.00179	4/4/2024	0.0001ND	No	73	122R, 200	n/a	n/a	63	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Chromium (mg/l)	GU-2A	0.0343	4/4/2024	0.0025ND	No	73	122R, 200	n/a	n/a	68	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Chromium (mg/l)	MW-119RR	0.0343	4/4/2024	0.0025ND	No	73	122R, 200	n/a	n/a	68	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Chromium (mg/l)	MW-205	0.0343	4/4/2024	0.0025ND	No	73	122R, 200	n/a	n/a	68	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Chromium (mg/l)	MW-206	0.0343	4/4/2024	0.0025ND	No	73	122R, 200	n/a	n/a	68	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Cobalt (mg/l)	GU-2A	0.026	4/4/2024	0.00025ND	No	73	122R, 200	n/a	n/a	85	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Cobalt (mg/l)	MW-119RR	0.026	4/4/2024	0.00216	No	73	122R, 200	n/a	n/a	85	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Cobalt (mg/l)	MW-205	0.026	4/4/2024	0.00755	No	73	122R, 200	n/a	n/a	85	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Cobalt (mg/l)	MW-206	0.026	4/4/2024	0.00522	No	73	122R, 200	n/a	n/a	85	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Copper (mg/l)	GU-2A	0.0536	4/4/2024	0.0025ND	No	73	122R, 200	n/a	n/a	95	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Copper (mg/l)	MW-119RR	0.0536	4/4/2024	0.0025ND	No	73	122R, 200	n/a	n/a	95	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Copper (mg/l)	MW-205	0.0536	4/4/2024	0.0025ND	No	73	122R, 200	n/a	n/a	95	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Copper (mg/l)	MW-206	0.0536	4/4/2024	0.0025ND	No	73	122R, 200	n/a	n/a	95	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Lead (mg/l)	GU-2A	0.0362	4/4/2024	0.00025ND	No	73	122R, 200	n/a	n/a	89	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Lead (mg/l)	MW-119RR	0.0362	4/4/2024	0.0003J	No	73	122R, 200	n/a	n/a	89	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Lead (mg/l)	MW-205	0.0362	4/4/2024	0.000637	No	73	122R, 200	n/a	n/a	89	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Lead (mg/l)	MW-206	0.0362	4/4/2024	0.00299	No	73	122R, 200	n/a	n/a	89	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Nickel (mg/l)	GU-2A	0.0545	4/4/2024	0.0025ND	No	73	122R, 200	n/a	n/a	67	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Nickel (mg/l)	MW-119RR	0.0545	4/4/2024	0.0168	No	73	122R, 200	n/a	n/a	67	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Nickel (mg/l)	MW-205	0.0545	4/4/2024	0.0106	No	73	122R, 200	n/a	n/a	67	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Nickel (mg/l)	MW-206	0.0545	4/4/2024	0.0082	No	73	122R, 200	n/a	n/a	67	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Vanadium (mg/l)	GU-2A	0.0921	4/4/2024	0.0025ND	No	73	122R, 200	n/a	n/a	77	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Vanadium (mg/l)	MW-119RR	0.0921	4/4/2024	0.0025ND	No	73	122R, 200	n/a	n/a	77	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Vanadium (mg/l)	MW-205	0.0921	4/4/2024	0.0025ND	No	73	122R, 200	n/a	n/a	77	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Vanadium (mg/l)	MW-206	0.0921	4/4/2024	0.0025ND	No	73	122R, 200	n/a	n/a	77	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Zinc (mg/l)	GU-2A	0.224	4/4/2024	0.01ND	No	73	122R, 200	n/a	n/a	64	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Zinc (mg/l)	MW-119RR	0.224	4/4/2024	0.01ND	No	73	122R, 200	n/a	n/a	64	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Zinc (mg/l)	MW-205	0.224	4/4/2024	0.00662J	No	73	122R, 200	n/a	n/a	64	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2

Interwell Prediction Limit

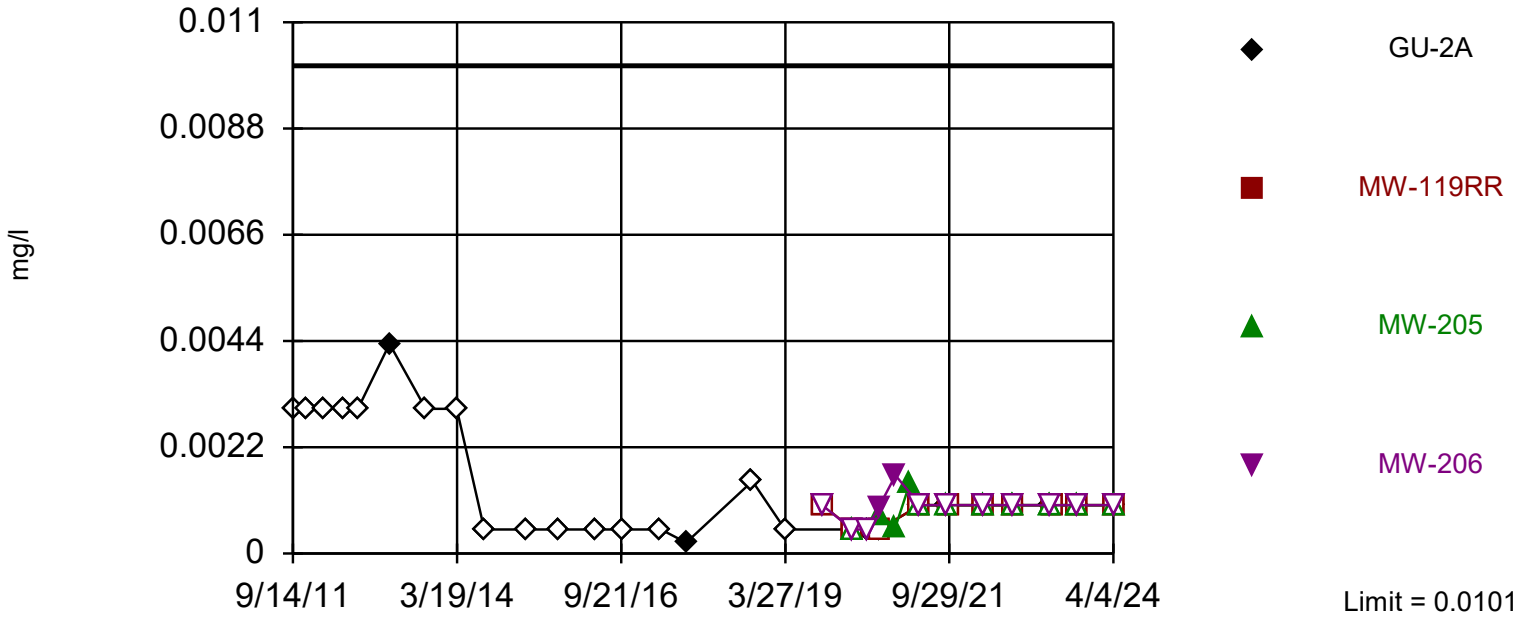
Constituent Name	Well	Upper Limit	Date	Observation	Exceed	Background N	Background Wells	Background Mean	Standard Deviation	% Non-detects	Non-detect Adjustment	Transformation	Alpha	Method
Detection Monitoring Locations Continued														
Zinc (mg/l)	MW-206	0.224	4/4/2024	0.0122J	No	73	122R, 200	n/a	n/a	64	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Assessment Monitoring Locations														
Antimony (mg/l)	MW-121R	0.0101	4/4/2024	0.001ND	No	73	122R, 200	n/a	n/a	99	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Arsenic (mg/l)	MW-121R	0.00801	4/4/2024	0.0222	Yes	73	122R, 200	n/a	n/a	90	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Barium (mg/l)	MW-121R	1.05	4/4/2024	0.671	No	73	122R, 200	n/a	n/a	0	n/a	n/a	0.0003608	NP Inter (normality) 1 of 2
Beryllium (mg/l)	MW-121R	0.00348	4/4/2024	0.0005ND	No	73	122R, 200	n/a	n/a	97	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Cadmium (mg/l)	MW-121R	0.00179	4/4/2024	0.0001ND	No	73	122R, 200	n/a	n/a	63	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Chromium (mg/l)	MW-121R	0.0343	4/4/2024	0.0025ND	No	73	122R, 200	n/a	n/a	68	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Cobalt (mg/l)	MW-121R	0.026	4/4/2024	0.00384	No	73	122R, 200	n/a	n/a	85	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Copper (mg/l)	MW-121R	0.0536	4/4/2024	0.0025ND	No	73	122R, 200	n/a	n/a	95	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Lead (mg/l)	MW-121R	0.0362	4/4/2024	0.00025ND	No	73	122R, 200	n/a	n/a	89	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Nickel (mg/l)	MW-121R	0.0545	4/4/2024	0.0359	No	73	122R, 200	n/a	n/a	67	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Vanadium (mg/l)	MW-121R	0.0921	4/4/2024	0.0025ND	No	73	122R, 200	n/a	n/a	77	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2
Zinc (mg/l)	MW-121R	0.224	4/4/2024	0.01ND	No	73	122R, 200	n/a	n/a	64	n/a	n/a	0.0003608	NP Inter (NDs) 1 of 2

Hollow symbols indicate censored values.

Within Limit

Prediction Limit - Detection Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 73 background values. 98.63% NDs. Annual per-constituent alpha = 0.004321. Individual comparison alpha = 0.0003608 (1 of 2).

Constituent: Antimony Analysis Run 6/6/2024 4:05 PM

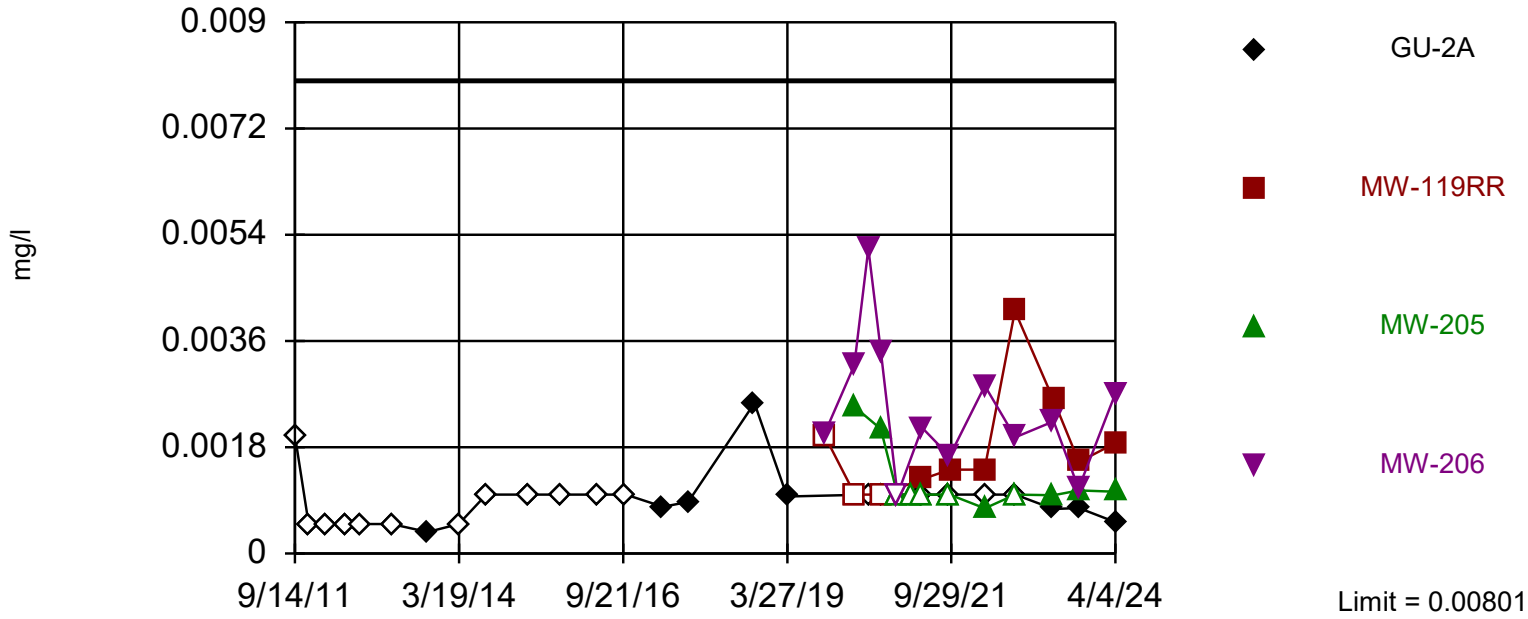
Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit - Detection Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 73 background values. 90.41% NDs. Annual per-constituent alpha = 0.004321. Individual comparison alpha = 0.0003608 (1 of 2).

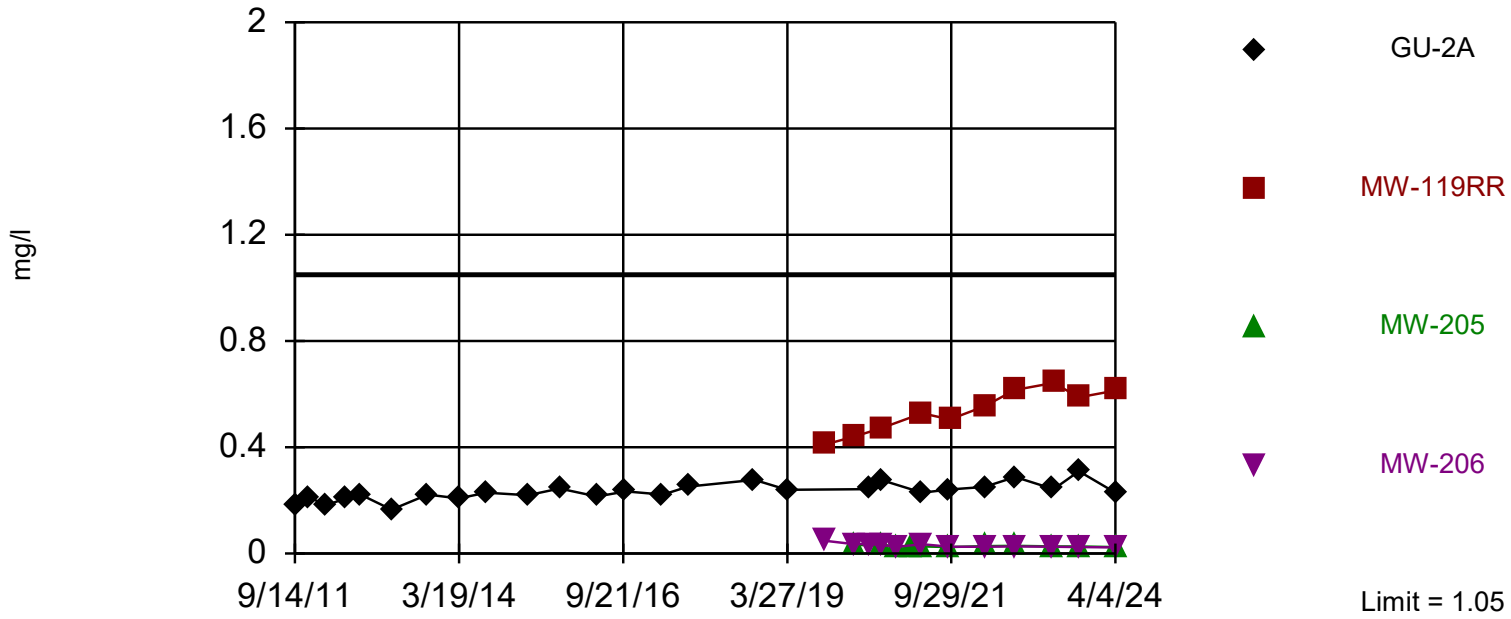
Constituent: Arsenic Analysis Run 6/6/2024 4:05 PM

Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Within Limit

Prediction Limit - Detection Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 73 background values. Annual per-constituent alpha = 0.004321. Individual comparison alpha = 0.0003608 (1 of 2).

Constituent: Barium Analysis Run 6/6/2024 4:05 PM

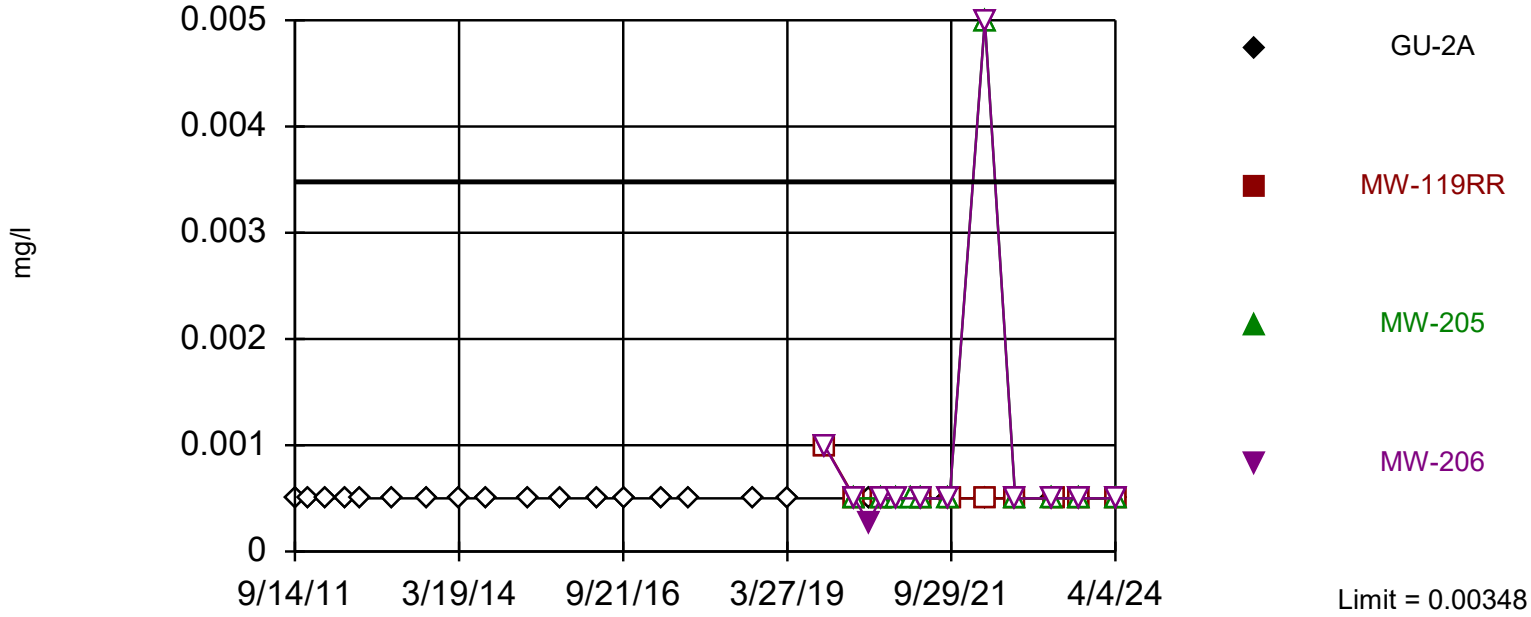
Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit - Detection Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 73 background values. 97.26% NDs. Annual per-constituent alpha = 0.004321. Individual comparison alpha = 0.0003608 (1 of 2).

Constituent: Beryllium Analysis Run 6/6/2024 4:05 PM

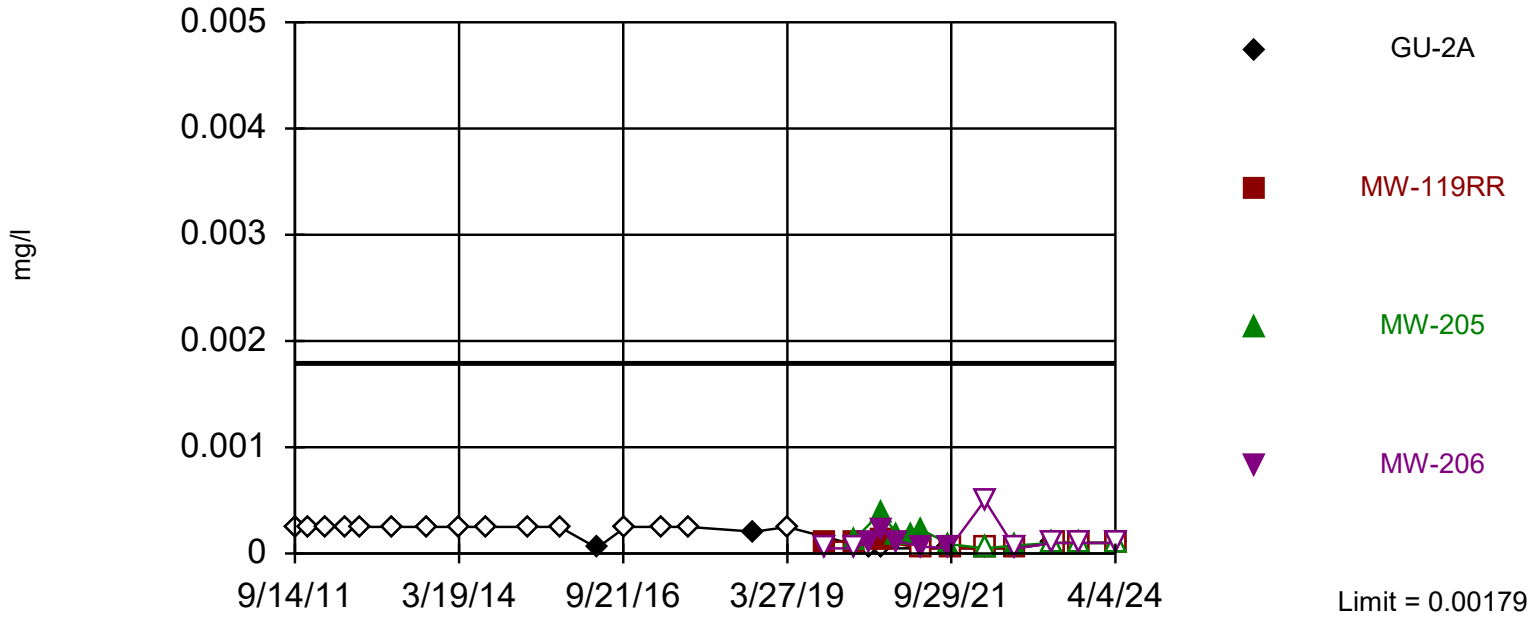
Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit - Detection Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 73 background values. 63.01% NDs. Annual per-constituent alpha = 0.004321. Individual comparison alpha = 0.0003608 (1 of 2).

Constituent: Cadmium Analysis Run 6/6/2024 4:05 PM

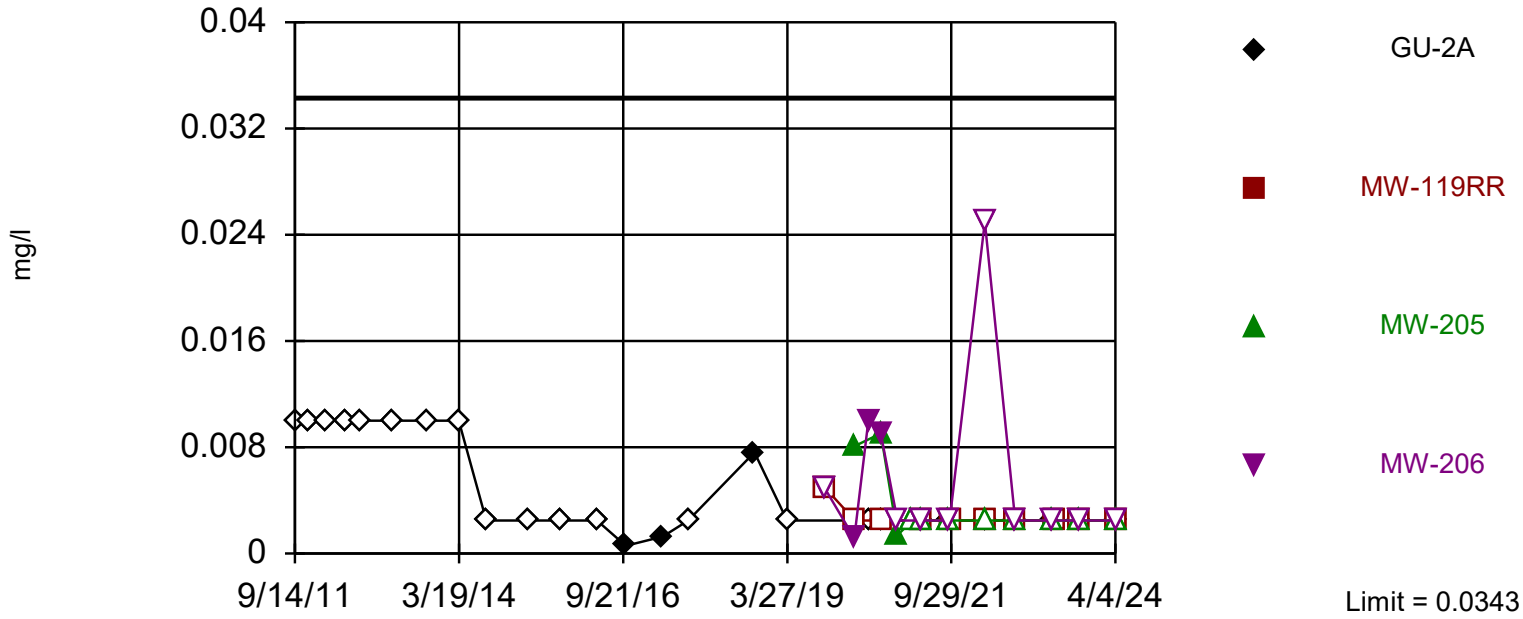
Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit - Detection Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 73 background values. 68.49% NDs. Annual per-constituent alpha = 0.004321. Individual comparison alpha = 0.0003608 (1 of 2).

Constituent: Chromium Analysis Run 6/6/2024 4:05 PM

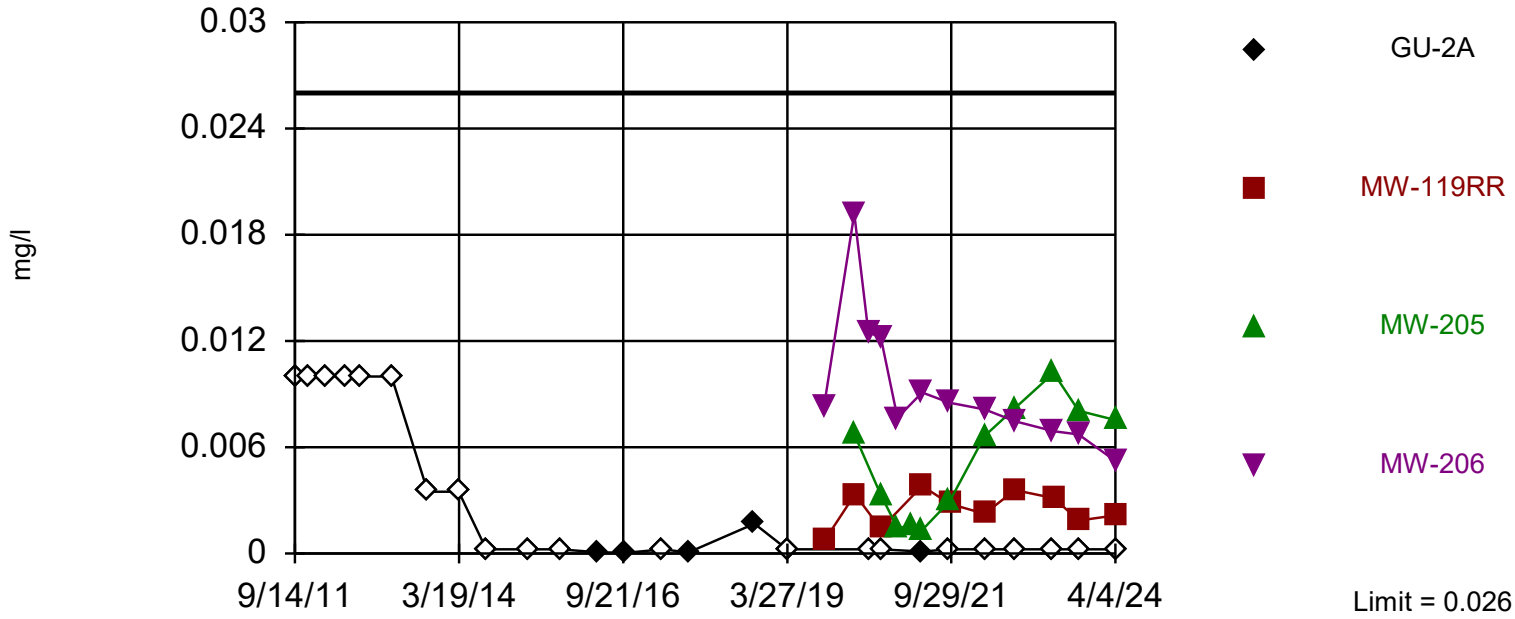
Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit - Detection Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 73 background values. 84.93% NDs. Annual per-constituent alpha = 0.004321. Individual comparison alpha = 0.0003608 (1 of 2).

Constituent: Cobalt Analysis Run 6/6/2024 4:05 PM

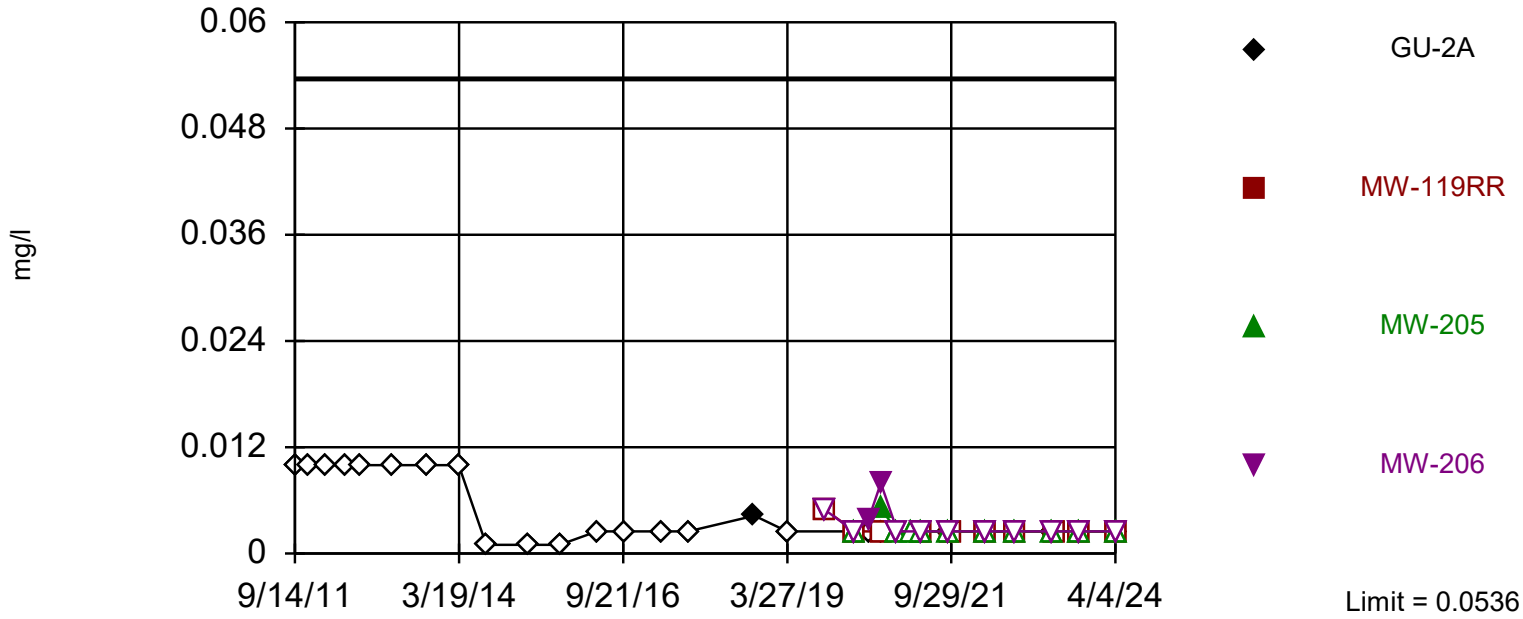
Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit - Detection Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 73 background values. 94.52% NDs. Annual per-constituent alpha = 0.004321. Individual comparison alpha = 0.0003608 (1 of 2).

Constituent: Copper Analysis Run 6/6/2024 4:05 PM

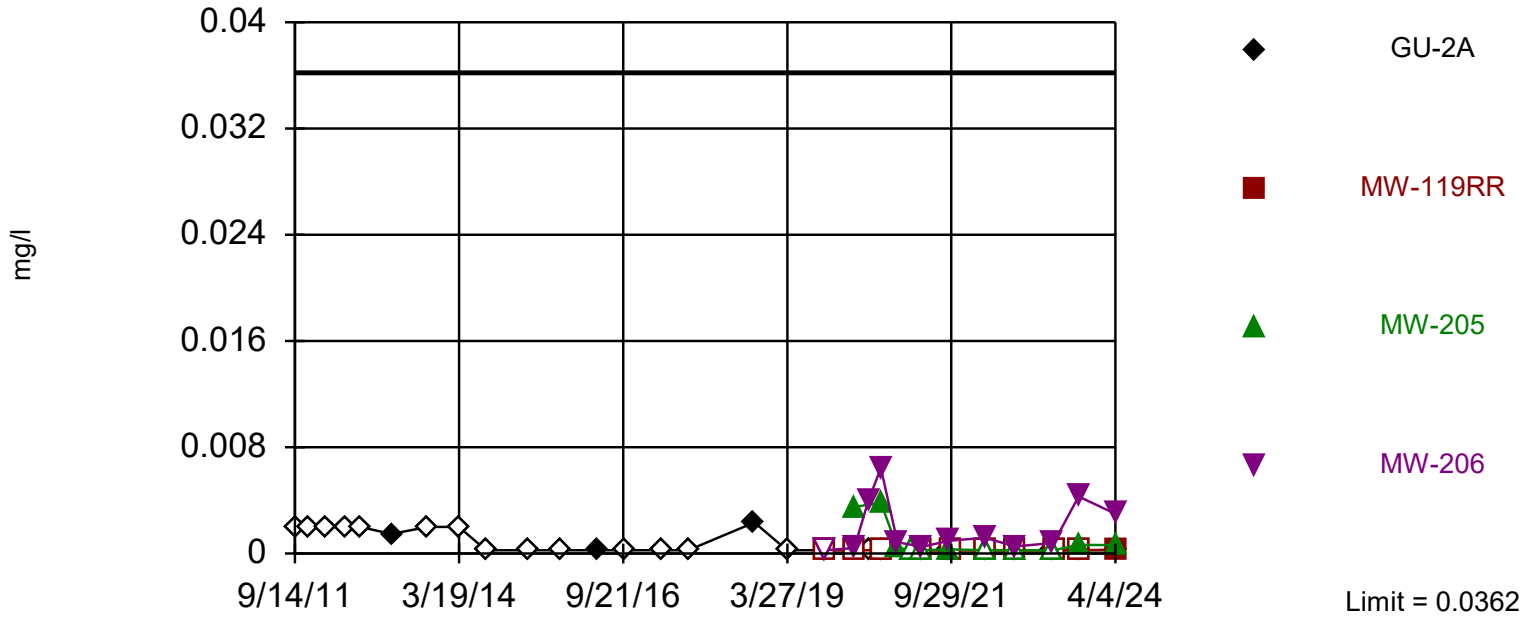
Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit - Detection Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 73 background values. 89.04% NDs. Annual per-constituent alpha = 0.004321. Individual comparison alpha = 0.0003608 (1 of 2).

Constituent: Lead Analysis Run 6/6/2024 4:06 PM

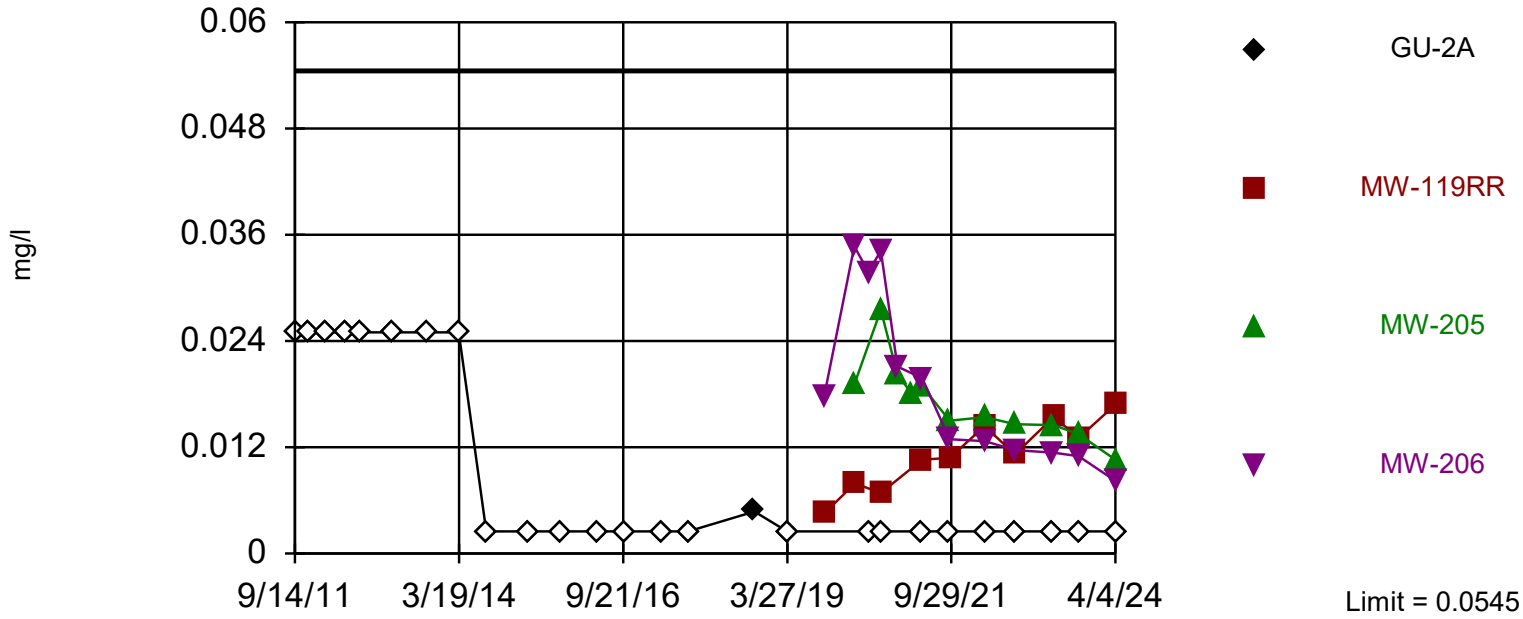
Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit - Detection Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 73 background values. 67.12% NDs. Annual per-constituent alpha = 0.004321. Individual comparison alpha = 0.0003608 (1 of 2).

Constituent: Nickel Analysis Run 6/6/2024 4:06 PM

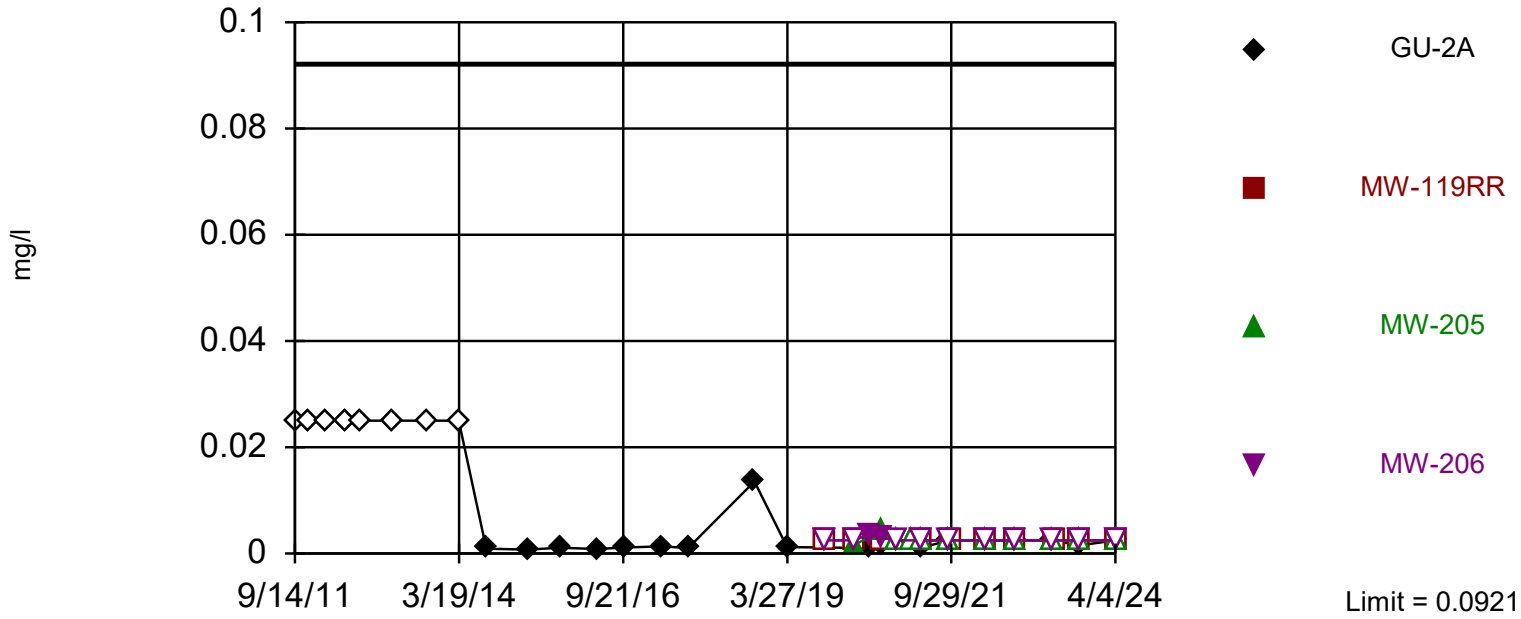
Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit - Detection Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 73 background values. 76.71% NDs. Annual per-constituent alpha = 0.004321. Individual comparison alpha = 0.0003608 (1 of 2).

Constituent: Vanadium Analysis Run 6/6/2024 4:06 PM

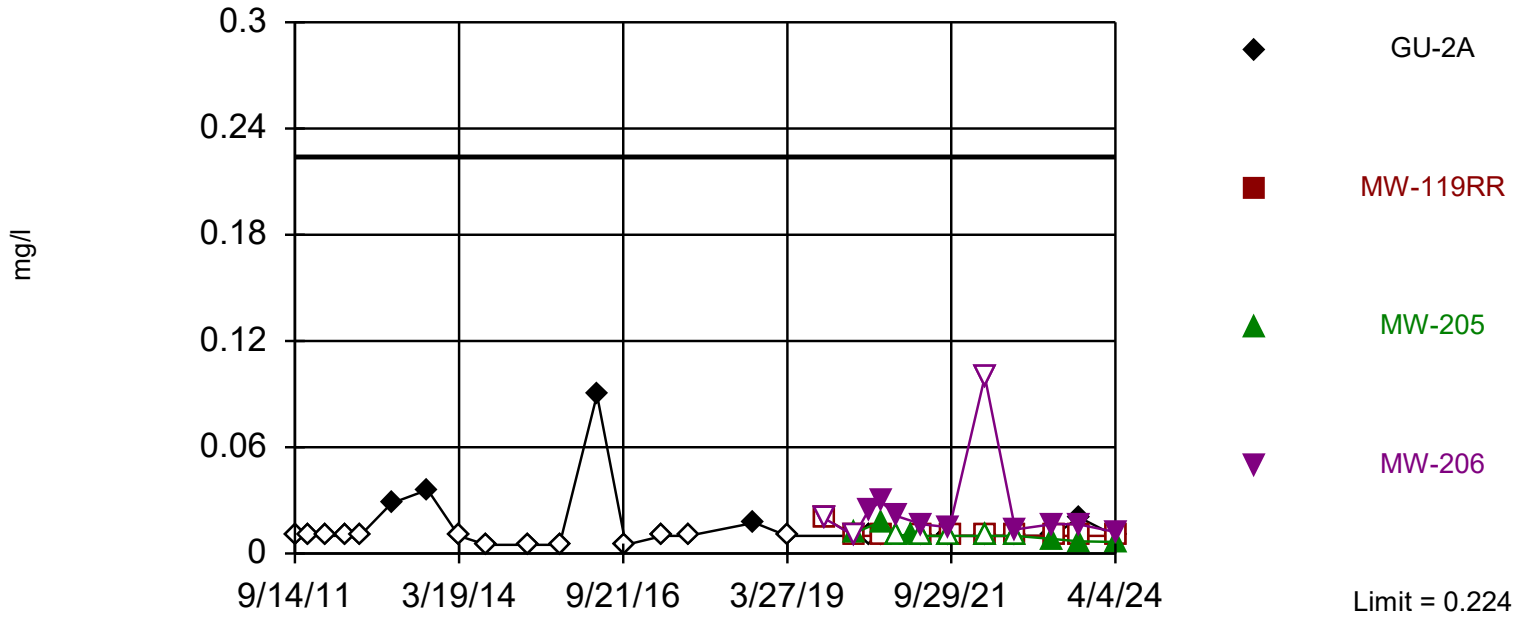
Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit - Detection Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 73 background values. 64.38% NDs. Annual per-constituent alpha = 0.004321. Individual comparison alpha = 0.0003608 (1 of 2).

Constituent: Zinc Analysis Run 6/6/2024 4:06 PM

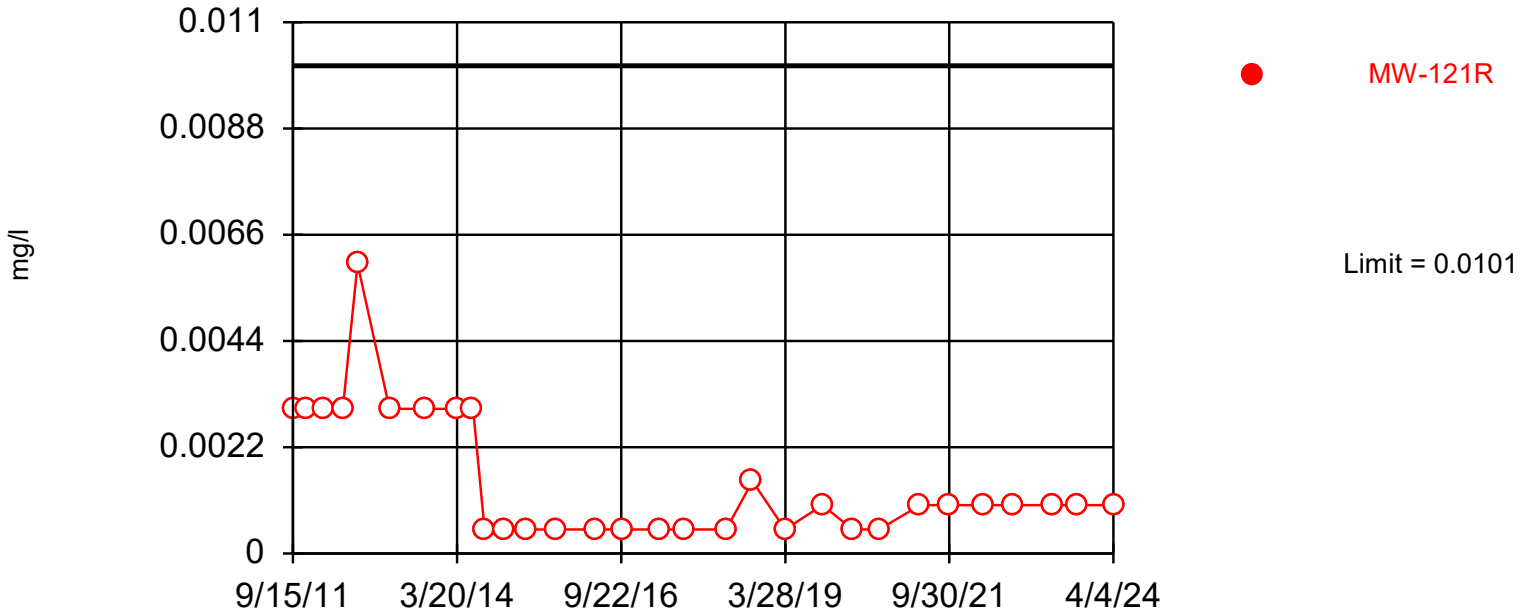
Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit - Assessment Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 73 background values. 98.63% NDs. Annual per-constituent alpha = 0.004321. Individual comparison alpha = 0.0003608 (1 of 2).

Constituent: Antimony Analysis Run 6/6/2024 4:13 PM

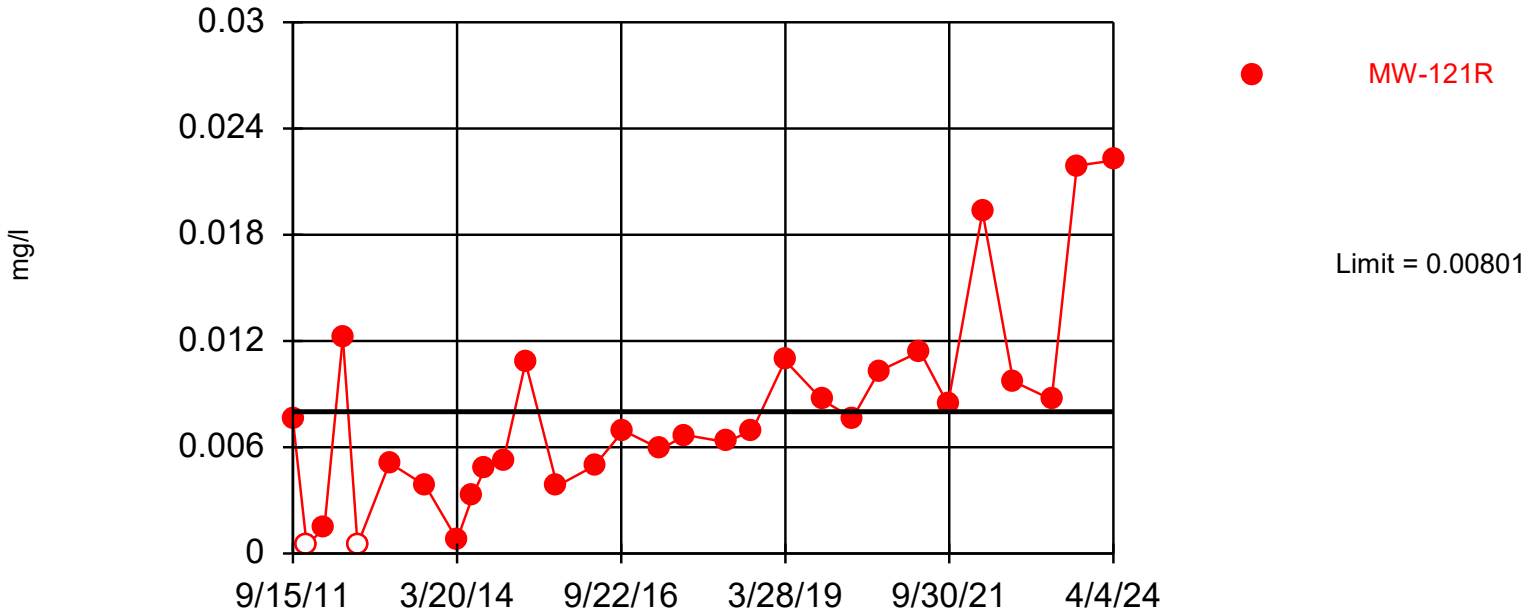
Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Hollow symbols indicate censored values.

Exceeds Limit: MW-121R

Prediction Limit - Assessment Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 73 background values. 90.41% NDs. Annual per-constituent alpha = 0.004321. Individual comparison alpha = 0.0003608 (1 of 2).

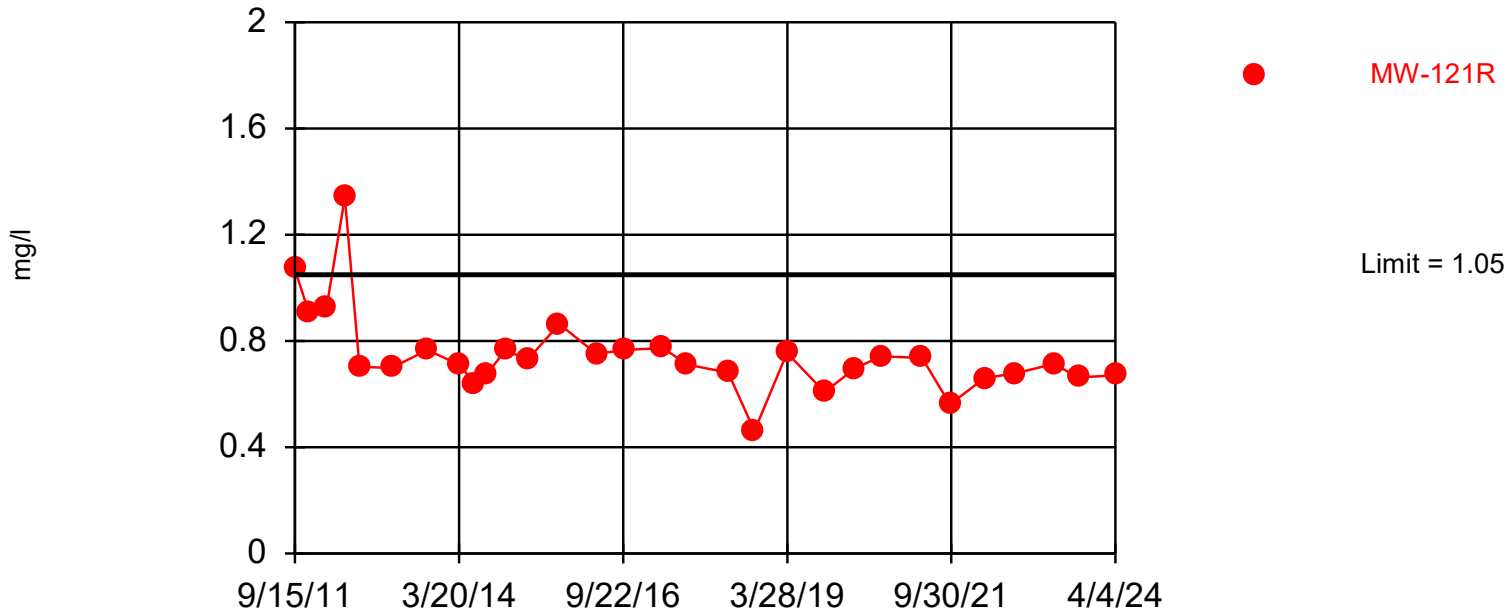
Constituent: Arsenic Analysis Run 6/6/2024 4:13 PM

Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Within Limit

Prediction Limit - Assessment Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 73 background values. Annual per-constituent alpha = 0.004321. Individual comparison alpha = 0.0003608 (1 of 2).

Constituent: Barium Analysis Run 6/6/2024 4:13 PM

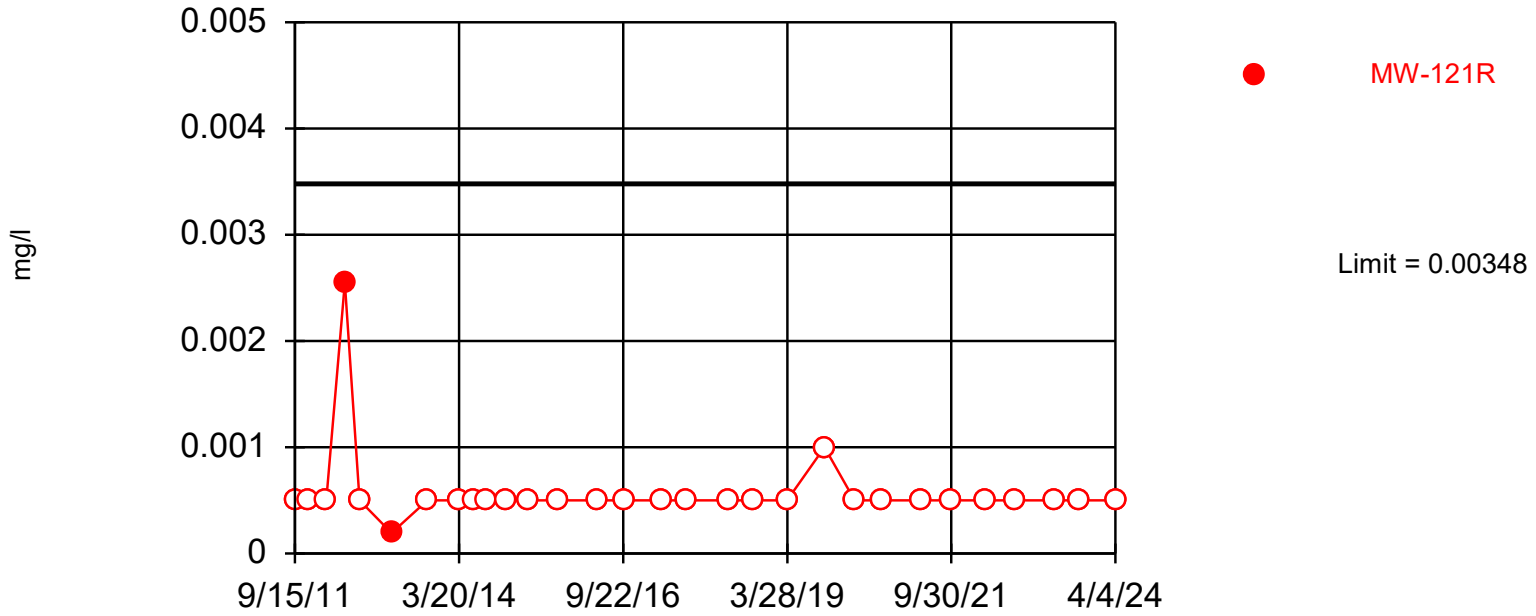
Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit - Assessment Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 73 background values. 97.26% NDs. Annual per-constituent alpha = 0.004321. Individual comparison alpha = 0.0003608 (1 of 2).

Constituent: Beryllium Analysis Run 6/6/2024 4:13 PM

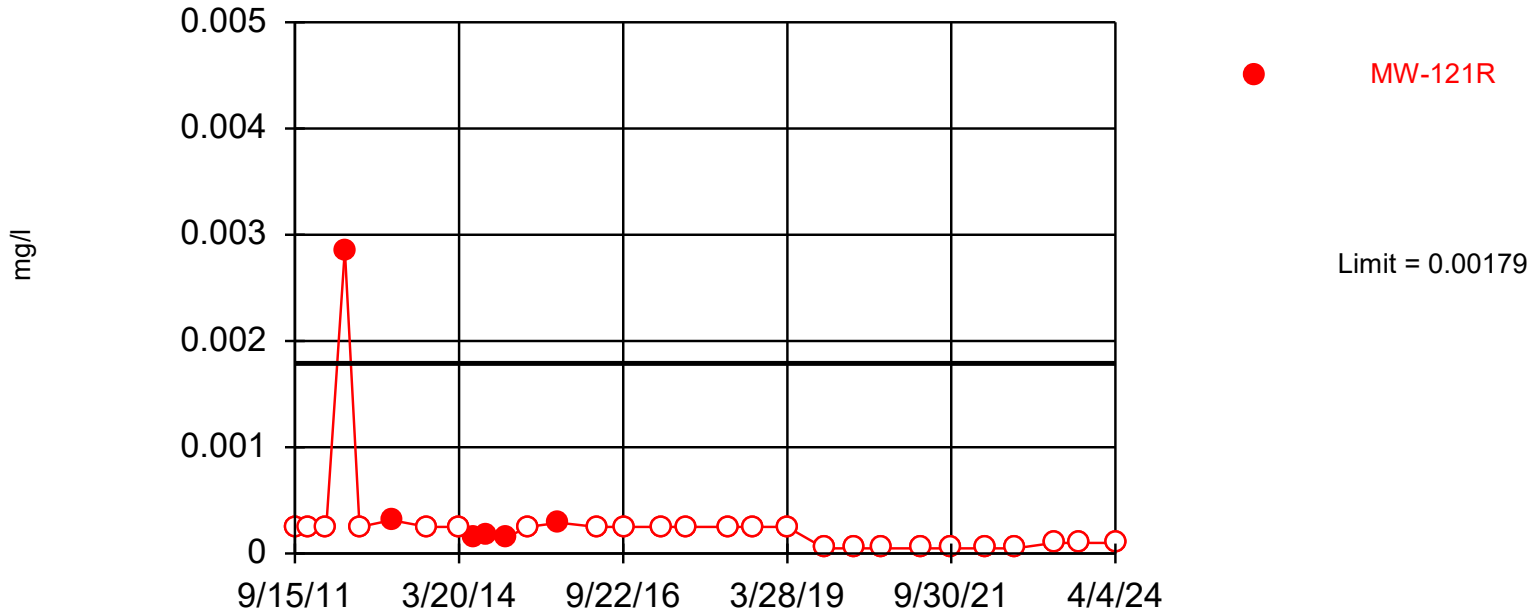
Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit - Assessment Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 73 background values. 63.01% NDs. Annual per-constituent alpha = 0.004321. Individual comparison alpha = 0.0003608 (1 of 2).

Constituent: Cadmium Analysis Run 6/6/2024 4:13 PM

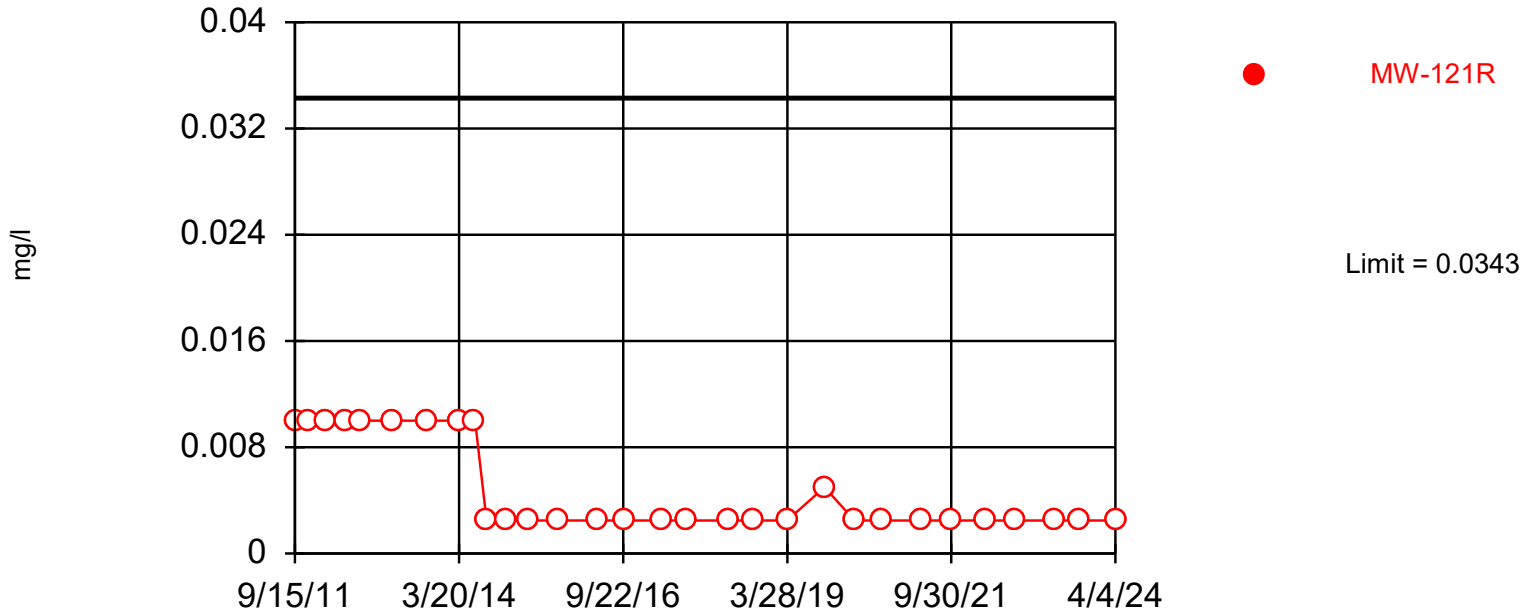
Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit - Assessment Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 73 background values. 68.49% NDs. Annual per-constituent alpha = 0.004321. Individual comparison alpha = 0.0003608 (1 of 2).

Constituent: Chromium Analysis Run 6/6/2024 4:13 PM

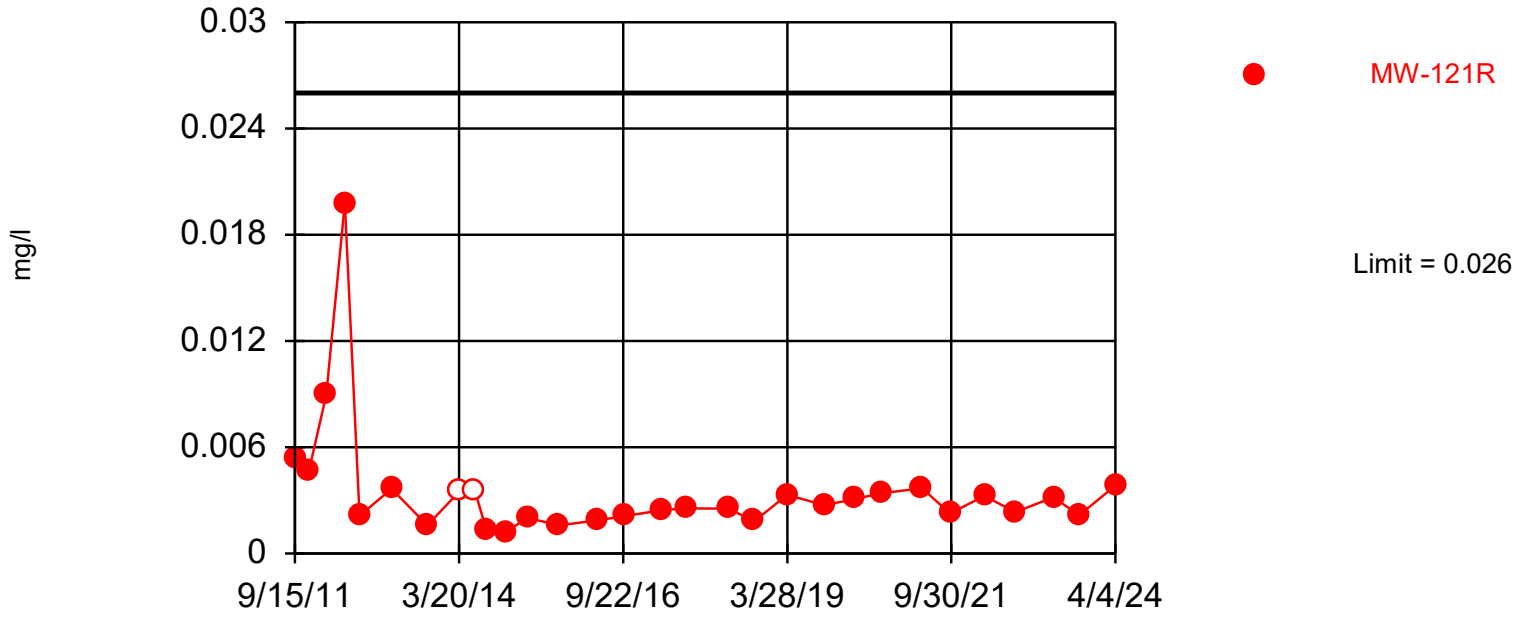
Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit - Assessment Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 73 background values. 84.93% NDs. Annual per-constituent alpha = 0.004321. Individual comparison alpha = 0.0003608 (1 of 2).

Constituent: Cobalt Analysis Run 6/6/2024 4:13 PM

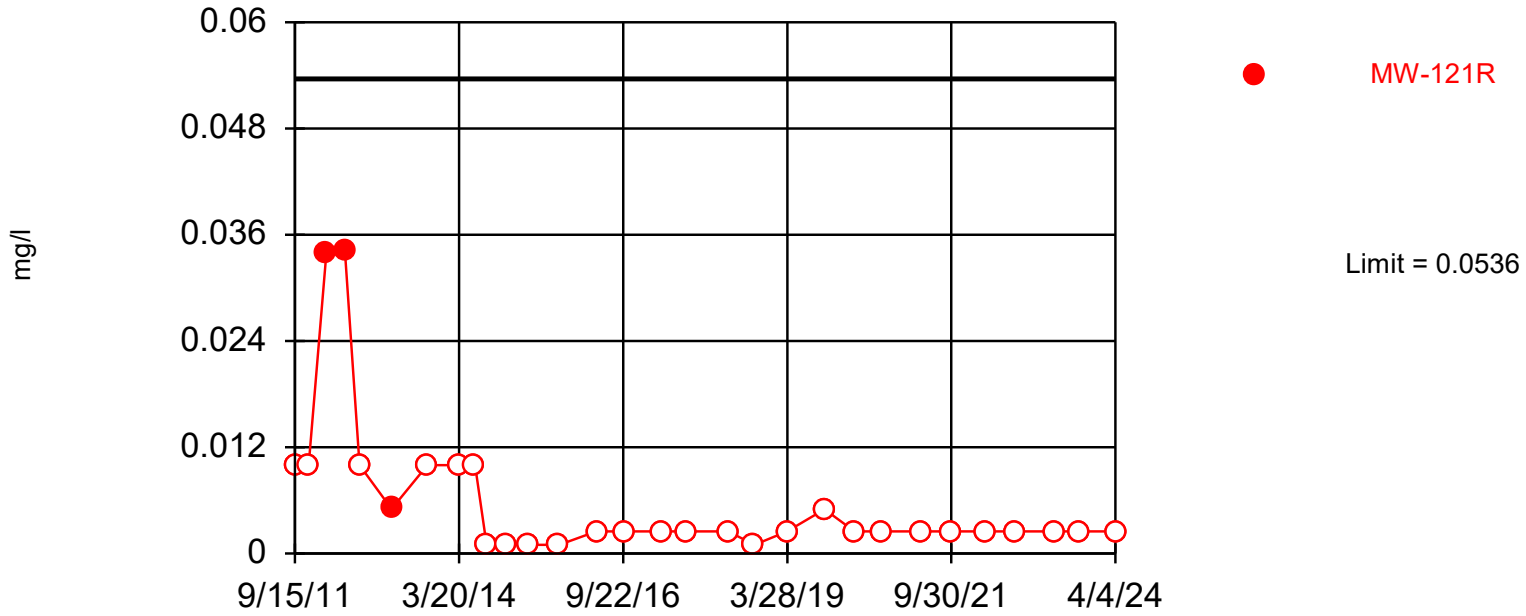
Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit - Assessment Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 73 background values. 94.52% NDs. Annual per-constituent alpha = 0.004321. Individual comparison alpha = 0.0003608 (1 of 2).

Constituent: Copper Analysis Run 6/6/2024 4:13 PM

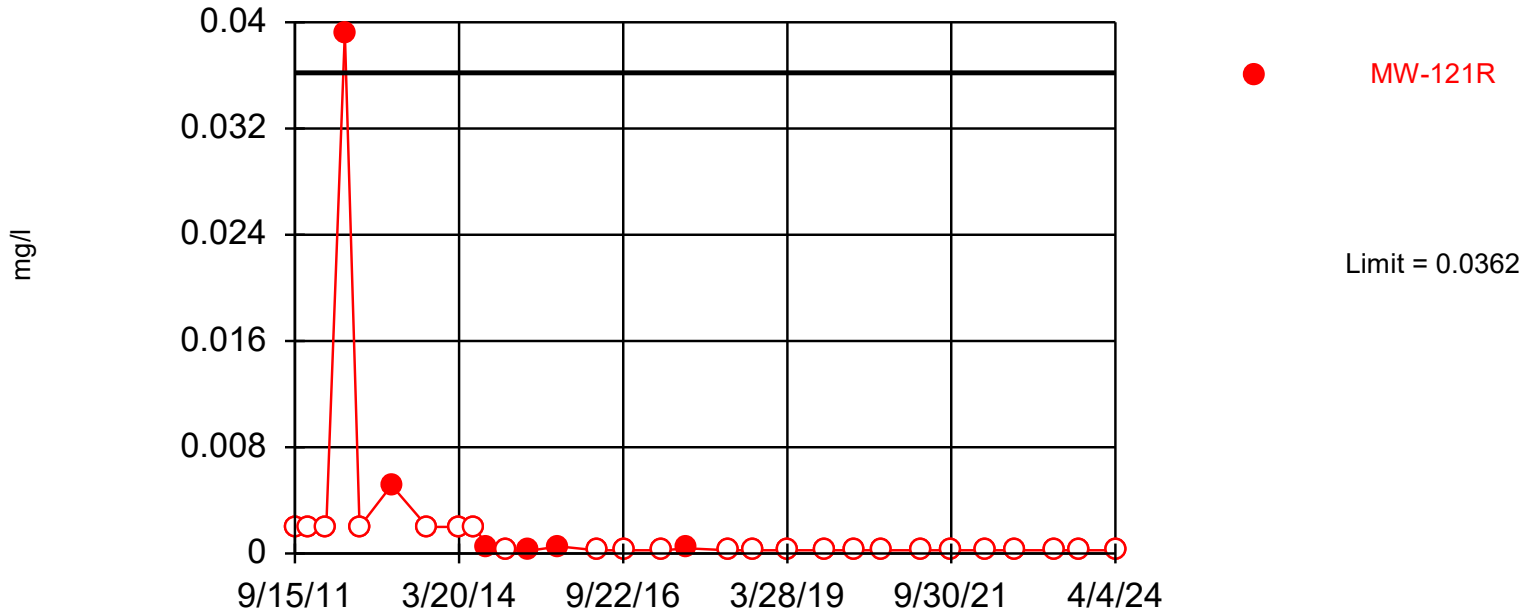
Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit - Assessment Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 73 background values. 89.04% NDs. Annual per-constituent alpha = 0.004321. Individual comparison alpha = 0.0003608 (1 of 2).

Constituent: Lead Analysis Run 6/6/2024 4:13 PM

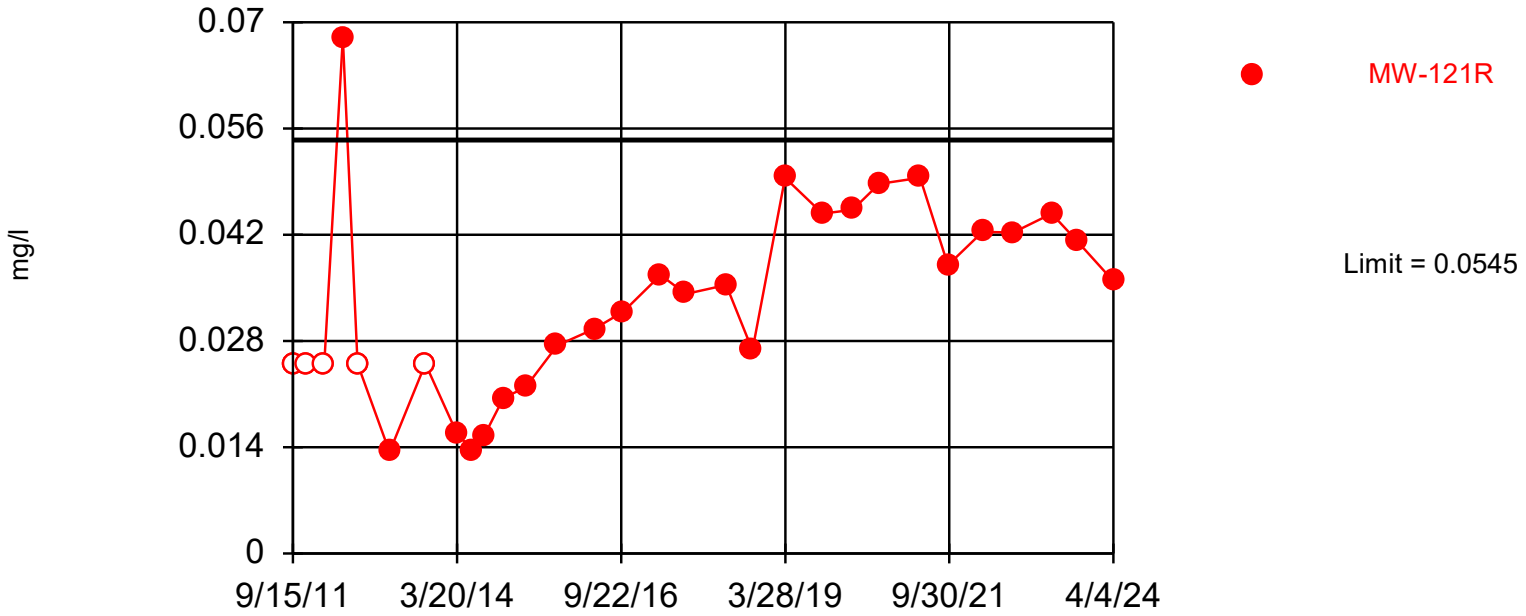
Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit - Assessment Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 73 background values. 67.12% NDs. Annual per-constituent alpha = 0.004321. Individual comparison alpha = 0.0003608 (1 of 2).

Constituent: Nickel Analysis Run 6/6/2024 4:13 PM

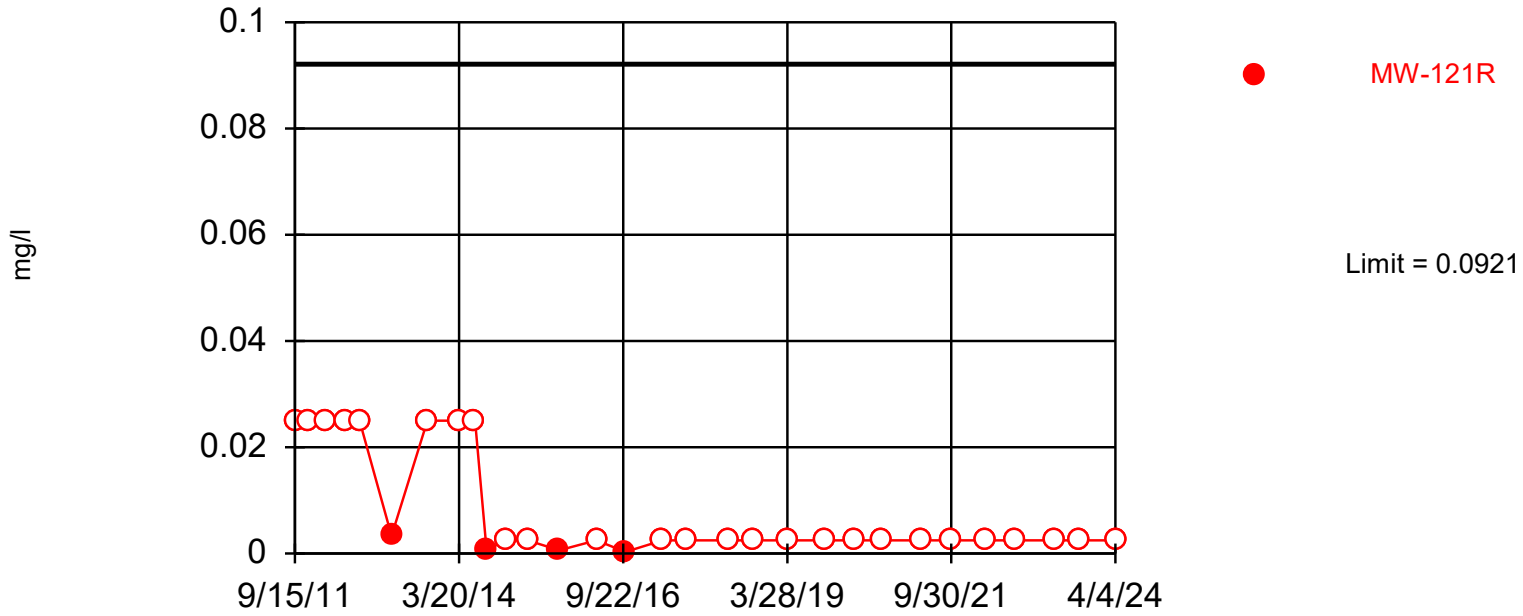
Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit - Assessment Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 73 background values. 76.71% NDs. Annual per-constituent alpha = 0.004321. Individual comparison alpha = 0.0003608 (1 of 2).

Constituent: Vanadium Analysis Run 6/6/2024 4:13 PM

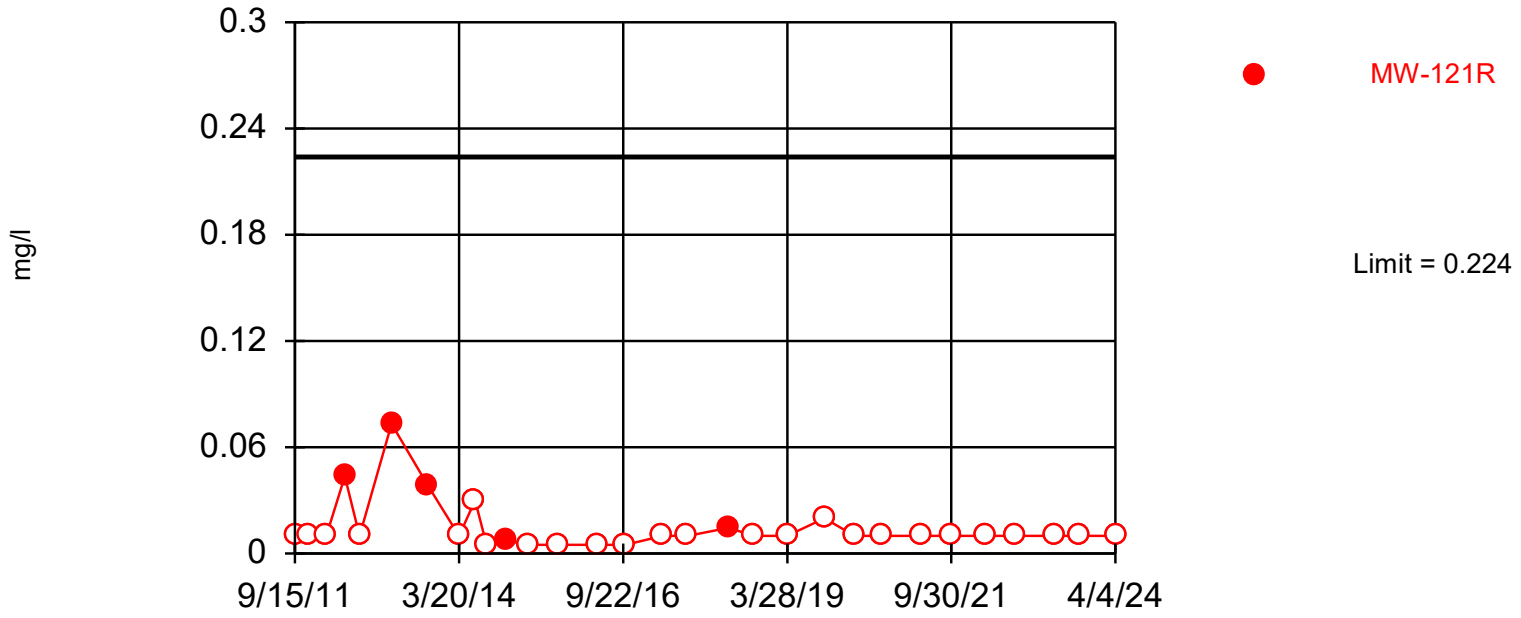
Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit - Assessment Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 73 background values. 64.38% NDs. Annual per-constituent alpha = 0.004321. Individual comparison alpha = 0.0003608 (1 of 2).

Constituent: Zinc Analysis Run 6/6/2024 4:13 PM

Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Attachment 4

Sanitas Report Output for Double Quantification Rule Evaluations

Data Screening - Detection Monitoring

Analysis Run 6/6/2024 4:35 PM

Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

A listing of detects for 206 constituents in GU-2A, MW-119RR, MW-200, MW-205, and MW-206 on 4/4/2024:

-none-

Data Screening - Assessment Monitoring

Analysis Run 6/6/2024 4:34 PM

Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

A listing of detects for 206 constituents in MW-121R on 4/4/2024:

Benzene, MW-121R, 4/4/2024: 0.662 ug/l
cis-1,2-Dichloroethene, MW-121R, 4/4/2024: 6 ug/l

Attachment 5
Sanitas Report Output for Confidence Interval Calculations
Assessment Mode

Confidence Interval - Assessment Mode [1]

Constituent Name	Well	Upper Limit	Lower Limit	Compliance Limit [2]	Exceed	N	Mean	Standard Deviation	CV	a to Achieve 50% Power at R=1.5 [3,4]	a to Achieve 80% Power at R=2.0 [3,4]	% Non-detects	Non-detect Adjustment	Transformation	Alpha	Method
Assessment Monitoring Locations																
Arsenic (mg/l)	MW-121R	0.010	0.005	0.01	No	30	0.008	0.006	0.70	<0.01	<0.01	7	None	No	0.01	NP (normality)
Benzene (ug/l)	MW-121R	1.02	0.25	5	No	31	0.66	0.40	0.61	<0.01	<0.01	35	None	No	0.01	NP (normality)
cis-1,2-Dichloroethene (ug/l)	MW-121R	18.8	1.9	70	No	31	11.1	8.9	0.80	<0.01	<0.01	16	None	No	0.01	NP (normality)

[1] Under assessment mode, an SSL is indicated when the lower confidence limit exceeds the groundwater protection standard (compliance limit).

[2] Value is the 40 CFR Part 141 Safe Drinking Water Act MCL or the IAC 567 Chapter 137 Statewide Standard for a Protected Groundwater Source.

[3] For parametric confidence intervals: Except where otherwise indicated, based on Unified Guidance Equation 22.2, i.e., $\alpha \sim 1 - F_{T,n-1}\left(\frac{(R-1)\sqrt{n}}{R \cdot \widehat{CV}} - t_{1-\beta,n-1}\right)$

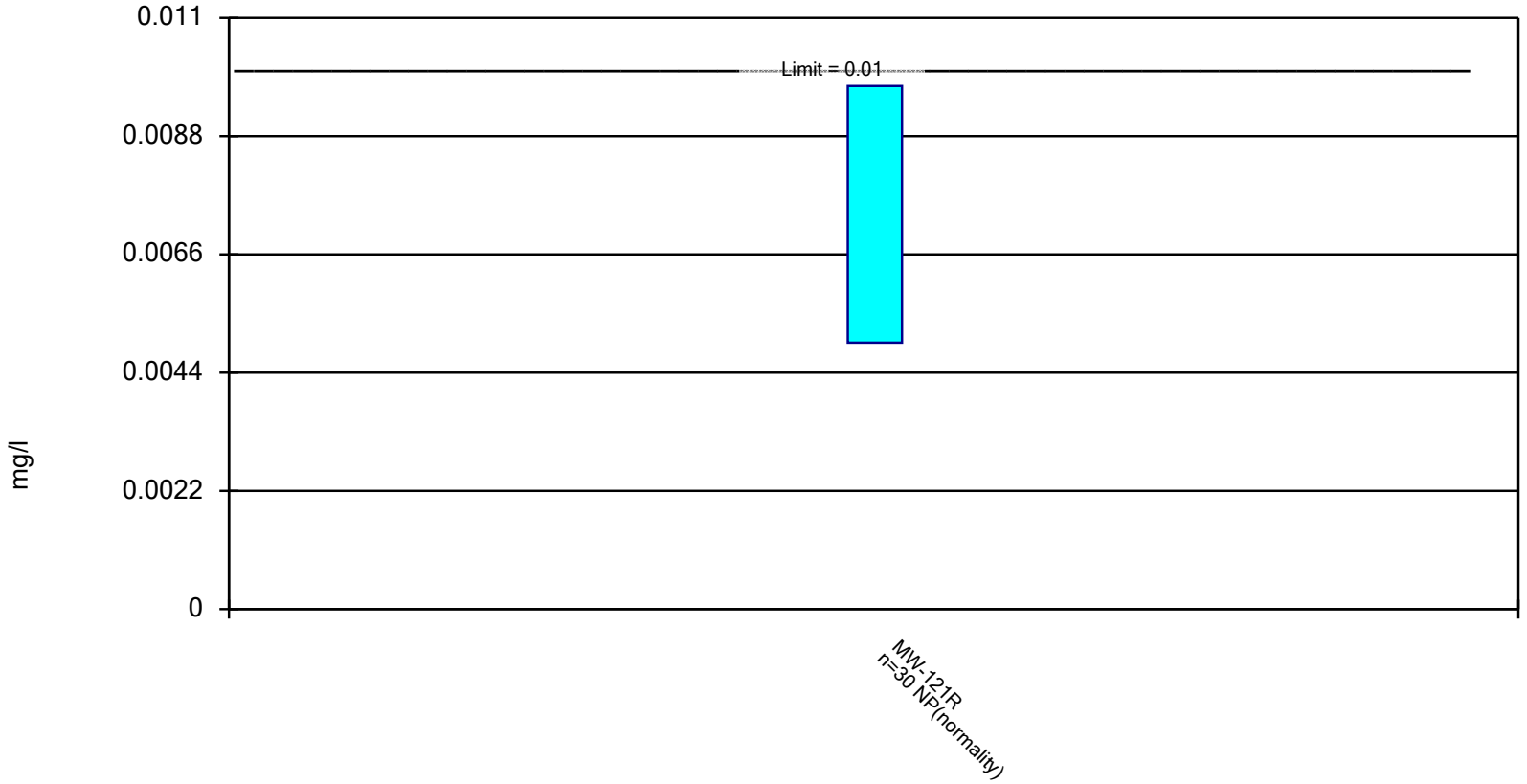
where R is the desired risk ratio, *n* is the sample size, CV is the estimated sample coefficient of variation, $t_{1-b,n-1}$ is the (1−b) Student's t-quantile with (n−1) degrees of freedom, and F is the cumulative (central) Student's t-distribution function.

[4] For non-parametric confidence intervals: Based on Unified Guidance Equation 22.1, i.e., $1 - \beta = G_{T,n-1}\left(t_{1-\alpha,n-1} \middle| \Delta = \sqrt{n}(R-1)\right)$

where R is the desired risk ratio, $t_{1-a,n-1}$ is the (1−a) Student's t-quantile with (n−1) degrees of freedom and G represents the cumulative non-central t-distribution with (n−1) degrees of freedom and noncentrality parameter D.

Non-Parametric Confidence Interval - Assessment Montioring

Compliance Limit is not exceeded. Per-well alpha = 0.01.

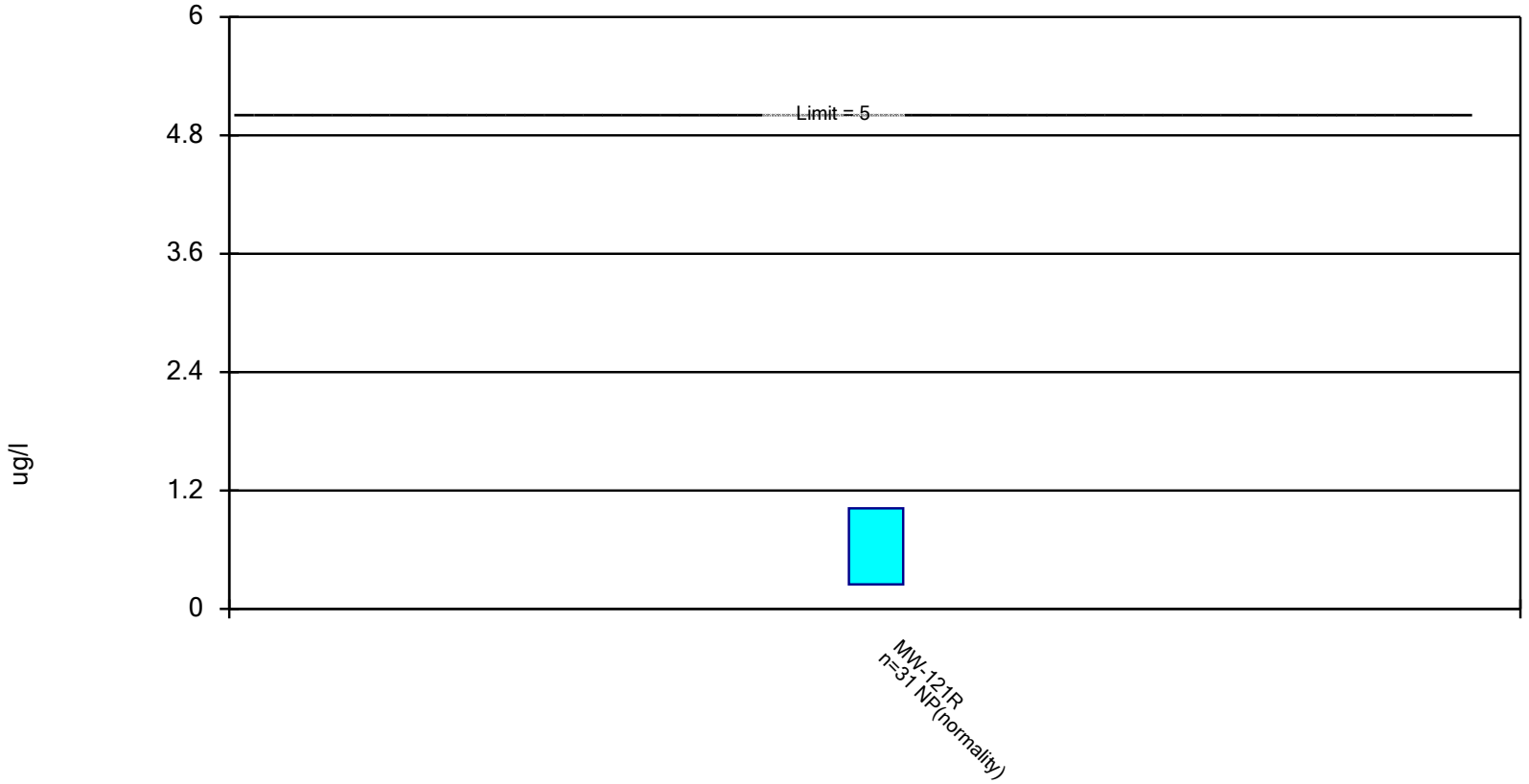


Constituent: Arsenic Analysis Run 6/6/2024 5:24 PM

Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Non-Parametric Confidence Interval - Assessment Montioring

Compliance Limit is not exceeded. Per-well alpha = 0.01.

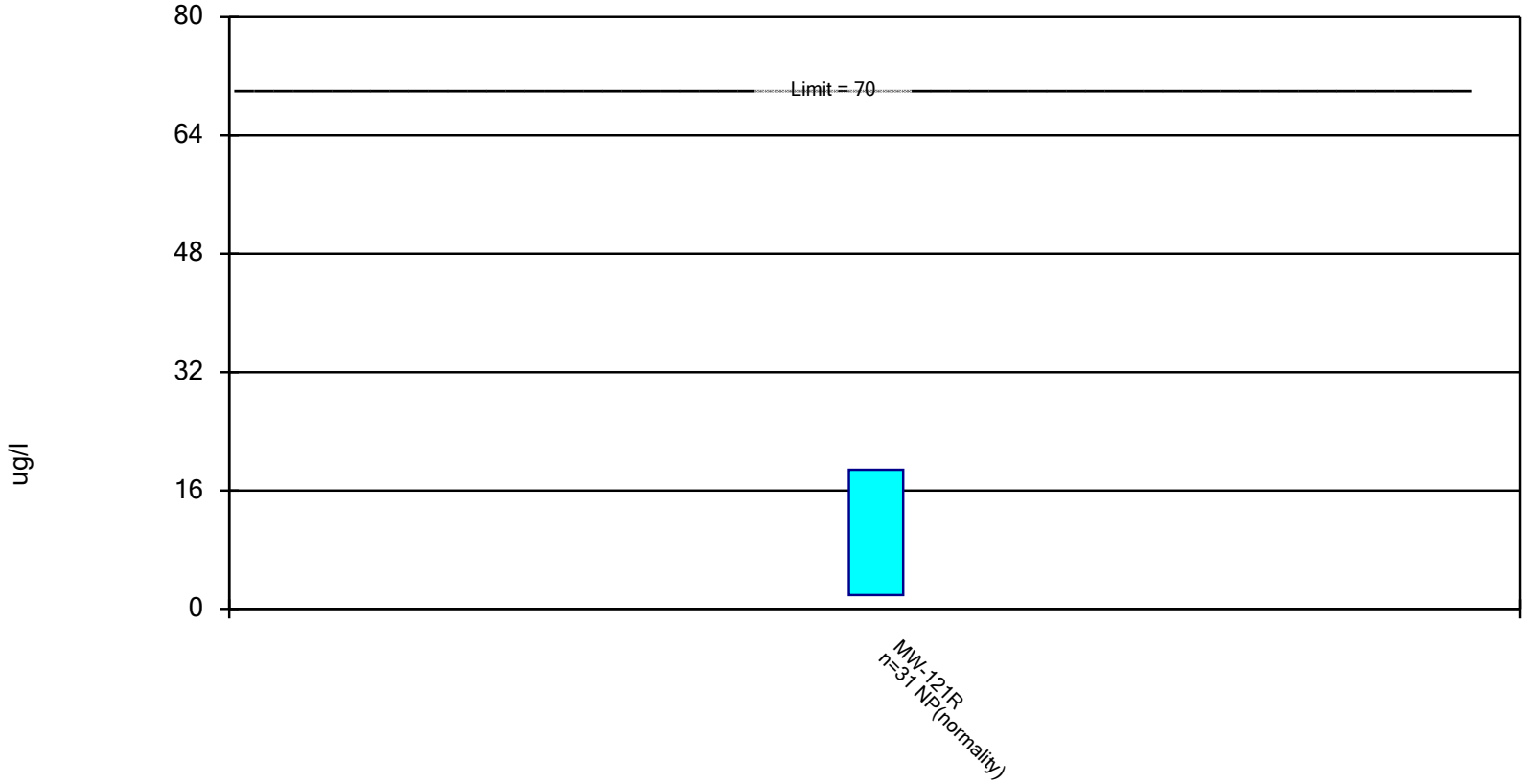


Constituent: Benzene Analysis Run 6/6/2024 5:24 PM

Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Non-Parametric Confidence Interval - Assessment Montioring

Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: cis-1,2-Dichloroethene Analysis Run 6/6/2024 5:24 PM

Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Attachment 6
Effective Power and Site-Wide False Positive Rate Discussion
Power Curve Evaluation

Effective Power and Site-Wide False Positive Rate

Statistical power refers to the ability of a test to identify real increases in concentration levels given they exist. The Unified Guidance defines the effective power as the "probability of detecting contamination in the monitoring network when one and only one well-constituent pair is contaminated." It further states that any statistical test procedure with effective power at least as high as the appropriate USEPA Reference Power Curve (ERPC) should be considered to have reasonable power.

The Unified Guidance gives the following criteria for comparing the effective power to the ERPC:

If the effective power first exceeds the ERPC at a mean concentration increase no greater than 3 background standard deviations, the power is labeled 'good;' if the effective power first exceeds the ERPC at a mean increase between 3 and 4 standard deviations, the power is considered 'acceptable;' and if the first exceedance of the ERPC does not occur until an increase greater than 4 standard deviations, the power is considered 'low.'

Effective power curves were developed with Sanitas for the 1-of-2 prediction limit plan, with power curves illustrated below. Based on the power curves, the intrawell and interwell non-parametric prediction limits currently have good power ratings.

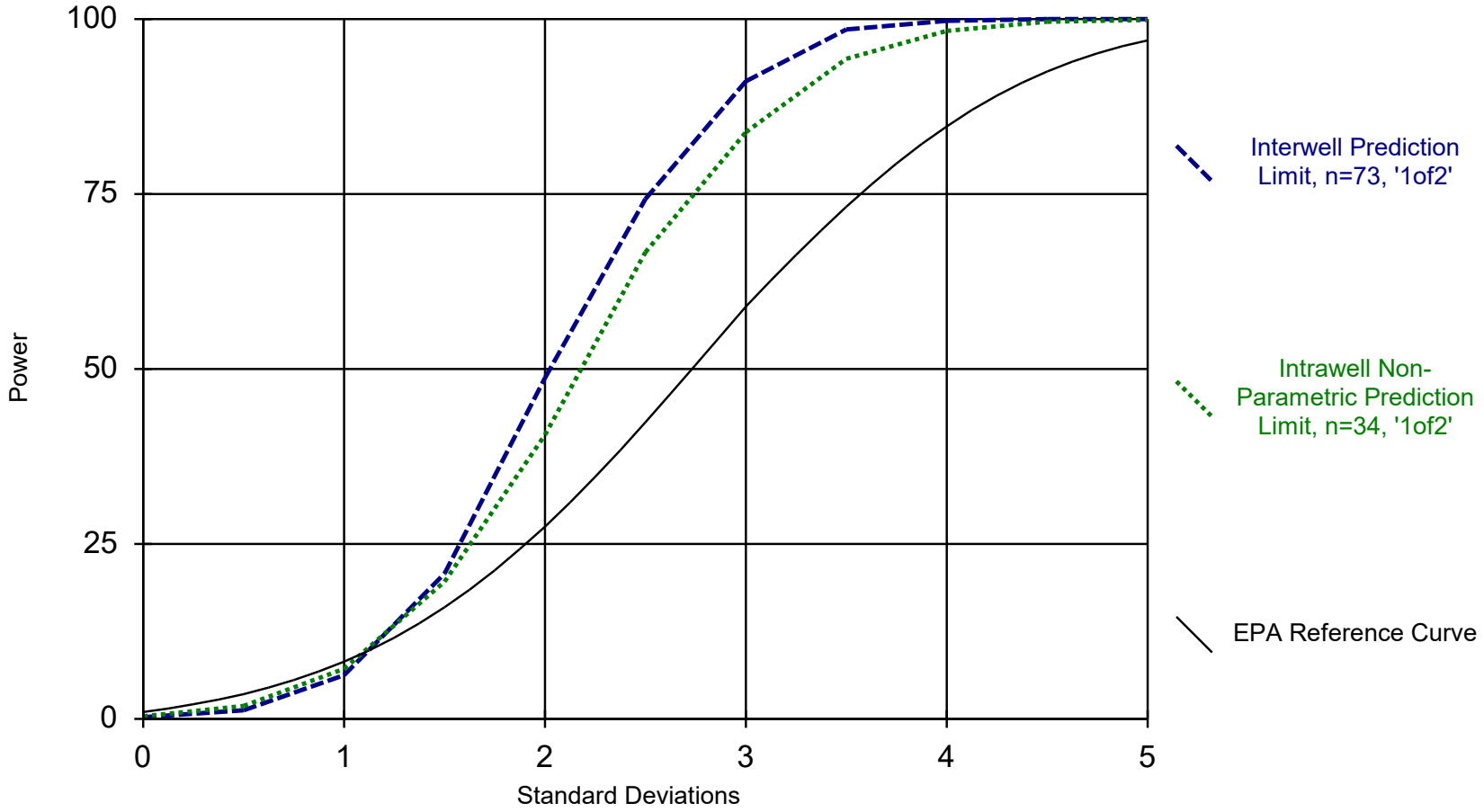
The Unified Guidance "strongly encourages use of a comprehensive design strategy to account for both the cumulative site-wide false positive rate (SWFPR) and effective power to identify real exceedances." The Unified Guidance recommends and uses an annual SWFPR target of 10%. The current annual SWFPR based on the 1-of-2 prediction limit plan may be calculated using the basic subdivision principle discussed in Unified Guidance Sections 6.2.2, 19.2.1 and 19.4.

Currently, comparisons are made at 6 compliance locations and semiannually with a total of 147 single tests annually.

The Sanitas prediction limit report output of Attachment 3 includes annual individual test α-levels for each well/constituent pair. The α-levels reported by Sanitas account for the 1-of-2 plan, as well as two semiannual events conducted at the site.

The cumulative annual SWFPR can be approximated directly from the α-levels reported in the Sanitas output as $\text{SWFPR} = 1 - \prod_{i=1}^{72}(1-\alpha_i)^2 = 0.078 \approx 8\%$. The current annual SWFPR is in compliance with the Unified Guidance target 10% false positive.

Power Curve



Analysis Run 6/6/2024 5:55 PM

Carroll County Landfill Client: Foth Data: Carroll West Spring 2024 Evaluation

Attachment 7
References

References

Foth, 2024. *2023 Annual Water Quality Report, Carroll County Landfill Western Expansion Area, IDNR Permit No. 14-SDP-01-74P, Project I.D.: 24C002.00.* March 1. [Doc. No. 109295].

United States Environmental Protection Agency (USEPA), 1997. *The Lognormal Distribution in Environmental Applications*. EPA/600/R97/006. Office of Solid Waste and Emergency Response, Washington, D.C.

USEPA, 2006. *On the Computation of a 95% Upper Confidence Limit of the Unknown Population Mean Based Upon Data Sets with Below Detection Limit Observations*. EPA/600/R-06/022. Office of Research and Development, Washington, D.C.

USEPA, 2009. *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance*. EPA 530-R-09-007. Office of Resource Conservation and Recovery, Program Implementation and Information Division, Washington, D.C.

Memorandum

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foth.com

November 12, 2024

TO: Iowa Department of Natural Resources

FR: Hannah Dubbs; Gina Wilming, CGP

RE: Carroll County Western Expansion Area - Fall 2024 Statistical Evaluation

1. Memorandum Organization

This memo addresses the statistical analysis of the groundwater monitoring data collected during September 2024. The statistical methods and results are summarized, with the memo organization given as follows:

Tables

Tables (Continued)

Attachments

2. Background

The groundwater monitoring locations and the status of the Appendix I and II sampling schedules are summarized in Table 1. The Appendix I and II analytical results will be provided in Table 13 of the 2024 Annual Water Quality Report (AWQR).

Table 1
Groundwater Monitoring Locations & Sampling Schedules
Apr. 2008 – Sep. 2024 Appendix I and II Data

Monitoring Location	Monitoring Program	Current Schedule (Sep. 2024) [1]	Appendix I Initiated	# Events to Complete Baseline Appendix I or Completion Date [113.10(5)b]	Appendix II Initiated	# Events to Complete Baseline Appendix II or Completion Date [113.10(6)b]	Returned to Detection Monitoring
Downgradient Monitoring Locations							
GU-2A	Detection	Appendix I	Sep-11	Sep-12	N/A	N/A	N/A
GU-4A	Detection	Dry	---	5	N/A	N/A	N/A
MW-119RR	Detection	Appendix I	Oct-19	Sep-21	N/A	N/A	N/A
MW-121R	Assessment	Full Appendix II	Sep-11	Sep-12	Jun-14	Apr-15	No
MW-200 [2]	Detection	Appendix I	Sep-09	Sep-10	Jul-16	Jul-16 [3]	Sep-18
MW-205 [4]	Detection	Appendix I	Apr-20	Apr-21	N/A	N/A	N/A
MW-206	Detection	Appendix I	Oct-19	Dec-20	N/A	N/A	N/A
Background Monitoring Locations							
MW-122R	Background	Full Appendix II	Apr-08	Mar-09	Mar-09	Mar-10	N/A
MW-200 [2]	Background	Full Appendix II	Sep-09	Sep-10	Jul-16 [6]	Jul-16 [6]	N/A

N/A = Not applicable

[1] In Sep. 2024, the Appendix II locations were sampled for the full Appendix II list. The next 5-year resampling for the full Appendix II list at the assessment and background monitoring wells is scheduled for Fall 2029.

[2] MW-200 primarily serves as a downgradient monitoring location; however, MW-200 is also used to supplement the background data set.

[3] MW-200 triggered assessment monitoring in Jul. 2016. Note that one round of background monitoring for the full Appendix II list had previously been conducted at MW-200 in October 2015 as part of the five-year full Appendix II resampling at the Closed Eastern Area. In accordance with Special Provision X.4.e, baseline assessment monitoring was completed after the June 2016 event since at least two rounds of analysis using the entire Appendix II list were completed in October 2015 and June 2016.

[4] In the *2023 AWQR* (Foth, 2024), Foth requested to replace MW-204RR with MW-205 in the permitted groundwater monitoring network for the Western Expansion Area due to the dry to limited water depths consistently observed at MW-204RR. The Iowa Department of Natural Resources (IDNR) approved the request in their letter dated July 5, 2024 (IDNR, 2024). Therefore, MW-205 was sampled in Sep. 2024 for the Appendix I list. MW-204RR is being retained as a water level only location.

In September 2024, semiannual detection, assessment, and background monitoring were conducted at the downgradient and background monitoring locations as indicated in Table 1. Assessment monitoring well MW-121R and background wells MW-122R and MW-200 were sampled for the full Appendix II list. As discussed in the Report Priority of the *2023 AWQR* (Foth, 2024), Foth requested MW-205 permanently replace detection monitoring well MW-204RR in the permitted groundwater monitoring network for the Western Expansion Area due to the dry to limited water depths consistently observed at MW-204RR. The IDNR approved the request in their letter dated July 5, 2024 (IDNR, 2024). Therefore, MW-205 was sampled for the Appendix I list in September 2024 in place of MW-204RR. MW-204RR is being retained as a water level only location.

Underdrain sample location GU-4A remained dry in September 2024. Baseline detection monitoring will be initiated once the water level is at or above the elevation of the horizontal underdrain discharge pipe connected perpendicular to the vertical sample pipe.

Under the detection and assessment monitoring programs of 567 Iowa Administrative Code (IAC) 113.10(5) and 113.10(6), Appendix I and II monitoring results are statistically compared to background levels as given in 567 IAC 113.10(5)c and 113.10(6)e and to the groundwater protection standard (GWPS) as given in 567 IAC 113.10(6)g and h. A well may return to detection monitoring when all Appendix II constituents are "shown to be at or below background values, using the statistical procedures in 567 IAC 113.10(4)g for two consecutive sampling events." Consequently, to return to detection monitoring in accordance with 567 IAC 113.10(6)e, all Appendix II constituents must be below the interwell prediction limit (for constituents which are detected in the background data set) or below the laboratory reporting limit (for constituents which are not detected in the background data set) during two consecutive sampling events. Three consecutive sampling events may be utilized to make the determination to return to detection monitoring to limit the frequent fluctuation of wells moving between the detection and assessment monitoring programs. Assessment monitoring continues when Appendix II concentrations are above background values but below the GWPS using the statistical procedures in 567 IAC 113.10(4)g.

If Appendix II constituents are detected at statistically significant levels (SSLs) above the GWPS, characterization [567 IAC 113.10(6)g] is initiated, and the owners or operators are required to initiate an assessment of corrective measures, select a remedy, and implement a remedy in accordance with 567 IAC 113.10(7), (8), and (9). For remedy completion [567 IAC 113.10(9)e(2)], compliance with the GWPS is considered achieved by demonstrating that concentrations of Appendix II constituents have not exceeded the GWPS for a period of three consecutive years or an alternate length of time established by the Department.

Based on the April 2008 through September 2024 results, this memo presents an evaluation of statistically significant increases (SSIs) and SSLs under the requirements of 567 IAC 113.10(4)g and h.

3. Statistical Methodology

The statistical methods utilized for locations in detection and assessment monitoring were consistent with the methods used in previous statistical evaluations. Detailed descriptions of the statistical methods are provided in Attachment 1. Sanitas® v10 (Sanitas Technologies) software was utilized to complete the statistical comparisons.

Note that statistical comparisons were not conducted at GU-4A since the location was dry in September 2024.

3.1 Background Data Set

The combined background data set of MW-122R and MW-200 was utilized to evaluate SSIs over background for metals. The background data set for non-metal constituents is defined by MW-122R only.

3.1.1 Turbidity and the Background Data Set

No background data set adjustments are recommended based on a review of the field turbidity and total suspended solids (TSS) data from the September 2024 sampling event. TSS concentrations in MW-122R and MW-200 were below the 5 mg/L level for acceptable sample quality in September 2024. A detailed discussion regarding compliance with Permit Special Provision X.4.g will be provided in the 2024 AWQR.

3.1.2 Background Data Set Review for Prediction Limits

The practical quantitation limit (PQL) has been lowered for several metal constituents since the start of Appendix I monitoring in March 2008. This lowering of the PQL has enabled laboratory quantitation limits to be lower than the GWPS. As a result of the shifting PQLs, the background datasets were reviewed to determine whether some of the earlier non-detect data with elevated PQLs may need to be removed from the background data due to the increased uncertainty this adds. For example, removing earlier non-detect data with elevated PQLs when that value is larger than any existing detected values ensures that the maximum order statistic is a quantified concentration for non-parametric prediction limits. However, data set adjustments are typically not recommended if detections are identified at concentrations above the earlier elevated PQLs, or in cases where the PQL remains relatively consistent over time. Also, consideration is given as to whether the elevated PQL is greater than or less than the GWPS. No background data set adjustments have been previously or are currently recommended based on shifting PQLs.

3.2 MW-200 Evaluation

The following statistical comparisons were conducted to provide ongoing documentation that MW-200 is suitable for inclusion in the background metals data set.

- Review MW-200 data for detection of non-metal constituents.
- Conduct Mann-Kendall trend tests on detected metals constituents.
- Conduct intrawell prediction limits on detected metals constituents.

3.2.1 Detection of Non-Metal Constituents in MW-200

No non-metal Appendix I or II constituents were detected above the laboratory PQL at MW-200 in September 2024.

The background data set adjustments previously recommended and incorporated based on a review of single background detections include:

- Removal of the September 2020 metals concentrations in MW-200 from interwell statistical comparisons (initiated with the Fall 2020 statistical evaluation) and intrawell statistical comparisons (initiated with the Fall 2021 statistical evaluation).

These data set adjustments were maintained in the current statistical evaluation.

3.2.2 Trend Tests and Intrawell Prediction Limits – MW-200

3.2.2.1 Updating Intrawell Background

Intrawell background was not updated during this statistical evaluation. Intrawell background was last updated during the Fall 2023 statistical evaluation. The Unified Guidance (Section 5.3.2) recommends that the intrawell background data set be updated periodically, after 4 to 8 new compliance observations have been collected. The guidance also states that "a potential update is predicated on there being no statistically significant increase [SSI] recorded for that well constituent, including since the last update." Intrawell background will be updated in Fall 2025 if there continue to be no SSIs identified at MW-200.

3.2.2.2 Trend Tests and Intrawell Prediction Limits

Mann-Kendall trend tests and intrawell prediction limits were used to statistically compare the detected metals concentrations in MW-200. These analytes are antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, tin, vanadium, and zinc. In previous events, tin has not been sampled and included in the analysis for MW-200 because tin has not been detected in any downgradient wells or in the background data set above the PQL since 2013. However, tin was analyzed in Fall 2024 due to the 5-year resampling of the full Appendix II list; therefore, tin was included in MW-200's intrawell analysis. The trend test and prediction limit statistical outputs are included in Attachment 2.

For constituents where notable changes in the reporting limit have occurred (i.e., antimony, chromium, cobalt, copper, lead, nickel, tin, and vanadium), the earlier non-detect values with higher reporting limits were not included in the Mann-Kendall trend tests since this may artificially introduce variation into the trend test. Trend test results developed through Sanitas indicated a decreasing trend for zinc that is significant at the 98% confidence level (two-tailed test, α=0.01 per tail). Trends are not significant at the 98% confidence level for the other detected metals constituents in MW-200.

For zinc, a decreasing trend is reported even when a common value below the lowest detected value is used for non-detects since the results in 2016-2024 are non-detect except for September 2022. However, zinc is still considered suitable for inclusion in the background dataset since the trend is decreasing as opposed to increasing, and since periods of non-detects for zinc have been previously observed between 2011 and 2012, and during portions of 2014 and 2015. In addition, the decreasing trend is primarily driven by the earlier maximum concentration of 0.224 mg/L on 12/1/09. When the 12/1/09 zinc concentration is removed, no trend is identified.

The September 2024 results were below their respective intrawell prediction limits. Based on the Mann-Kendall trend test and intrawell prediction limit results, MW-200 remains suitable for inclusion in the background metals data set.

3.3 MW-119R and MW-119RR Data Sets

MW-119R was abandoned in April 2019 and replacement well MW-119R was installed in August 2019. As further discussed in the Spring 2021 Statistical Evaluation, the MW-119RR data was not combined with the abandoned MW-119R data. Therefore, only the MW-119RR data is used when conducting statistical comparisons.

4. Comparison to Background

Comparisons to background levels were conducted using interwell prediction limits and the Double Quantification Rule (DQR).

4.1 Interwell Prediction Limits

Interwell prediction limits were used to formally assess SSIs over background for analytes that have been detected above the reporting limit in the background data set (MW-122R and MW-200). These analytes were antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, tin, vanadium, and zinc. In previous events, tin was not sampled and included in the interwell prediction limit analysis because tin has not been detected in any downgradient wells or in the background data set above the PQL since 2013. However, tin was analyzed at the assessment and background monitoring wells in Fall 2024 due to the 5-year resampling of the full Appendix II list.

Prediction limits calculated utilizing background sample data collected from April 2008 through September 2024 are summarized in Table 2. The MW-200 background data set adjustments discussed in Section 3.2.1 were utilized.

Non-parametric prediction limits were used since either normality assumptions could not be met, or there were less than 50% detects in the combined background data.

Table 2
Interwell Prediction Limit Summary
Apr. 2008 – Sep. 2024 Interwell Data [(1)]

Chemical Name	Prediction Limit	Units	Prediction Limit Type	Retesting Plan	Prediction Limit Method
Antimony	0.0101	mg/L	Non-Parametric	1-of-2	Maximum Order Statistic
Arsenic	0.00801	mg/L	Non-Parametric	1-of-2	Maximum Order Statistic
Barium	1.05	mg/L	Non-Parametric	1-of-2	Maximum Order Statistic
Beryllium	0.00348	mg/L	Non-Parametric	1-of-2	Maximum Order Statistic
Cadmium	0.00179	mg/L	Non-Parametric	1-of-2	Maximum Order Statistic
Chromium	0.0343	mg/L	Non-Parametric	1-of-2	Maximum Order Statistic
Cobalt	0.026	mg/L	Non-Parametric	1-of-2	Maximum Order Statistic
Copper	0.0536	mg/L	Non-Parametric	1-of-2	Maximum Order Statistic
Lead	0.0362	mg/L	Non-Parametric	1-of-2	Maximum Order Statistic
Nickel	0.0545	mg/L	Non-Parametric	1-of-2	Maximum Order Statistic
Tin	0.376	mg/L	Non-Parametric	1-of-2	Maximum Order Statistic
Vanadium	0.0921	mg/L	Non-Parametric	1-of-2	Maximum Order Statistic
Zinc	0.224	mg/L	Non-Parametric	1-of-2	Maximum Order Statistic

[(1)] Interwell data consists of the Appendix I and II parameters that have been detected in the combined background data set (MW-122R and MW-200). Note that the MW-200 background data set adjustments were incorporated in accordance with Section 3.2.1.

Interwell prediction limit output is included in Attachment 3. The monitoring locations exhibiting a prediction limit exceedance during the September 2024 event are listed in Table 3.

Table 3
Sep. 2024 Prediction Limit Exceedances

Prediction Limit	Arsenic (mg/L) 0.00801
Detection Monitoring Locations	
None	
Assessment Monitoring Locations	
MW-121R	0.0183

4.2 Double Quantification Rule

The DQR was used to evaluate SSIs over background for the Appendix I and II metal constituents which have not been detected above the reporting limit in the combined background data set (MW-122R and MW-200), and for the non-metal constituents which have not been detected above the reporting limit in MW-122R (i.e., DQR is applied to constituents which have not been evaluated using interwell prediction limits.)

The DQR output is included in Attachment 4, with a summary of the September 2024 DQR detections listed in Table 4.

Table 4
Double Quantification Rule
Sep. 2024 Detections

Well	Constituent(s)
Detection Monitoring Locations	
None	
Assessment Monitoring Locations	
MW-121R	Benzene; cis-1,2-Dichloroethene

4.3 Summary of Comparison to Background

4.3.1 Detection Monitoring Locations

No prediction limit exceedances or DQR detections were identified at GU-2A, MW-119RR, MW-200, MW-205, and MW-206.

4.3.2 Assessment Monitoring Locations

An interwell prediction limit exceedance was identified for arsenic in MW-121R. DQR detections were identified for benzene and cis-1,2-dichloroethene in MW-121R. In lieu of retesting for the prediction limit exceedance and DQR detections, SSIs were declared and evaluated for SSLs in Section 5.

4.3.2.1 Exiting Assessment Monitoring

Table 5 presents a summary of the assessment monitoring locations and statistical comparisons required for exiting assessment monitoring. As discussed in Section 2, assessment monitoring locations may return to detection monitoring when Appendix II constituents fall below the current interwell prediction limit (for constituents which are detected in the background data set) and below the laboratory reporting limit (for constituents which are not detected in the background data set) for three consecutive sampling events.

Table 5
Evaluation to Exit Assessment Monitoring

Monitoring Location	Sep. 2023	Apr. 2024	Sep. 2024
MW-121R			
Constituents Detected in Background are Below Prediction Limits	No	No	No
DQR Constituents are Below Reporting Limit	No	No	No

All Appendix II constituents were not below the interwell prediction limit or laboratory reporting limit for three consecutive sampling events at MW-121R. As a result, MW-121R will not exit assessment monitoring at this time.

5. Comparison to Groundwater Protection Standard

The prediction limit exceedances and DQR detections listed in Tables 3 and 4 were evaluated for SSLs over the GWPS per IAC 113.10(6)f and g. Comparisons to the GWPS were evaluated through statistical confidence intervals under the assessment monitoring null hypothesis. SSLs are declared to exist with statistical certainty when the lower confidence limit exceeds the GWPS.

Confidence interval output is included in Attachment 5 and summarized in Table 6. SSLs were not identified at MW-121R.

Table 6
SSL Summary

Chemical Name	Wells with SSL [1]	Wells without SSL	Groundwater Protection Standard [2]
Assessment Monitoring Locations			
Arsenic (mg/L)		MW-121R	0.01
Benzene (ug/L)		MW-121R	5
cis-1,2-Dichloroethene (ug/L)		MW-121R	70

[1] Under assessment mode, an SSL is indicated when the lower confidence limit exceeds the GWPS.
[2] Values are the 40 CFR Part 141 Safe Drinking Water Act MCL or IAC 567 Chapter 137 Statewide Standard for a Protected Groundwater Source.

6. Effective Power and Site-Wide False Positive Rate

Statistical power calculations, effective power curves for the 1-of-2 prediction limit plan, and the current SWFPR are discussed in detail in Attachment 6. The intrawell and interwell non-parametric prediction limits currently have good power ratings. The current cumulative annual SWFPR for the plan is 8%. The current annual SWFPR is in compliance with the Unified Guidance target 10% false positive.

Statistical power calculations for confidence intervals in assessment mode are included in the confidence interval output of Attachment 5. Details regarding the purpose and procedures for these calculations are provided in Attachment 1. Confidence limits are calculated to meet statistical power levels of 50% for increases in the true concentration mean of 1.5 times a fixed standard, and 80% for increases in the true concentration mean of 2.0 times a fixed standard, as discussed in the Unified Guidance Chapter 22 (USEPA, 2009).

7. Conclusions

The methodology described in Attachment 1 was utilized to conduct the statistical evaluations for locations in the detection and assessment monitoring programs. The combined background data set of MW-122R and MW-200 was utilized to evaluate SSIs over background for metals. The background data set for non-metal constituents is defined by MW-122R only.

A summary of the Fall 2024 statistical results is presented in Table 7 and detailed in the following subsections.

Table 7
Summary of the Fall 2024 Evaluation

Monitoring Location	Monitoring Program	Current Schedule (Sep. 2024) [1]	Current SSIs	Current SSLs	Retesting Parameter [2]	Monitoring Program Changes
Downgradient Monitoring Locations						
GU-2A	Detection	Appendix I				
GU-4A	Detection	Dry				
MW-119RR	Detection	Appendix I				
MW-121R	Assessment	Full Appendix II	Arsenic; Benzene; cis-1,2-Dichloroethene			
MW-200 [3]	Detection	Appendix I				
MW-205 [4]	Detection	Appendix I				
MW-206	Detection	Appendix I				
Background Monitoring Locations						
MW-122R	Background	Full Appendix II				
MW-200 [2]	Background	Full Appendix II				

[1] In Sep. 2024, the Appendix II locations were sampled for the full Appendix II list. The next 5-year resampling for the full Appendix II list at the assessment and background monitoring wells is scheduled for Fall 2029.
[2] Retest samples will be collected prior to the next semiannual event and will be utilized to determine if any monitoring program changes will be initiated.
[3] MW-200 primarily serves as a downgradient monitoring location; however, MW-200 is also used to supplement the background data set.
[4] In the *2023 AWQR* (Foth, 2024), Foth requested to replace MW-204RR with MW-205 in the permitted groundwater monitoring network for the Western Expansion Area due to the dry to limited water depths consistently observed at MW-204RR. The IDNR approved the request in their letter dated July 5, 2024 (IDNR, 2024). Therefore, MW-205 was sampled in Sep. 2024 for the Appendix I list. MW-204RR is being retained as a water level only location.

7.1 Detection Monitoring

Semiannual detection monitoring for the Appendix I list was conducted at GU-2A, MW-119RR, MW-200, MW-205, and MW-206 in September 2024. As discussed in the Report Priority of the *2023 AWQR* (Foth, 2024), Foth requested MW-205 permanently replace detection monitoring well MW-204RR in the permitted groundwater monitoring network for the Western Expansion Area due to the dry to limited water depths consistently observed at MW-204RR. The IDNR approved the request in their letter dated July 5, 2024 (IDNR, 2024). Therefore, MW-205 was sampled for the Appendix I list in September 2024 in place of MW-204RR. MW-204RR is being retained as a water level only location.

At GU-4A, baseline detection monitoring will be initiated once the water level is at or above the elevation of the horizontal underdrain discharge pipe connected perpendicular to the vertical sample pipe.

No SSIs were identified at GU-2A, MW-119RR, MW-200, MW-205, and MW-206. Semiannual detection monitoring for the Appendix I list will be conducted at GU-2A, MW-119RR, MW-200, MW-205, and MW-206 in Spring 2025.

7.2 Assessment Monitoring

In accordance with Permit Special Provision X.4.h, the 5-year resampling of the full Appendix II list was conducted at MW-121R in September 2024. SSIs were identified for arsenic, benzene, and cis-1,2-dichloroethene at MW-121R. SSLs were not identified.

The Fall 2024 statistical evaluation did not identify all Appendix II constituents below the interwell prediction limit or laboratory reporting limit for three consecutive sampling events at MW-121R. As a result, MW-121R will not exit assessment monitoring at this time.

Semiannual assessment monitoring for the Appendix I and detected Appendix II constituents will be conducted at MW-121R in Spring 2025. Since no new Appendix II constituents were detected at MW-121R during the 5-year full Appendix II resampling event in September 2024, no new Appendix II constituents will be added for the semiannual assessment monitoring events for the Appendix I and detected Appendix II list at MW-121R. In accordance with Permit Special Provision X.4.h, the next 5-year resampling event for the full Appendix II list at MW-121R will be conducted in Fall 2029.

7.3 Background Monitoring

Semiannual background monitoring for the full Appendix II list was conducted at MW-122R and MW-200 in September 2024. No new Appendix II constituents were detected at MW-122R and MW-200. Note that while MW-200 primarily serves as a downgradient monitoring location, MW-200 is also used to supplement the background data set. Mann-Kendal trend tests and intrawell prediction limit results indicated that MW-200 remains suitable for inclusion in the background metals data set.

Semiannual background monitoring well for the Appendix I and detected Appendix II constituents will be continued at MW-122R and MW-200 in Spring 2025. In accordance with Permit Special Provision X.4.e, the next resampling event for the full set of Appendix II constituents is scheduled for Fall 2029.

Attachment 1
Detailed Discussion of Statistical Methods

Statistical Methodology

1. Comparison to Background

For determining which parameters will need a formal statistical treatment, the Unified Guidance (USEPA, 2009) suggests splitting monitoring parameters into three distinct groups: a) reliable indicators selected for formal testing; b) other analytes which are monitored for general groundwater quality information but not statistically tested; and c) those meeting the "never-detected" criteria. Only those parameters with some historically detected presence in background need to be included in the first group and treated with a formal statistical test. Any parameter that has never been detected in background is eligible for the third group of "never-detected" constituents. Constituents with detection below the reporting limit (J-flagged data) will be considered "never-detected." As a means of evaluating the third group, the Unified Guidance suggests the Double Quantification Rule (DQR). The DQR is stated in the Unified Guidance as:

"A confirmed exceedance is registered if any well-constituent pair in the '100% non-detect' group exhibits quantified measurements (i.e., at or above the reporting limit [RL]) in two consecutive sample and resample events."

The Unified Guidance also recommends establishing background sample sizes as large as feasible. The guidance recognizes that small sample sizes in background can be "particularly" troublesome, especially in controlling statistical test false positive and negative rates. With parametric tests (such as parametric prediction limits), the false positive rate may be controlled, but at the expense of statistical power. With non-parametric tests (such as non-parametric prediction limits or the "quasi-statistical" DQR), the false positive rate may be unacceptably high. The Unified Guidance suggests that generally at least 8 to 10 separate background measurements be available, recognizing that statistical power continues to increase with larger sample sizes.

In reports prior to the *2011 AWQR* (Foth, 2012), the ANOVA and a "2x2 contingency table" methods were used to evaluate SSIs over background. These methods met the criteria of IAC 113.10(4)g and h. The ANOVA and "2x2 contingency table" methods were used to maximize the statistical power while minimizing potentially large false positive rates as a result of the smaller sample sizes.

Starting with the *2011 AWQR* (Foth, 2012), the statistical analysis methods utilized for comparison to background were the DQR and "1-of-2" interwell prediction limits as recommended in the Unified Guidance (USEPA, 2009).

Expansion of the Background Data Set

During the statistical evaluation for the 2012 Annual Water Quality Report, the Commission elected to expand the background metals data set by including metals data from MW-200 with upgradient well MW-122R data. The Department approved the secondary use of MW-200 for interwell background providing the sampling results are assessed using intrawell statistics to justify its suitability. The suitability of MW-200 for inclusion in the background data set will be verified by review of volatile organic compound data, Mann-Kendal trend tests, and intrawell prediction limits (further discussed below).

Double Quantification Rule

The DQR will be used to evaluate SSIs over background for the Appendix I and II constituents that have not been detected above the reporting limit in the background data set. An SSI will be indicated for any well-constituent pair with quantified measurements at or above the reporting limit noted for two consecutive sample and resample events. If applicable, the resample will be collected prior to next semiannual sampling event.

Interwell Prediction Limits

Interwell prediction limits will be used to statistically evaluate SSIs over background for the Appendix I and II constituents which have been detected above the reporting limit in the background data set. A "1-of-2" retesting plan will be utilized on individual sample results. The 1-of-2 retesting plan as defined in the Unified Guidance concludes that an SSI has occurred when two out of two sample results exceed the prediction limit, while no SSI is concluded if 1-of-2 is below the limit. If applicable, resamples will be collected prior to next semiannual sampling event. The prediction limit for each constituent will be recalculated semiannually.

For interwell constituents with less than or equal to 50% detects in the background data set, a non-parametric prediction limit will be utilized. The non-parametric prediction limit will be taken as the maximum order statistic (maximum value) of the background data. The background data set will consist of data collected from April 2008 through the current sampling event.

For interwell constituents with greater than 50% detects in the background data set, normality assumptions will be verified using the Shapiro-Wilk normality test. If the background data is not normally distributed, a non-parametric prediction limit will be utilized (as described in the paragraph above). If the background data is normally distributed or can be fit to a normal distribution utilizing a normalizing transformation, then a normal-based parametric prediction limit will be applied.

When considering a lognormal prediction limit, a comparison will be made to the maximum order statistic for the background data set. Lognormal prediction limits can be sensitive to smaller departures from lognormality. That is, if data are not truly lognormal, but also not rejected as lognormal, the prediction limit may be inflated because of the transformation. In choosing a lognormal limit, in addition to the percent detections and lognormal goodness of fit criteria, an additional convention will be applied. If the lognormal limit exceeds the level of twice the maximum background concentration, it is assumed that the lognormal model does not adequately fit the background distribution and a non-parametric prediction limit will be selected.

For interwell constituents with 50% to 85% detects in the background data set, Kaplan-Meier estimation will be applied to manage statistical bias introduced by non-detects. For interwell constituents with over 85% detects in the background data set, half the reporting limit will be used for non-detect data. These estimation methods follow Unified Guidance recommendations and are given in detail in Unified Guidance Chapter 15 (USEPA, 2009).

The parametric prediction limit will be calculated as:

$$PL = \bar{x} + k \cdot s$$

where $\bar{x}$ is the sample mean of the April 2008 through current event background data, *s* is the sample standard deviation, and *k* is the multiplier obtained from the Unified Guidance Table 19-1 (USEPA, 2009) for 1-of-2 interwell prediction limits on observations. In determining *k*, the number of constituents of concern (COCs) for formal statistical evaluation along with the

number of downgradient wells need to be identified. Per the basic subdivision discussion presented in Section 19.2.1 of the Unified Guidance, along with the discussion regarding the use of the appendix tables for parametric retesting plans given on pages 19-13 through 19-15 of the Unified Guidance (USEPA, 2009), the *k*-multiplier is chosen based on the number of constituents, wells and evaluations performed annually. When an exact well and COC configuration is not given in the appendix tables, the *k*-multiplier is linearly interpolated as described on page 19-14 of the Unified Guidance (USEPA, 2009).

Sanitas v10 software (Sanitas Technologies) is used to check distributional assumptions, perform Kaplan-Meier estimation in the case of 50% to 85% detects in the upgradient well, and calculate the *k*-multipliers and subsequent prediction limits.

Intrawell Prediction Limits

Intrawell prediction limits are calculated in a similar manner to that described above for the interwell case. A main difference between the two methods is the intrawell limit is calculated from a collection of background measurements within the compliance well. A minimum of eight compliance well background samples will be used when calculating the limit.

A second difference is for the parametric prediction limit, in which the *k*-multiplier is modified from the interwell case, as given in Appendix D Tables 19-10 through 19-18 of the Unified Guidance (USEPA, 2009).

Updating intrawell background is performed periodically. The Unified Guidance (Section 5.3.2) recommends that 4 to 8 new compliance observations be collected prior to updating the background dataset. The guidance also states that "a potential update is predicated on there being no statistically significant increase [SSI] recorded for that well constituent, including since the last update." A two-sample t-test or Wilcoxon rank-sum test between existing intrawell background data and the potential set of newer background data is performed, and a non-significant result (α = 0.05) implies that the newer compliance data can be re-classified as background measurements.

For Wilcoxon rank-sum tests, non-detect results cannot be ranked with certainty and the problem is compounded with multiple PQLs and/or J-flagged values (USEPA, 2009). In comparisons where a substantial fraction of non-detect and/or J-flagged measurements or changing PQLs occur, professional judgment will be utilized for evaluating significant differences between the existing intrawell background data and the potential newer set of background data. Consideration will be given to whether significant differences are due to artificial variation introduced by censored data.

2. Comparison to Groundwater Protection Standard – Assessment Monitoring

According to IAC 113.10(6)f and g, under the assessment monitoring program Appendix II results which have been determined to be statistically above background are also statistically compared to the GWPS. If "Appendix II constituents are detected at statistically significant levels above the GWPS" a notice is placed in the operating record and characterization is begun.

Under IAC 113.10(6)h, the GWPS is the maximum contaminant level (MCL) promulgated under Section 1412 of the Safe Drinking Water Act in 40 Code of Federal Regulations (CFR) Part 141. If no MCL exists, or if background concentrations are higher than the MCL, the GWPS is defined as background. Also, per IAC 113.10(6)i, an alternative GWPS may be established by the Department for constituents for which there is no MCL such as the "health-based

concentrations that comply with the statewide standards for groundwater established pursuant to 567-Chapter 137."

When the GWPS is background concentrations, the statistical methods discussed in the above "1. Comparison to Background" are used. When the GWPS is the MCL or an alternative health-based concentration, per the Unified Guidance (USEPA, 2009), "confidence intervals are the recommended general statistical strategy in compliance/assessment or corrective action monitoring." In the case of normally distributed data, a normal-based parametric confidence interval is used. If the data are not normally distributed a non-parametric confidence interval on the median is used. A lower 99% confidence limit falling above the GWPS implies that concentrations are detected at statistically significant levels above the GWPS with an α-level of 0.01, which is the minimum RCRA regulatory limit from §264.97(i)(2) for an individual test false positive error rate.

The Unified Guidance recognizes that statistical power is also of prime concern to USEPA and that there "should be a high probability that the statistical test will positively identify concentrations that have exceeded a fixed regulatory standard." In compliance/assessment monitoring, instead of pre-specifying the false positive rate prior to computing confidence interval limits, the Unified Guidance suggests the desired level of power (1-β) should be set as an initial target.

For compliance/assessment monitoring purposes, the Unified Guidance (Chapter 22) suggests evaluating increases in the true concentration mean of 1.5 and 2.0 times a fixed standard. (This is similar in concept to the critical power targets in detection monitoring, i.e., 55-60% power at 3σ above background and 80-85% power at 4σ over background). As a general guide, the Unified Guidance suggests there should be at least 70-80% statistical power for detecting increases of 2 times a fixed standard. Specifically, the Unified Guidance recommends there be 50% power of detecting increases in the true concentration mean of 1.5 times a fixed standard (risk ratio of 1.5) and 80% power of detecting increases in the true concentration mean of 2.0 times a fixed standard (risk ratio of 2.0).

To meet these levels of statistical power, α is chosen based on either Unified Guidance Equation 22.1:

$$1-\beta = G_{T,n-1}\left(t_{1-\alpha,n-1}\middle|\Delta-\sqrt{n}(R-1)\right);$$

where R is the desired risk ratio, $t_{(1-\alpha,n-1)}$ is the (1–α) Student's t-quantile with (n–1) degrees of freedom and G represents the cumulative non-central t-distribution with (n–1) degrees of freedom and noncentrality parameter Δ;

or Unified Guidance Equation 22.2:

$$\alpha \sim 1-F_{T,n-1}\left(\frac{(R-1)\sqrt{n}}{R\cdot\widehat{CV}}-t_{1-\beta,n-1}\right);$$

where R is the desired risk ratio, n is the sample size, CV is the estimated sample coefficient of variation, $t_{(1-\beta,n-1)}$ is the (1–β) Student's t-quantile with (n–1) degrees of freedom, and F is the cumulative (central) Student's t-distribution function.

The first equation (Unified Guidance Equation 22.1) assumes a coefficient of variation (CV) =1. This version is used if only poorer estimates of the true CV are available. In practice, a

convention has been adopted with the statistical updates to utilize Unified Guidance Equation 22.2 in all cases where a parametric confidence interval is calculated and use Unified Guidance Equation 22.1 when non-parametric confidence intervals are calculated. Since a non-parametric confidence interval is based on the median, it is not as sensitive to departures from normality, and the assumption of a CV=1 in Unified Guidance Equation 22.1 should provide a conservative estimate.

Since 0.01 is the minimum RCRA regulatory limit for α, it is never set lower than this. Conversely, the Unified Guidance recognizes the "difficulty of simultaneously attaining the recommended level of power while controlling the false positive rate, especially for small sample sizes and highly variable data." The Unified Guidance suggests a maximum false positive rate of α=0.2 is a reasonable upper bound.

Finally, like the need for defining a SWFPR under detection monitoring, the Unified Guidance (Chapter 7) recognizes there may be concern about the "use of relatively high individual test-wise false positive rates (α) in order to meet a pre-specified power, especially when considering the cumulative false positive error rate across multiple wells and/or constituents." However, "the Unified Guidance considers computation of cumulative SWFPRs in compliance/assessment testing to be problematic, and reliance on individual test false positive rates preferable." Notwithstanding, if several confidence limit calculations are compared to the GWPS with high α-levels, caution should be taken in the interpretation.

For calculation of confidence intervals, Sanitas® v10 software is again used to check distributional assumptions, perform Kaplan-Meier estimation in the case of 50% to 85% detects, and calculate either parametric or nonparametric confidence limits.

3. Comparison to Groundwater Protection Standard – Corrective Action Monitoring

As stated above, if "Appendix II constituents are detected at statistically significant levels above the GWPS" a notice is placed in the operating record and characterization is begun. Owners or operators are required to initiate an assessment of corrective measures, select a remedy, and implement a remedy in accordance with IAC 113.10(7), (8), and (9). For remedy completion in accordance with IAC 113.10(9)e(2), compliance with the GWPS is considered achieved by demonstrating that concentrations of Appendix II constituents have not exceeded the GWPS for a period of three consecutive years or an alternate length of time established by the Department.

Starting with the Fall 2019 statistical evaluation, individual analyte/well pairs may return to assessment constituents (at the corrective action monitoring location) once compliance with the GWPS has been achieved for a period of 3 years. Note that monitoring wells will not move out of the corrective action monitoring program until all Appendix II constituents have achieved compliance with the GWPS for a period of three consecutive years.

Confidence Intervals in Corrective Action Mode

In the case of the GWPS being a fixed standard as either the 40 CFR Part 141 Safe Drinking Water Act MCL or the IAC 567 Chapter 137 Statewide Standard for a Protected Groundwater Source, "confidence intervals are the recommended general statistical strategy in compliance/assessment or corrective action monitoring" (USEPA, 2009). However, a primary difference between confidence intervals as used under assessment monitoring and confidence intervals used under corrective action is reversal of the null hypothesis. As detailed in Section 7.2 of the Unified Guidance (USEPA, 2009), the hypothesis testing structure under assessment

monitoring is to presume compliance point concentrations do not to exceed the fixed standard unless sampling data indicates otherwise. As a formal statistical hypothesis, this is written as:

$$H_0: \Theta \leq G \quad \text{vs.} \quad H_A: \Theta > G$$

In corrective action mode, the hypothesis is reversed. Namely, compliance point concentrations are presumed to exceed the fixed standard and evidence must be presented to demonstrate regulatory compliance. In the case of corrective action, the statistical hypothesis is written as:

$$H_0: \Theta > G \quad \text{vs.} \quad H_A: \Theta \leq G$$

For testing under assessment monitoring, a lower confidence limit (LCL) is compared to the compliance standard *G*. If the LCL is larger than the standard *G*, it is concluded that the compliance standard has been violated.

However, under corrective action monitoring, the upper confidence limit (UCL) is compared to the compliance standard *G*. In this case, the UCL should lie below the standard to accept the alternative hypothesis that concentration levels are in compliance.

The UCL α-level under corrective action monitoring is set so that a high degree of confidence is achieved in declaring successful remediation. Per the Unified Guidance (Section 7.4.2) "EPA's overriding concern in corrective action is that remediation efforts are not declared successful without sufficient statistical proof." The Unified Guidance "recommends the use of a reasonably low, fixed test-wide false positive rate (e.g., α = 0.05 or 0.10)." In this case, α = 0.10 corresponds to a 90% UCL.

<u>GWPS as Background</u>

Pursuant to IAC 113.10(6)h, when background concentrations of an analyte exceed the applicable MCL or IAC Statewide Standard for a Protected Groundwater Source, the GWPS is the background concentration. In this case, the GWPS is not a fixed standard but based on a distribution of background sample results.

Section 7.5 of the Unified Guidance (USEPA, 2009) details statistical hypothesis testing under corrective action when the GWPS is background. The Unified Guidance offers two alternative statistical approaches to hypothesis testing in this case. These alternatives are as follows:

A. The first represents a *two-sample* test of two distinct populations, namely the compliance well to background populations. Similar to the statistical tests used under detection and assessment monitoring, with this alternative under corrective action, the Unified Guidance states that "one highly recommended statistical test approach is a prediction limit." The Unified Guidance also states, "whatever the critical value for a selected background test, it becomes the GWPS under compliance/assessment or corrective action monitoring." Further, "the only allowable hypothesis test structure for the two-sample approach follows that of detection and compliance monitoring. Once exceeded and in corrective action, a return to compliance is through evidence that future samples lie below the GWPS using the same hypothesis structure." Therefore, with this approach in corrective action, prediction limits are calculated similarly as in assessment monitoring. Compliance well concentrations below a prediction limit indicate a return to concentrations below the background GWPS.

B. The second involves computation of a fixed statistic from the background data as the GWPS. The Unified Guidance recommendation in this case is to define a fixed GWPS based on a background upper tolerance limit with 95% confidence and 95% coverage. This is designed to be a "reasonable maximum on the likely range of background concentrations." This upper tolerance limit based on background data is then used as a fixed standard in statistical comparisons with 90% or 95% UCLs from compliance wells as discussed previously. Also, with the UCL method, the null hypothesis is reversed from that of assessment monitoring, assuming contamination is above the GWPS. A UCL falling below the background GWPS offers evidence of a return to concentrations below the GWPS. The Unified Guidance refers to this approach as a *single-sample* testing method, since the compliance well population is tested against a defined fixed standard.

The Unified Guidance discusses tradeoffs between the two approaches and does not necessarily prescribe either approach over the other. The Unified Guidance suggests that both approaches may be used, where "the background GWPS would be a range based on the two testing methods rather than a single value."

Normality

For calculation of confidence intervals, Sanitas® v10 software is again used to check distributional assumptions, perform Kaplan-Meier estimation in the case of 50% to 85% detects, and calculate either parametric or nonparametric confidence limits. "Corrective Action Mode" is selected for this analysis.

Non-Corrective Action Constituents

As recommended in the Unified Guidance (USEPA, 2009), confidence intervals in corrective action mode will be utilized to evaluate only constituents and monitoring locations with previously identified SSLs over the GWPS. Other compliance constituents (i.e., those without SSLs over the GWPS during prior statistical evaluations) will continue to be evaluated using the "1. Comparison to Background" and "2. Comparison to Groundwater Protection Standard – Assessment Monitoring" methods described above.

Note: The Unified Guidance (USEPA, 2009) states: "it should be recognized that once corrective action or remediation activities are initiated, there will be a considerable time during which the GWPS may still be exceeded. As provided in the RCRA regulations, it is at the conclusion of remediation activities that formal corrective action monitoring evaluation is appropriate. However, in the intervening period of remedial activity, well constituents can still be monitored, and the relative efficacy of remediation measures tracked. The same corrective action hypothesis can be assumed for the targeted constituents; techniques such as trend testing may be appropriate interim applications." Given the statement above and the intentions of IAC 113.10(6)g, as soon as an SSL is identified for an assessment monitoring constituent/location, then the next statistical evaluation will utilize corrective action monitoring (confidence intervals in corrective action mode).

Data Concentration Shifts During Corrective Action

Confidence intervals assume that the population is stable over time. As a result, confidence intervals may not accurately represent the current well concentrations if increasing or decreasing trends are observed (i.e., during a release or under active remediation). Per the Unified Guidance (USEPA, 2009), lower or upper confidence limits constructed on accumulated data may be overly wide (due to high sample variability caused by combining pre- and post-shift data) and may not be reflective of more recent upward/downward shifts in the contaminant distribution.

Alternative procedures may be applied to data sets with shifting distributions. For example, where trends tests are significant, pre-shift data may be removed from the well/parameter data set for the purposes of constructing the confidence interval. “The reduction in sample size will often be more than offset by the gain in statistical power. More recent measurements may exhibit less variation around the shifted mean value, resulting in a shorter confidence interval” (USEPA, 2009).

Another alternative is to construct confidence bands around the trend line to track progress towards exceeding or meeting a fixed standard. As suggested in the Unified Guidance (Chapter 22), if a trend is present, a 90% confidence band (upper 95% confidence limit) is placed on the linear trend line. If the upper 95% confidence limit on the trend line falls below the GWPS, the well is found to have reduced to levels statistically below the GWPS.

As the discussed in the Unified Guidance, “inferences concerning a linear regression are generally appropriate when two conditions hold: 1) the residuals from the regression are approximately normal or at least reasonably symmetric in distribution; and 2) a plot of residuals versus concentrations indicates a scatter cloud of essentially uniform vertical thickness or width.” These conditions are assessed through normal probability plots of the regression residuals and plots of residuals against the predicted concentrations.

Data Adjustments Due to Exiting Corrective Action

When analyte/well pairs exit corrective action and return to assessment constituents, the hypothesis testing structure is reversed again. In corrective action mode, compliance point concentrations were presumed to exceed the GWPS, and evidence must be presented to demonstrated regulatory compliance (i.e., UCLs below the GWPS for three consecutive years). With the return to assessment constituents, analyte/well pairs have demonstrated regulatory compliance. The hypothesis testing structure reverts to the assessment monitoring structure where compliance point concentrations are presumed to not exceed the GWPS unless sampling data indicates otherwise (i.e., LCL is above the GWPS). With this reversion in hypothesis, the focus shifts to evaluating concentration changes in the analyte/well pair that would indicate an increase over the GWPS and re-trigger corrective action. For constituents with historical SSLs, earlier concentrations that had previously triggered corrective action are no longer providing useful information regarding the current assessment monitoring hypothesis. Retaining the historical data during the timeframe in which the GWPS was exceeded will result in the regression or confidence interval methods being slower to respond to new increases. As a result, the historical data prior to when statistical compliance with the GWPS was first achieved will be removed when analyte/well pairs exit corrective action and return to assessment constituents.

Attachment 2
MW-200 Intrawell Statistics

Trend Tests
Sep. 2009 Through Sep. 2024 Data [1]

Constituent Name	Well	Slope	Mann-Kendall	Critical Value	Trend	N	Alpha
Antimony (mg/L) [2]	MW-200	0	83	89	No	23	0.02
Arsenic (mg/l)	MW-200	0	152	179	No	37	0.02
Barium (mg/l)	MW-200	-0.001174	-95	-179	No	37	0.02
Beryllium (mg/l)	MW-200	0	-70	-179	No	37	0.02
Cadmium (mg/l)	MW-200	-0.000004291	-97	-179	No	37	0.02
Chromium (mg/L) [2]	MW-200	0	3	106	No	26	0.02
Cobalt (mg/L) [2]	MW-200	0	-2	-95	No	24	0.02
Copper (mg/L) [2]	MW-200	0	-6	-95	No	24	0.02
Lead (mg/L) [2]	MW-200	0	-51	-101	No	25	0.02
Nickel (mg/L) [2]	MW-200	0.00009472	39	106	No	26	0.02
Tin (mg/L) [2]	MW-200	0	-30	-63	No	18	0.02
Vanadium (mg/L) [2]	MW-200	0.000002237	45	95	No	24	0.02
Zinc (mg/l)	MW-200	-0.0002933	-183	-179	Yes	37	0.02
		0	-149	-171	No	36	0.02

[1] Per Section 3.2, the Sep. 2020 metals data in MW-200 were removed from the intrawell background data set.

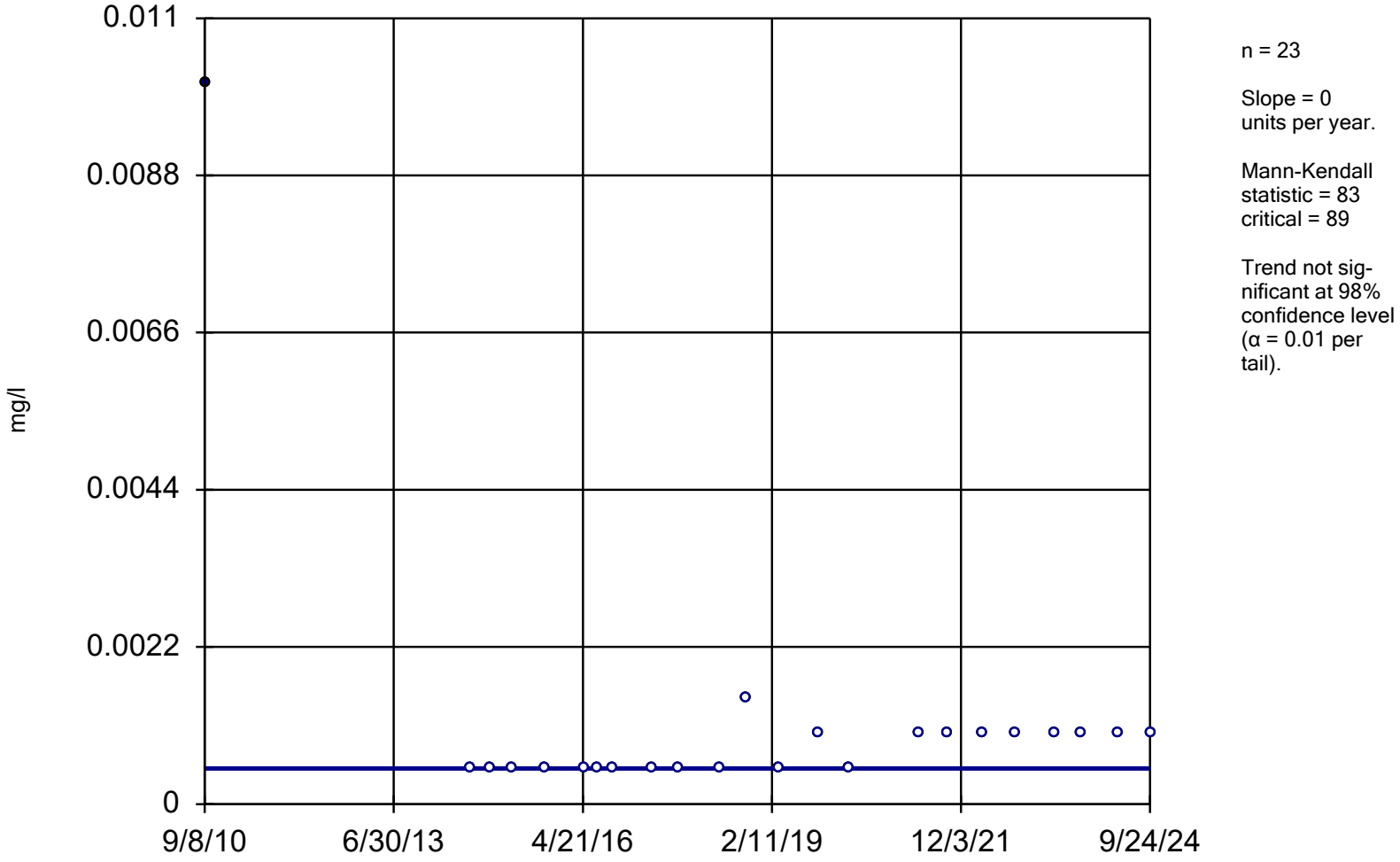
[2] By default, Sanitas software utilizes half the reporting limit for non-detected values. In the case of changing reporting limits, this may artificially introduce variation into the trend test. For constituents where notable changes in the reporting limit have occurred, the earlier non-detect values with higher report limits were not included in the trend evaluation.

[4] For zinc, a decreasing trend is reported even when a common value below the lowest detected value is used for non-detects since the results in 2016-2024 are non-detect with the exception of Sep. 2022. However, zinc is still considered suitable for inclusion in the background dataset since the trend is decreasing and not increasing, and since periods of non-detects for zinc have been previously observed between 2011 and 2012, and during portions of 2014 and 2015. In addition, the decreasing trend is primarily driven by the earlier maximum concentration of 0.224 mg/L on 12/1/09. When the 12/1/09 zinc concentration is removed, no trend is identified.

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-200 (bg)



n = 23

Slope = 0
units per year.

Mann-Kendall
statistic = 83
critical = 89

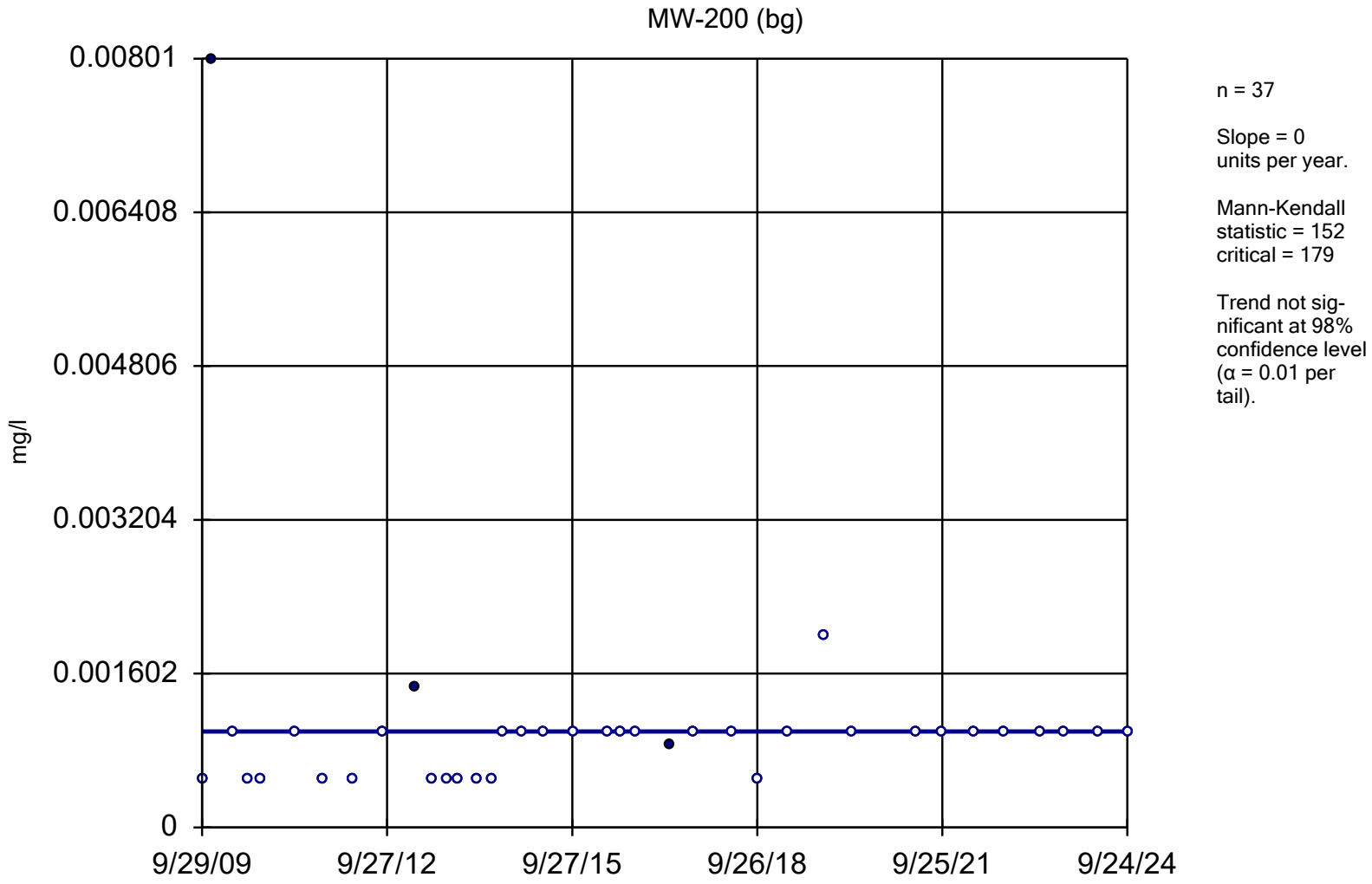
Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

Constituent: Antimony Analysis Run 11/11/2024 4:20 PM

Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Hollow symbols indicate censored values.

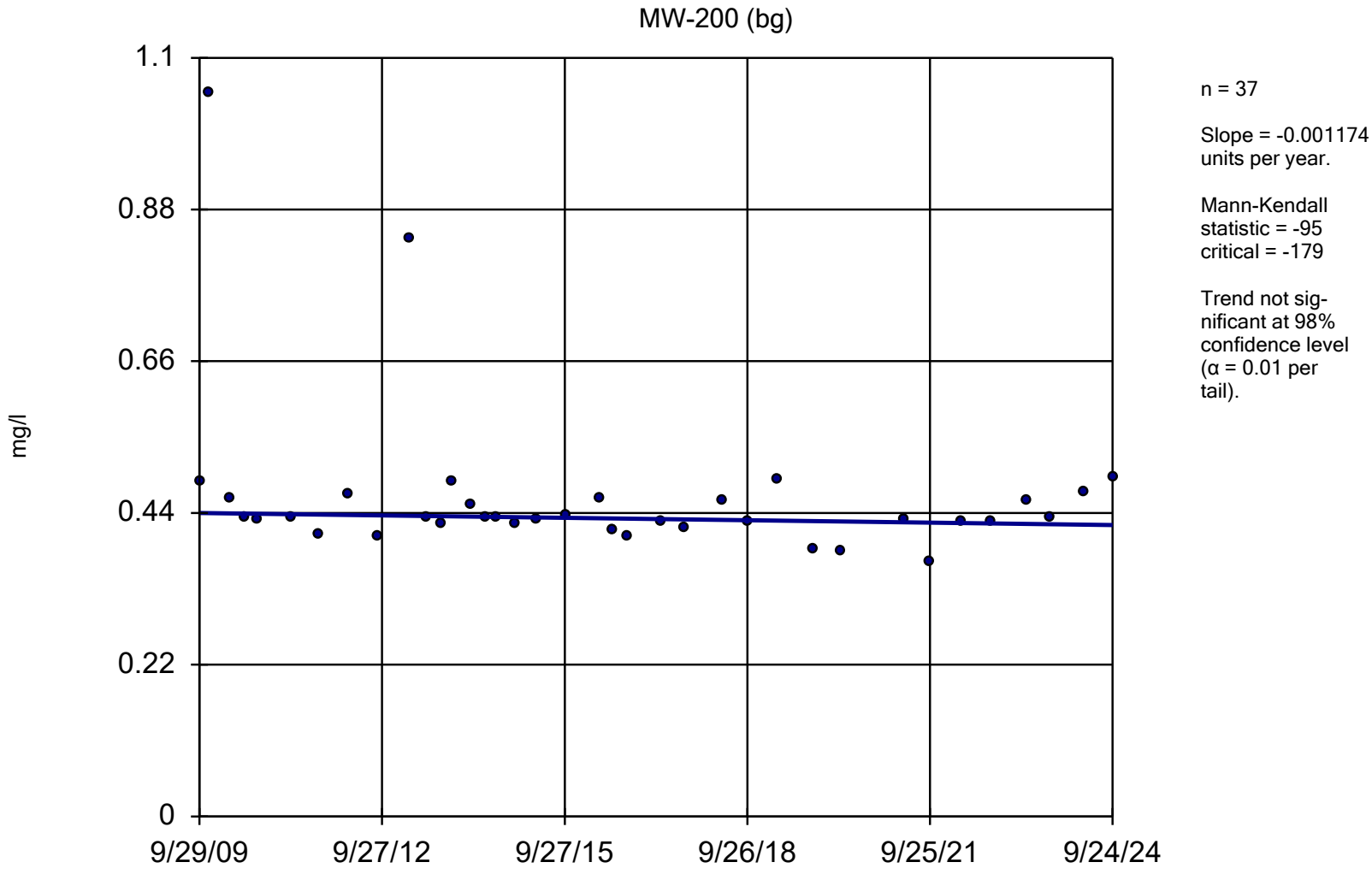
Sen's Slope Estimator



Constituent: Arsenic Analysis Run 11/11/2024 4:32 PM

Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Sen's Slope Estimator

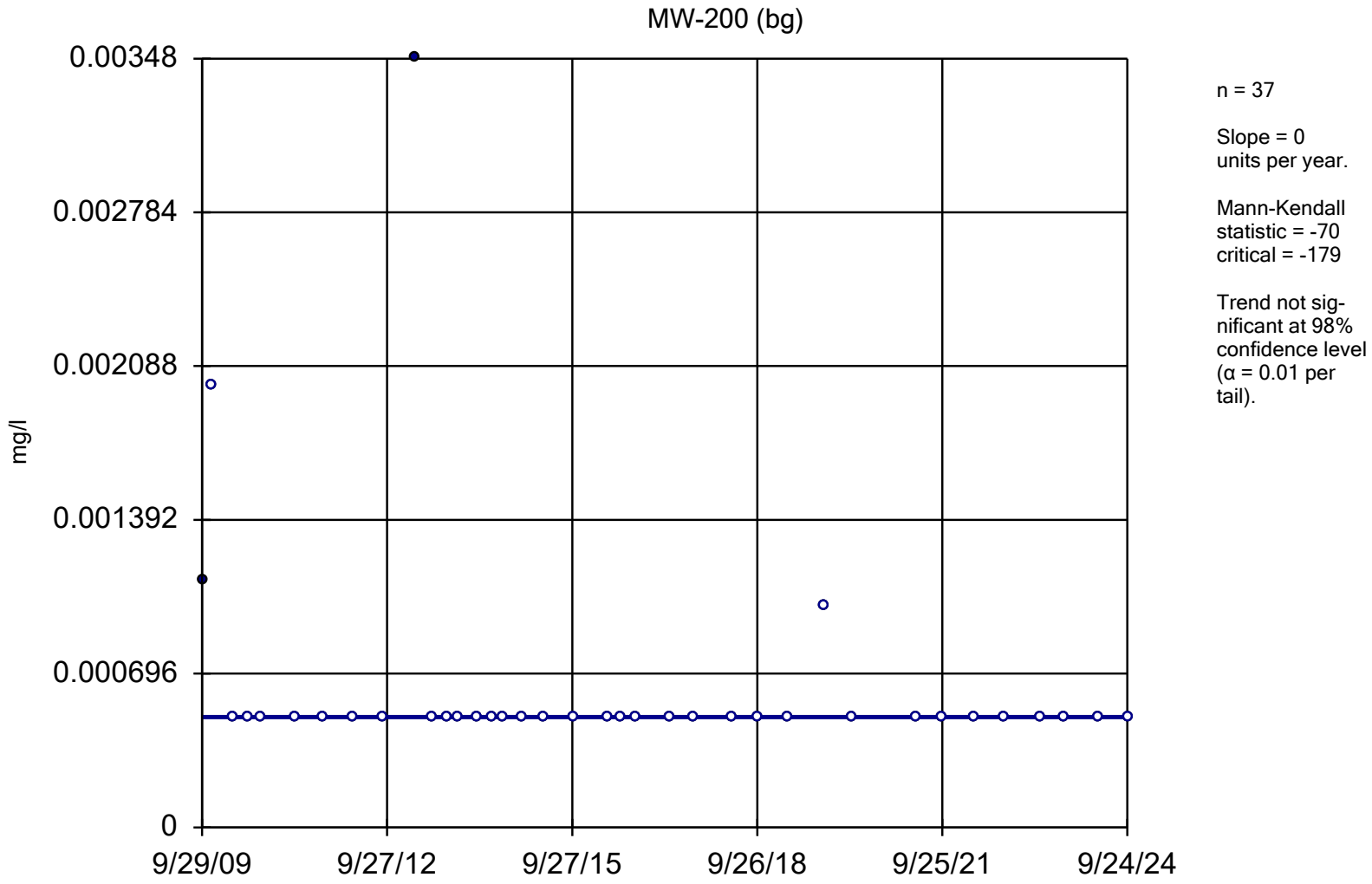


Constituent: Barium Analysis Run 11/11/2024 4:34 PM

Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Hollow symbols indicate censored values.

Sen's Slope Estimator

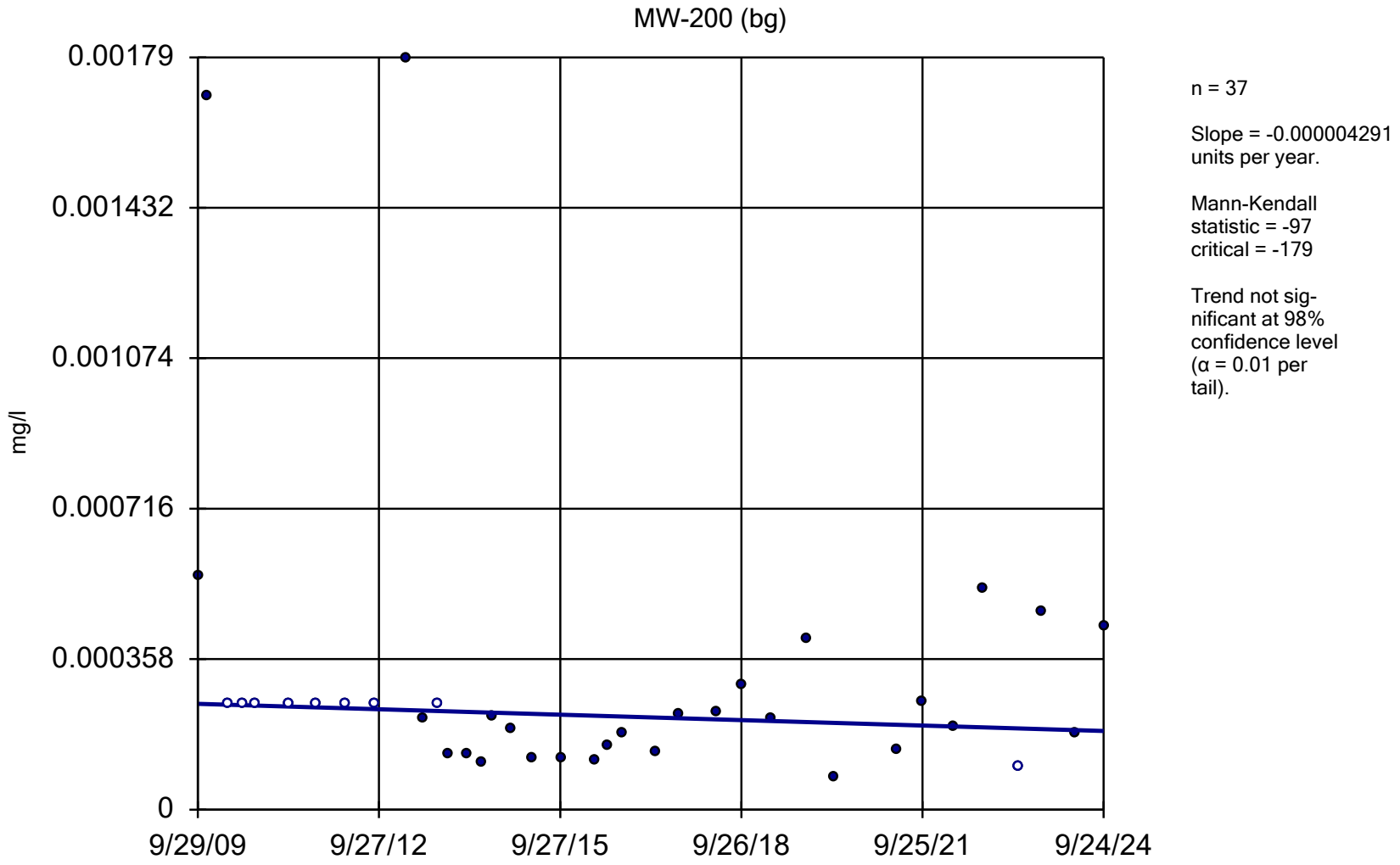


Constituent: Beryllium Analysis Run 11/11/2024 4:36 PM

Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Hollow symbols indicate censored values.

Sen's Slope Estimator



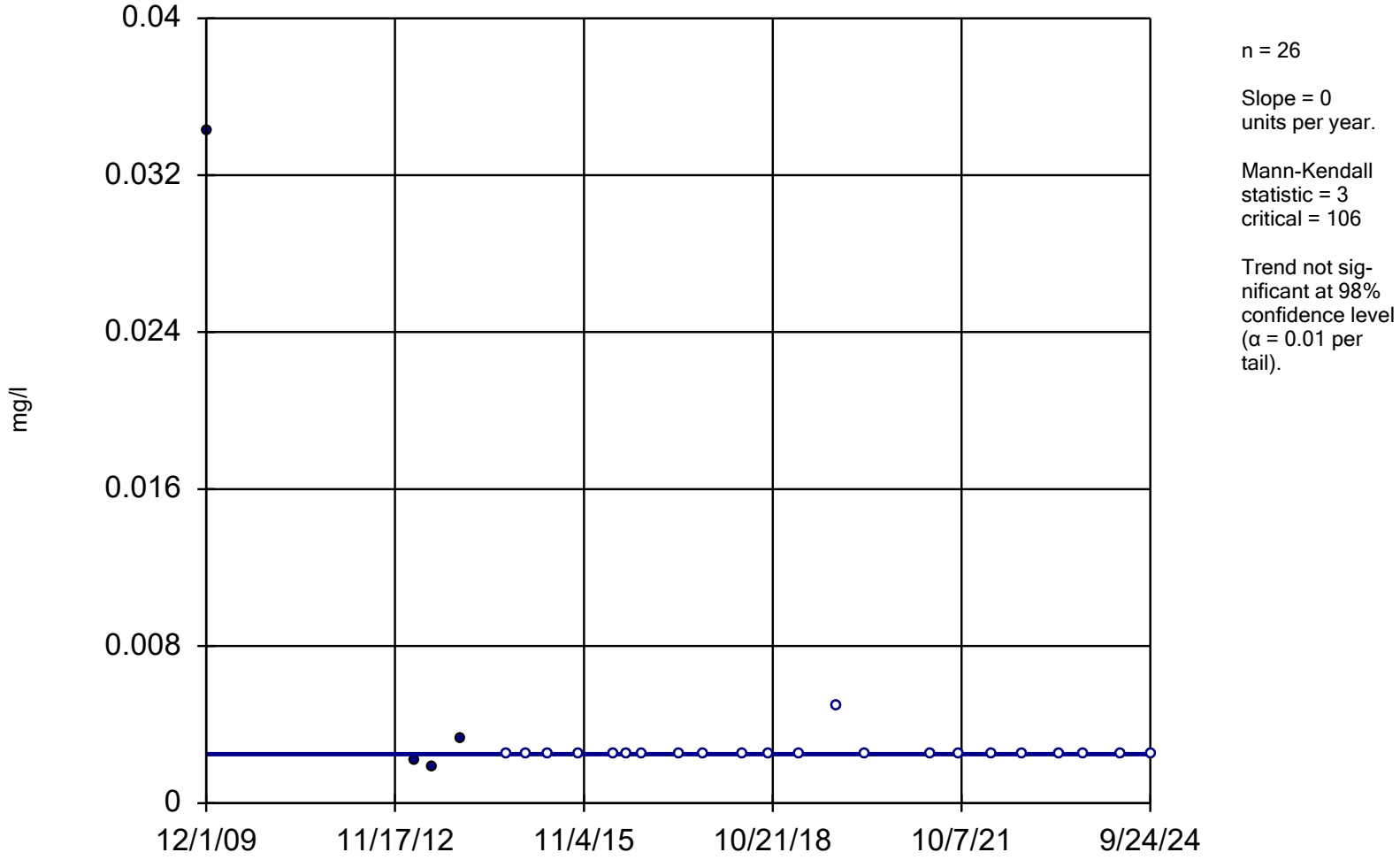
Constituent: Cadmium Analysis Run 11/11/2024 4:38 PM

Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-200 (bg)



n = 26

Slope = 0
units per year.

Mann-Kendall
statistic = 3
critical = 106

Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

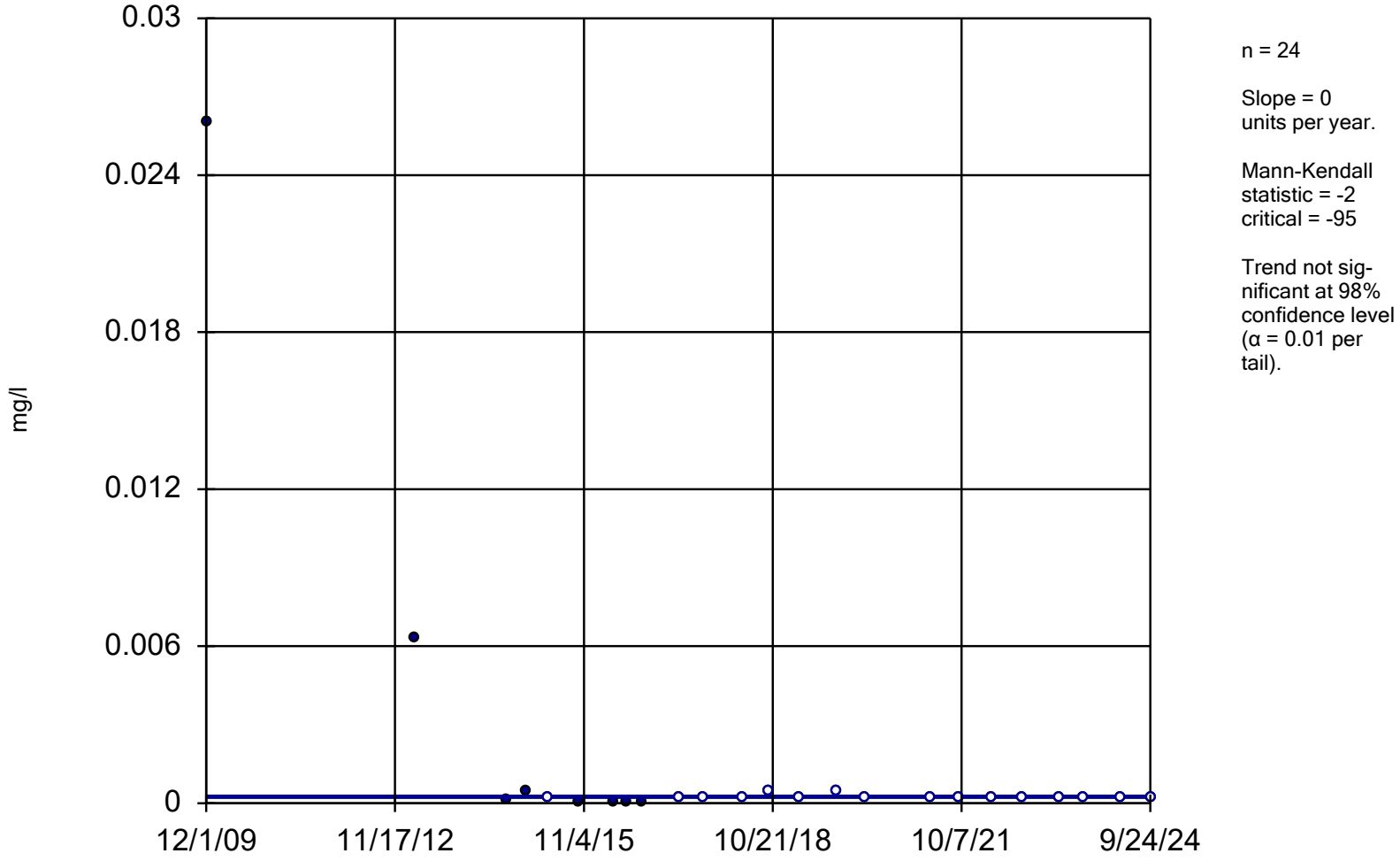
Constituent: Chromium Analysis Run 11/11/2024 4:43 PM

Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-200 (bg)



n = 24

Slope = 0
units per year.

Mann-Kendall
statistic = -2
critical = -95

Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

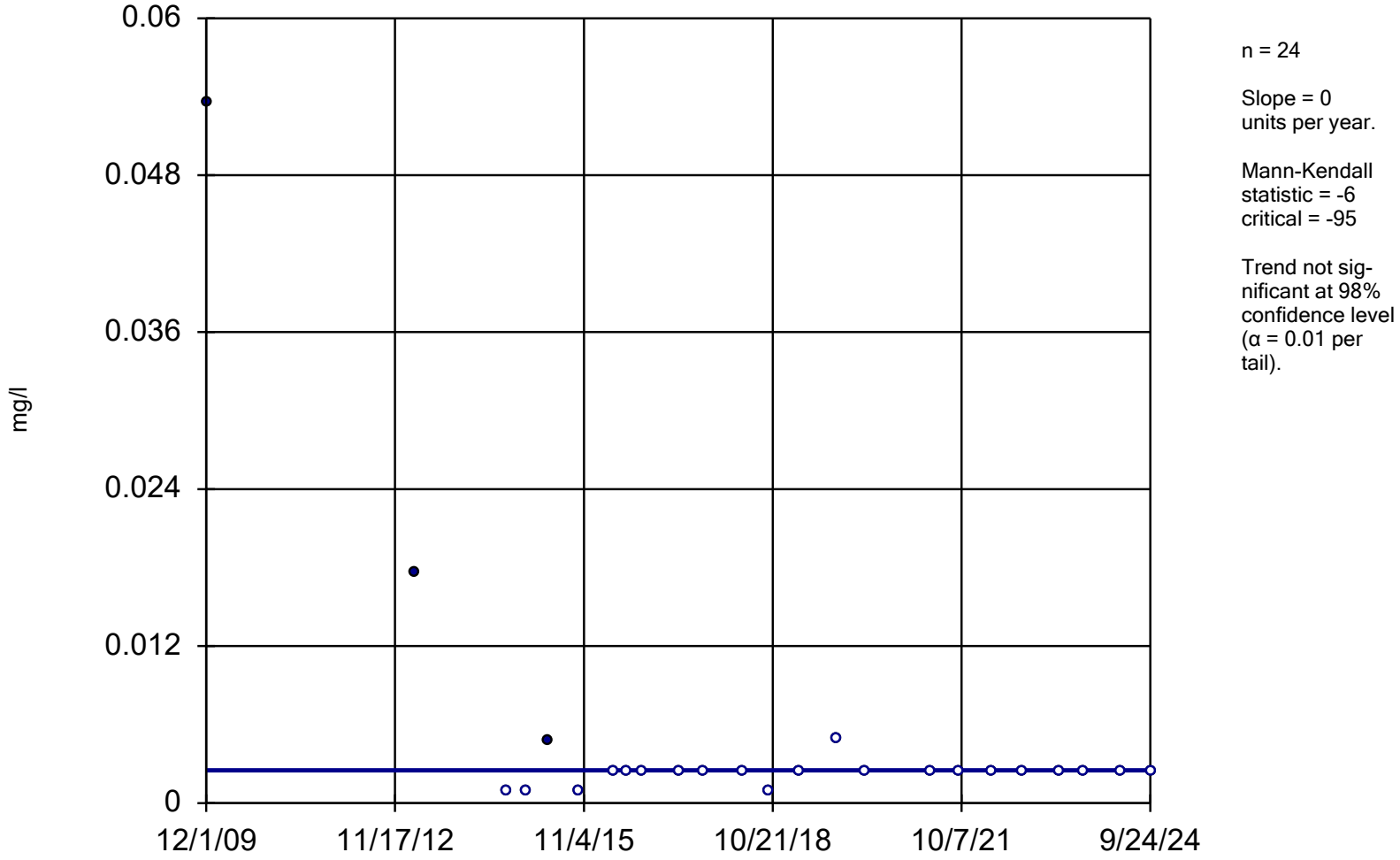
Constituent: Cobalt Analysis Run 11/11/2024 4:45 PM

Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-200 (bg)



n = 24

Slope = 0
units per year.

Mann-Kendall
statistic = -6
critical = -95

Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

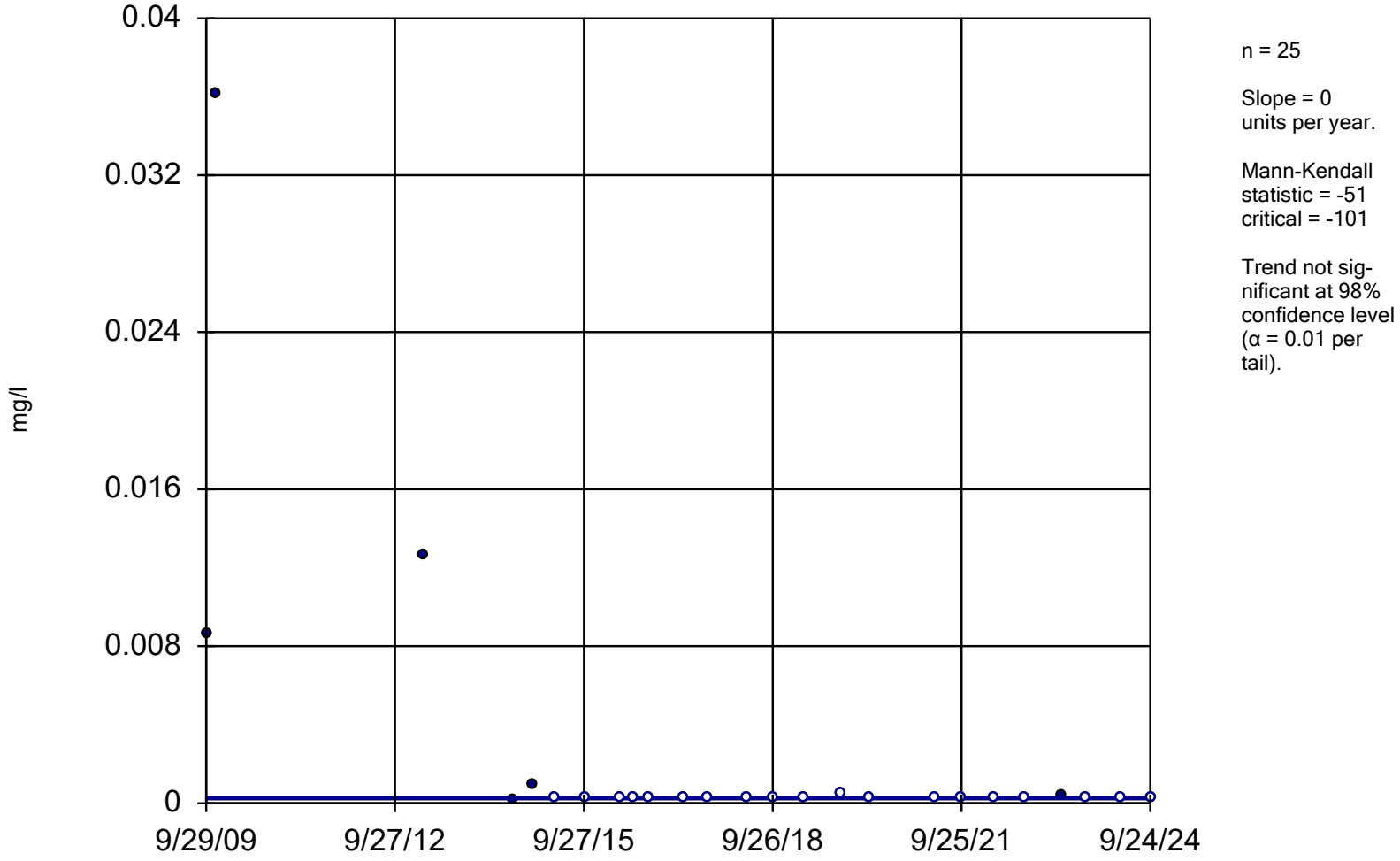
Constituent: Copper Analysis Run 11/11/2024 4:47 PM

Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-200 (bg)



n = 25

Slope = 0
units per year.

Mann-Kendall
statistic = -51
critical = -101

Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

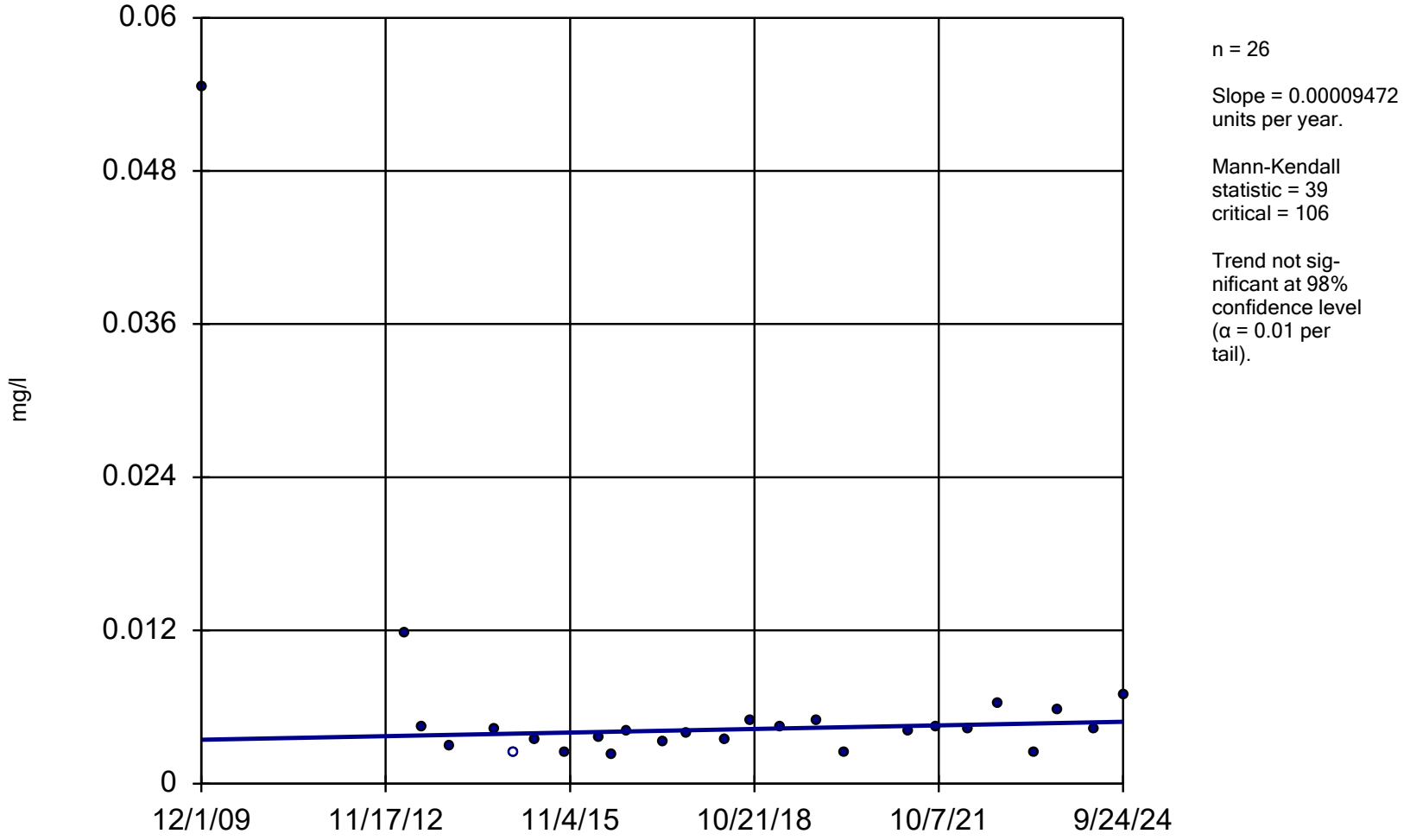
Constituent: Lead Analysis Run 11/11/2024 4:49 PM

Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-200 (bg)



n = 26

Slope = 0.00009472 units per year.

Mann-Kendall statistic = 39
critical = 106

Trend not significant at 98% confidence level (α = 0.01 per tail).

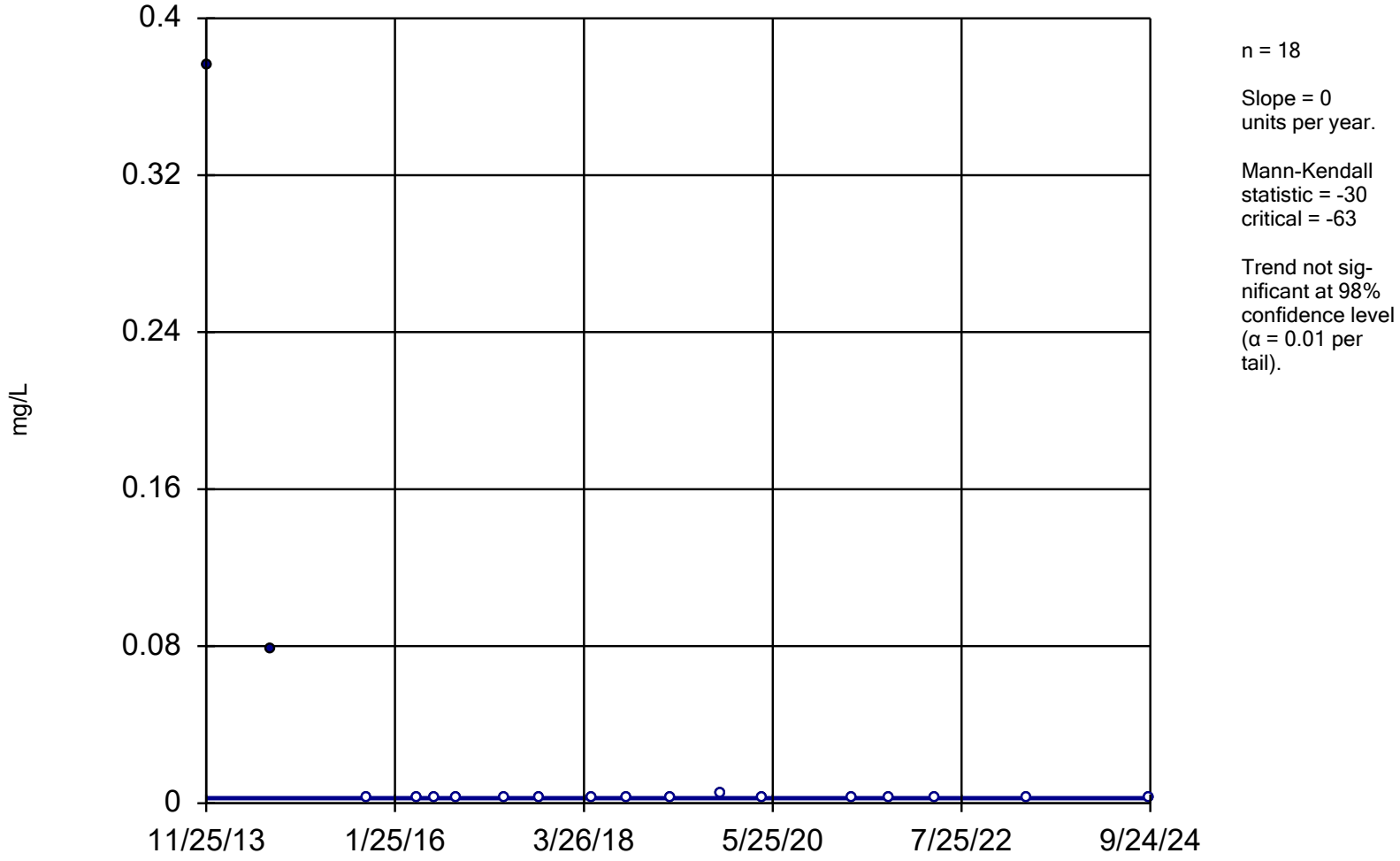
Constituent: Nickel Analysis Run 11/11/2024 4:51 PM

Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-200 (bg)



n = 18

Slope = 0
units per year.

Mann-Kendall
statistic = -30
critical = -63

Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

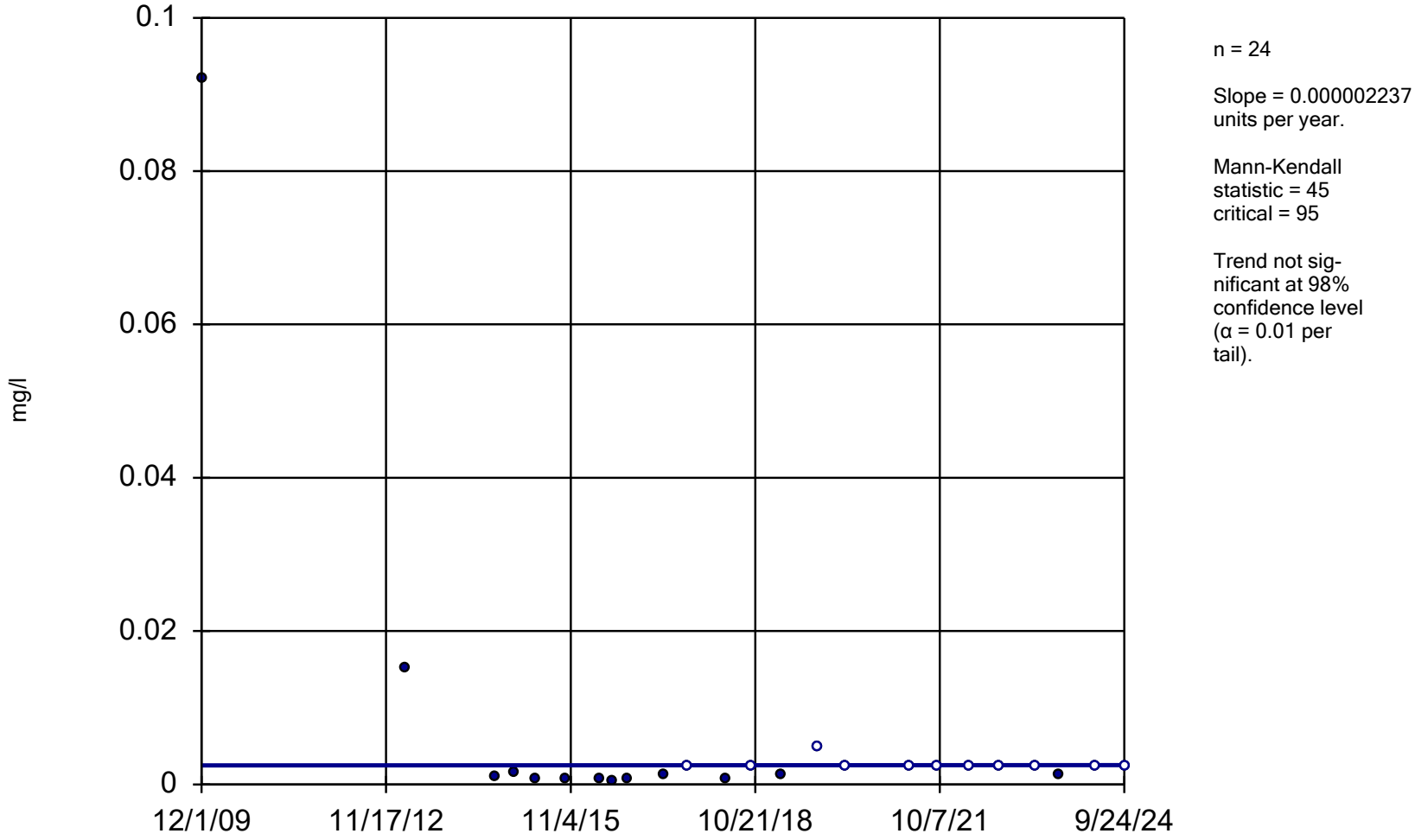
Constituent: Tin Analysis Run 11/11/2024 5:14 PM

Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-200 (bg)



n = 24

Slope = 0.000002237 units per year.

Mann-Kendall statistic = 45
critical = 95

Trend not significant at 98% confidence level (α = 0.01 per tail).

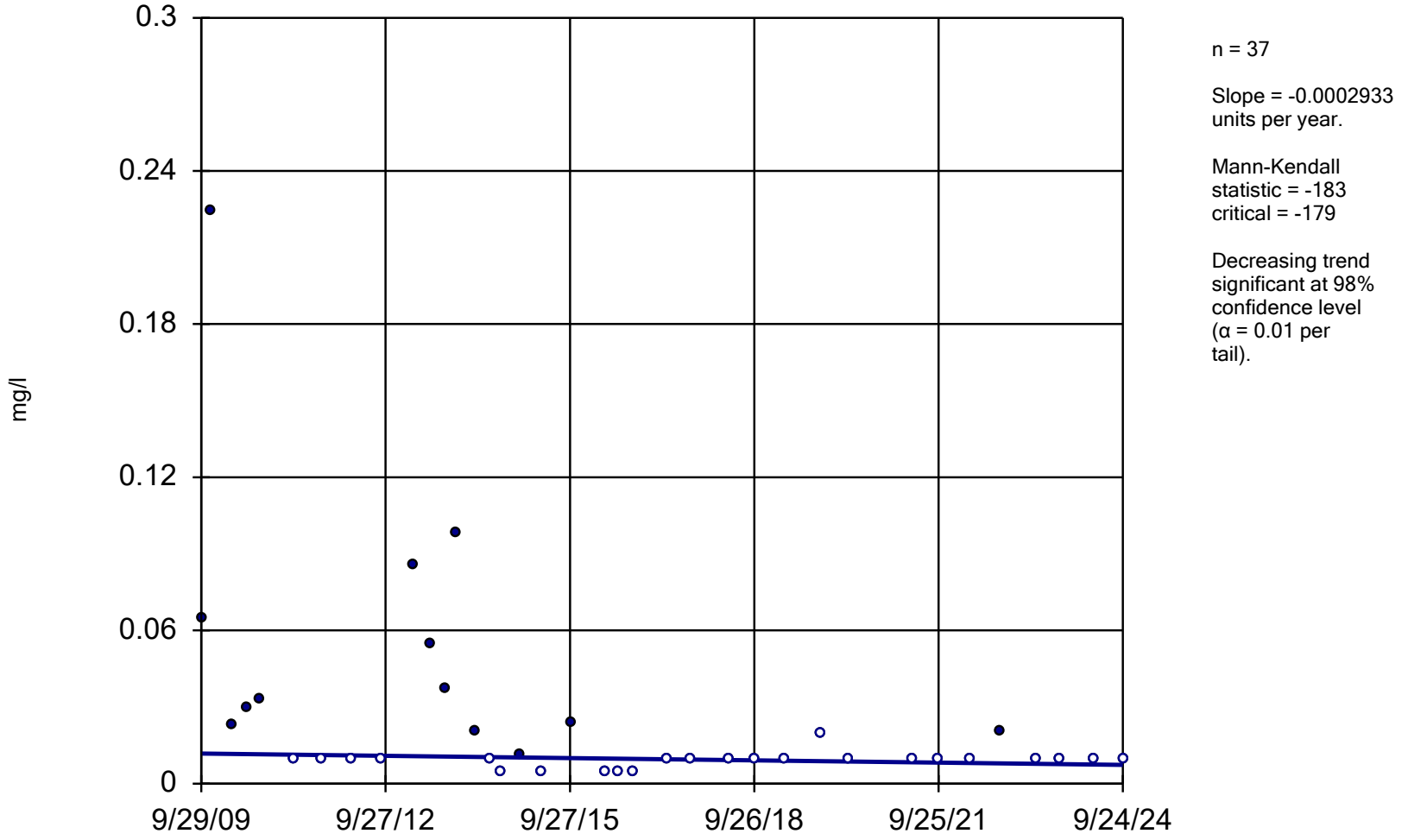
Constituent: Vanadium Analysis Run 11/11/2024 4:53 PM

Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-200 (bg)



n = 37

Slope = -0.0002933 units per year.

Mann-Kendall statistic = -183
critical = -179

Decreasing trend significant at 98% confidence level (α = 0.01 per tail).

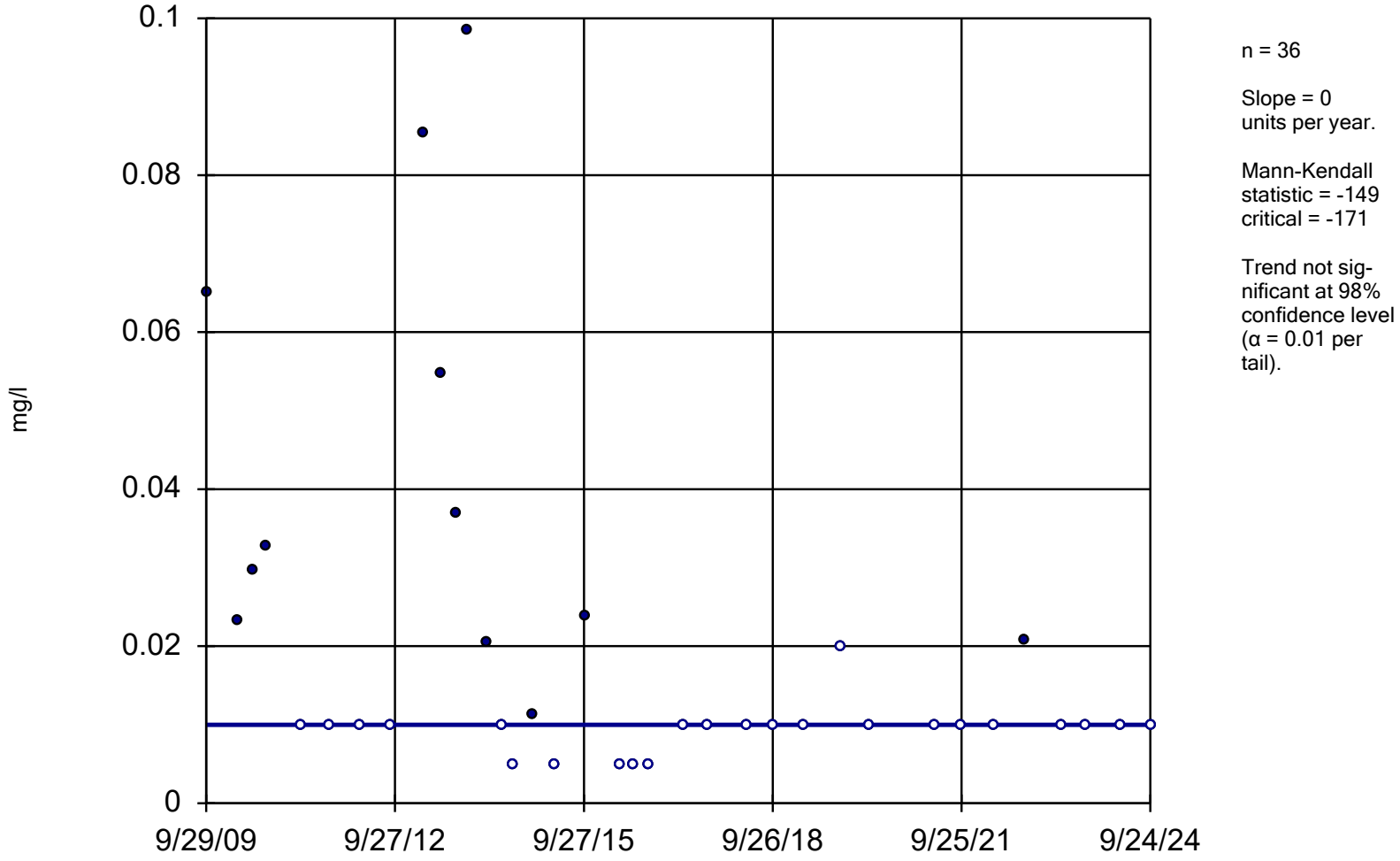
Constituent: Zinc Analysis Run 11/11/2024 5:10 PM

Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Hollow symbols indicate censored values.

Sen's Slope Estimator

MW-200 (bg)



n = 36

Slope = 0
units per year.

Mann-Kendall
statistic = -149
critical = -171

Trend not sig-
nificant at 98%
confidence level
(α = 0.01 per
tail).

Constituent: Zinc Analysis Run 11/11/2024 5:09 PM

Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Intrawell Prediction Limit

Utilizing Background Data from Sep. 2009 Through Apr. 2023 [1]

Constituent Name	Well	Upper Limit	Date	Observation	Exceeds	Background N	Background Wells	Background Mean	Standard Deviation	% Non-detects	Non-detect Adjustment	Transformation	Alpha	Method
Antimony (mg/l)	MW-200	0.0101	9/24/2024	0.001ND	No	34	n/a	n/a	n/a	97	n/a	n/a	0.001599	NP Intra (NDs) 1 of 2
Arsenic (mg/l)	MW-200	0.00801	9/24/2024	0.001ND	No	34	n/a	n/a	n/a	91	n/a	n/a	0.001599	NP Intra (NDs) 1 of 2
Barium (mg/l)	MW-200	1.05	9/24/2024	0.492	No	34	n/a	n/a	n/a	0	n/a	n/a	0.001599	NP Intra (normality) 1 of 2
Beryllium (mg/l)	MW-200	0.00348	9/24/2024	0.0005ND	No	34	n/a	n/a	n/a	94	n/a	n/a	0.001599	NP Intra (NDs) 1 of 2
Cadmium (mg/l)	MW-200	0.00179	9/24/2024	0.000436	No	34	n/a	n/a	n/a	26	n/a	n/a	0.001599	NP Intra (normality) 1 of 2
Chromium (mg/l)	MW-200	0.0343	9/24/2024	0.0025ND	No	34	n/a	n/a	n/a	88	n/a	n/a	0.001599	NP Intra (NDs) 1 of 2
Cobalt (mg/l)	MW-200	0.026	9/24/2024	0.00025ND	No	34	n/a	n/a	n/a	76	n/a	n/a	0.001599	NP Intra (NDs) 1 of 2
Copper (mg/l)	MW-200	0.0536	9/24/2024	0.0025ND	No	34	n/a	n/a	n/a	91	n/a	n/a	0.001599	NP Intra (NDs) 1 of 2
Lead (mg/l)	MW-200	0.0362	9/24/2024	0.00025ND	No	34	n/a	n/a	n/a	82	n/a	n/a	0.001599	NP Intra (NDs) 1 of 2
Nickel (mg/l)	MW-200	0.0545	9/24/2024	0.00697	No	34	n/a	n/a	n/a	35	n/a	n/a	0.001599	NP Intra (normality) 1 of 2
Tin (mg/L)	MW-200	0.376	9/24/2024	0.0025ND	No	23	n/a	n/a	n/a	91	n/a	n/a	0.003415	NP Intra (NDs) 1 of 2
Vanadium (mg/l)	MW-200	0.0921	9/24/2024	0.0025ND	No	34	n/a	n/a	n/a	65	n/a	n/a	0.001599	NP Intra (NDs) 1 of 2
Zinc (mg/l)	MW-200	0.224	9/24/2024	0.01ND	No	34	n/a	n/a	n/a	62	n/a	n/a	0.001599	NP Intra (NDs) 1 of 2

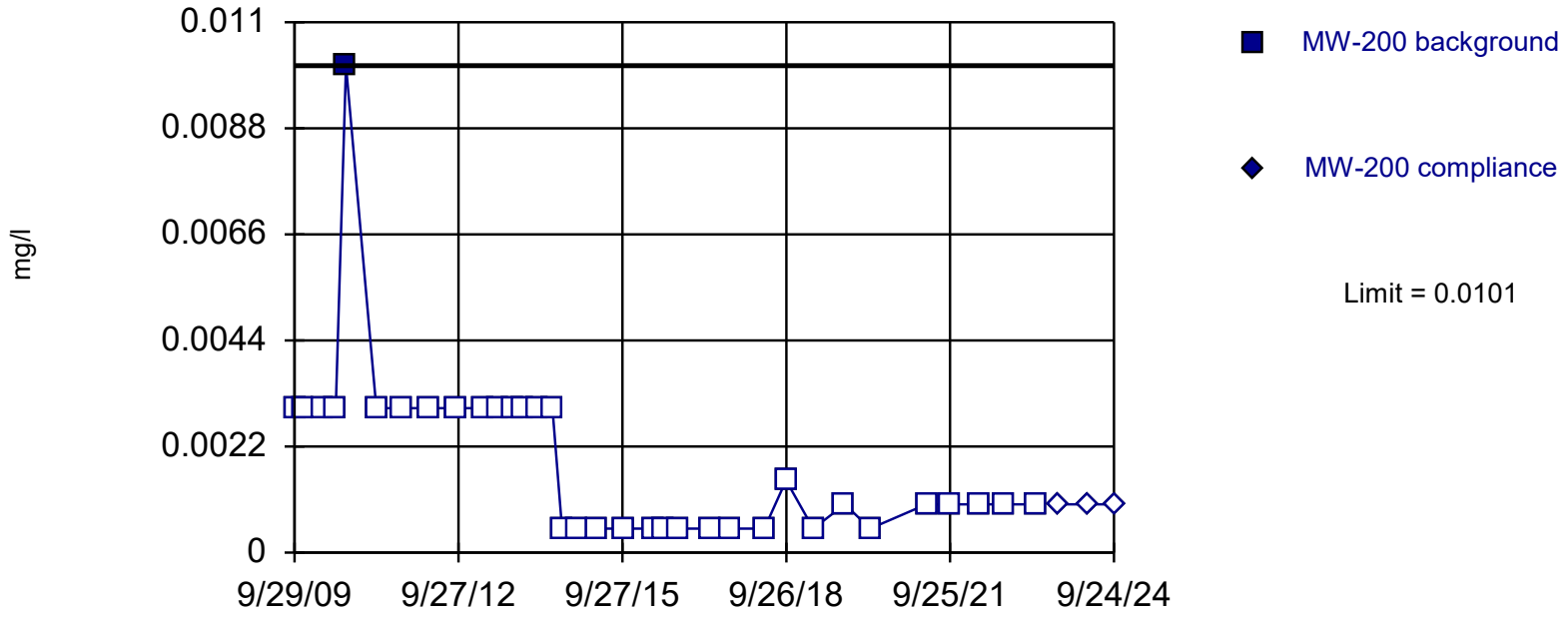
[1] Per Section 3.2, the Sep. 2020 metals data in MW-200 were removed from the intrawell background data set.

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 34 background values. 97.06% NDs. Well-constituent pair annual alpha = 0.003195. Individual comparison alpha = 0.001599 (1 of 2).

Constituent: Antimony Analysis Run 11/11/2024 5:17 PM

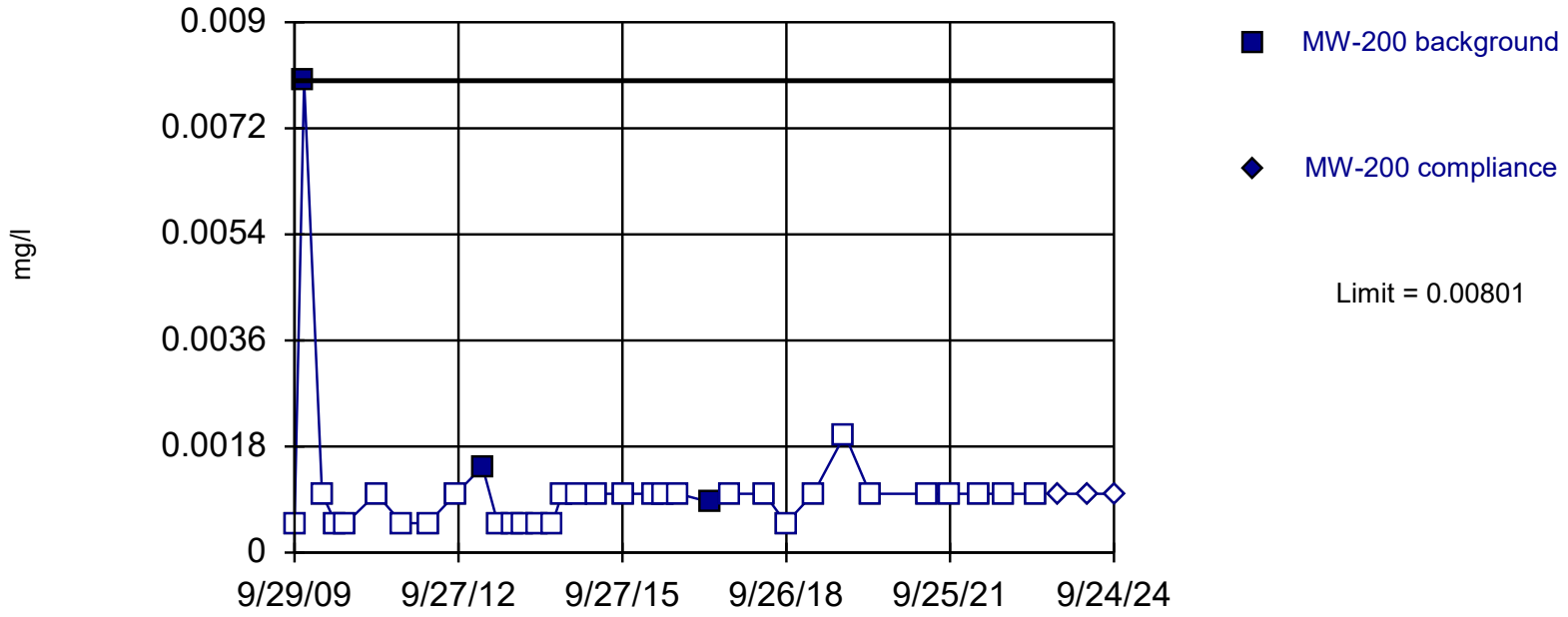
Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 34 background values. 91.18% NDs. Well-constituent pair annual alpha = 0.003195. Individual comparison alpha = 0.001599 (1 of 2).

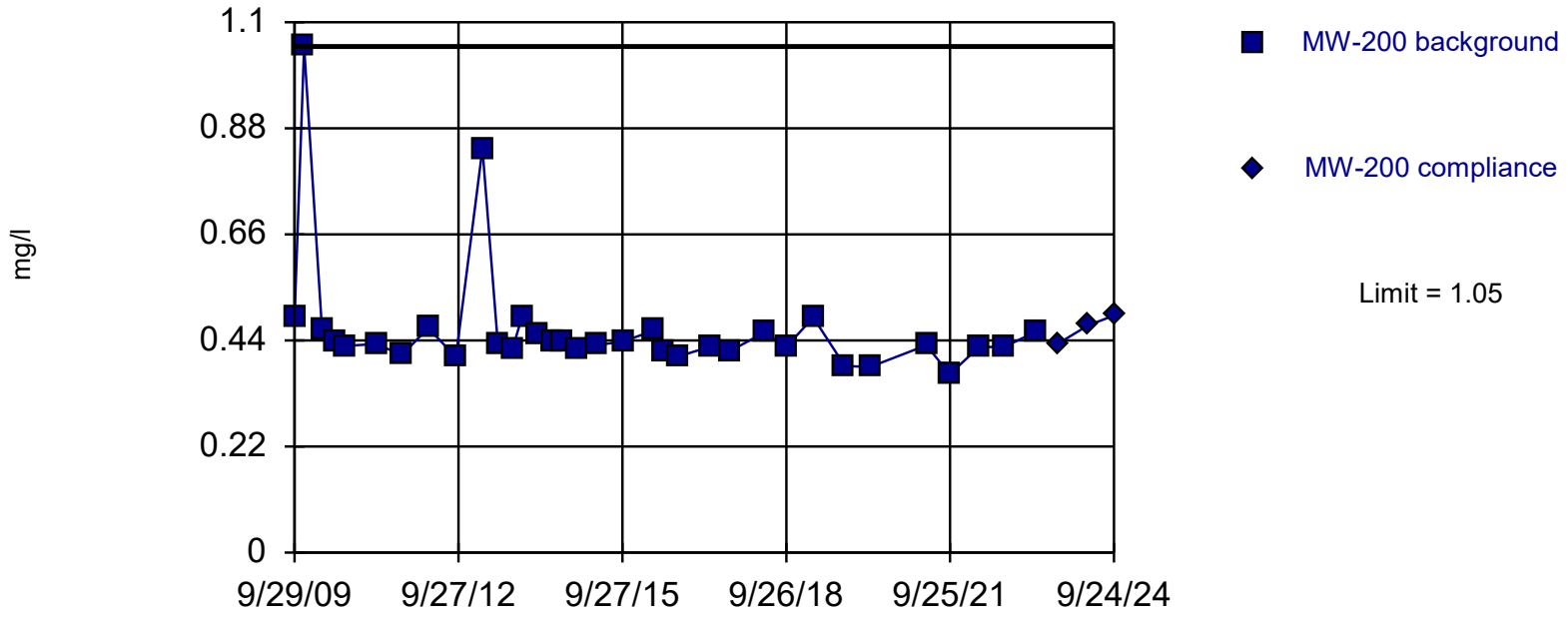
Constituent: Arsenic Analysis Run 11/11/2024 5:17 PM

Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 34 background values. Well-constituent pair annual alpha = 0.003195. Individual comparison alpha = 0.001599 (1 of 2).

Constituent: Barium Analysis Run 11/11/2024 5:17 PM

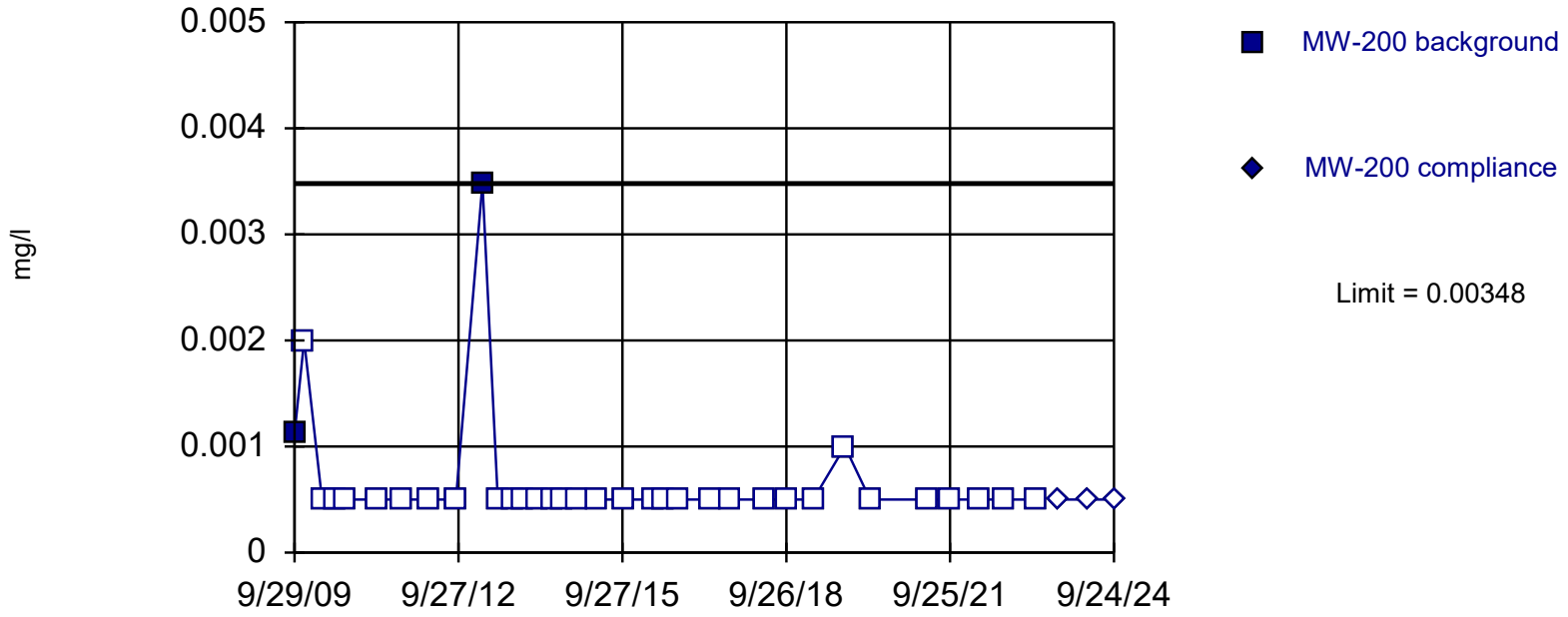
Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 34 background values. 94.12% NDs. Well-constituent pair annual alpha = 0.003195. Individual comparison alpha = 0.001599 (1 of 2).

Constituent: Beryllium Analysis Run 11/11/2024 5:17 PM

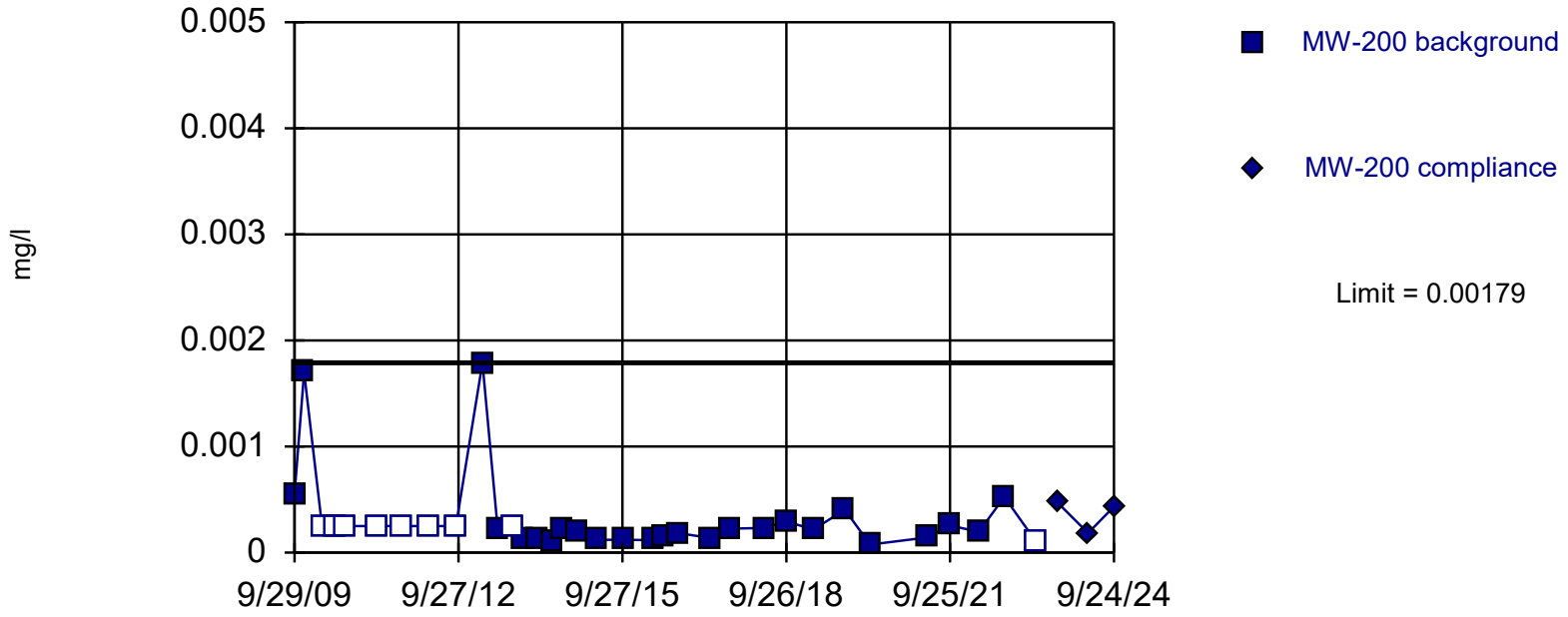
Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 34 background values. 26.47% NDs. Well-constituent pair annual alpha = 0.003195. Individual comparison alpha = 0.001599 (1 of 2).

Constituent: Cadmium Analysis Run 11/11/2024 5:17 PM

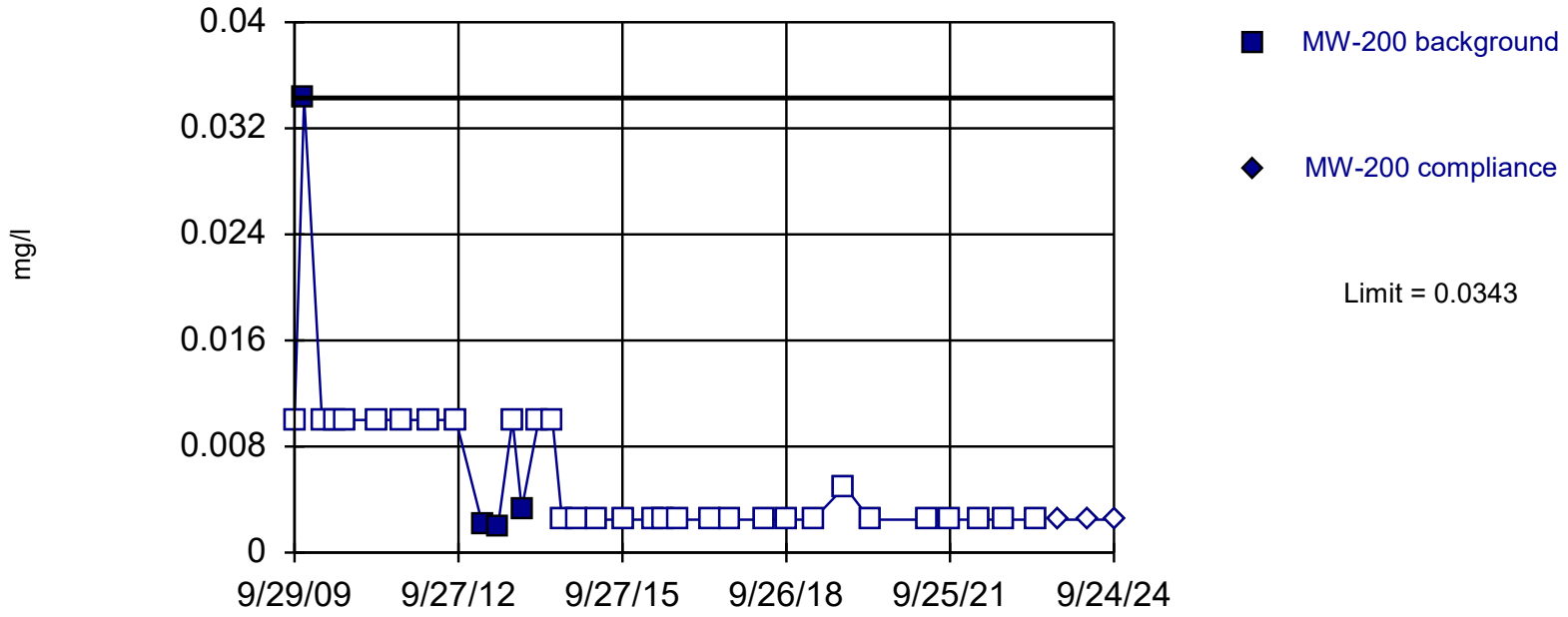
Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 34 background values. 88.24% NDs. Well-constituent pair annual alpha = 0.003195. Individual comparison alpha = 0.001599 (1 of 2).

Constituent: Chromium Analysis Run 11/11/2024 5:17 PM

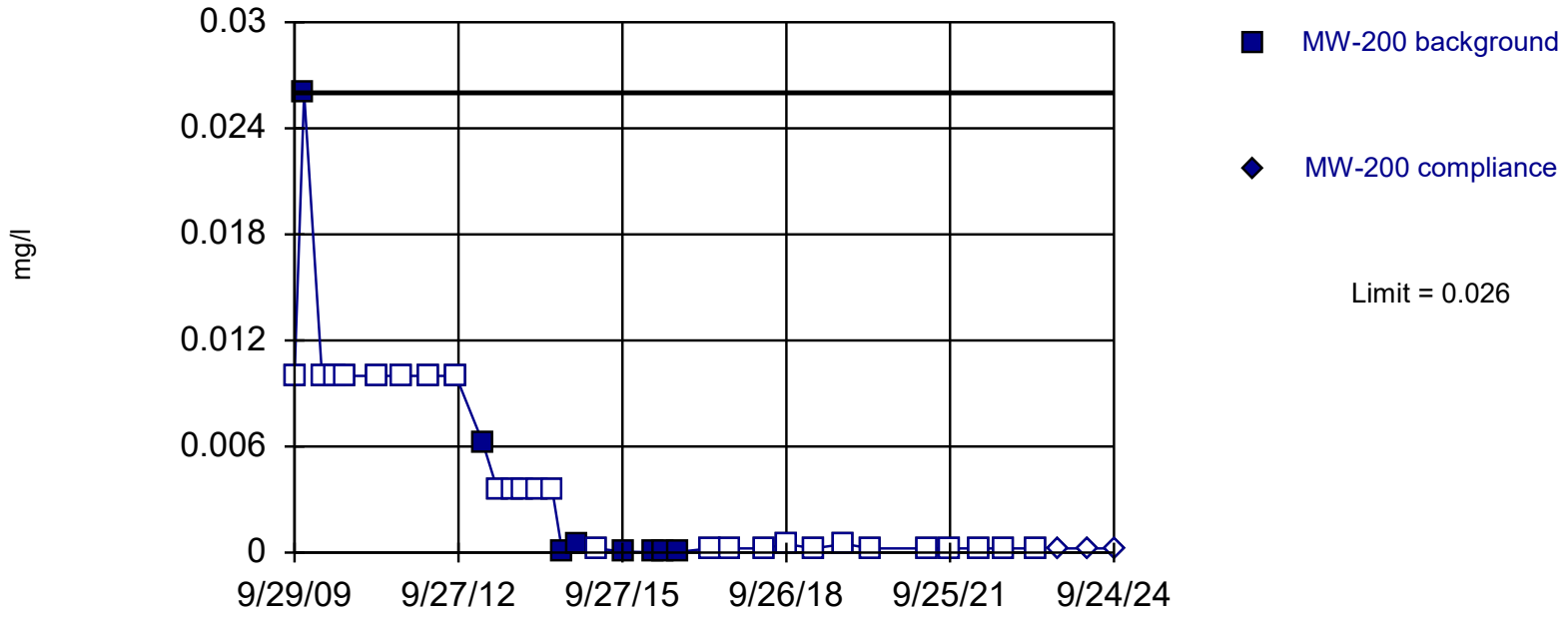
Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 34 background values. 76.47% NDs. Well-constituent pair annual alpha = 0.003195. Individual comparison alpha = 0.001599 (1 of 2).

Constituent: Cobalt Analysis Run 11/11/2024 5:17 PM

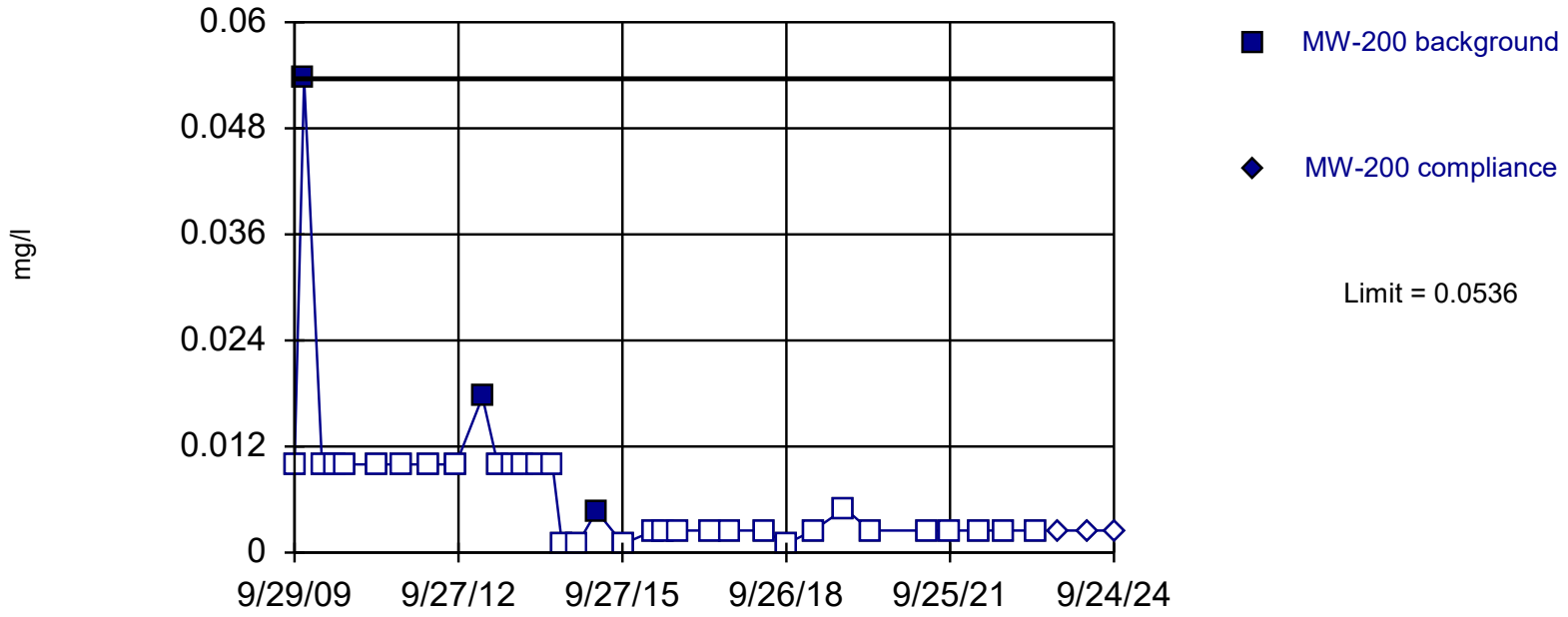
Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 34 background values. 91.18% NDs. Well-constituent pair annual alpha = 0.003195. Individual comparison alpha = 0.001599 (1 of 2).

Constituent: Copper Analysis Run 11/11/2024 5:17 PM

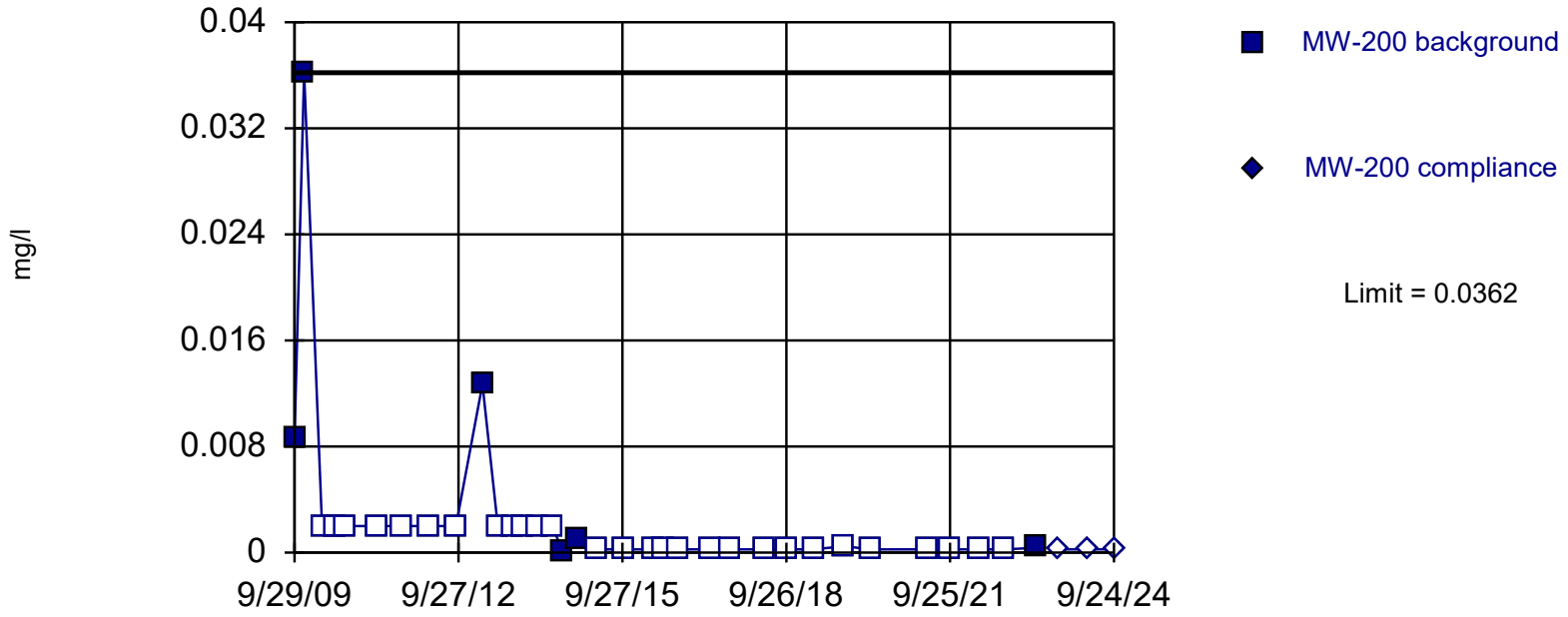
Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 34 background values. 82.35% NDs. Well-constituent pair annual alpha = 0.003195. Individual comparison alpha = 0.001599 (1 of 2).

Constituent: Lead Analysis Run 11/11/2024 5:17 PM

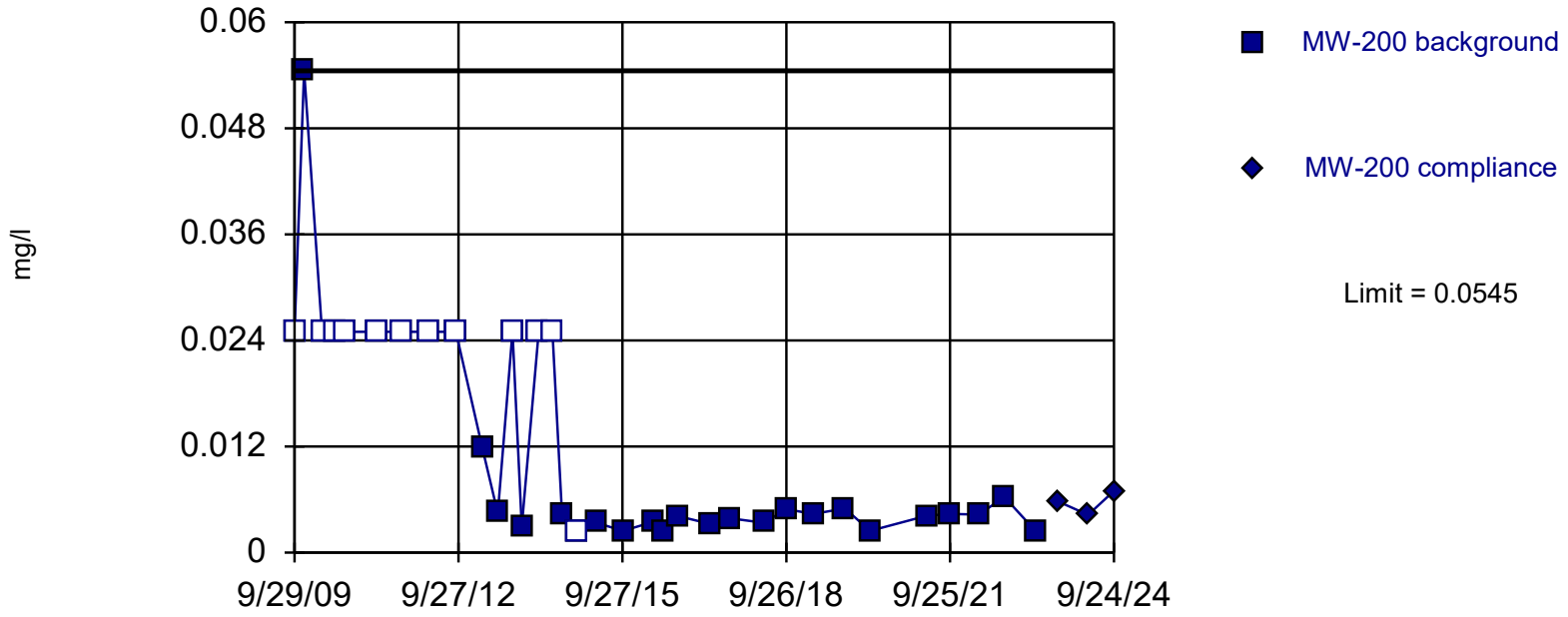
Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 34 background values. 35.29% NDs. Well-constituent pair annual alpha = 0.003195. Individual comparison alpha = 0.001599 (1 of 2).

Constituent: Nickel Analysis Run 11/11/2024 5:17 PM

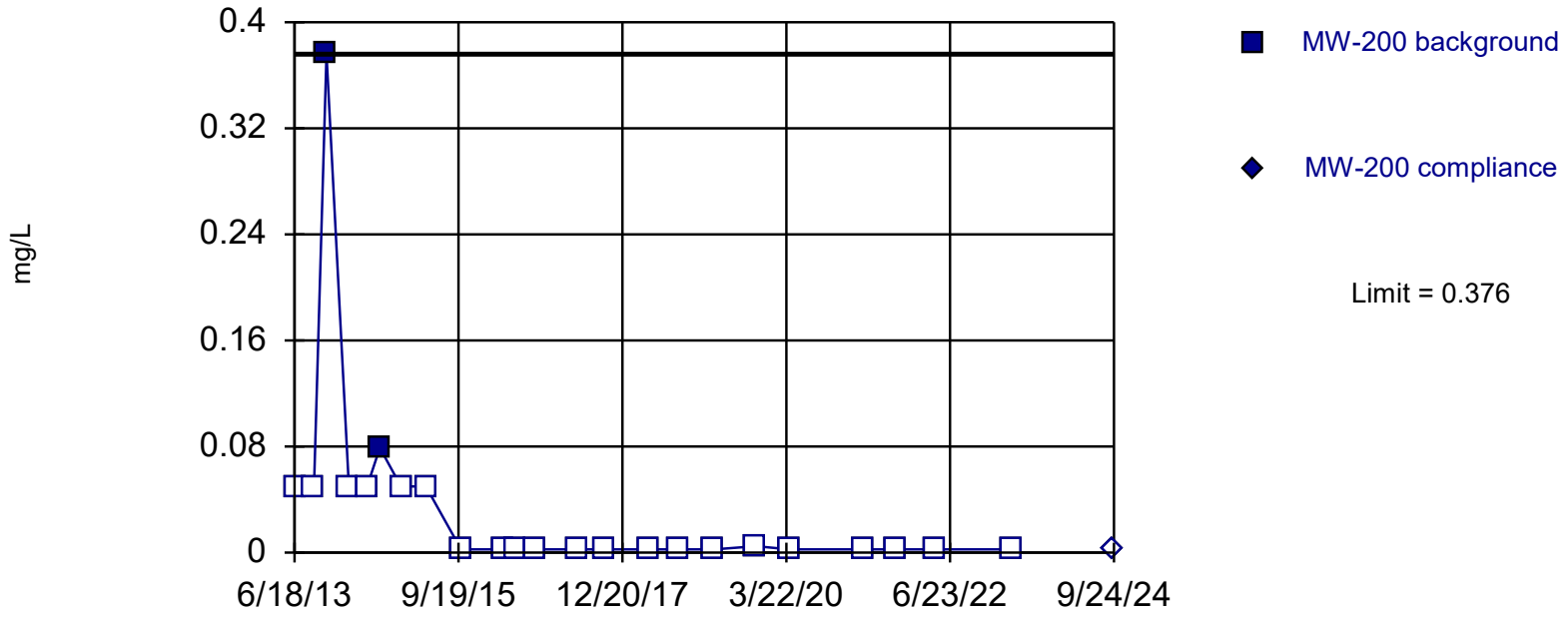
Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 23 background values. 91.3% NDs. Well-constituent pair annual alpha = 0.006819. Individual comparison alpha = 0.003415 (1 of 2).

Constituent: Tin Analysis Run 11/11/2024 5:56 PM

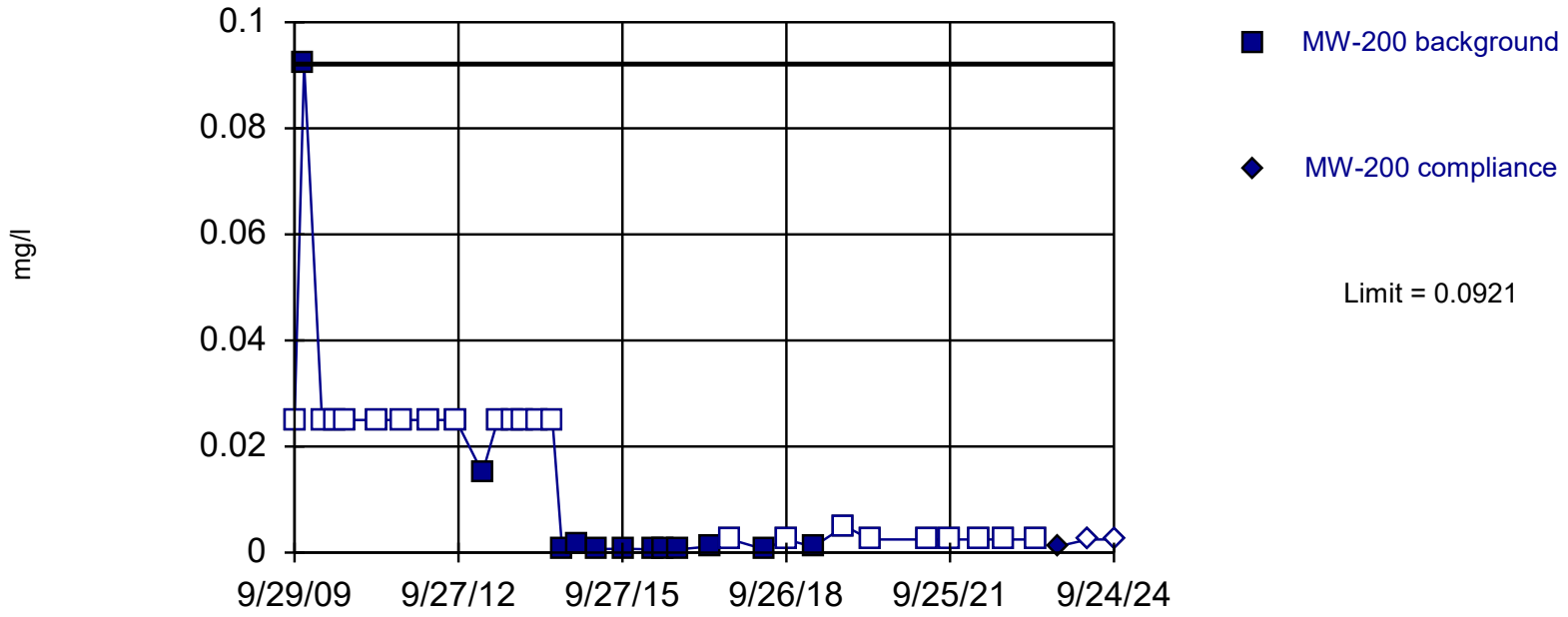
Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 34 background values. 64.71% NDs. Well-constituent pair annual alpha = 0.003195. Individual comparison alpha = 0.001599 (1 of 2).

Constituent: Vanadium Analysis Run 11/11/2024 5:17 PM

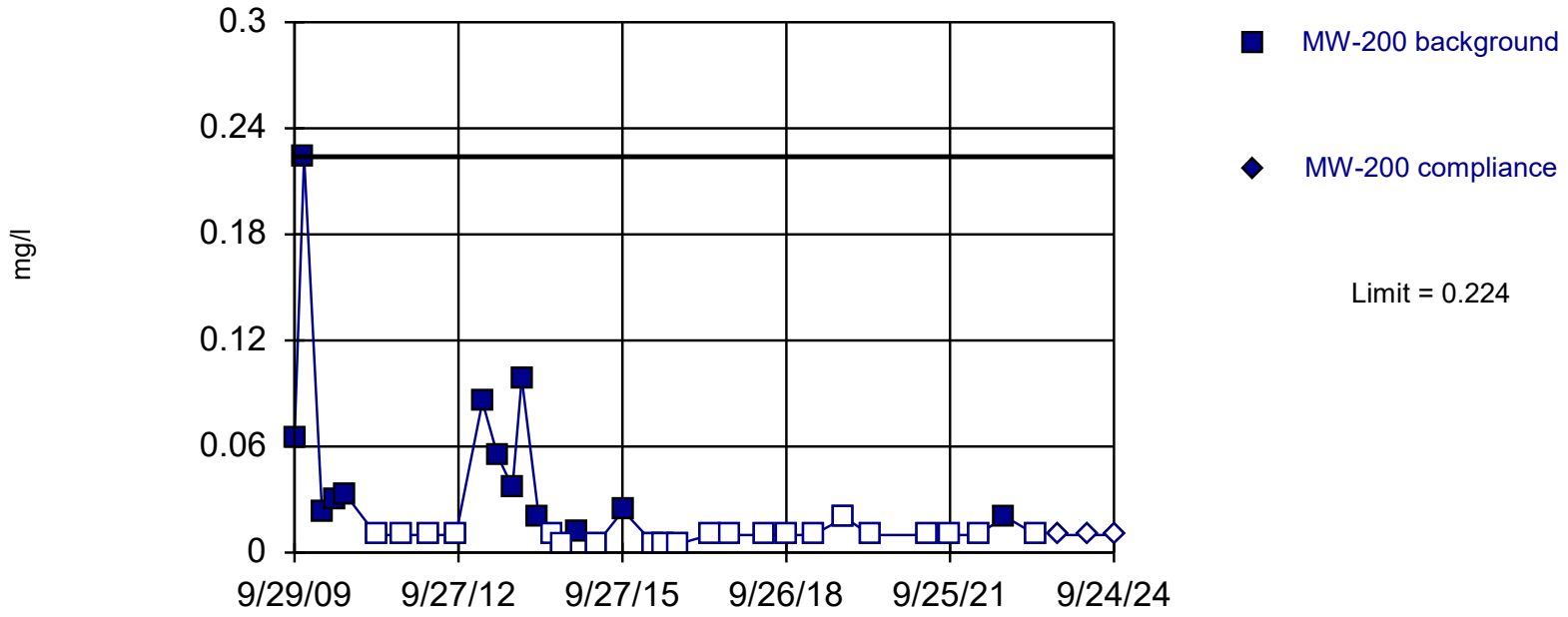
Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit

Intrawell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 34 background values. 61.76% NDs. Well-constituent pair annual alpha = 0.003195. Individual comparison alpha = 0.001599 (1 of 2).

Constituent: Zinc Analysis Run 11/11/2024 5:17 PM

Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Attachment 3
Sanitas Report Output for Interwell Prediction Limit Calculations

Interwell Prediction Limit

Constituent Name	Well	Upper Limit	Date	Observation	Exceed	Background N	Background Wells	Background Mean	Standard Deviation	% Non-detects	Non-detect Adjustment	Transformation	Alpha	Method
Detection Monitoring Locations														
Antimony (mg/l)	GU-2A	0.0101	9/23/2024	0.001ND	No	75	122R, 200	n/a	n/a	99	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Antimony (mg/l)	MW-119RR	0.0101	9/24/2024	0.001ND	No	75	122R, 200	n/a	n/a	99	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Antimony (mg/l)	MW-205	0.0101	9/23/2024	0.001ND	No	75	122R, 200	n/a	n/a	99	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Antimony (mg/l)	MW-206	0.0101	9/23/2024	0.001ND	No	75	122R, 200	n/a	n/a	99	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Arsenic (mg/l)	GU-2A	0.00801	9/23/2024	0.001ND	No	75	122R, 200	n/a	n/a	91	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Arsenic (mg/l)	MW-119RR	0.00801	9/24/2024	0.00388	No	75	122R, 200	n/a	n/a	91	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Arsenic (mg/l)	MW-205	0.00801	9/23/2024	0.00117J	No	75	122R, 200	n/a	n/a	91	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Arsenic (mg/l)	MW-206	0.00801	9/23/2024	0.00326	No	75	122R, 200	n/a	n/a	91	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Barium (mg/l)	GU-2A	1.05	9/23/2024	0.294	No	75	122R, 200	n/a	n/a	0	n/a	n/a	0.0003431	NP Inter (normality) 1 of 2
Barium (mg/l)	MW-119RR	1.05	9/24/2024	0.667	No	75	122R, 200	n/a	n/a	0	n/a	n/a	0.0003431	NP Inter (normality) 1 of 2
Barium (mg/l)	MW-205	1.05	9/23/2024	0.0223	No	75	122R, 200	n/a	n/a	0	n/a	n/a	0.0003431	NP Inter (normality) 1 of 2
Barium (mg/l)	MW-206	1.05	9/23/2024	0.0216	No	75	122R, 200	n/a	n/a	0	n/a	n/a	0.0003431	NP Inter (normality) 1 of 2
Beryllium (mg/l)	GU-2A	0.00348	9/23/2024	0.0005ND	No	75	122R, 200	n/a	n/a	97	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Beryllium (mg/l)	MW-119RR	0.00348	9/24/2024	0.0005ND	No	75	122R, 200	n/a	n/a	97	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Beryllium (mg/l)	MW-205	0.00348	9/23/2024	0.0005ND	No	75	122R, 200	n/a	n/a	97	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Beryllium (mg/l)	MW-206	0.00348	9/23/2024	0.0005ND	No	75	122R, 200	n/a	n/a	97	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Cadmium (mg/l)	GU-2A	0.00179	9/23/2024	0.0001ND	No	75	122R, 200	n/a	n/a	63	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Cadmium (mg/l)	MW-119RR	0.00179	9/24/2024	0.0001ND	No	75	122R, 200	n/a	n/a	63	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Cadmium (mg/l)	MW-205	0.00179	9/23/2024	0.0001ND	No	75	122R, 200	n/a	n/a	63	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Cadmium (mg/l)	MW-206	0.00179	9/23/2024	0.000122J	No	75	122R, 200	n/a	n/a	63	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Chromium (mg/l)	GU-2A	0.0343	9/23/2024	0.0025ND	No	75	122R, 200	n/a	n/a	68	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Chromium (mg/l)	MW-119RR	0.0343	9/24/2024	0.0025ND	No	75	122R, 200	n/a	n/a	68	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Chromium (mg/l)	MW-205	0.0343	9/23/2024	0.0025ND	No	75	122R, 200	n/a	n/a	68	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Chromium (mg/l)	MW-206	0.0343	9/23/2024	0.0025ND	No	75	122R, 200	n/a	n/a	68	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Cobalt (mg/l)	GU-2A	0.026	9/23/2024	0.00025ND	No	75	122R, 200	n/a	n/a	85	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Cobalt (mg/l)	MW-119RR	0.026	9/24/2024	0.00217	No	75	122R, 200	n/a	n/a	85	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Cobalt (mg/l)	MW-205	0.026	9/23/2024	0.00582	No	75	122R, 200	n/a	n/a	85	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Cobalt (mg/l)	MW-206	0.026	9/23/2024	0.00412	No	75	122R, 200	n/a	n/a	85	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Copper (mg/l)	GU-2A	0.0536	9/23/2024	0.0025ND	No	75	122R, 200	n/a	n/a	95	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Copper (mg/l)	MW-119RR	0.0536	9/24/2024	0.0025ND	No	75	122R, 200	n/a	n/a	95	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Copper (mg/l)	MW-205	0.0536	9/23/2024	0.0025ND	No	75	122R, 200	n/a	n/a	95	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Copper (mg/l)	MW-206	0.0536	9/23/2024	0.0025ND	No	75	122R, 200	n/a	n/a	95	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Lead (mg/l)	GU-2A	0.0362	9/23/2024	0.00025ND	No	75	122R, 200	n/a	n/a	89	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Lead (mg/l)	MW-119RR	0.0362	9/24/2024	0.00025ND	No	75	122R, 200	n/a	n/a	89	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Lead (mg/l)	MW-205	0.0362	9/23/2024	0.000363J	No	75	122R, 200	n/a	n/a	89	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Lead (mg/l)	MW-206	0.0362	9/23/2024	0.00361	No	75	122R, 200	n/a	n/a	89	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Nickel (mg/l)	GU-2A	0.0545	9/23/2024	0.0025ND	No	75	122R, 200	n/a	n/a	67	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Nickel (mg/l)	MW-119RR	0.0545	9/24/2024	0.00969	No	75	122R, 200	n/a	n/a	67	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Nickel (mg/l)	MW-205	0.0545	9/23/2024	0.00871	No	75	122R, 200	n/a	n/a	67	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Nickel (mg/l)	MW-206	0.0545	9/23/2024	0.00812	No	75	122R, 200	n/a	n/a	67	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Vanadium (mg/l)	GU-2A	0.0921	9/23/2024	0.0025ND	No	75	122R, 200	n/a	n/a	77	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Vanadium (mg/l)	MW-119RR	0.0921	9/24/2024	0.0025ND	No	75	122R, 200	n/a	n/a	77	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Vanadium (mg/l)	MW-205	0.0921	9/23/2024	0.0025ND	No	75	122R, 200	n/a	n/a	77	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Vanadium (mg/l)	MW-206	0.0921	9/23/2024	0.0025ND	No	75	122R, 200	n/a	n/a	77	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Zinc (mg/l)	GU-2A	0.224	9/23/2024	0.01ND	No	75	122R, 200	n/a	n/a	65	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Zinc (mg/l)	MW-119RR	0.224	9/24/2024	0.01ND	No	75	122R, 200	n/a	n/a	65	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Zinc (mg/l)	MW-205	0.224	9/23/2024	0.01ND	No	75	122R, 200	n/a	n/a	65	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2

Interwell Prediction Limit

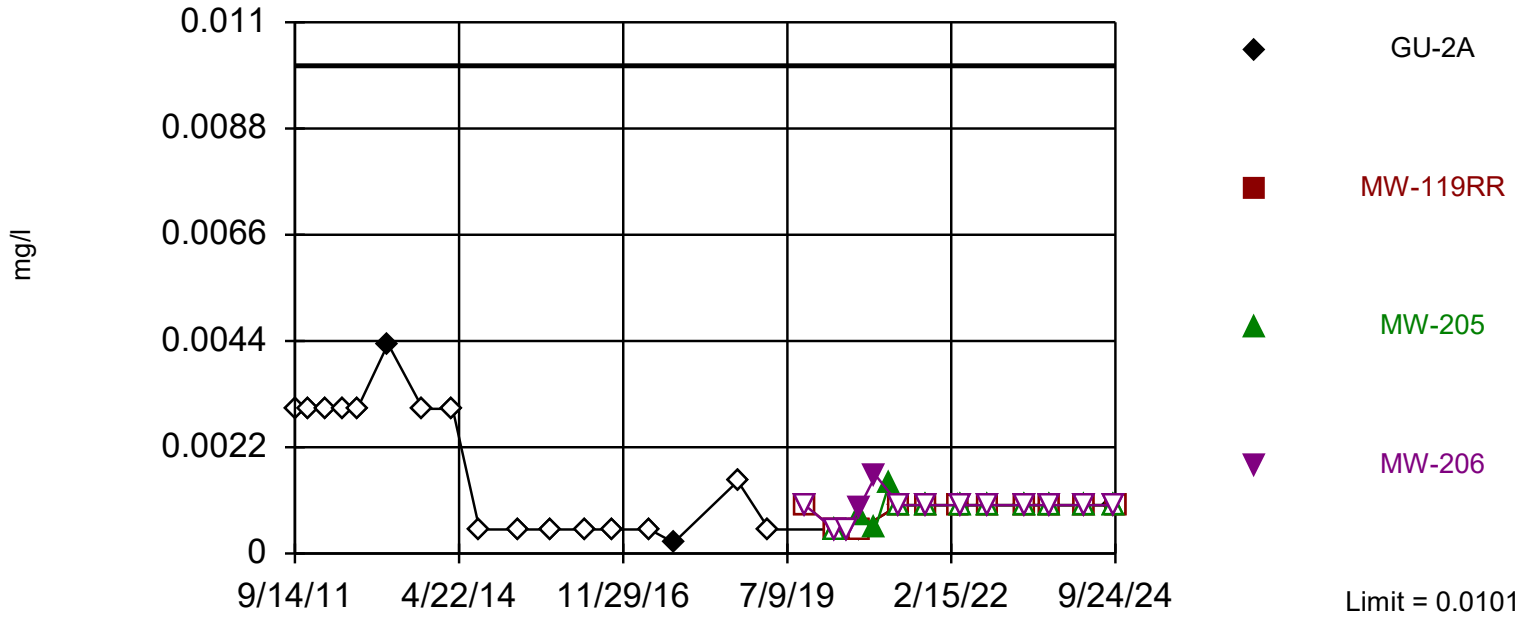
Constituent Name	Well	Upper Limit	Date	Observation	Exceed	Background N	Background Wells	Background Mean	Standard Deviation	% Non-detects	Non-detect Adjustment	Transformation	Alpha	Method
Detection Monitoring Locations Continued														
Zinc (mg/l)	MW-206	0.224	9/23/2024	0.014J	No	75	122R, 200	n/a	n/a	65	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Assessment Monitoring Locations														
Antimony (mg/l)	MW-121R	0.0101	9/24/2024	0.001ND	No	75	122R, 200	n/a	n/a	99	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Arsenic (mg/l)	MW-121R	0.00801	9/24/2024	0.0183	Yes	75	122R, 200	n/a	n/a	91	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Barium (mg/l)	MW-121R	1.05	9/24/2024	0.708	No	75	122R, 200	n/a	n/a	0	n/a	n/a	0.0003431	NP Inter (normality) 1 of 2
Beryllium (mg/l)	MW-121R	0.00348	9/24/2024	0.0005ND	No	75	122R, 200	n/a	n/a	97	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Cadmium (mg/l)	MW-121R	0.00179	9/24/2024	0.0001ND	No	75	122R, 200	n/a	n/a	63	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Chromium (mg/l)	MW-121R	0.0343	9/24/2024	0.0025ND	No	75	122R, 200	n/a	n/a	68	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Cobalt (mg/l)	MW-121R	0.026	9/24/2024	0.00206	No	75	122R, 200	n/a	n/a	85	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Copper (mg/l)	MW-121R	0.0536	9/24/2024	0.0025ND	No	75	122R, 200	n/a	n/a	95	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Lead (mg/l)	MW-121R	0.0362	9/24/2024	0.00025ND	No	75	122R, 200	n/a	n/a	89	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Nickel (mg/l)	MW-121R	0.0545	9/24/2024	0.0422	No	75	122R, 200	n/a	n/a	67	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Tin (mg/L)	MW-121R	0.376	9/24/2024	0.0025ND	No	55	122R, 200	n/a	n/a	93	n/a	n/a	0.000631	NP Inter (NDs) 1 of 2
Vanadium (mg/l)	MW-121R	0.0921	9/24/2024	0.0025ND	No	75	122R, 200	n/a	n/a	77	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2
Zinc (mg/l)	MW-121R	0.224	45559	0.01ND	No	75	122R, 200	n/a	n/a	65.33	n/a	n/a	0.0003431	NP Inter (NDs) 1 of 2

Hollow symbols indicate censored values.

Within Limit

Prediction Limit - Detection Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 75 background values. 98.67% NDs. Annual per-constituent alpha = 0.004109. Individual comparison alpha = 0.0003431 (1 of 2).

Constituent: Antimony Analysis Run 11/11/2024 10:48 AM

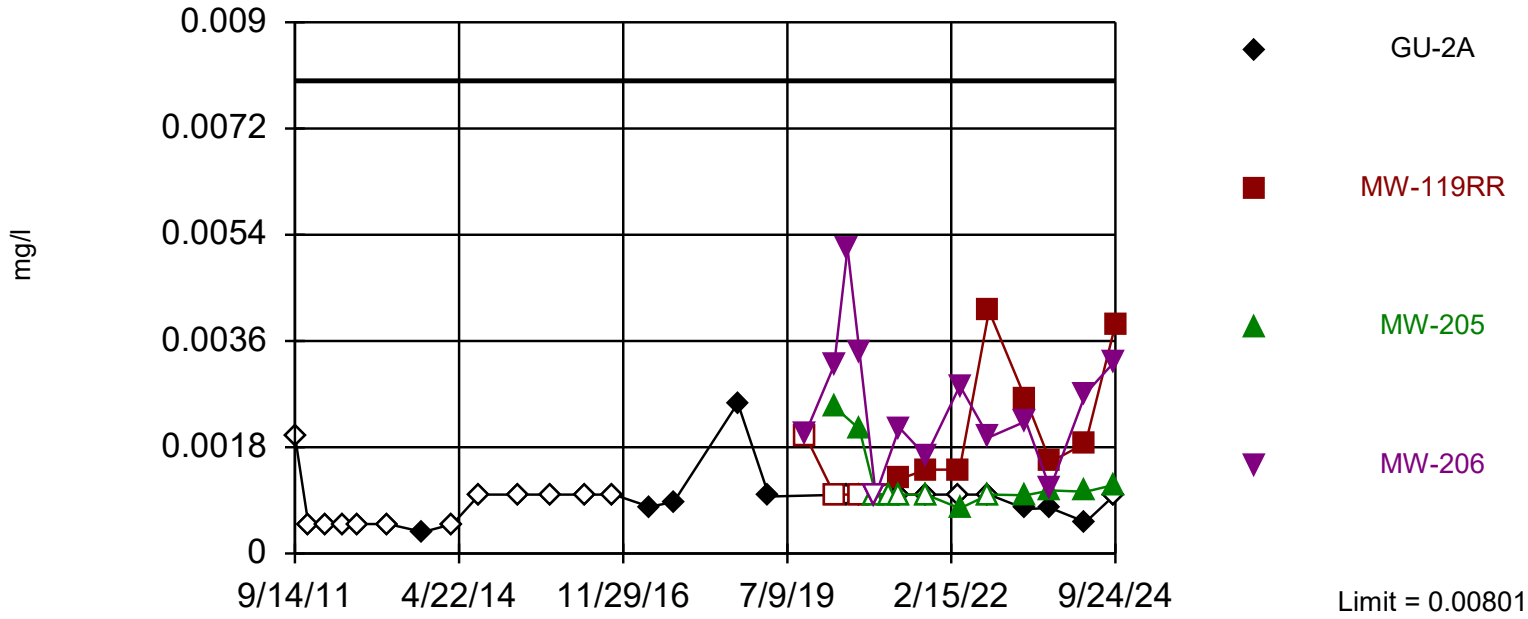
Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit - Detection Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 75 background values. 90.67% NDs. Annual per-constituent alpha = 0.004109. Individual comparison alpha = 0.0003431 (1 of 2).

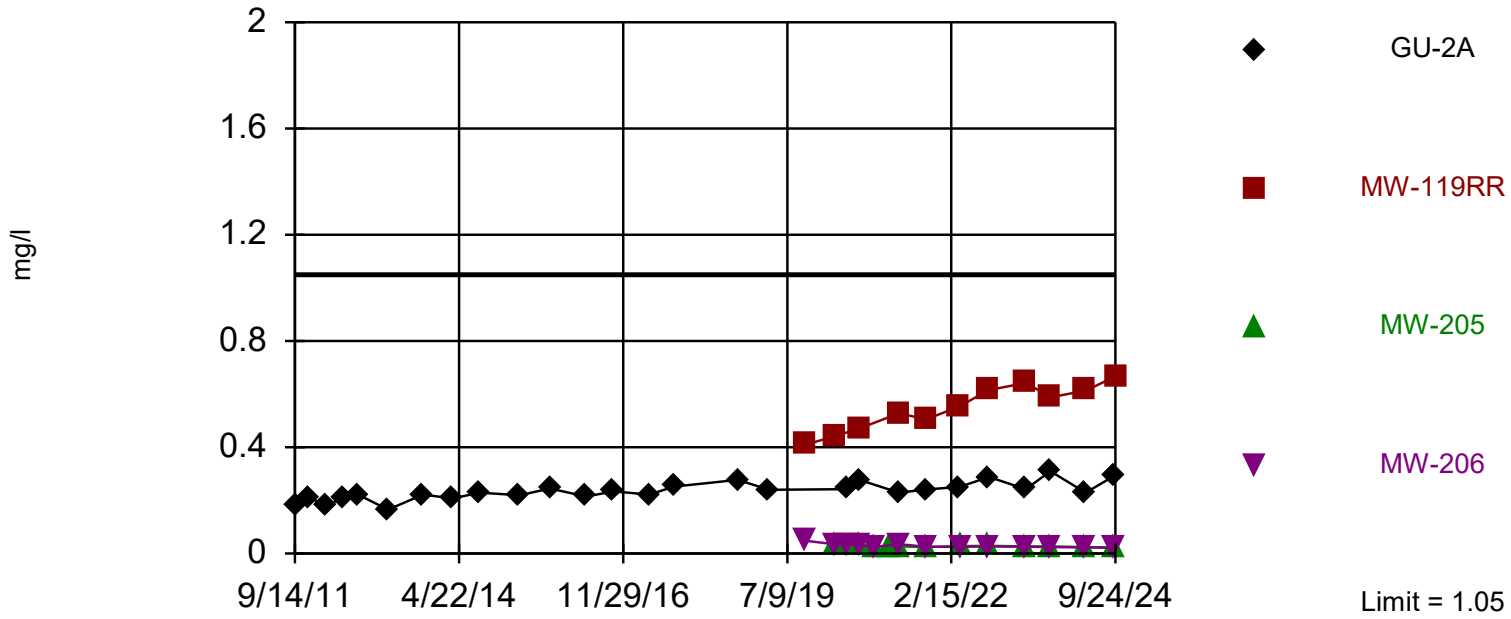
Constituent: Arsenic Analysis Run 11/11/2024 10:48 AM

Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Within Limit

Prediction Limit - Detection Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 75 background values. Annual per-constituent alpha = 0.004109. Individual comparison alpha = 0.0003431 (1 of 2).

Constituent: Barium Analysis Run 11/11/2024 10:48 AM

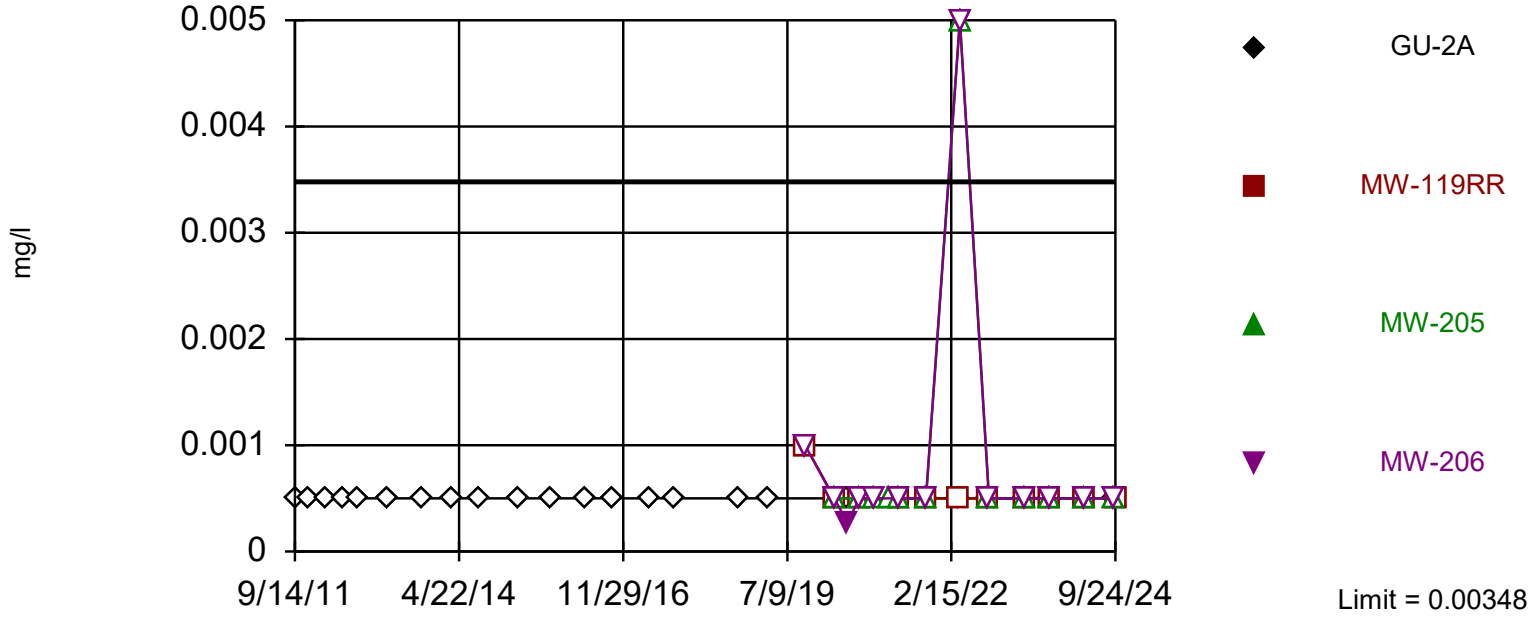
Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit - Detection Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 75 background values. 97.33% NDs. Annual per-constituent alpha = 0.004109. Individual comparison alpha = 0.0003431 (1 of 2).

Constituent: Beryllium Analysis Run 11/11/2024 10:48 AM

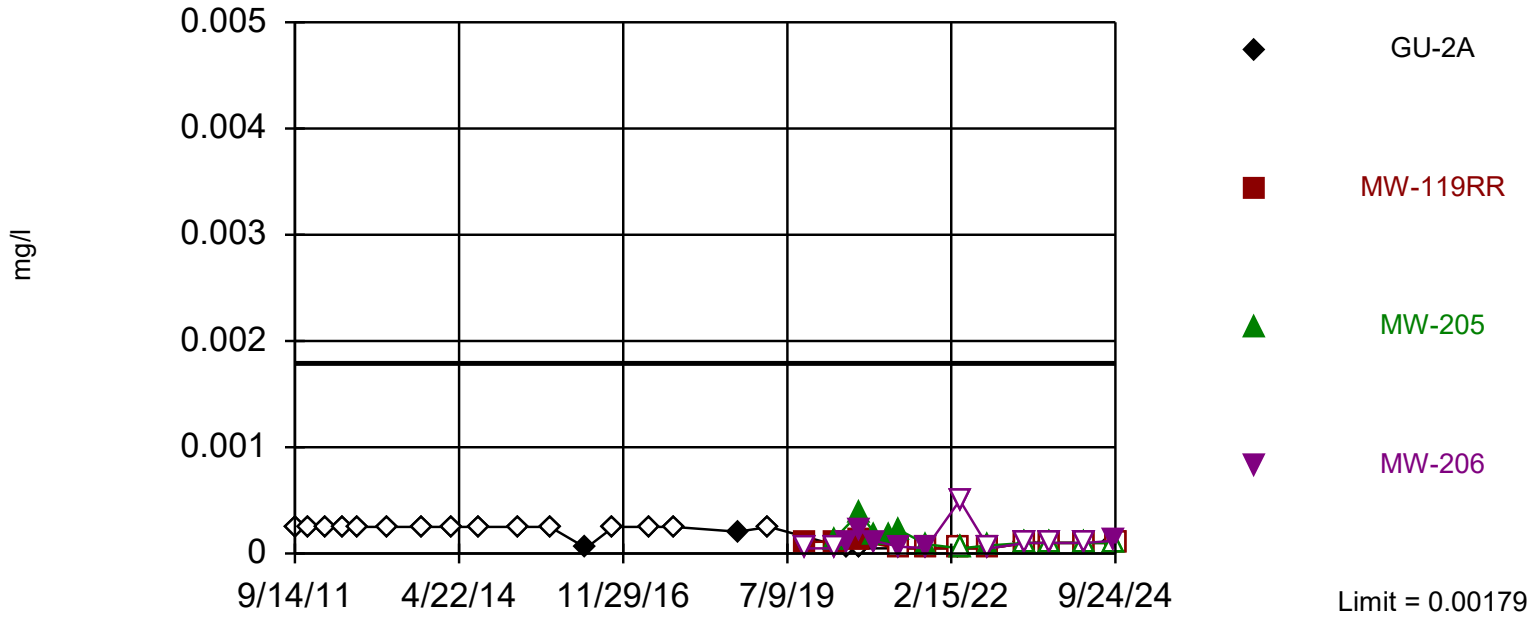
Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit - Detection Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 75 background values. 62.67% NDs. Annual per-constituent alpha = 0.004109. Individual comparison alpha = 0.0003431 (1 of 2).

Constituent: Cadmium Analysis Run 11/11/2024 10:48 AM

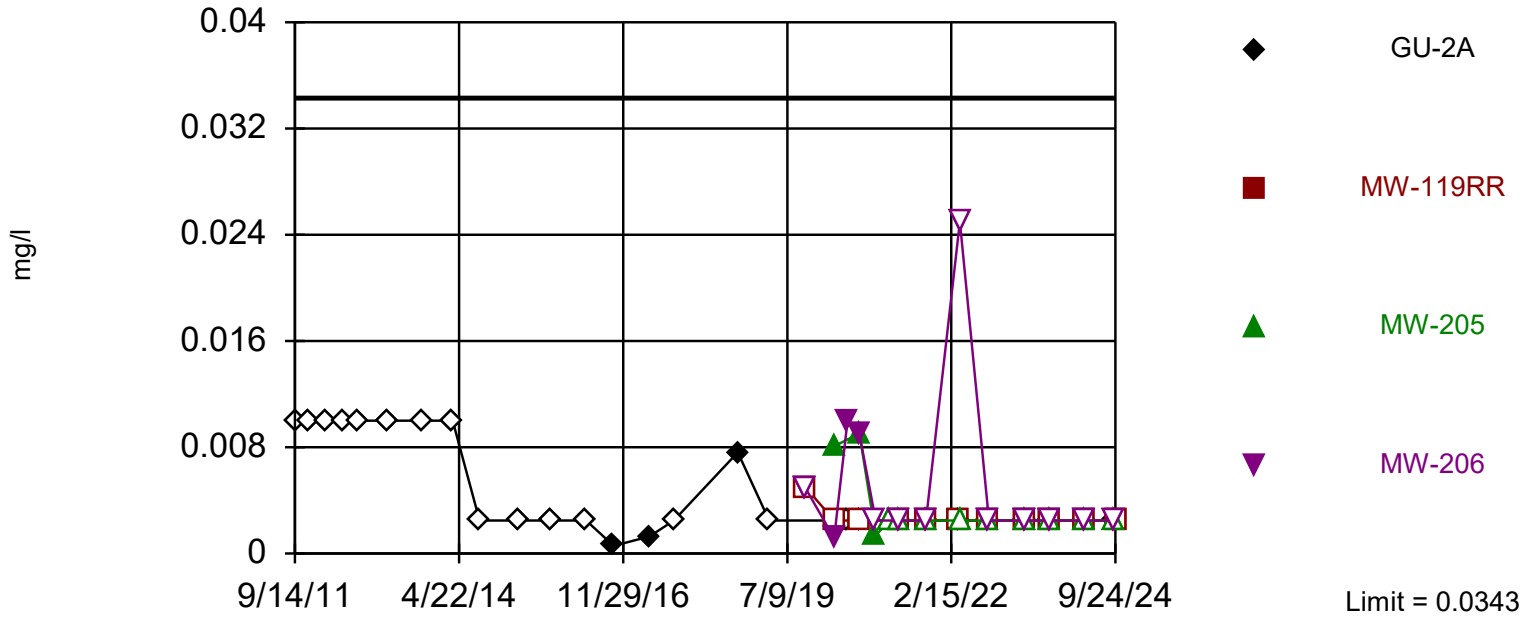
Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit - Detection Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 75 background values. 68% NDs. Annual per-constituent alpha = 0.004109. Individual comparison alpha = 0.0003431 (1 of 2).

Constituent: Chromium Analysis Run 11/11/2024 10:48 AM

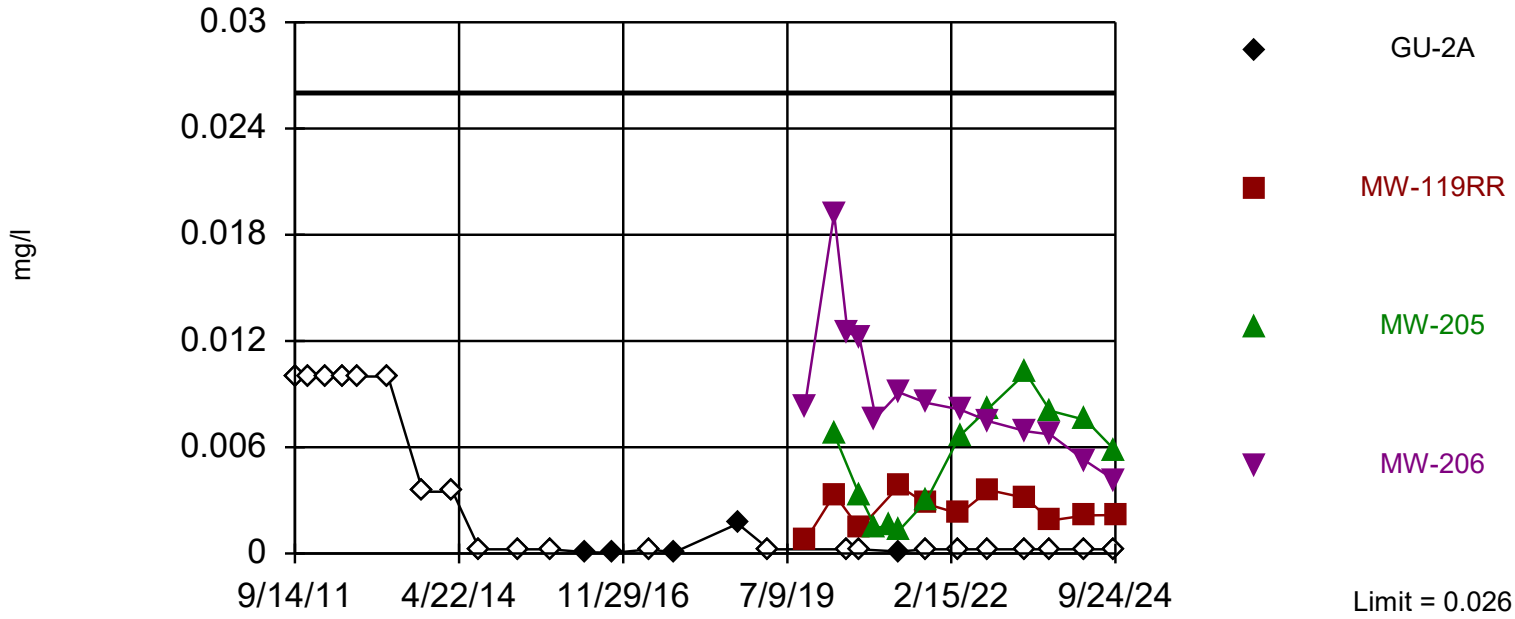
Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit - Detection Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 75 background values. 85.33% NDs. Annual per-constituent alpha = 0.004109. Individual comparison alpha = 0.0003431 (1 of 2).

Constituent: Cobalt Analysis Run 11/11/2024 10:48 AM

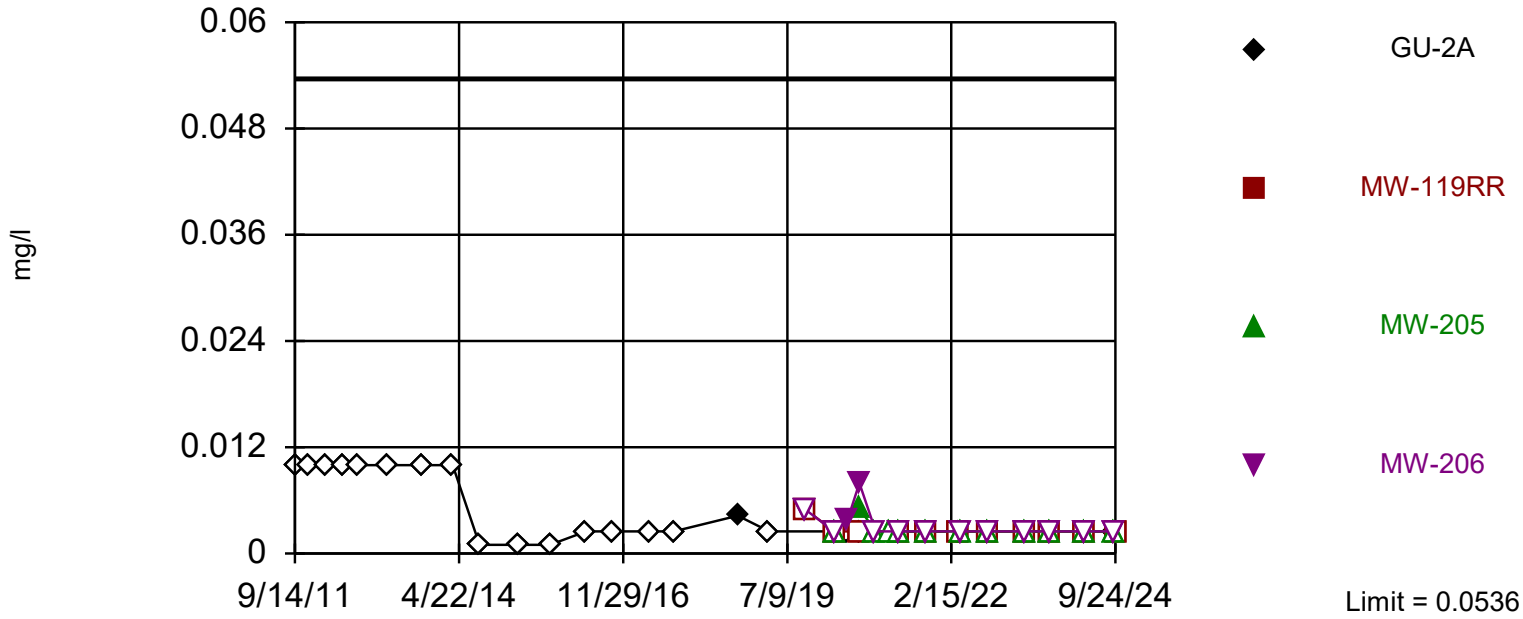
Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit - Detection Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 75 background values. 94.67% NDs. Annual per-constituent alpha = 0.004109. Individual comparison alpha = 0.0003431 (1 of 2).

Constituent: Copper Analysis Run 11/11/2024 10:48 AM

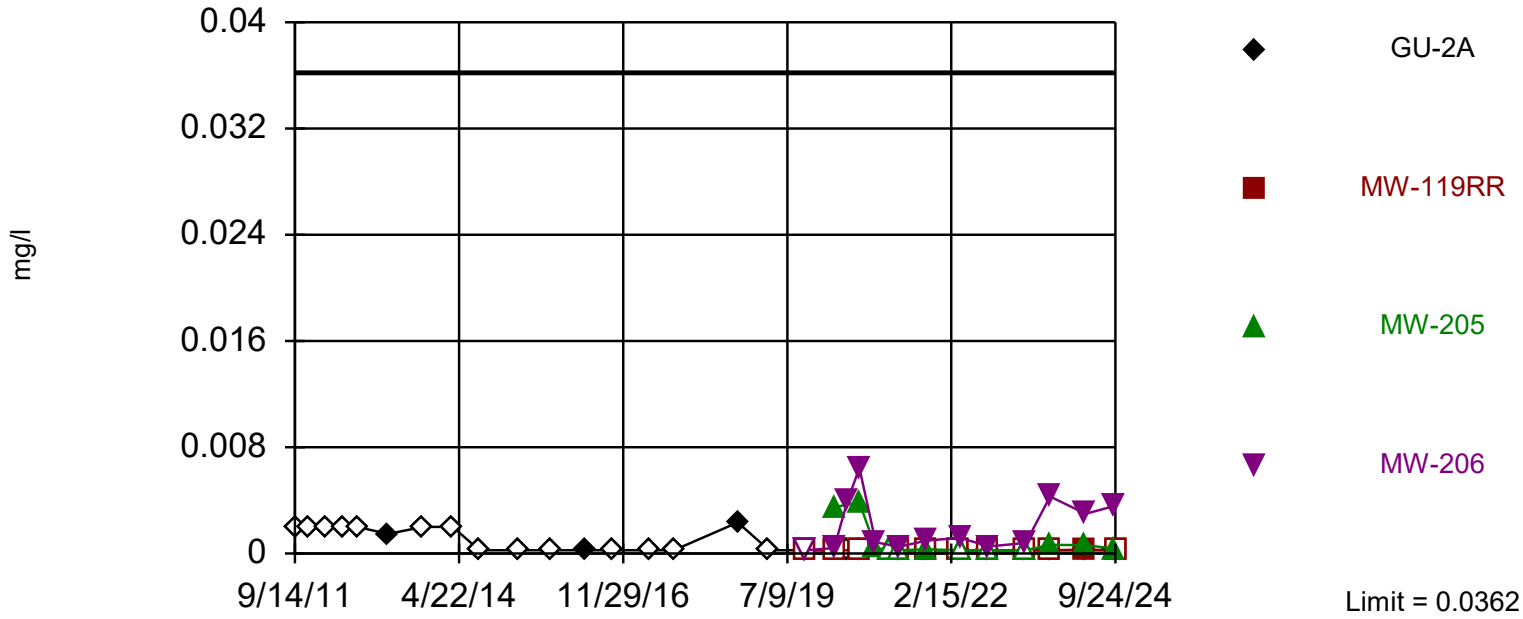
Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit - Detection Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 75 background values. 89.33% NDs. Annual per-constituent alpha = 0.004109. Individual comparison alpha = 0.0003431 (1 of 2).

Constituent: Lead Analysis Run 11/11/2024 10:48 AM

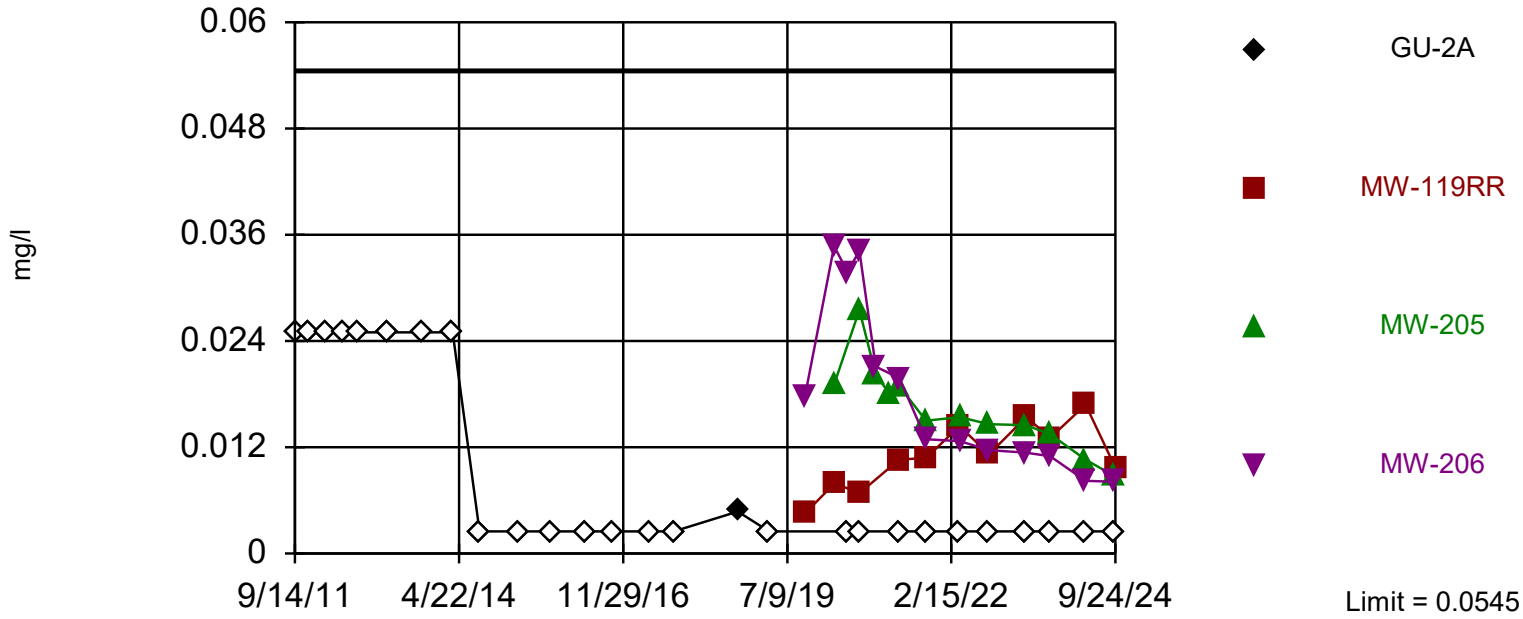
Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit - Detection Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 75 background values. 66.67% NDs. Annual per-constituent alpha = 0.004109. Individual comparison alpha = 0.0003431 (1 of 2).

Constituent: Nickel Analysis Run 11/11/2024 10:48 AM

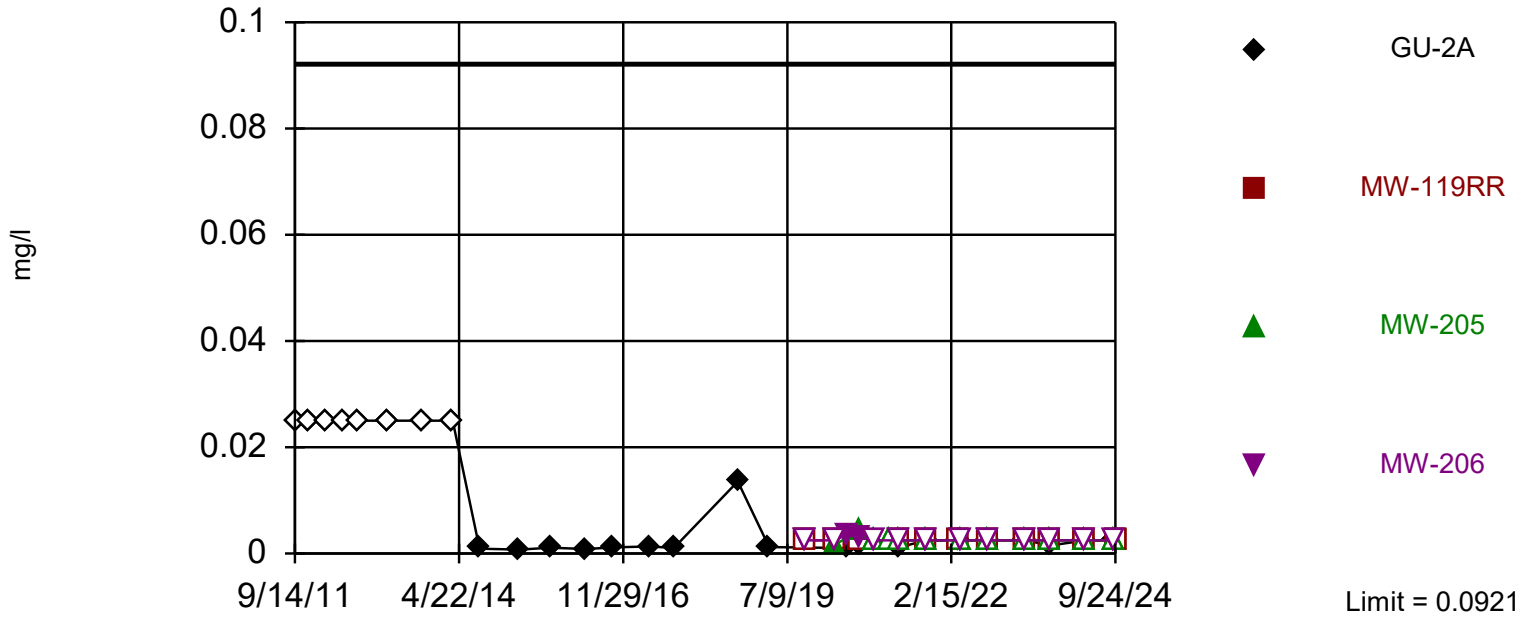
Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit - Detection Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 75 background values. 77.33% NDs. Annual per-constituent alpha = 0.004109. Individual comparison alpha = 0.0003431 (1 of 2).

Constituent: Vanadium Analysis Run 11/11/2024 10:48 AM

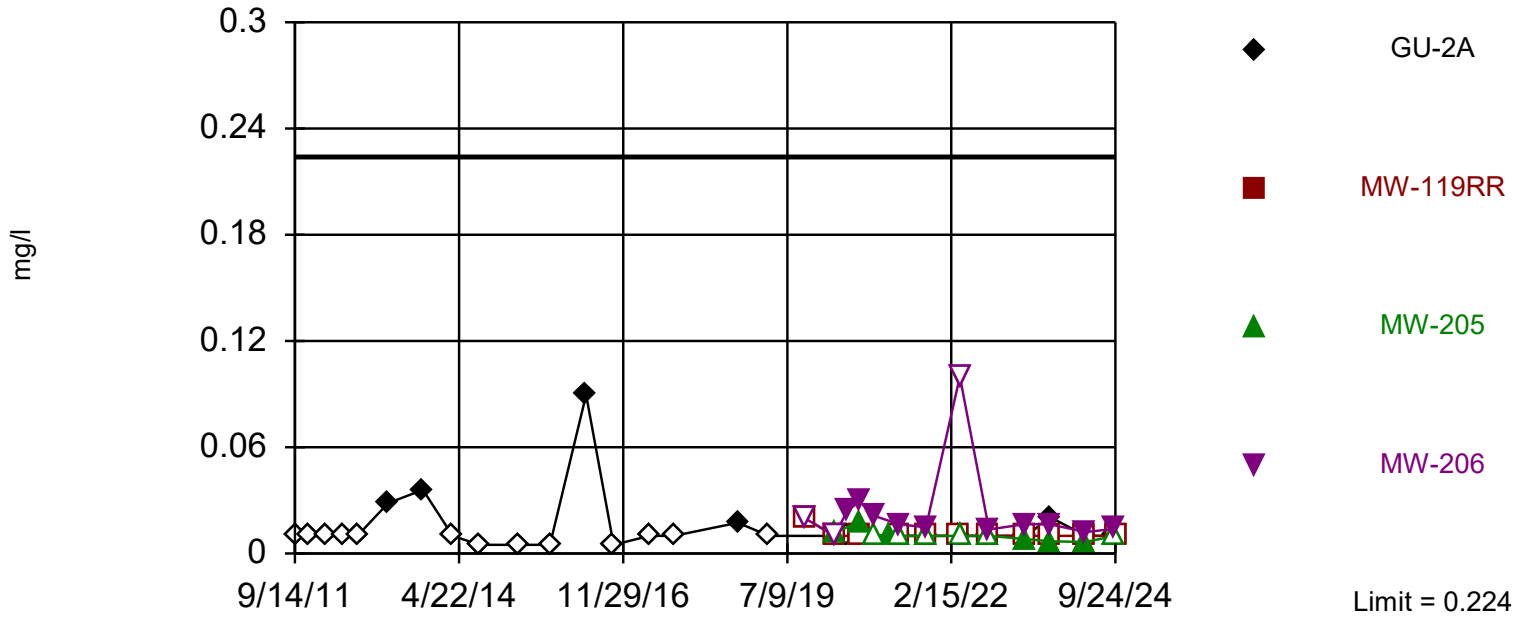
Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit - Detection Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 75 background values. 65.33% NDs. Annual per-constituent alpha = 0.004109. Individual comparison alpha = 0.0003431 (1 of 2).

Constituent: Zinc Analysis Run 11/11/2024 10:48 AM

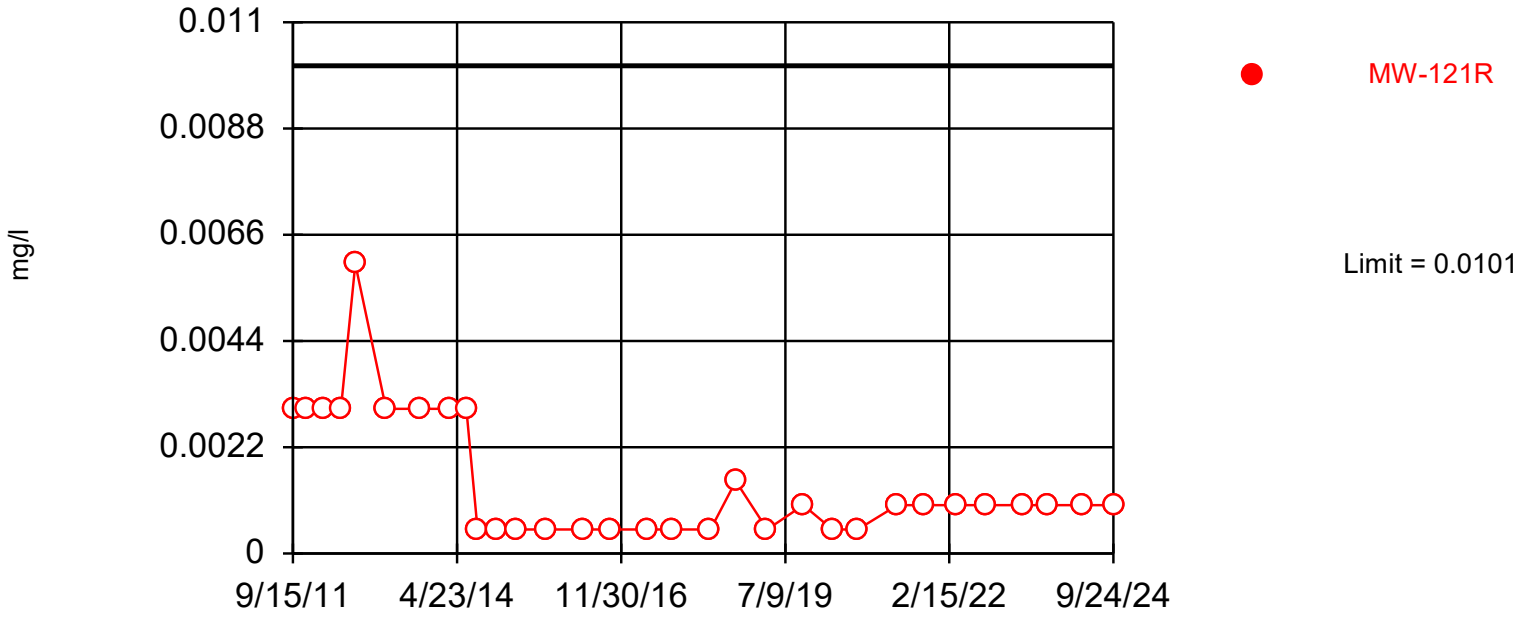
Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit - Assessment Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 75 background values. 98.67% NDs. Annual per-constituent alpha = 0.004109. Individual comparison alpha = 0.0003431 (1 of 2).

Constituent: Antimony Analysis Run 11/11/2024 10:55 AM

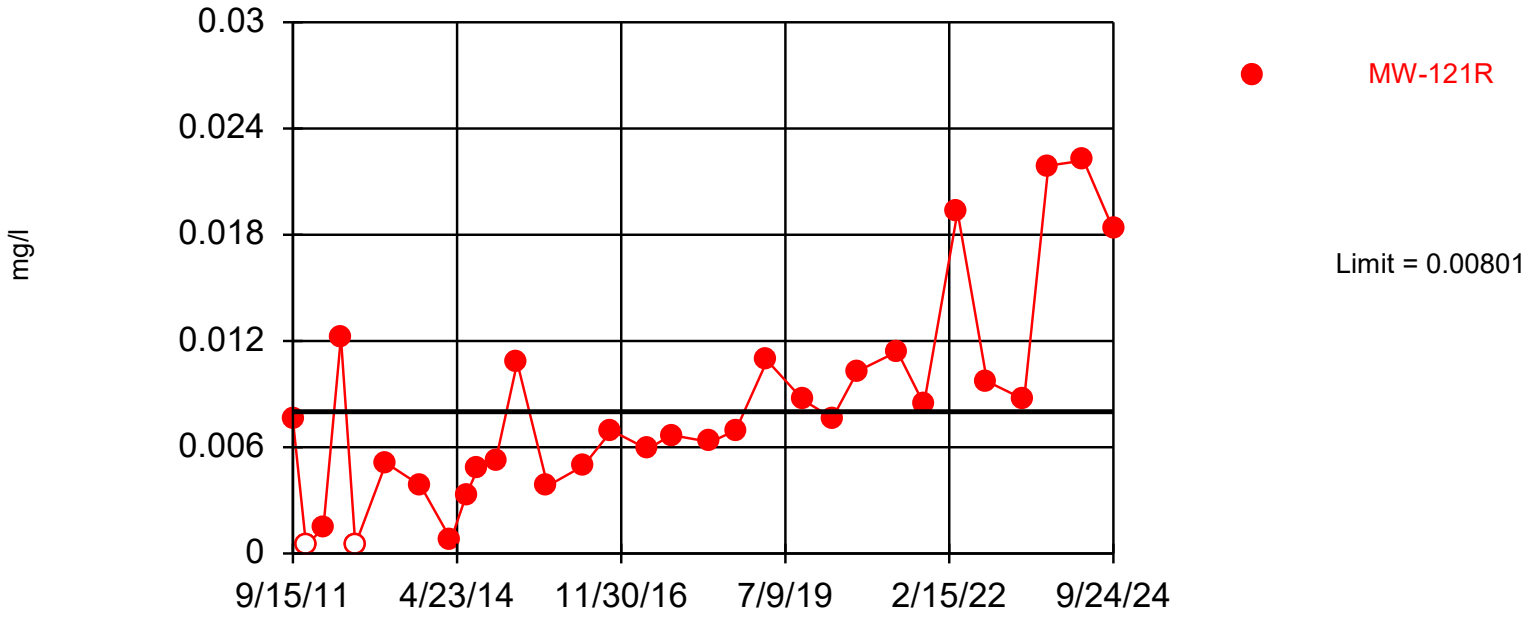
Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Hollow symbols indicate censored values.

Exceeds Limit: MW-121R

Prediction Limit - Assessment Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 75 background values. 90.67% NDs. Annual per-constituent alpha = 0.004109. Individual comparison alpha = 0.0003431 (1 of 2).

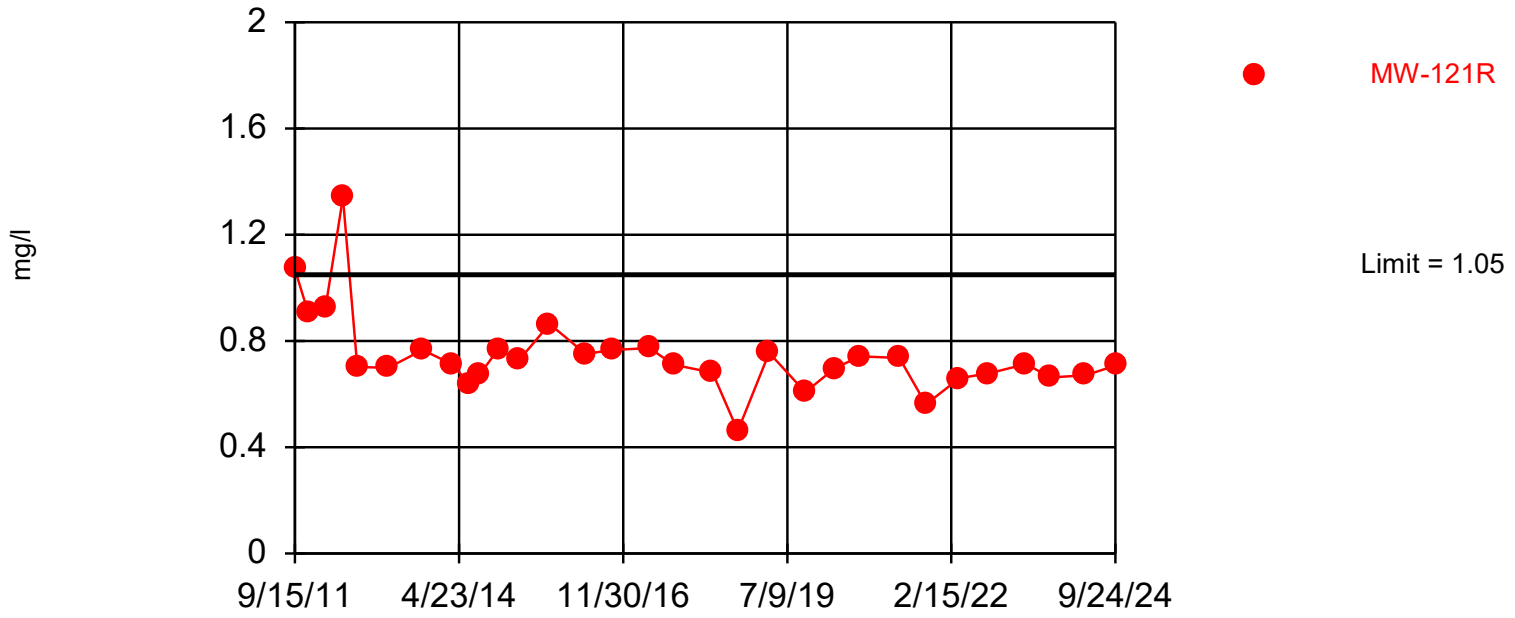
Constituent: Arsenic Analysis Run 11/11/2024 10:55 AM

Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Within Limit

Prediction Limit - Assessment Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 75 background values. Annual per-constituent alpha = 0.004109. Individual comparison alpha = 0.0003431 (1 of 2).

Constituent: Barium Analysis Run 11/11/2024 10:55 AM

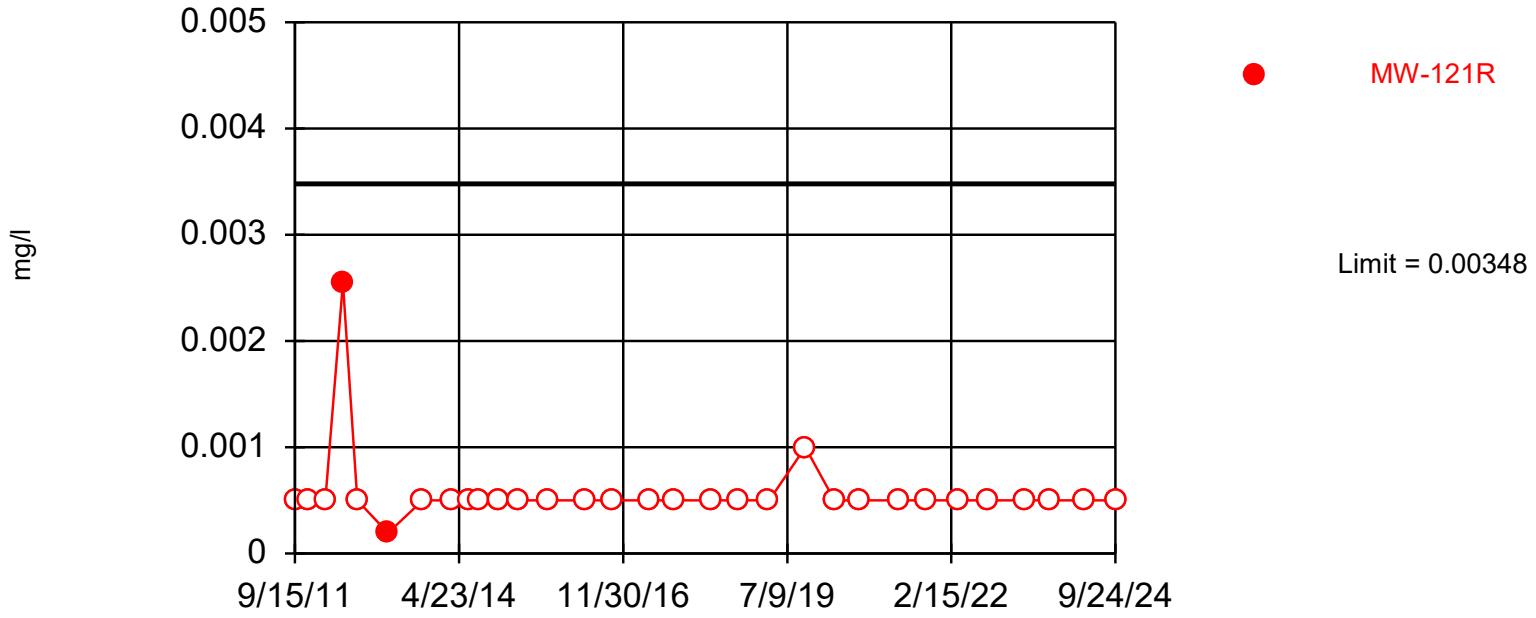
Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit - Assessment Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 75 background values. 97.33% NDs. Annual per-constituent alpha = 0.004109. Individual comparison alpha = 0.0003431 (1 of 2).

Constituent: Beryllium Analysis Run 11/11/2024 10:55 AM

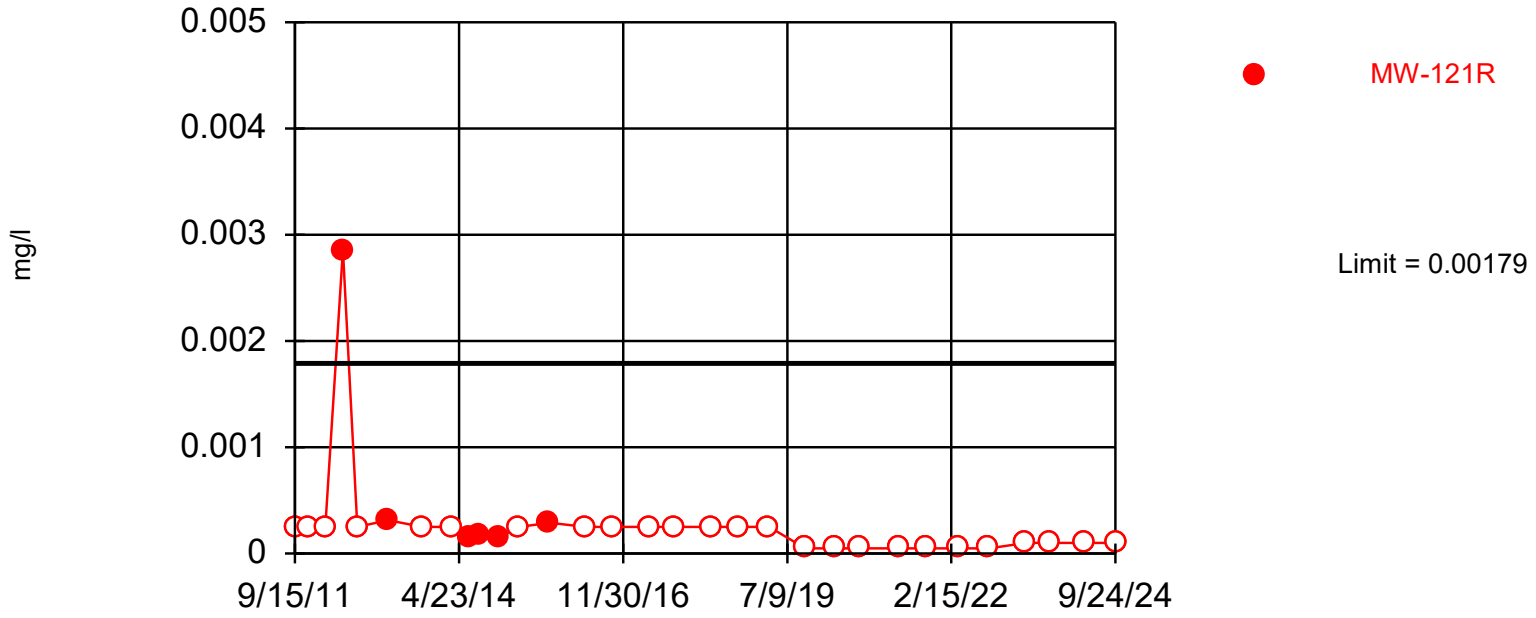
Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit - Assessment Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 75 background values. 62.67% NDs. Annual per-constituent alpha = 0.004109. Individual comparison alpha = 0.0003431 (1 of 2).

Constituent: Cadmium Analysis Run 11/11/2024 10:55 AM

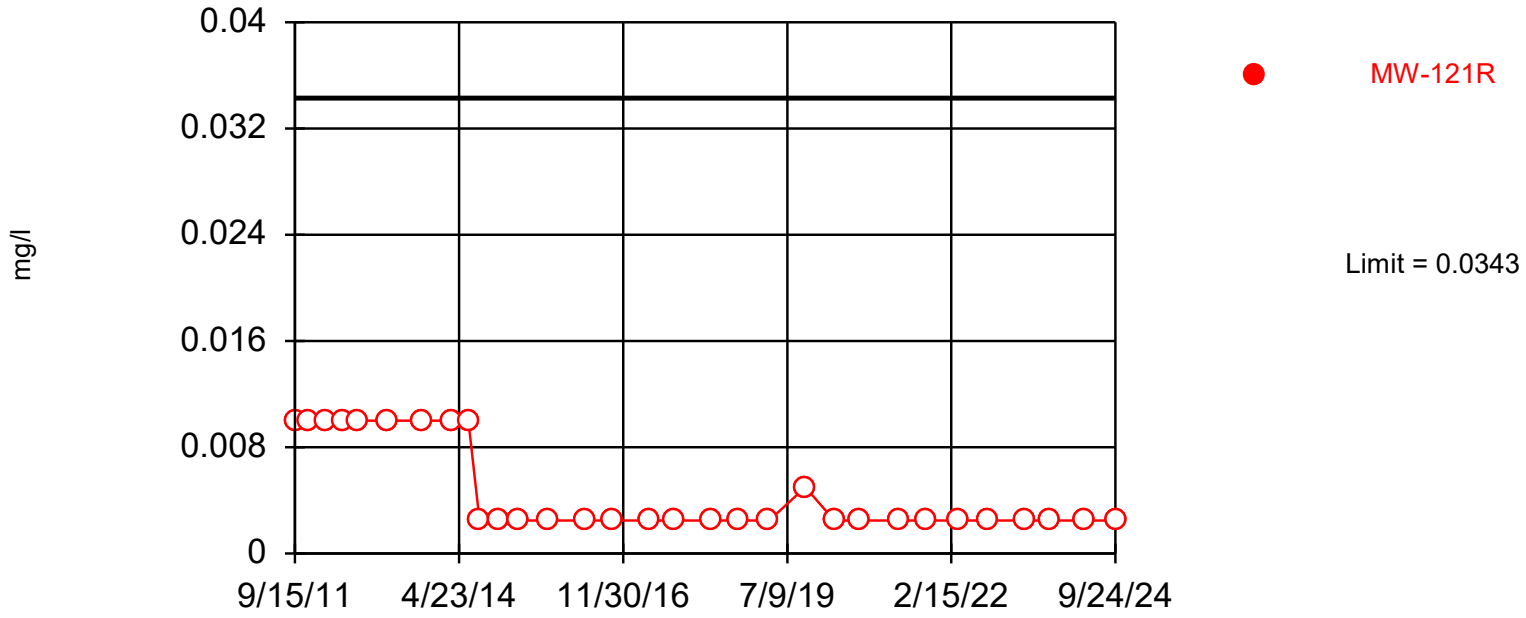
Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit - Assessment Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 75 background values. 68% NDs. Annual per-constituent alpha = 0.004109. Individual comparison alpha = 0.0003431 (1 of 2).

Constituent: Chromium Analysis Run 11/11/2024 10:55 AM

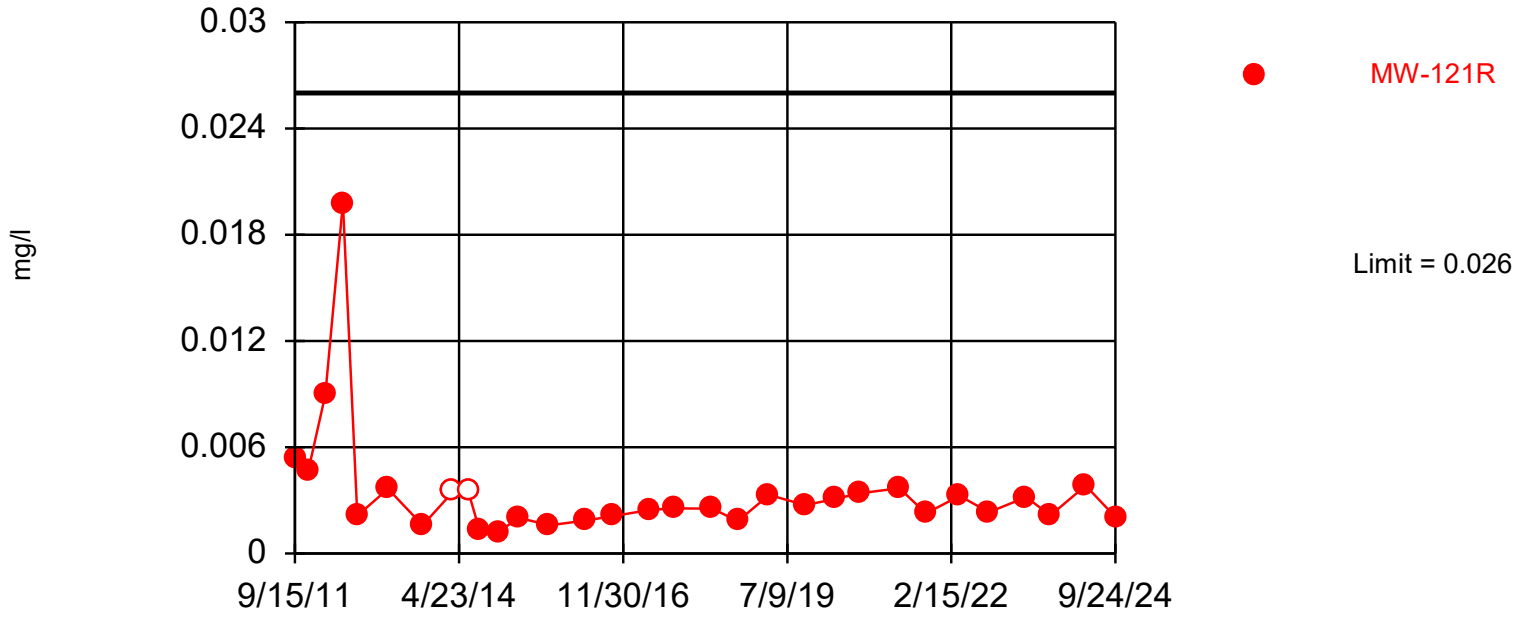
Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit - Assessment Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 75 background values. 85.33% NDs. Annual per-constituent alpha = 0.004109. Individual comparison alpha = 0.0003431 (1 of 2).

Constituent: Cobalt Analysis Run 11/11/2024 10:55 AM

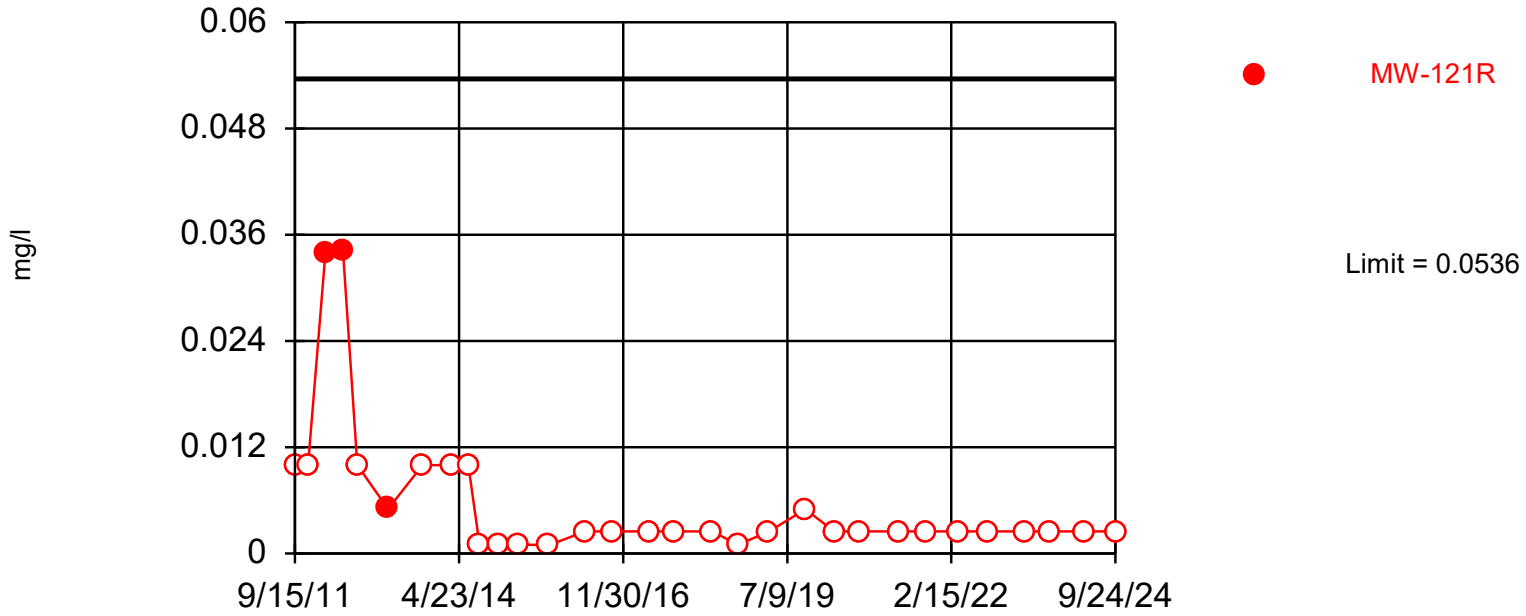
Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit - Assessment Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 75 background values. 94.67% NDs. Annual per-constituent alpha = 0.004109. Individual comparison alpha = 0.0003431 (1 of 2).

Constituent: Copper Analysis Run 11/11/2024 10:55 AM

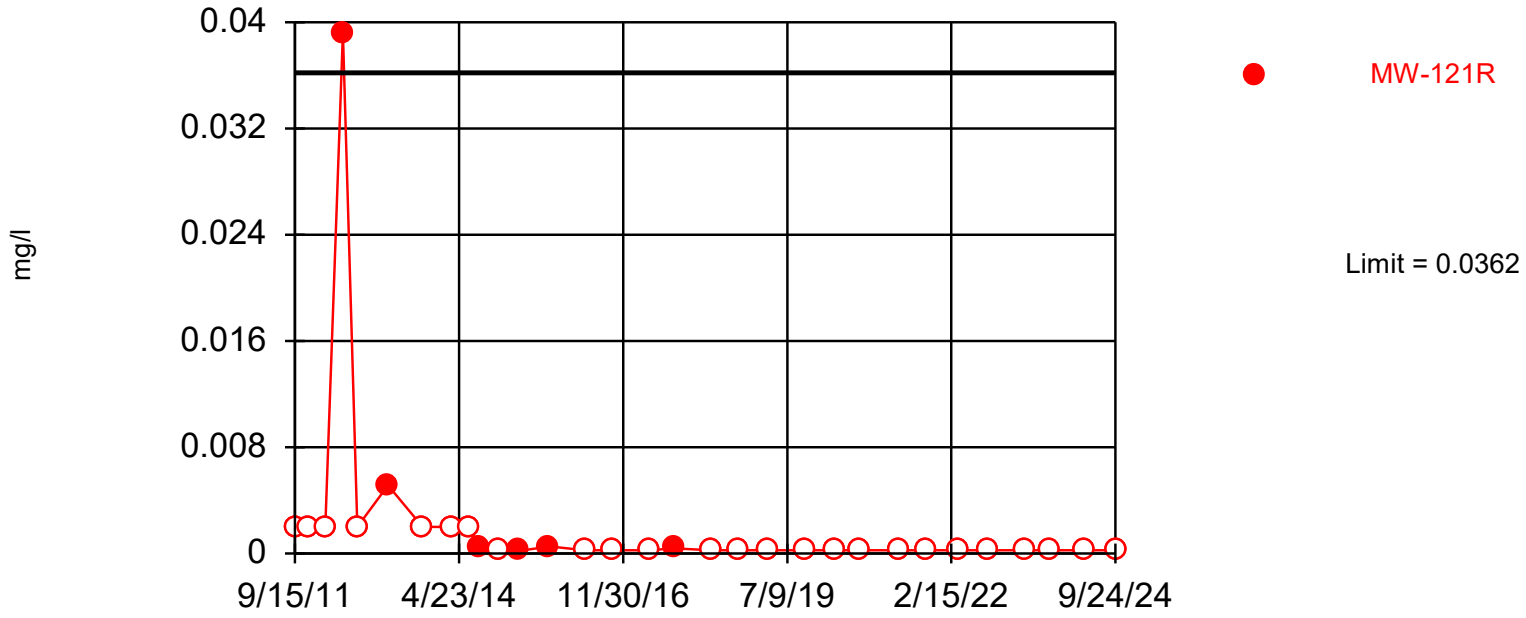
Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit - Assessment Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 75 background values. 89.33% NDs. Annual per-constituent alpha = 0.004109. Individual comparison alpha = 0.0003431 (1 of 2).

Constituent: Lead Analysis Run 11/11/2024 10:55 AM

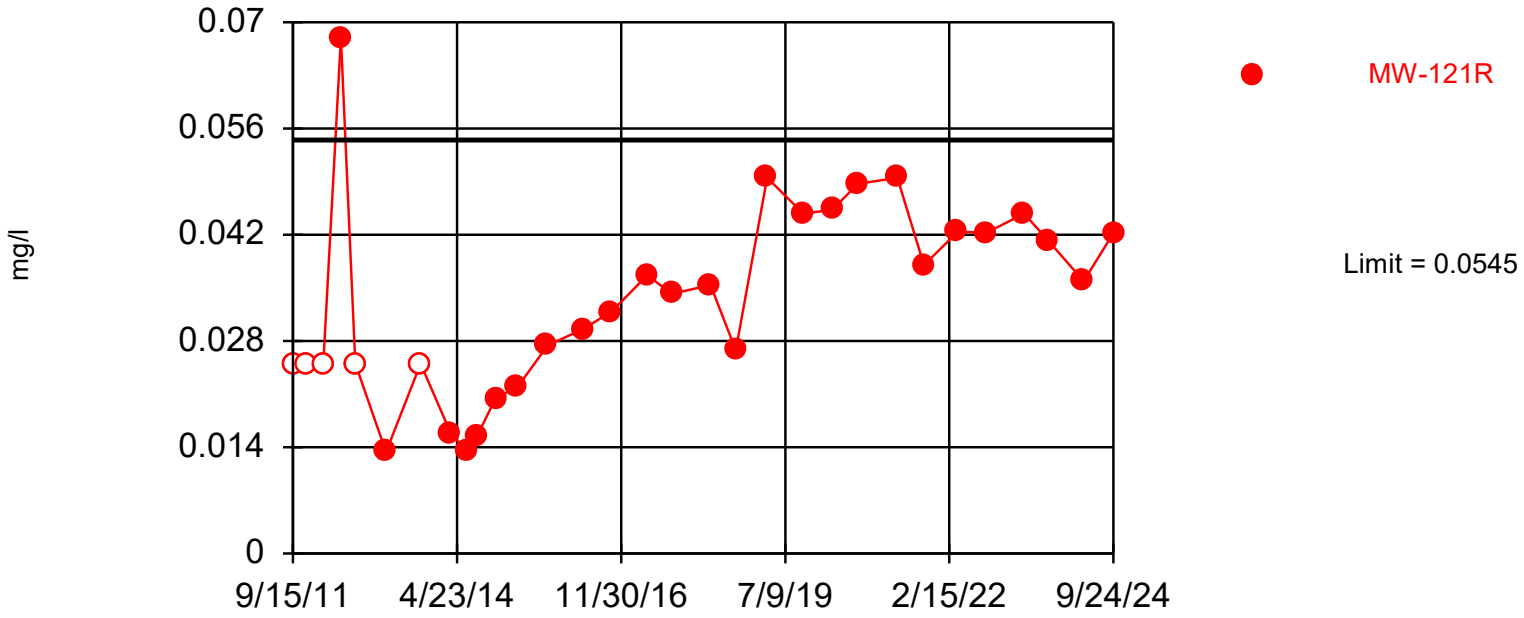
Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit - Assessment Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 75 background values. 66.67% NDs. Annual per-constituent alpha = 0.004109. Individual comparison alpha = 0.0003431 (1 of 2).

Constituent: Nickel Analysis Run 11/11/2024 10:55 AM

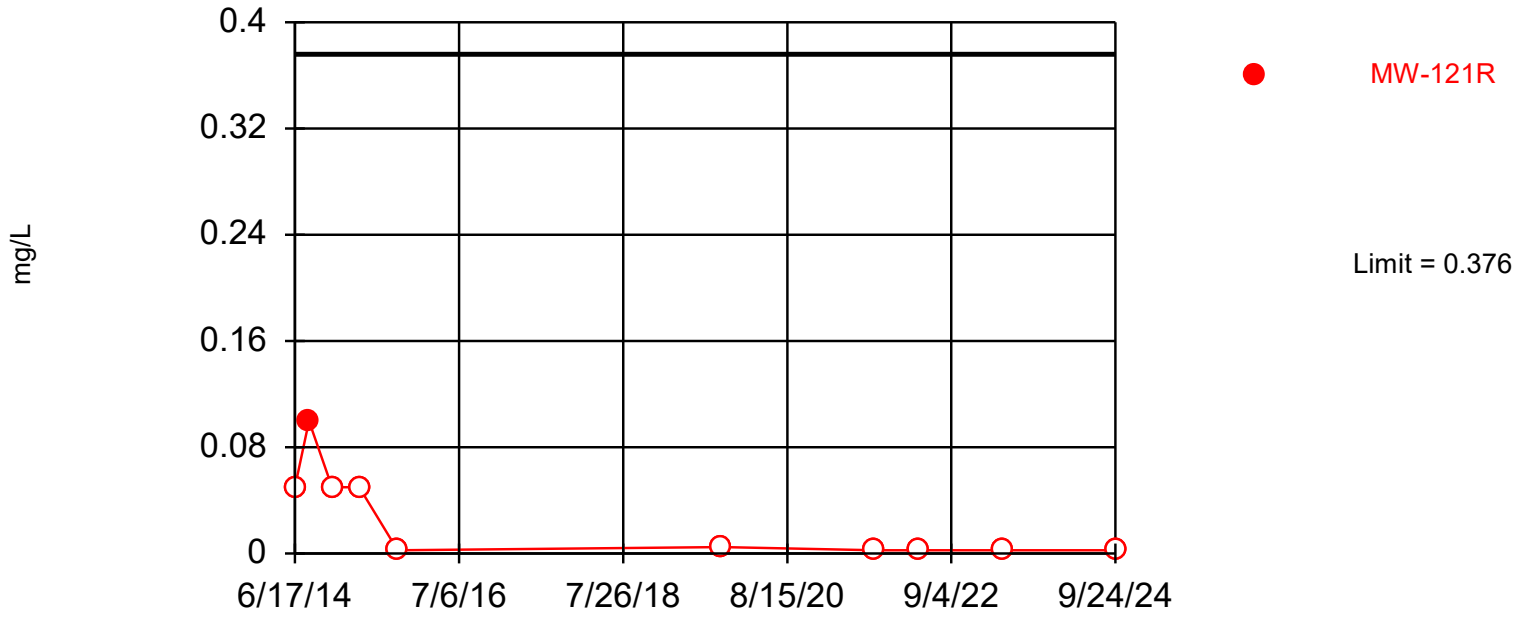
Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit - Assessment Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 55 background values. 92.73% NDs. Annual per-constituent alpha = 0.007546. Individual comparison alpha = 0.000631 (1 of 2).

Constituent: Tin Analysis Run 11/11/2024 10:56 AM

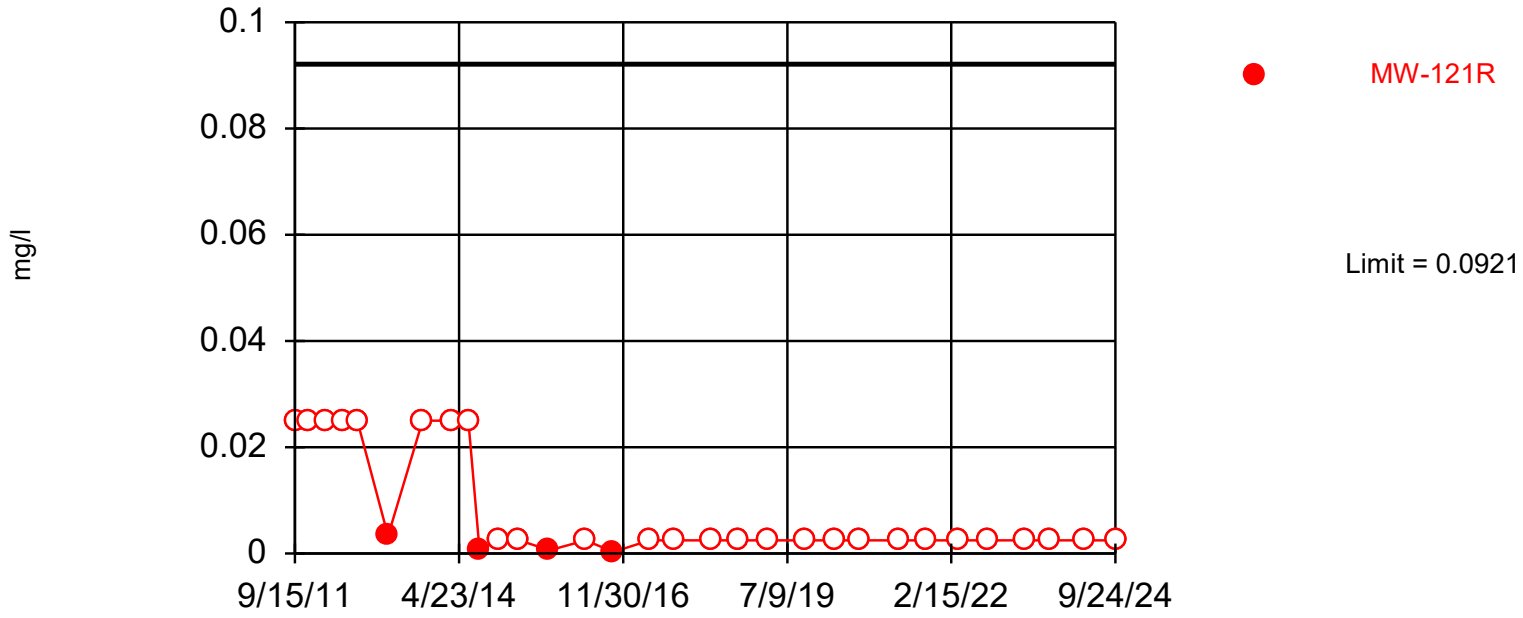
Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit - Assessment Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 75 background values. 77.33% NDs. Annual per-constituent alpha = 0.004109. Individual comparison alpha = 0.0003431 (1 of 2).

Constituent: Vanadium Analysis Run 11/11/2024 10:56 AM

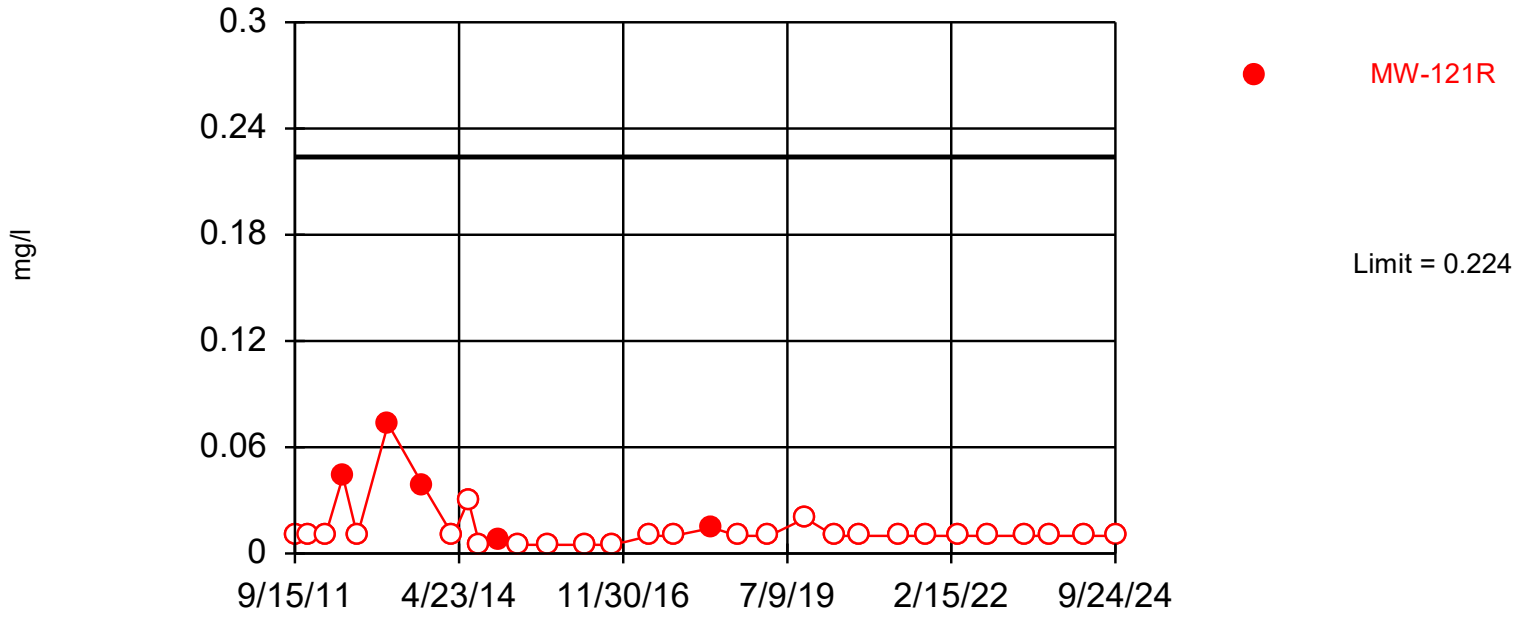
Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Hollow symbols indicate censored values.

Within Limit

Prediction Limit - Assessment Monitoring

Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 75 background values. 65.33% NDs. Annual per-constituent alpha = 0.004109. Individual comparison alpha = 0.0003431 (1 of 2).

Constituent: Zinc Analysis Run 11/11/2024 10:56 AM

Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Attachment 4

Sanitas Report Output for Double Quantification Rule Evaluations

Data Screening - Detection Monitoring

Analysis Run 11/11/2024 11:09 AM

Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

A listing of detects for 205 constituents in GU-2A, MW-119RR, MW-200, MW-205, and MW-206 in September 2024:

-none-

Data Screening - Assessment Monitoring

Analysis Run 11/11/2024 11:07 AM

Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

A listing of detects for 205 constituents in MW-121R in September 2024:

Benzene, MW-121R, 9/24/2024: 1 ug/l
cis-1,2-Dichloroethene, MW-121R, 9/24/2024: 8.47 ug/l

Attachment 5
Sanitas Report Output for Confidence Interval Calculations
Assessment Mode

Confidence Interval - Assessment Mode [1]

Constituent Name	Well	Upper Limit	Lower Limit	Compliance Limit [2]	Exceed	N	Mean	Standard Deviation	CV	a to Achieve 50% Power at R=1.5 [3,4]	a to Achieve 80% Power at R=2.0 [3,4]	% Non-detects	Non-detect Adjustment	Transformation	Alpha	Method [3,4]
Assessment Monitoring Locations																
cis-1,2-Dichloroethene (ug/l)	MW-121R	0.010	0.005	0.01	No	31	0.008	0.006	0.70	<0.01	<0.01	6	None	No	0.01	NP (normality)
Benzene (ug/l)	MW-121R	1.02	0.25	5	No	32	0.67	0.40	0.60	<0.01	<0.01	34	None	No	0.01	NP (normality)
cis-1,2-Dichloroethene (ug/l)	MW-121R	18.8	1.9	70	No	32	11.1	8.8	0.79	<0.01	<0.01	16	None	No	0.01	NP (normality)

[1] Under assessment mode, an SSL is indicated when the lower confidence limit exceeds the groundwater protection standard (compliance limit).

[2] Value is the 40 CFR Part 141 Safe Drinking Water Act MCL or the IAC 567 Chapter 137 Statewide Standard for a Protected Groundwater Source.

[3] For parametric confidence intervals: Except where otherwise indicated, based on Unified Guidance Equation 22.2, i.e., $\alpha \sim 1 - F_{T,n-1}\left(\frac{(R-1)\sqrt{n}}{R \cdot \widehat{CV}} - t_{1-\beta,n-1}\right)$

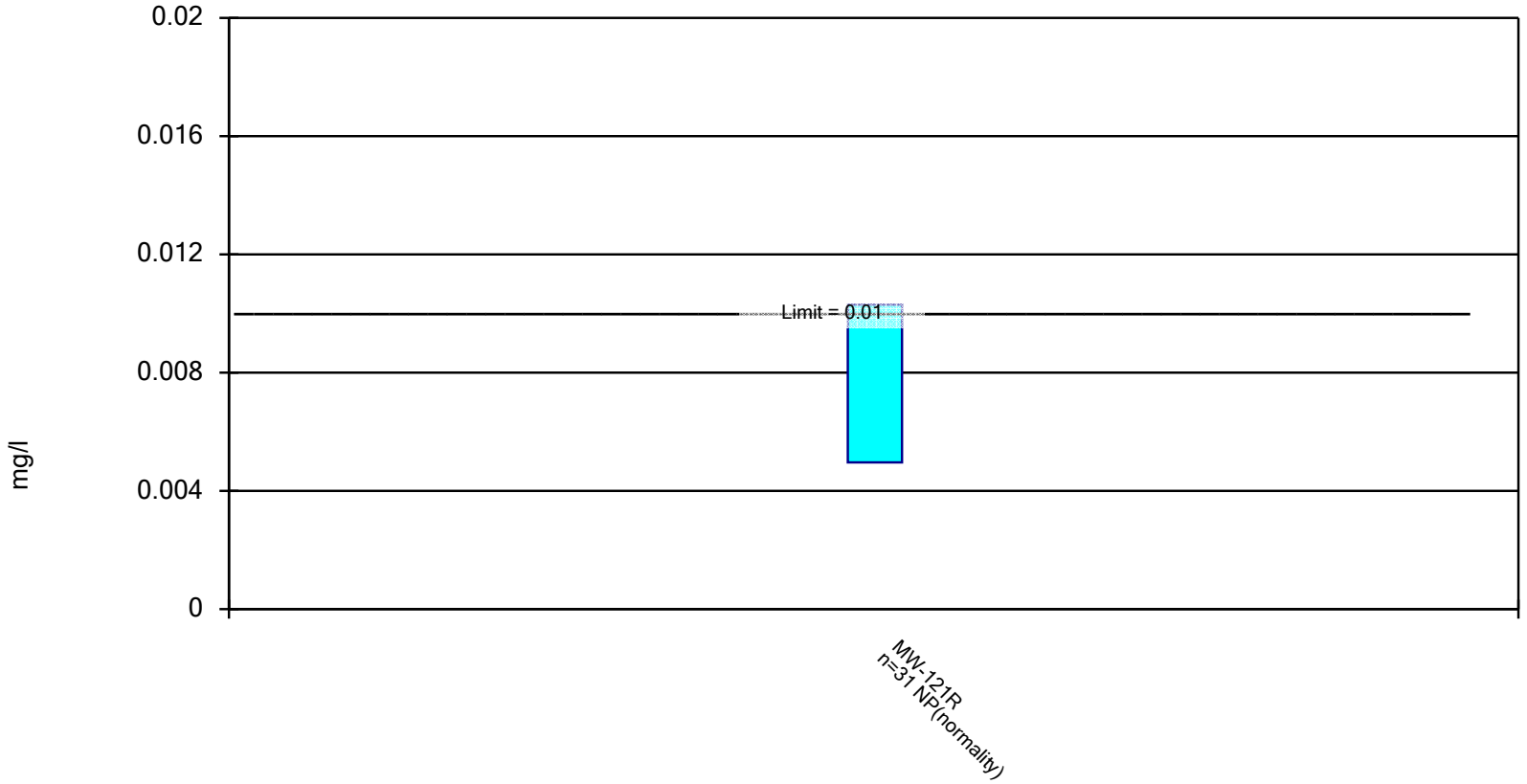
where R is the desired risk ratio, n is the sample size, CV is the estimated sample coefficient of variation, $t_{1-b,n-1}$ is the (1−b) Student's t-quantile with (n−1) degrees of freedom, and F is the cumulative (central) Student's t-distribution function.

[4] For non-parametric confidence intervals: Based on Unified Guidance Equation 22.1, i.e., $1 - \beta = G_{T,n-1}\left(t_{1-\alpha,n-1} \middle| \Delta = \sqrt{n}(R-1)\right)$

where R is the desired risk ratio, $t_{1-a,n-1}$ is the (1−a) Student's t-quantile with (n−1) degrees of freedom and G represents the cumulative non-central t-distribution with (n−1) degrees of freedom and noncentrality parameter D.

Non-Parametric Confidence Interval - Assessment Monitoring

Compliance Limit is not exceeded. Per-well alpha = 0.01.

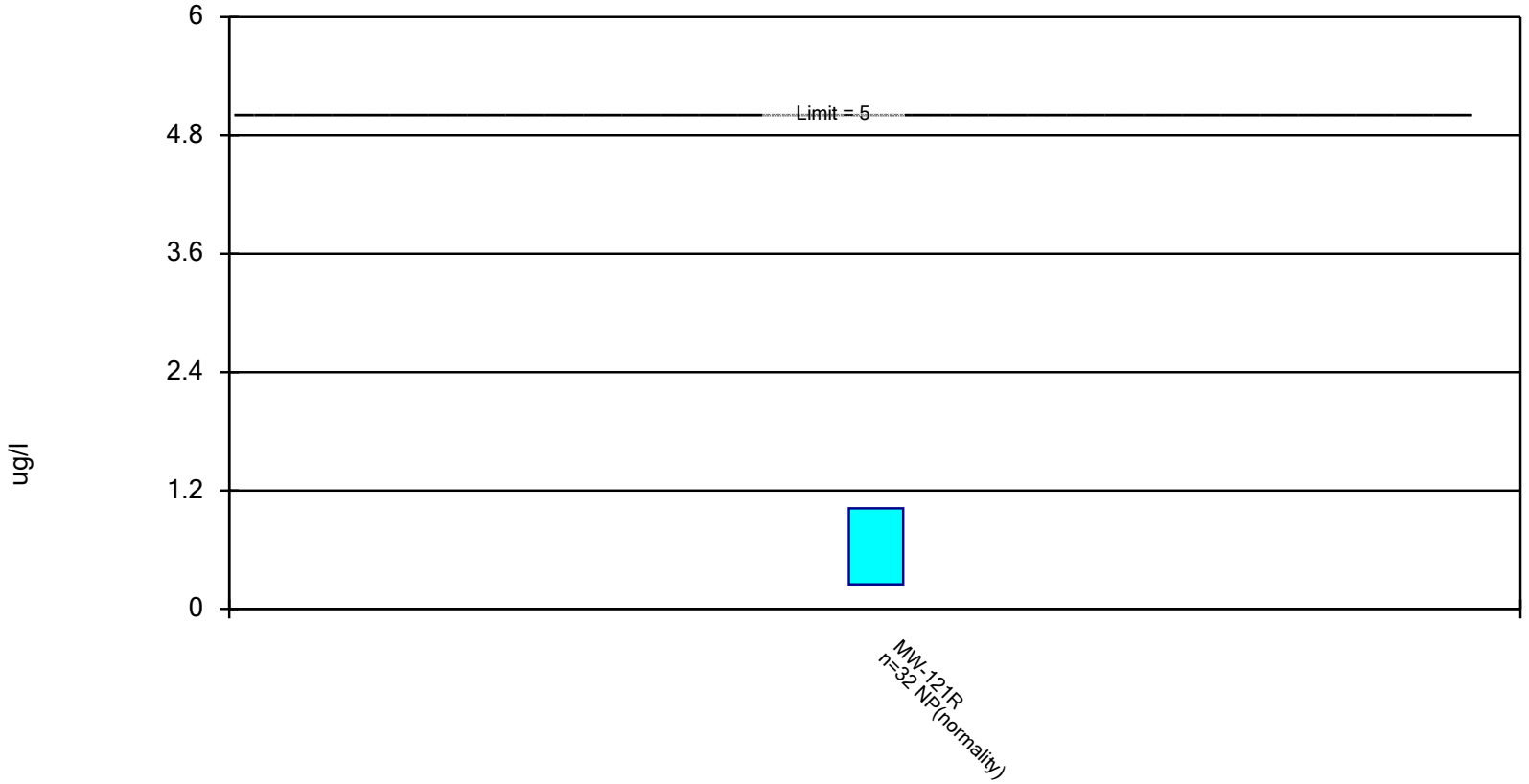


Constituent: Arsenic Analysis Run 11/11/2024 12:30 PM

Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Non-Parametric Confidence Interval - Assessment Monitoring

Compliance Limit is not exceeded. Per-well alpha = 0.01.

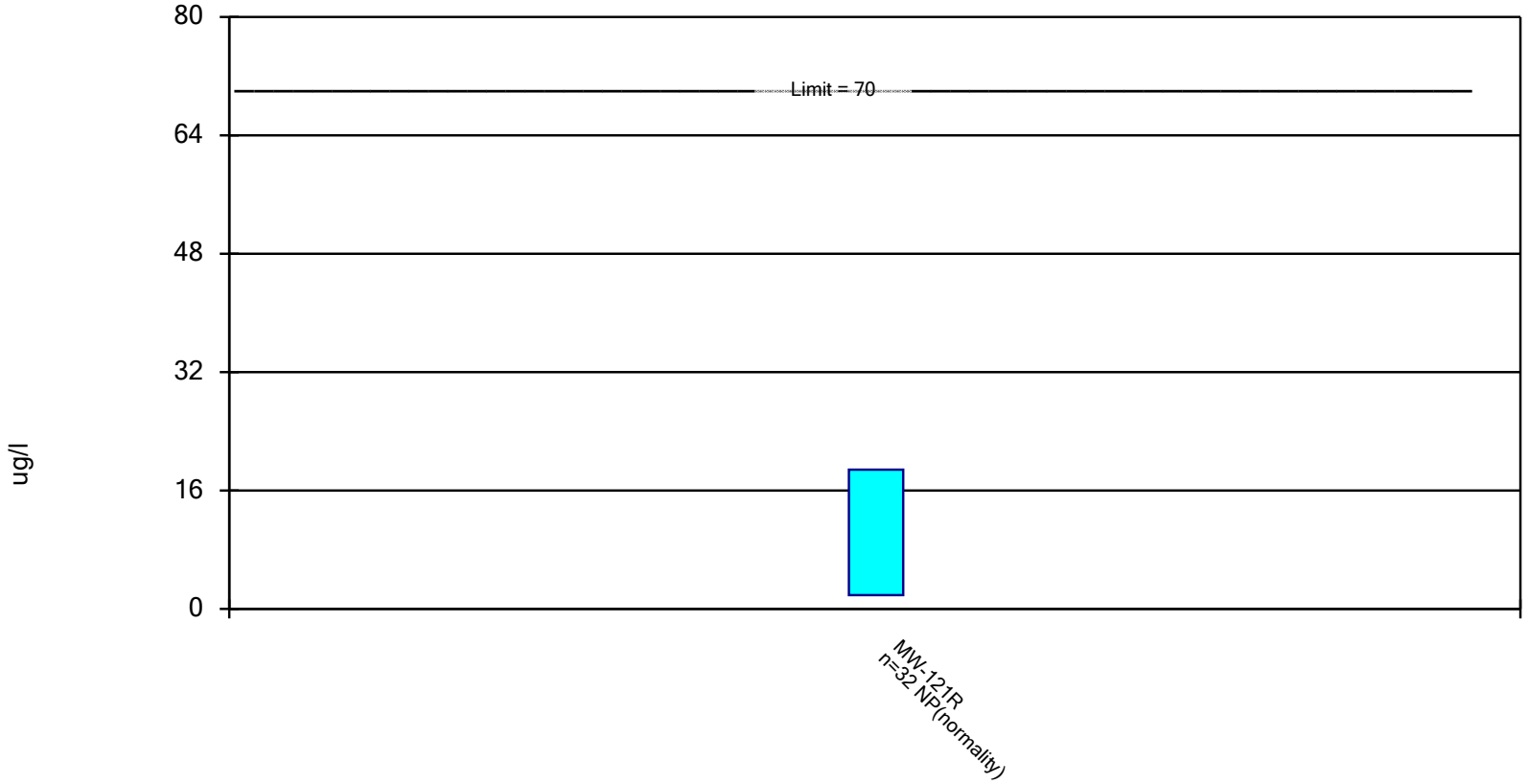


Constituent: Benzene Analysis Run 11/11/2024 12:30 PM

Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Non-Parametric Confidence Interval - Assessment Monitoring

Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: cis-1,2-Dichloroethene Analysis Run 11/11/2024 12:30 PM

Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Attachment 6
Effective Power and Site-Wide False Positive Rate Discussion
Power Curve Evaluation

Effective Power and Site-Wide False Positive Rate

Statistical power refers to the ability of a test to identify real increases in concentration levels given they exist. The Unified Guidance defines the effective power as the "probability of detecting contamination in the monitoring network when one and only one well-constituent pair is contaminated." It further states that any statistical test procedure with effective power at least as high as the appropriate USEPA Reference Power Curve (ERPC) should be considered to have reasonable power.

The Unified Guidance gives the following criteria for comparing the effective power to the ERPC:

If the effective power first exceeds the ERPC at a mean concentration increase no greater than 3 background standard deviations, the power is labeled 'good;' if the effective power first exceeds the ERPC at a mean increase between 3 and 4 standard deviations, the power is considered 'acceptable;' and if the first exceedance of the ERPC does not occur until an increase greater than 4 standard deviations, the power is considered 'low.'

Effective power curves were developed with Sanitas for the 1-of-2 prediction limit plan, with power curves illustrated below. Based on the power curves, the intrawell and interwell non-parametric prediction limits currently have good power ratings.

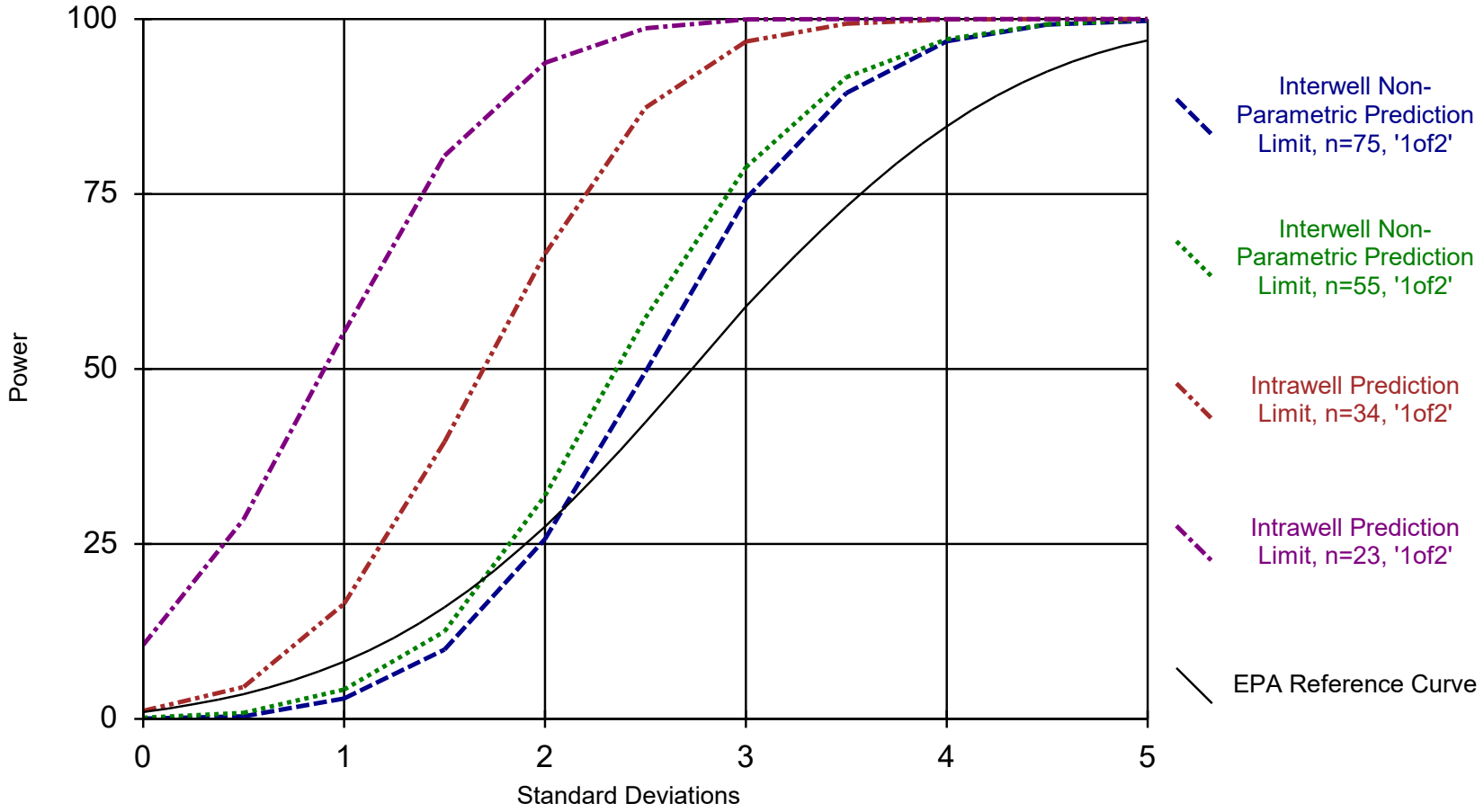
The Unified Guidance "strongly encourages use of a comprehensive design strategy to account for both the cumulative site-wide false positive rate (SWFPR) and effective power to identify real exceedances." The Unified Guidance recommends and uses an annual SWFPR target of 10%. The current annual SWFPR based on the 1-of-2 prediction limit plan may be calculated using the basic subdivision principle discussed in Unified Guidance Sections 6.2.2, 19.2.1 and 19.4.

Currently, comparisons are made at 6 compliance locations and semiannually with a total of 147 single tests annually.

The Sanitas prediction limit report output of Attachment 3 includes annual individual test α-levels for each well/constituent pair. The α-levels reported by Sanitas account for the 1-of-2 plan, as well as two semiannual events conducted at the site.

The cumulative annual SWFPR can be approximated directly from the α-levels reported in the Sanitas output as $\text{SWFPR} = 1 - \prod_{i=1}^{74}(1-\alpha_i)^2 = 0.084 \approx 8\%$. The current annual SWFPR is in compliance with the Unified Guidance target 10% false positive.

Power Curve



Analysis Run 11/11/2024 3:13 PM

Carroll County Landfill Client: Foth Data: Carroll West Fall 2024 Evaluation

Attachment 7
References

References

Foth Infrastructure & Environment, LLC (Foth), 2024. *2023 Annual Water Quality Report, Carroll County Landfill Western Expansion Area, IDNR Permit No. 14-SDP-01-74P, Project I.D.: 24C002.00.* March 1. [Doc. No. 109295].

Iowa Department of Natural Resources (IDNR). Letter to Mary Wittry 5 July 2024. "*2023 Carroll County Sanitary Landfill, Annual Water Quality Report – Western Expansion Area, Permit #14-SDP-01-74P*." [Doc# 107375].

United States Environmental Protection Agency (USEPA), 1997. *The Lognormal Distribution in Environmental Applications*. EPA/600/R97/006. Office of Solid Waste and Emergency Response, Washington, D.C.

USEPA, 2006. *On the Computation of a 95% Upper Confidence Limit of the Unknown Population Mean Based Upon Data Sets with Below Detection Limit Observations*. EPA/600/R-06/022. Office of Research and Development, Washington, D.C.

USEPA, 2009. *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance*. EPA 530-R-09-007. Office of Resource Conservation and Recovery, Program Implementation and Information Division, Washington, D.C.

Appendix C

Leachate Collection System Data

Leachate Sample Analytical Results
Leachate Line Cleaning and Inspection Report

OPERATIONAL PERMIT SYSTEM

INDUSTRIAL/COMMERCIAL CONTRIBUTOR MONITORING REPORT

January, 2024 CARROLL COUNTY SOLID WASTE MANAGEMENT COMMISSION

		WASTEWATER PARAMETERS ANALYZED							
DATE	FLOW (MGD)	PH SU	TEMP 0C	TSS LBS/DAY	BOD5 LBS/DAY	NH3 LBS/DAY	TKN MG/L	TKN LBS/DAY	COPPER MG/L
1	0.001700			0	0.00	0		0	
7	0.001600			0	0.00	0		0	
8	0.002000	6.8	9.7	0	3.54	15	1586	26	0.0177
4	0.001700			0	0.00	0		0	
5	0.001600			0	0.00	0		0	
8	0.002200			0	0.00	0		0	
7	0.001600			0	0.00	0		0	
8	0.001600			0	0.00	0		0	
5	0.002200			0	0.00	0		0	
13	0.001600	6.8	8.5	0	2.71	12	1629	22	0.025
13	0.002000			0	0.00	0		0	
12	0.001600			0	0.00	0		0	
13	0.001500			0	0.00	0		0	
14	0.001600			0	0.00	0		0	
26	0.001600			0	0.00	0		0	
16	0.001700			0	0.00	0		0	
13	0.001600	8.4	4.3	0	3.32	0	1601	21	0.0045
16	0.001600			0	0.00	0		0	
13	0.001400			0	0.00	0		0	
20	0.001600			0	0.00	0		0	
27	0.001600			0	0.00	0		0	
27	0.001600			0	0.00	0		0	
13	0.001700			0	0.00	0		0	
24	0.001600	8.2	10.9	0	3.43	16	1644	22	0.0313
26	0.002000			0	0.00	0		0	
26	0.002100			0	0.00	0		0	
27	0.002300			0	0.00	0		0	
13	0.002700			0	0.00	0		0	
13	0.005200			0	0.00	0		0	
30	0.007400			0	0.00	0		0	
31	0.009100	7.8	9.1	10	13.51	37	730	55	0.0191
TOT	0.071200			23	26.51	89		146	
AVG	0.002297	8.0	8.5	1	0.86	3	1438	5	0.01952
MAX	0.009100	8.6	10.9	10	13.51	37	1644	55	0.0313

Sean Kleespies
Project Mananger
Grade IV Cert #7768 W.W.T

CARROLL COUNTY SOLID WASTE MANAGEMENT COMISSION

INDUSTRIAL/COMMERCIAL CONTRIBUTOR MONITORING REPORT

January, 2024

DATE	FLOW (mgd)	BOD5 (lbs./day act.)	BOD5 (mg/l)	BOD5 (lbs./day avg.)
1	0.001700	0		3.156
2	0.001600	0		2.970
3	0.002000	4	212	3.713
4	0.001700	0		3.156
5	0.001600	0		2.970
6	0.002200	0		4.084
7	0.001500	0		2.785
8	0.001600	0		2.970
9	0.002200	0		4.084
10	0.001500	3	217	2.785
11	0.002000	0		3.713
12	0.001800	0		3.342
13	0.001500	0		2.785
14	0.001500	0		2.785
15	0.001600	0		2.970
16	0.001700	0		3.156
17	0.001600	3	249	2.970
18	0.001600	0		2.970
19	0.001400	0		2.599
20	0.001600	0		2.970
21	0.001600	0		2.970
22	0.001600	0		2.970
23	0.001700	0		3.156
24	0.001600	3	257	2.970
25	0.002000	0		3.713
26	0.002100	0		3.899
27	0.002300	0		4.270
28	0.002700	0		5.013
29	0.005200	0		9.654
30	0.007400	0		13.738
31	0.009100	14	178	16.894
AVG.	0.002297	1	223	4.264
TOTAL	0.071200	27	1113	132.182

Sean Kleespies
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Grade IV Cert #7768 W.W.T

CARROLL COUNTY SOLID WASTE MANAGEMENT COMISSION

INDUSTRIAL/COMMERCIAL CONTRIBUTOR MONITORING REPORT

January, 2024

DATE	FLOW (mgd)	TSS (lds/day act.)	TSS (mg/l act.)	TSS (lbs./day avg.)
1	0.00170	0		3
2	0.00160	0		3
3	0.00200	3	201	3
4	0.00170	0		3
5	0.00160	0		3
6	0.00220	0		4
7	0.00150	0		3
8	0.00160	0		3
9	0.00220	0		4
10	0.00150	3	218	3
11	0.00200	0		3
12	0.00180	0		3
13	0.00150	0		3
14	0.00150	0		3
15	0.00160	0		3
16	0.00170	0		3
17	0.00160	3	247	3
18	0.00160	0		3
19	0.00140	0		2
20	0.00160	0		3
21	0.00160	0		3
22	0.00160	0		3
23	0.00170	0		3
24	0.00160	3	212	3
25	0.00200	0		3
26	0.00210	0		4
27	0.00230	0		4
28	0.00270	0		5
29	0.00520	0		9
30	0.00740	0		13
31	0.00910	10	136	15
AVG.		1	203	4
TOTAL	0.071200	23	1014	120.42

Sean Kleespies
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CARROLL COUNTY SOLID WASTE MANAGEMENT COMISSION

INDUSTRIAL/COMMERCIAL CONTRIBUTOR MONITORING REPORT

January, 2024

DATE	FLOW (mgd)	NH3 (lbs./day act.)	NH3 (mg/l)	NH3 (lbs./day avg.)
1	0.001700	0		12
2	0.001600	0		11
3	0.002000	15	906	14
4	0.001700	0		12
5	0.001600	0		11
6	0.002200	0		16
7	0.001500	0		11
8	0.001600	0		11
9	0.002200	0		16
10	0.001500	12	971	11
11	0.002000	0		14
12	0.001800	0		13
13	0.001500	0		11
14	0.001500	0		11
15	0.001600	0		11
16	0.001700	0		12
17	0.001600	9	673	11
18	0.001600	0		11
19	0.001400	0		10
20	0.001600	0		11
21	0.001600	0		11
22	0.001600	0		11
23	0.001700	0		12
24	0.001600	16	1190	11
25	0.002000	0		14
26	0.002100	0		15
27	0.002300	0		16
28	0.002700	0		19
29	0.005200	0		37
30	0.007400	0		52
31	0.009100	37	491	64
AVG.	0.002297	3	846	16
TOTAL	0.071200	89	4231	502

Sean Kleespies
Project Mananger
Grade IV Cert #7768 W.W.T

CARROLL COUNTY SOLID WASTE MANAGEMENT COMISSION

INDUSTRIAL/COMMERCIAL CONTRIBUTOR MONITORING REPORT

February, 2024

DATE	FLOW (mgd)	NH3 (lbs./day act.)	NH3 (mg/l)	NH3 (lbs./day avg.)
1	0.011700	0		85
2	0.011000	0		80
3	0.009700	0		71
4	0.009500	0		69
5	0.008500	0		62
6	0.007600	0		55
7	0.007500	46	736	55
8	0.007300	0		53
9	0.005100	0		37
10	0.003800	0		28
11	0.003800	0		28
12	0.003200	0		23
13	0.003200	0		23
14	0.003300	14	506	24
15	0.002600	0		19
16	0.002700	0		20
17	0.002700	0		20
18	0.002700	0		20
19	0.002700	0		20
20	0.002600	0		19
21	0.002700	27	1190	20
22	0.002800	0		20
23	0.002100	0		15
24	0.002700	0		20
25	0.002100	0		15
26	0.002700	0		20
27	0.002300	0		17
28	0.002000	18	1060	15
29	0.002100	0		15
30	0.000000	0		0
31	0.000000	0		0
AVG.	0.004281	3	873	31
TOTAL	0.132700	104	3492	966

Sean Kleespies
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Grade IV Cert #7768 W.W.T

CARROLL COUNTY SOLID WASTE MANAGEMENT COMISSION

INDUSTRIAL/COMMERCIAL CONTRIBUTOR MONITORING REPORT

February, 2024

DATE	FLOW (mgd)	TSS (lds/day act.)	TSS (mg/l act.)	TSS (lbs./day avg.)
1	0.01170	0		19
2	0.01100	0		17
3	0.00970	0		15
4	0.00950	0		15
5	0.00850	0		13
6	0.00760	0		12
7	0.00750	11	178	12
8	0.00730	0		12
9	0.00510	0		8
10	0.00380	0		6
11	0.00380	0		6
12	0.00320	0		5
13	0.00320	0		5
14	0.00330	5	197	5
15	0.00260	0		4
16	0.00270	0		4
17	0.00270	0		4
18	0.00270	0		4
19	0.00270	0		4
20	0.00260	0		4
21	0.00270	5	219	4
22	0.00280	0		4
23	0.00210	0		3
24	0.00270	0		4
25	0.00210	0		3
26	0.00270	0		4
27	0.00230	0		4
28	0.00200	3	165	3
29	0.00210	0		3
30		0		0
31		0		0
AVG.		1	190	7
TOTAL	0.132700	25	759	210.00

Sean Kleespies
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CARROLL COUNTY SOLID WASTE MANAGEMENT COMISSION

INDUSTRIAL/COMMERCIAL CONTRIBUTOR MONITORING REPORT

February, 2024

DATE	FLOW (mgd)	BOD5 (lbs./day act.)	BOD5 (mg/l)	BOD5 (lbs./day avg.)
7	0.011000	0		24.297
2	0.011000	0		22.843
3	0.009700	0		20.144
4	0.003800	0		19.728
8	0.003800	0		17.652
8	0.007600	0		15.783
7	0.002700	0	2	15.575
8	0.007600	0		15.160
8	0.009700	0		10.591
10	0.003800	0		7.891
12	0.003800	0		7.891
12	0.003800	0		6.645
13	0.003200	0		6.645
14	0.003300	17	604	6.853
15	0.007600	0		5.399
28	0.002700	0		5.607
12	0.002700	0		5.607
28	0.002700	0		5.607
28	0.002700	0		5.607
20	0.002700	0		5.399
12	0.002700	3	150	5.607
28	0.002700	0		5.815
12	0.002100	0		4.361
24	0.002700	0		5.607
28	0.002100	0		4.361
28	0.002700	0		5.607
28	0.002100	0		4.776
28	0.007600	4	240	4.153
28	0.002100	0		4.361
20	0.002700	0		0.000
31	0.002700	0		0.000
AVG.	0.004281	1	249	8.889
TOTAL	0.132700	24	996	275.573

Sean Kleespies
Project Mananger
Grade IV Cert #7768 W.W.T

OPERATIONAL PERMIT SYSTEM

INDUSTRIAL/COMMERCIAL CONTRIBUTOR MONITORING REPORT

February, 2024 CARROLL COUNTY SOLID WASTE MANAGEMENT COMMISSION

		WASTEWATER PARAMETERS ANALYZED							
DATE	FLOW (MGD)	PH SU	TEMP 0C	TSS LBS/DAY	BOD5 LBS/DAY	NH3 LBS/DAY	TKN MG/L	TKN LBS/DAY	COPPER MG/L
1	0.011700			0	0.00	0		0	
2	0.011000			0	0.00	0		0	
3	0.009700			0	0.00	0		0	
4	0.009500			0	0.00	0		0	
5	0.008500			0	0.00	0		0	
6	0.007600			0	0.00	0		0	
7	0.007500	7.8	12.4	11	0.13	46	759	47	0.0186
8	0.007300			0	0.00	0		0	
9	0.005100			0	0.00	0		0	
10	0.003800			0	0.00	0		0	
11	0.003800			0	0.00	0		0	
12	0.003200			0	0.00	0		0	
13	0.003200			0	0.00	0		0	
14	0.003300	7.9	19.2	5	16.62	14	1308	36	0.0244
15	0.002600			0	0.00	0		0	
16	0.002700			0	0.00	0		0	
17	0.002700			0	0.00	0		0	
18	0.002700			0	0.00	0		0	
19	0.002700			0	0.00	0		0	
20	0.002600			0	0.00	0		0	
21	0.002700	8.2	11.1	5	3.38	27	1632	37	0.0308
22	0.002800			0	0.00	0		0	
23	0.002100			0	0.00	0		0	
24	0.002700			0	0.00	0		0	
25	0.002100			0	0.00	0		0	
26	0.002700			0	0.00	0		0	
27	0.002300			0	0.00	0		0	
28	0.002000	8.7	8.1	3	4.00	18	1509	25	0.0222
29	0.002100			0	0.00	0		0	
30	0.000000			0	0.00	0		0	
31	0.000000			0	0.00	0		0	
TOT	0.132700			24	24.13	104		145	
AVG	0.004281	8.2	12.7	1	0.78	3	1302	5	0.024
MAX	0.011700	8.7	19.2	11	16.62	46	1632	47	0.0308

Sean Kleespies
Project Mananger
Grade IV Cert #7768 W.W.T

OPERATIONAL PERMIT SYSTEM

INDUSTRIAL/COMMERCIAL CONTRIBUTOR MONITORING REPORT

March, 2024 CARROLL COUNTY SOLID WASTE MANAGEMENT COMMISSION

		WASTEWATER PARAMETERS ANALYZED							
DATE	FLOW (MGD)	PH SU	TEMP 0C	TSS LBS/DAY	BOD5 LBS/DAY	NH3 LBS/DAY	TKN MG/L	TKN LBS/DAY	COPPER MG/L
1	0.002700			0	0.00	0		0	
2	0.002800			0	0.00	0		0	
3	0.003600			0	0.00	0		0	
4	0.004400			0	0.00	0		0	
5	0.005500			0	0.00	0		0	
6	0.012300	8.5	12	21	26.88	141	1431	147	0.0278
7	0.018200			0	0.00	0		0	
8	0.007200			0	0.00	0		0	
9	0.003500			0	0.00	0		0	
10	0.002500			0	0.00	0		0	
11	0.001900			0	0.00	0		0	
12	0.002000			0	0.00	0		0	
13	0.002100	8.3	11.4	3	4.66	12	1711	30	0.0584
14	0.001900			0	0.00	0		0	
15	0.002000			0	0.00	0		0	
16	0.002200			0	0.00	0		0	
17	0.002000			0	0.00	0		0	
18	0.001900			0	0.00	0		0	
19	0.002100			0	0.00	0		0	
20	0.002000	8.5	6.3	4	3.72	19	1664	28	0.0166
21	0.002100			0	0.00	0		0	
22	0.001800			0	0.00	0		0	
23	0.001700			0	0.00	0		0	
24	0.001900			0	0.00	0		0	
25	0.002000			0	0.00	0		0	
26	0.002100			0	0.00	0		0	
27	0.001600	8.3	5	1	0.59	2	161	2	0.0147
28	0.002100			0	0.00	0		0	
29	0.002200			0	0.00	0		0	
30	0.002100			0	0.00	0		0	
31	0.002200			0	0.00	0		0	
TOT	0.104600			29	35.84	173		207	
AVG	0.003374	8.4	8.7	1	1.16	6	1241.8	7	0.029375
MAX	0.018200	8.5	12.0	21	26.88	141	1711	147	0.0584

Sean Kleespies
Project Mananger
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CARROLL COUNTY SOLID WASTE MANAGEMENT COMISSION

INDUSTRIAL/COMMERCIAL CONTRIBUTOR MONITORING REPORT

March, 2024

DATE	FLOW (mgd)	BOD5 (lbs./day act.)	BOD5 (mg/l)	BOD5 (lbs./day avg.)
1	0.002700	0		4.475
2	0.002800	0		4.641
3	0.003600	0		5.967
4	0.004400	0		7.293
5	0.005500	0		9.117
6	0.012300	27	262	20.388
7	0.018200	0		30.168
8	0.007200	0		11.935
9	0.003500	0		5.802
10	0.002500	0		4.144
11	0.001900	0		3.149
12	0.002000	0		3.315
13	0.002100	5	266	3.481
14	0.001900	0		3.149
15	0.002000	0		3.315
16	0.002200	0		3.647
17	0.002000	0		3.315
18	0.001900	0		3.149
19	0.002100	0		3.481
20	0.002000	4	223	3.315
21	0.002100	0		3.481
22	0.001800	0		2.984
23	0.001700	0		2.818
24	0.001900	0		3.149
25	0.002000	0		3.315
26	0.002100	0		3.481
27	0.001600	1	44	2.652
28	0.002100	0		3.481
29	0.002200	0		3.647
30	0.002100	0		3.481
31	0.002200	0		3.647
AVG.	0.003374	1	199	5.593
TOTAL	0.104600	36	795	173.382

Sean Kleespies
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CARROLL COUNTY SOLID WASTE MANAGEMENT COMISSION

INDUSTRIAL/COMMERCIAL CONTRIBUTOR MONITORING REPORT

March, 2024

DATE	FLOW (mgd)	TSS (lds/day act.)	TSS (mg/l act.)	TSS (lbs./day avg.)
1	0.00270	0		4
2	0.00280	0		4
3	0.00360	0		5
4	0.00440	0		6
5	0.00550	0		8
6	0.01230	21	206	17
7	0.01820	0		25
8	0.00720	0		10
9	0.00350	0		5
10	0.00250	0		3
11	0.00190	0		3
12	0.00200	0		3
13	0.00210	3	170	3
14	0.00190	0		3
15	0.00200	0		3
16	0.00220	0		3
17	0.00200	0		3
18	0.00190	0		3
19	0.00210	0		3
20	0.00200	4	216	3
21	0.00210	0		3
22	0.00180	0		2
23	0.00170	0		2
24	0.00190	0		3
25	0.00200	0		3
26	0.00210	0		3
27	0.00160	1	73	2
28	0.00210	0		3
29	0.00220	0		3
30	0.00210	0		3
31	0.00220	0		3
AVG.		1	166	5
TOTAL	0.104600	30	665	145.03

Sean Kleespies
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CARROLL COUNTY SOLID WASTE MANAGEMENT COMISSION

INDUSTRIAL/COMMERCIAL CONTRIBUTOR MONITORING REPORT

March, 2024

DATE	FLOW (mgd)	NH3 (lbs./day act.)	NH3 (mg/l)	NH3 (lbs./day avg.)
1	0.002700	0		19
2	0.002800	0		19
3	0.003600	0		25
4	0.004400	0		30
5	0.005500	0		38
6	0.012300	141	1370	85
7	0.018200	0		125
8	0.007200	0		50
9	0.003500	0		24
10	0.002500	0		17
11	0.001900	0		13
12	0.002000	0		14
13	0.002100	12	673	14
14	0.001900	0		13
15	0.002000	0		14
16	0.002200	0		15
17	0.002000	0		14
18	0.001900	0		13
19	0.002100	0		14
20	0.002000	19	1120	14
21	0.002100	0		14
22	0.001800	0		12
23	0.001700	0		12
24	0.001900	0		13
25	0.002000	0		14
26	0.002100	0		14
27	0.001600	2	143	11
28	0.002100	0		14
29	0.002200	0		15
30	0.002100	0		14
31	0.002200	0		15
AVG.	0.003374	6	827	23
TOTAL	0.104600	173	3306	721

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CARROLL COUNTY SOLID WASTE MANAGEMENT COMISSION

INDUSTRIAL/COMMERCIAL CONTRIBUTOR MONITORING REPORT

April, 2024

DATE	FLOW (mgd)	TSS (lds/day act.)	TSS (mg/l act.)	TSS (lbs./day avg.)
1	0.00230	0		3
2	0.00210	0		3
3	0.00220	2	85	3
4	0.00170	0		2
5	0.00150	0		2
6	0.00160	0		2
7	0.00150	0		2
8	0.00680	0		8
9	0.00960	0		12
10	0.00830	15	220	10
11	0.00860	0		10
12	0.01050	0		13
13	0.00700	0		8
14	0.00180	0		2
15	0.00140	0		2
16	0.00140	0		2
17	0.00160	2	127	2
18	0.00930	0		11
19	0.01060	0		13
20	0.01000	0		12
21	0.00940	0		11
22	0.00380	0		5
23	0.00330	0		4
24	0.00290	4	149	4
25	0.00180	0		2
26	0.00140	0		2
27	0.00160	0		2
28	0.00140	0		2
29	0.00380	0		5
30	0.00470	0		6
31		0		0
AVG.		1	145	5
TOTAL	0.133900	23	581	162.20

Sean Kleespies
Project Mananger
Grade IV Cert #7768 W.W.T

CARROLL COUNTY SOLID WASTE MANAGEMENT COMISSION

INDUSTRIAL/COMMERCIAL CONTRIBUTOR MONITORING REPORT

April, 2024

DATE	FLOW (mgd)	BOD5 (lbs./day act.)	BOD5 (mg/l)	BOD5 (lbs./day avg.)
1	0.002300	0		3.996
2	0.002100	0		3.648
3	0.002200	1	42.72	3.822
4	0.001700	0		2.953
5	0.001500	0		2.606
6	0.001600	0		2.780
7	0.001500	0		2.606
8	0.006800	0		11.813
9	0.009600	0		16.678
10	0.008300	33	470.76	14.419
11	0.008600	0		14.940
12	0.010500	0		18.241
13	0.007000	0		12.161
14	0.001800	0		3.127
15	0.001400	0		2.432
16	0.001400	0		2.432
17	0.001600	1	76	2.780
18	0.009300	0		16.157
19	0.010600	0		18.415
20	0.010000	0		17.373
21	0.009400	0		16.330
22	0.003800	0		6.602
23	0.003300	0		5.733
24	0.002900	6	243.74	5.038
25	0.001800	0		3.127
26	0.001400	0		2.432
27	0.001600	0		2.780
28	0.001400	0		2.432
29	0.003800	0		6.602
30	0.004700	0		8.165
31	0.000000	0		0.000
AVG.	0.004319	1	208	7.504
TOTAL	0.133900	40	833.22	232.620

Sean Kleespies
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Grade IV Cert #7768 W.W.T

CARROLL COUNTY SOLID WASTE MANAGEMENT COMISSION

INDUSTRIAL/COMMERCIAL CONTRIBUTOR MONITORING REPORT

April, 2024

DATE	FLOW (mgd)	NH3 (lbs./day act.)	NH3 (mg/l)	NH3 (lbs./day avg.)
1	0.002300	0		12
2	0.002100	0		11
3	0.002200	7	372	12
4	0.001700	0		9
5	0.001500	0		8
6	0.001600	0		8
7	0.001500	0		8
8	0.006800	0		36
9	0.009600	0		51
10	0.008300	46	667	44
11	0.008600	0		46
12	0.010500	0		56
13	0.007000	0		37
14	0.001800	0		10
15	0.001400	0		7
16	0.001400	0		7
17	0.001600	9	665	8
18	0.009300	0		49
19	0.010600	0		56
20	0.010000	0		53
21	0.009400	0		50
22	0.003800	0		20
23	0.003300	0		17
24	0.002900	20	834	15
25	0.001800	0		10
26	0.001400	0		7
27	0.001600	0		8
28	0.001400	0		7
29	0.003800	0		20
30	0.004700	0		25
31	0.000000	0		0
AVG.	0.004319	3	635	23
TOTAL	0.133900	82	2538	709

Sean Kleespies
Project Mananger
Grade IV Cert #7768 W.W.T

OPERATIONAL PERMIT SYSTEM

INDUSTRIAL/COMMERCIAL CONTRIBUTOR MONITORING REPORT

April, 2024 CARROLL COUNTY SOLID WASTE MANAGEMENT COMMISSION

		WASTEWATER PARAMETERS ANALYZED							
DATE	FLOW (MGD)	PH SU	TEMP 0C	TSS LBS/DAY	BOD5 LBS/DAY	NH3 LBS/DAY	TKN MG/L	TKN LBS/DAY	COPPER MG/L
1	0.002300			0	0.00	0		0	
2	0.002100			0	0.00	0		0	
3	0.002200	8.1	8.4	2	0.78	7	414	8	0.0255
4	0.001700			0	0.00	0		0	
5	0.001500			0	0.00	0		0	
6	0.001600			0	0.00	0		0	
7	0.001500			0	0.00	0		0	
8	0.006800			0	0.00	0		0	
9	0.009600			0	0.00	0		0	
10	0.008300	8	14.5	15	32.59	46	1666	115	0.0359
11	0.008600			0	0.00	0		0	
12	0.010500			0	0.00	0		0	
13	0.007000			0	0.00	0		0	
14	0.001800			0	0.00	0		0	
15	0.001400			0	0.00	0		0	
16	0.001400			0	0.00	0		0	
17	0.001600	7.8	13.4	2	1.01	9	668	9	0.0123
18	0.009300			0	0.00	0		0	
19	0.010600			0	0.00	0		0	
20	0.010000			0	0.00	0		0	
21	0.009400			0	0.00	0		0	
22	0.003800			0	0.00	0		0	
23	0.003300			0	0.00	0		0	
24	0.002900	8.3	12.7	4	5.90	20	1493	36	0.0391
25	0.001800			0	0.00	0		0	
26	0.001400			0	0.00	0		0	
27	0.001600			0	0.00	0		0	
28	0.001400			0	0.00	0		0	
29	0.003800			0	0.00	0		0	
30	0.004700			0	0.00	0		0	
31	0.000000			0	0.00	0		0	
TOT	0.133900			22	40.28	82		168	
AVG	0.004319	8.1	12.3	1	1.30	3	1060.3	5	0.0282
MAX	0.010600	8.3	14.5	15	32.59	46	1666	115	0.0391

Sean Kleespies
Project Mananger
Grade IV Cert #7768 W.W.T

CARROLL COUNTY SOLID WASTE MANAGEMENT COMISSION

INDUSTRIAL/COMMERCIAL CONTRIBUTOR MONITORING REPORT

May, 2024

DATE	FLOW (mgd)	TSS (lds/day act.)	TSS (mg/l act.)	TSS (lbs./day avg.)
1	0.01060	9	99	10
2	0.01170	0		11
3	0.00680	0		6
4	0.00910	0		9
5	0.00750	0		7
6	0.00860	0		8
7	0.01020	0		10
8	0.00610	3	65	6
9	0.00780	0		7
10	0.00950	0		9
11	0.00860	0		8
12	0.00790	0		7
13	0.00980	0		9
14	0.00970	0		9
15	0.01200	12	124	11
16	0.01060	0		10
17	0.00780	0		7
18	0.00680	0		6
19	0.00650	0		6
20	0.00640	0		6
21	0.01030	0		10
22	0.01020	0		10
23	0.00910	11	146	9
24	0.00870	0		8
25	0.00850	0		8
26	0.00760	0		7
27	0.00690	0		7
28	0.01030	0		10
29	0.01230	13	131	12
30	0.01150	0		11
31	0.01020	0		10
AVG.		2	113	9
TOTAL	0.279600	51	565	263.50

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Grade IV Cert #7768 W.W.T

CARROLL COUNTY SOLID WASTE MANAGEMENT COMISSION

INDUSTRIAL/COMMERCIAL CONTRIBUTOR MONITORING REPORT

May, 2024

DATE	FLOW (mgd)	BOD5 (lbs./day act.)	BOD5 (mg/l)	BOD5 (lbs./day avg.)
1	0.010600	6	65	14.887
2	0.011700	0		16.432
3	0.006800	0		9.550
4	0.009100	0		12.781
5	0.007500	0		10.533
6	0.008600	0		12.078
7	0.010200	0		14.325
8	0.006100	2	33	8.567
9	0.007800	0		10.955
10	0.009500	0		13.342
11	0.008600	0		12.078
12	0.007900	0		11.095
13	0.009800	0		13.764
14	0.009700	0		13.623
15	0.012000	26	262	16.853
16	0.010600	0		14.887
17	0.007800	0		10.955
18	0.006800	0		9.550
19	0.006500	0		9.129
20	0.006400	0		8.989
21	0.010300	0		14.466
22	0.010200	0		14.325
23	0.009100	21	278	12.781
24	0.008700	0		12.219
25	0.008500	0		11.938
26	0.007600	0		10.674
27	0.006900	0		9.691
28	0.010300	0		14.466
29	0.012300	21	204	17.275
30	0.011500	0		16.151
31	0.010200	0		14.325
AVG.	0.009019	2	168	12.667
TOTAL	0.279600	76	842	392.686

Sean Kleespies
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Grade IV Cert #7768 W.W.T

CARROLL COUNTY SOLID WASTE MANAGEMENT COMISSION

INDUSTRIAL/COMMERCIAL CONTRIBUTOR MONITORING REPORT

May, 2024

DATE	FLOW (mgd)	NH3 (lbs./day act.)	NH3 (mg/l)	NH3 (lbs./day avg.)
1	0.010600	35	395	56
2	0.011700	0		62
3	0.006800	0		36
4	0.009100	0		48
5	0.007500	0		40
6	0.008600	0		45
7	0.010200	0		54
8	0.006100	0		32
9	0.007800	11	163	41
10	0.009500	0		50
11	0.008600	0		45
12	0.007900	0		42
13	0.009800	0		52
14	0.009700	0		51
15	0.012000	96	961	63
16	0.010600	0		56
17	0.007800	0		41
18	0.006800	0		36
19	0.006500	0		34
20	0.006400	0		34
21	0.010300	0		54
22	0.010200	0		54
23	0.009100	49	651	48
24	0.008700	0		46
25	0.008500	0		45
26	0.007600	0		40
27	0.006900	0		36
28	0.010300	0		54
29	0.012300	101	988	65
30	0.011500	0		61
31	0.010200	0		54
AVG.	0.009019	9	632	48
TOTAL	0.279600	292	3158	1473

Sean Kleespies
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OPERATIONAL PERMIT SYSTEM

INDUSTRIAL/COMMERCIAL CONTRIBUTOR MONITORING REPORT

May, 2024 CARROLL COUNTY SOLID WASTE MANAGEMENT COMMISSION

		WASTEWATER PARAMETERS ANALYZED							
DATE	FLOW (MGD)	PH SU	TEMP 0C	TSS LBS/DAY	BOD5 LBS/DAY	NH3 LBS/DAY	TKN MG/L	TKN LBS/DAY	COPPER MG/L
1	0.010600	8	14.4	9	5.75	35	497	44	0.0223
2	0.011700			0	0.00	0		0	
3	0.006800			0	0.00	0		0	
4	0.009100			0	0.00	0		0	
5	0.007500			0	0.00	0		0	
6	0.008600			0	0.00	0		0	
7	0.010200			0	0.00	0		0	
8	0.006100	7.2	17.7	3	1.68	0	174	9	0.0164
9	0.007800			0	0.00	11		0	
10	0.009500			0	0.00	0		0	
11	0.008600			0	0.00	0		0	
12	0.007900			0	0.00	0		0	
13	0.009800			0	0.00	0		0	
14	0.009700			0	0.00	0		0	
15	0.012000	7.9	16.9	12	26.22	96	1144	114	0.0558
16	0.010600			0	0.00	0		0	
17	0.007800			0	0.00	0		0	
18	0.006800			0	0.00	0		0	
19	0.006500			0	0.00	0		0	
20	0.006400			0	0.00	0		0	
21	0.010300			0	0.00	0		0	
22	0.010200			0	0.00	0		0	
23	0.009100	7.9	19.6	11	21.10	49	880	67	0.0274
24	0.008700			0	0.00	0		0	
25	0.008500			0	0.00	0		0	
26	0.007600			0	0.00	0		0	
27	0.006900			0	0.00	0		0	
28	0.010300			0	0.00	0		0	
29	0.012300	7.6	19.8	13	20.93	101	1332	137	0.0256
30	0.011500			0	0.00	0		0	
31	0.010200			0	0.00	0		0	
TOT	0.279600			49	75.67	292		371	
AVG	0.009019	7.7	17.7	2	2.44	9	805.4	12	0.0295
MAX	0.012300	8	19.8	13	26.22	101	1332	137	0.0558

Sean Kleespies
Project Mananger
Grade IV Cert #7768 W.W.T

CARROLL COUNTY SOLID WASTE MANAGEMENT COMISSION

INDUSTRIAL/COMMERCIAL CONTRIBUTOR MONITORING REPORT

June, 2024

DATE	FLOW (mgd)	TSS (lds/day act.)	TSS (mg/l act.)	TSS (lbs./day avg.)
1	0.00760	0		13
2	0.00590	0		10
3	0.01040	0		18
4	0.01110	0		19
5	0.01040	17	201	18
6	0.00890	0		15
7	0.00490	0		8
8	0.00470	0		8
9	0.00430	0		7
10	0.00430	0		7
11	0.00420	5	156	7
12	0.00430	0		7
13	0.00400	0		7
14	0.00380	0		7
15	0.00400	0		7
16	0.00400	0		7
17	0.00390	0		7
18	0.00370	8	244	6
19	0.00440	0		8
20	0.00370	0		6
21	0.00390	0		7
22	0.00440	0		8
23	0.00420	0		7
24	0.00410	0		7
25	0.00390	7	224	7
26	0.00400	0		7
27	0.00410	0		7
28	0.00420	0		7
29	0.00350	0		6
30	0.00340	0		6
31		0		0
AVG.		1	206	8
TOTAL	0.152200	39	825	261.80

Sean Kleespies
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Grade IV Cert #7768 W.W.T

CARROLL COUNTY SOLID WASTE MANAGEMENT COMISSION

INDUSTRIAL/COMMERCIAL CONTRIBUTOR MONITORING REPORT

June, 2024

DATE	FLOW (mgd)	BOD5 (lbs./day act.)	BOD5 (mg/l)	BOD5 (lbs./day avg.)
1	0.007600	0		16.068
2	0.005900	0		12.474
3	0.010400	0		21.988
4	0.011100	0		23.468
5	0.010400	22	258	21.988
6	0.008900	0		18.816
7	0.004900	0		10.360
8	0.004700	0		9.937
9	0.004300	0		9.091
10	0.004300	0		9.091
11	0.004200	8	240	8.880
12	0.004300	0		9.091
13	0.004000	0		8.457
14	0.003800	0		8.034
15	0.004000	0		8.457
16	0.004000	0		8.457
17	0.003900	0		8.245
18	0.003700	8	261	7.823
19	0.004400	0		9.302
20	0.003700	0		7.823
21	0.003900	0		8.245
22	0.004400	0		9.302
23	0.004200	0		8.880
24	0.004100	0		8.668
25	0.003900	8	255	8.245
26	0.004000	0		8.457
27	0.004100	0		8.668
28	0.004200	0		8.880
29	0.003500	0		7.400
30	0.003400	0		7.188
31	0.000000	0		0.000
AVG.	0.004910	2	254	10.380
TOTAL	0.152200	47	1014	321.780

Sean Kleespies
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Grade IV Cert #7768 W.W.T

CARROLL COUNTY SOLID WASTE MANAGEMENT COMISSION

INDUSTRIAL/COMMERCIAL CONTRIBUTOR MONITORING REPORT

June, 2024

DATE	FLOW (mgd)	NH3 (lbs./day act.)	NH3 (mg/l)	NH3 (lbs./day avg.)
1	0.007600	0		55
2	0.005900	0		42
3	0.010400	0		75
4	0.011100	0		80
5	0.010400	93	1070	75
6	0.008900	0		64
7	0.004900	0		35
8	0.004700	0		34
9	0.004300	0		31
10	0.004300	0		31
11	0.004200	24	690	30
12	0.004300	0		31
13	0.004000	0		29
14	0.003800	0		27
15	0.004000	0		29
16	0.004000	0		29
17	0.003900	0		28
18	0.003700	19	617	27
19	0.004400	0		32
20	0.003700	0		27
21	0.003900	0		28
22	0.004400	0		32
23	0.004200	0		30
24	0.004100	0		29
25	0.003900	35	1070	28
26	0.004000	0		29
27	0.004100	0		29
28	0.004200	0		30
29	0.003500	0		25
30	0.003400	0		24
31	0.000000	0		0
AVG.	0.004910	6	862	35
TOTAL	0.152200	171	3447	1094

Sean Kleespies
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OPERATIONAL PERMIT SYSTEM

INDUSTRIAL/COMMERCIAL CONTRIBUTOR MONITORING REPORT

June, 2024 CARROLL COUNTY SOLID WASTE MANAGEMENT COMMISSION

		WASTEWATER PARAMETERS ANALYZED							
DATE	FLOW (MGD)	PH SU	TEMP 0C	TSS LBS/DAY	BOD5 LBS/DAY	NH3 LBS/DAY	TKN MG/L	TKN LBS/DAY	COPPER MG/L
1	0.007600			0	0.00	0		0	
2	0.005900			0	0.00	0		0	
3	0.010400			0	0.00	0		0	
4	0.011100			0	0.00	0		0	
5	0.010400	8	21.7	17	22.38	93	1656	144	0.0389
6	0.008900			0	0.00	0		0	
7	0.004900			0	0.00	0		0	
8	0.004700			0	0.00	0		0	
9	0.004300			0	0.00	0		0	
10	0.004300			0	0.00	0		0	
11	0.004200	7.7	18.8	5	8.41	24	1537	54	0.0261
12	0.004300			0	0.00	0		0	
13	0.004000			0	0.00	0		0	
14	0.003800			0	0.00	0		0	
15	0.004000			0	0.00	0		0	
16	0.004000			0	0.00	0		0	
17	0.003900			0	0.00	0		0	
18	0.003700	8	24.1	8	8.05	19	1477	46	0.0271
19	0.004400			0	0.00	0		0	
20	0.003700			0	0.00	0		0	
21	0.003900			0	0.00	0		0	
22	0.004400			0	0.00	0		0	
23	0.004200			0	0.00	0		0	
24	0.004100			0	0.00	0		0	
25	0.003900	7.8	23.9	7	8.29	35	1449	47	0.013
26	0.004000			0	0.00	0		0	
27	0.004100			0	0.00	0		0	
28	0.004200			0	0.00	0		0	
29	0.003500			0	0.00	0		0	
30	0.003400			0	0.00	0		0	
31	0.000000			0	0.00	0		0	
TOT	0.152200			38	47.13	171		290	
AVG	0.004910	7.9	22.1	1	1.52	6	1529.8	9	0.026275
MAX	0.011100	8	24.1	17	22.38	93	1656	144	0.0389

Sean Kleespies
Project Mananger
Grade IV Cert #7768 W.W.T

CARROLL COUNTY SOLID WASTE MANAGEMENT COMISSION

INDUSTRIAL/COMMERCIAL CONTRIBUTOR MONITORING REPORT

July, 2024

DATE	FLOW (mgd)	TSS (lds/day act.)	TSS (mg/l act.)	TSS (lbs./day avg.)
1	0.00350	0		9
2	0.00450	5	131	11
3	0.00500	0		12
4	0.00440	0		11
5	0.00410	0		10
6	0.00380	0		9
7	0.00390	0		10
8	0.00490	0		12
9	0.00900	31	417	22
10	0.00770	48	743	19
11	0.00340	0		8
12	0.00340	0		8
13	0.00350	0		9
14	0.00370	0		9
15	0.00340	0		8
16	0.00340	5	164	8
17	0.00340	0		8
18	0.00330	0		8
19	0.00310	0		8
20	0.00330	0		8
21	0.00310	0		8
22	0.00310	0		8
23	0.00310	0		8
24	0.00310	3	128	8
25	0.00300	0		7
26	0.00310	0		8
27	0.00290	0		7
28	0.00310	0		8
29	0.00290	0		7
30	0.00360	6	212	9
31	0.00340	0		8
AVG.		3	299	10
TOTAL	0.119100	101	1795	297.16

Sean Kleespies
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CARROLL COUNTY SOLID WASTE MANAGEMENT COMISSION

INDUSTRIAL/COMMERCIAL CONTRIBUTOR MONITORING REPORT

July, 2024

DATE	FLOW (mgd)	BOD5 (lbs./day act.)	BOD5 (mg/l)	BOD5 (lbs./day avg.)
1	0.003500	0		7.633
2	0.004500	8	202	9.814
3	0.005000	0		10.905
4	0.004400	0		9.596
5	0.004100	0		8.942
6	0.003800	0		8.287
7	0.003900	0		8.506
8	0.004900	0		10.686
9	0.009000	19	250	19.628
10	0.007700	18	273	16.793
11	0.003400	0		7.415
12	0.003400	0		7.415
13	0.003500	0		7.633
14	0.003700	0		8.069
15	0.003400	0		7.415
16	0.003400	6	229	7.415
17	0.003400	0		7.415
18	0.003300	0		7.197
19	0.003100	0		6.761
20	0.003300	0		7.197
21	0.003100	0		6.761
22	0.003100	0		6.761
23	0.003100	0		6.761
24	0.003100	8	300	6.761
25	0.003000	0		6.543
26	0.003100	0		6.761
27	0.002900	0		6.325
28	0.003100	0		6.761
29	0.002900	0		6.325
30	0.003600	9	315	7.851
31	0.003400	0		7.415
AVG.	0.003842	2	262	8.379
TOTAL	0.119100	68	1569	259.746

Sean Kleespies
Project Mananger
Grade IV Cert #7768 W.W.T

CARROLL COUNTY SOLID WASTE MANAGEMENT COMISSION

INDUSTRIAL/COMMERCIAL CONTRIBUTOR MONITORING REPORT

July, 2024

DATE	FLOW (mgd)	NH3 (lbs./day act.)	NH3 (mg/l)	NH3 (lbs./day avg.)
1	0.003500	0		32
2	0.004500	34	894	41
3	0.005000	0		45
4	0.004400	0		40
5	0.004100	0		37
6	0.003800	0		34
7	0.003900	0		35
8	0.004900	0		44
9	0.009000	46	617	81
10	0.007700	43	663	69
11	0.003400	0		31
12	0.003400	0		31
13	0.003500	0		32
14	0.003700	0		33
15	0.003400	0		31
16	0.003400	41	1459	31
17	0.003400	0		31
18	0.003300	0		30
19	0.003100	0		28
20	0.003300	0		30
21	0.003100	0		28
22	0.003100	0		28
23	0.003100	0		28
24	0.003100	37	1418	28
25	0.003000	0		27
26	0.003100	0		28
27	0.002900	0		26
28	0.003100	0		28
29	0.002900	0		26
30	0.003600	43	1424	32
31	0.003400	0		31
AVG.	0.003842	8	1079	35
TOTAL	0.119100	243	6475	1072

Sean Kleespies
Project Mananger
Grade IV Cert #7768 W.W.T

OPERATIONAL PERMIT SYSTEM

INDUSTRIAL/COMMERCIAL CONTRIBUTOR MONITORING REPORT

July, 2024 CARROLL COUNTY SOLID WASTE MANAGEMENT COMMISSION

		WASTEWATER PARAMETERS ANALYZED							
DATE	FLOW (MGD)	PH SU	TEMP 0C	TSS LBS/DAY	BOD5 LBS/DAY	NH3 LBS/DAY	TKN MG/L	TKN LBS/DAY	COPPER MG/L
1	0.003500			0	0.00	0		0	
2	0.004500	8	22.2	5	7.58	34	1545	58	0.0257
3	0.005000			0	0.00	0		0	
4	0.004400			0	0.00	0		0	
5	0.004100			0	0.00	0		0	
6	0.003800			0	0.00	0		0	
7	0.003900			0	0.00	0		0	
8	0.004900			0	0.00	0		0	
9	0.009000	7.1	20.7	31	18.77	46		0	
10	0.007700	7.5	20.8	48	17.53	43	1019	65	0.0285
11	0.003400			0	0.00	0		0	
12	0.003400			0	0.00	0		0	
13	0.003500			0	0.00	0		0	
14	0.003700			0	0.00	0		0	
15	0.003400			0	0.00	0		0	
16	0.003400	8	20.2	5	6.49	41	1533	43	0.0125
17	0.003400			0	0.00	0		0	
18	0.003300			0	0.00	0		0	
19	0.003100			0	0.00	0		0	
20	0.003300			0	0.00	0		0	
21	0.003100			0	0.00	0		0	
22	0.003100			0	0.00	0		0	
23	0.003100			0	0.00	0		0	
24	0.003100	7.9	22.1	3	7.76	37	1687	44	0.0232
25	0.003000			0	0.00	0		0	
26	0.003100			0	0.00	0		0	
27	0.002900			0	0.00	0		0	
28	0.003100			0	0.00	0		0	
29	0.002900			0	0.00	0		0	
30	0.003600	8	19.3	6	9.46	43	1683	51	0.0243
31	0.003400			0	0.00	0		0	
TOT	0.119100			98	67.58	243		261	
AVG	0.003842	7.8	20.9	3	2.18	8	1493.4	8	0.02284
MAX	0.009000	8	22.2	48	18.77	46	1687	65	0.0285

Sean Kleespies
Project Mananger
Grade IV Cert #7768 W.W.T

CARROLL COUNTY SOLID WASTE MANAGEMENT COMISSION

INDUSTRIAL/COMMERCIAL CONTRIBUTOR MONITORING REPORT

August, 2024

DATE	FLOW (mgd)	BOD5 (lbs./day act.)	BOD5 (mg/l)	BOD5 (lbs./day avg.)
1	0.003000	0		6.818
2	0.002900	0		6.591
3	0.002800	0		6.363
4	0.003500	0		7.954
5	0.002900	0		6.591
6	0.002800	6	259	6.363
7	0.002700	0		6.136
8	0.002800	0		6.363
9	0.002500	0		5.682
10	0.003000	0		6.818
11	0.002700	0		6.136
12	0.002800	0		6.363
13	0.002600	5	234	5.909
14	0.002700	0		6.136
15	0.003000	0		6.818
16	0.002700	0		6.136
17	0.002600	0		5.909
18	0.002600	0		5.909
19	0.002500	0		5.682
20	0.002400	6	278	5.454
21	0.002600	0		5.909
22	0.002400	0		5.454
23	0.002600	0		5.909
24	0.002600	0		5.909
25	0.002500	0		5.682
26	0.002600	0		5.909
27	0.002400	6	319	5.454
28	0.002400	0		5.454
29	0.002600	0		5.909
30	0.002400	0		5.454
31	0.002400	0		5.454
AVG.	0.002677	1	273	6.085
TOTAL	0.083000	23	1090	188.630

Sean Kleespies
Project Mananger
Grade IV Cert #7768 W.W.T

OPERATIONAL PERMIT SYSTEM

INDUSTRIAL/COMMERCIAL CONTRIBUTOR MONITORING REPORT

August, 2024 CARROLL COUNTY SOLID WASTE MANAGEMENT COMMISSION

	WASTEWATER PARAMETERS ANALYZED								
DATE	FLOW (MGD)	PH SU	TEMP 0C	TSS LBS/DAY	BOD5 LBS/DAY	NH3 LBS/DAY	TKN MG/L	TKN LBS/DAY	COPPER MG/L
1	0.003000			0	0.00	0		0	
2	0.002900			0	0.00	0		0	
3	0.002800			0	0.00	0		0	
4	0.003500			0	0.00	0		0	
5	0.002900			0	0.00	0		0	
6	0.002800	8.3	18.7	4	6.05	32	1671	39	0.0284
7	0.002700			0	0.00	0		0	
8	0.002800			0	0.00	0		0	
9	0.002500			0	0.00	0		0	
10	0.003000			0	0.00	0		0	
11	0.002700			0	0.00	0		0	
12	0.002800			0	0.00	0		0	
13	0.002600	7.9	19.3	5	5.07	29	1339	29	0.0333
14	0.002700			0	0.00	0		0	
15	0.003000			0	0.00	0		0	
16	0.002700			0	0.00	0		0	
17	0.002600			0	0.00	0		0	
18	0.002600			0	0.00	0		0	
19	0.002500			0	0.00	0		0	
20	0.002400	7.9	18.7	4	5.56	29	1713	34	0.021
21	0.002600			0	0.00	0		0	
22	0.002400			0	0.00	0		0	
23	0.002600			0	0.00	0		0	
24	0.002600			0	0.00	0		0	
25	0.002500			0	0.00	0		0	
26	0.002600			0	0.00	0		0	
27	0.002400	8.1	21.3	5	6.39	30	1797	36	0.0376
28	0.002400			0	0.00	0		0	
29	0.002600			0	0.00	0		0	
30	0.002400			0	0.00	0		0	
31	0.002400			0	0.00	0		0	
TOT	0.083000			19	23.07	120		138	
AVG	0.002677	8.1	19.5	1	0.74	4	1630	4	0.030075
MAX	0.003500	8.3	21.3	5	6.39	32	1797	39	0.0376

Sean Kleespies
Project Mananger
Grade IV Cert #7768 W.W.T

CARROLL COUNTY SOLID WASTE MANAGEMENT COMISSION

INDUSTRIAL/COMMERCIAL CONTRIBUTOR MONITORING REPORT

September, 2024

DATE	FLOW (mgd)	TSS (lds/day act.)	TSS (mg/l act.)	TSS (lbs./day avg.)
1	0.00220	0		3
2	0.00240	0		4
3	0.00220	0		3
4	0.00240	3	157	4
5	0.00240	0		4
6	0.00220	0		3
7	0.00230	0		4
8	0.00240	0		4
9	0.00220	0		3
10	0.00240	4	200	4
11	0.00220	0		3
12	0.00240	0		4
13	0.00220	0		3
14	0.00210	0		3
15	0.00220	0		3
16	0.00220	0		3
17	0.00280	5	215	4
18	0.00240	0		4
19	0.00220	0		3
20	0.00220	0		3
21	0.00220	0		3
22	0.00210	0		3
23	0.00200	0		3
24	0.00220	3	179	3
25	0.00210	0		3
26	0.00200	0		3
27	0.00190	0		3
28	0.00210	0		3
29	0.00200	0		3
30	0.00210	0		3
31		0		0
AVG.		0	188	3
TOTAL	0.066700	16	751	104.44

Sean Kleespies
Project Mananger
Grade IV Cert #7768 W.W.T

CARROLL COUNTY SOLID WASTE MANAGEMENT COMISSION

INDUSTRIAL/COMMERCIAL CONTRIBUTOR MONITORING REPORT

September, 2024

DATE	FLOW (mgd)	BOD5 (lbs./day act.)	BOD5 (mg/l)	BOD5 (lbs./day avg.)
1	0.002200	0		5.413
2	0.002400	0		5.905
3	0.002200	0		5.413
4	0.002400	6	282	5.905
5	0.002400	0		5.905
6	0.002200	0		5.413
7	0.002300	0		5.659
8	0.002400	0		5.905
9	0.002200	0		5.413
10	0.002400	7	328	5.905
11	0.002200	0		5.413
12	0.002400	0		5.905
13	0.002200	0		5.413
14	0.002100	0		5.167
15	0.002200	0		5.413
16	0.002200	0		5.413
17	0.002800	7	290	6.889
18	0.002400	0		5.905
19	0.002200	0		5.413
20	0.002200	0		5.413
21	0.002200	0		5.413
22	0.002100	0		5.167
23	0.002000	0		4.921
24	0.002200	5	280	5.413
25	0.002100	0		5.167
26	0.002000	0		4.921
27	0.001900	0		4.675
28	0.002100	0		5.167
29	0.002000	0		4.921
30	0.002100	0		5.167
31	0.000000	0		0.000
AVG.	0.002152	1	295	5.294
TOTAL	0.066700	24	1180	164.102

Sean Kleespies
Project Mananger
Grade IV Cert #7768 W.W.T

CARROLL COUNTY SOLID WASTE MANAGEMENT COMISSION

INDUSTRIAL/COMMERCIAL CONTRIBUTOR MONITORING REPORT

September, 2024

DATE	FLOW (mgd)	NH3 (lbs./day act.)	NH3 (mg/l)	NH3 (lbs./day avg.)
1	0.002200	0		30
2	0.002400	0		33
3	0.002200	0		30
4	0.002400	39	1940	33
5	0.002400	0		33
6	0.002200	0		30
7	0.002300	0		32
8	0.002400	0		33
9	0.002200	0		30
10	0.002400	32	1599	33
11	0.002200	0		30
12	0.002400	0		33
13	0.002200	0		30
14	0.002100	0		29
15	0.002200	0		30
16	0.002200	0		30
17	0.002800	36	1563	39
18	0.002400	0		33
19	0.002200	0		30
20	0.002200	0		30
21	0.002200	0		30
22	0.002100	0		29
23	0.002000	0		28
24	0.002200	28	1516	30
25	0.002100	0		29
26	0.002000	0		28
27	0.001900	0		26
28	0.002100	0		29
29	0.002000	0		28
30	0.002100	0		29
31	0.000000	0		0
AVG.	0.002152	4	1655	30
TOTAL	0.066700	135	6618	920

Sean Kleespies
Project Mananger
Grade IV Cert #7768 W.W.T

OPERATIONAL PERMIT SYSTEM

INDUSTRIAL/COMMERCIAL CONTRIBUTOR MONITORING REPORT

September, 2024 CARROLL COUNTY SOLID WASTE MANAGEMENT COMMISSION

	WASTEWATER PARAMETERS ANALYZED								
DATE	FLOW (MGD)	PH SU	TEMP 0C	TSS LBS/DAY	BOD5 LBS/DAY	NH3 LBS/DAY	TKN MG/L	TKN LBS/DAY	COPPER MG/L
1	0.002200			0	0.00	0		0	
2	0.002400			0	0.00	0		0	
3	0.002200			0	0.00	0		0	
4	0.002400	8.4	19.8	3	5.64	39	1833	37	0.0266
5	0.002400			0	0.00	0		0	
6	0.002200			0	0.00	0		0	
7	0.002300			0	0.00	0		0	
8	0.002400			0	0.00	0		0	
9	0.002200			0	0.00	0		0	
10	0.002400	7.9	19.1	4	6.57	32	1916	38	0.0275
11	0.002200			0	0.00	0		0	
12	0.002400			0	0.00	0		0	
13	0.002200			0	0.00	0		0	
14	0.002100			0	0.00	0		0	
15	0.002200			0	0.00	0		0	
16	0.002200			0	0.00	0		0	
17	0.002800	8.4	19.1	5	6.77	36	1466	34	0.079
18	0.002400			0	0.00	0		0	
19	0.002200			0	0.00	0		0	
20	0.002200			0	0.00	0		0	
21	0.002200			0	0.00	0		0	
22	0.002100			0	0.00	0		0	
23	0.002000			0	0.00	0		0	
24	0.002200	8.5	16.4	3	5.14	28	1788	33	0.0269
25	0.002100			0	0.00	0		0	
26	0.002000			0	0.00	0		0	
27	0.001900			0	0.00	0		0	
28	0.002100			0	0.00	0		0	
29	0.002000			0	0.00	0		0	
30	0.002100			0	0.00	0		0	
31	0.000000			0	0.00	0		0	
TOT	0.066700			15	24.12	135		142	
AVG	0.002152	8.3	18.6	0	0.78	4	1750.8	5	0.04
MAX	0.002800	8.5	19.8	5	6.77	39	1916	38	0.079

Sean Kleespies
Project Mananger
Grade IV Cert #7768 W.W.T

CARROLL COUNTY SOLID WASTE MANAGEMENT COMISSION

INDUSTRIAL/COMMERCIAL CONTRIBUTOR MONITORING REPORT

October, 2024

DATE	FLOW (mgd)	TSS (lds/day act.)	TSS (mg/l act.)	TSS (lbs./day avg.)
1	0.00180	3	194	3
2	0.00210	0		3
3	0.00180	0		3
4	0.00190	0		3
5	0.00200	0		3
6	0.00190	0		3
7	0.00190	0		3
8	0.00200	3	171	3
9	0.00190	0		3
10	0.00200	0		3
11	0.00180	0		3
12	0.00200	0		3
13	0.00190	0		3
14	0.00180	0		3
15	0.00170	3	189	3
16	0.00180	0		3
17	0.00200	0		3
18	0.00190	0		3
19	0.00180	0		3
20	0.00190	0		3
21	0.00190	0		3
22	0.00190	3	173	3
23	0.00190	0		3
24	0.00180	0		3
25	0.00190	0		3
26	0.00160	0		2
27	0.00190	0		3
28	0.00200	0		3
29	0.00200	3	207	3
30	0.00180	0		3
31	0.00220	0		3
AVG.		0	187	3
TOTAL	0.058800	15	934	91.61

Sean Kleespies
Project Mananger
Grade IV Cert #7768 W.W.T

CARROLL COUNTY SOLID WASTE MANAGEMENT COMISSION

INDUSTRIAL/COMMERCIAL CONTRIBUTOR MONITORING REPORT

October, 2024

DATE	FLOW (mgd)	BOD5 (lbs./day act.)	BOD5 (mg/l)	BOD5 (lbs./day avg.)
1	0.001800	4	295	3.810
2	0.002100	0		4.445
3	0.001800	0		3.810
4	0.001900	0		4.022
5	0.002000	0		4.233
6	0.001900	0		4.022
7	0.001900	0		4.022
8	0.002000	5	279	4.233
9	0.001900	0		4.022
10	0.002000	0		4.233
11	0.001800	0		3.810
12	0.002000	0		4.233
13	0.001900	0		4.022
14	0.001800	0		3.810
15	0.001700	4	256	3.598
16	0.001800	0		3.810
17	0.002000	0		4.233
18	0.001900	0		4.022
19	0.001800	0		3.810
20	0.001900	0		4.022
21	0.001900	0		4.022
22	0.001900	4	226	4.022
23	0.001900	0		4.022
24	0.001800	0		3.810
25	0.001900	0		4.022
26	0.001600	0		3.387
27	0.001900	0		4.022
28	0.002000	0		4.233
29	0.002000	4	213	4.233
30	0.001800	0		3.810
31	0.002200	0		4.657
AVG.	0.001897	1	254	4.015
TOTAL	0.058800	20	1269	124.461

Sean Kleespies
Project Mananger
Grade IV Cert #7768 W.W.T

CARROLL COUNTY SOLID WASTE MANAGEMENT COMISSION

INDUSTRIAL/COMMERCIAL CONTRIBUTOR MONITORING REPORT

October, 2024

DATE	FLOW (mgd)	NH3 (lbs./day act.)	NH3 (mg/l)	NH3 (lbs./day avg.)
1	0.001800	22	1484	24
2	0.002100	0		28
3	0.001800	0		24
4	0.001900	0		25
5	0.002000	0		26
6	0.001900	0		25
7	0.001900	0		25
8	0.002000	26	1565	26
9	0.001900	0		25
10	0.002000	0		26
11	0.001800	0		24
12	0.002000	0		26
13	0.001900	0		25
14	0.001800	0		24
15	0.001700	24	1672	22
16	0.001800	0		24
17	0.002000	0		26
18	0.001900	0		25
19	0.001800	0		24
20	0.001900	0		25
21	0.001900	0		25
22	0.001900	25	1593	25
23	0.001900	0		25
24	0.001800	0		24
25	0.001900	0		25
26	0.001600	0		21
27	0.001900	0		25
28	0.002000	0		26
29	0.002000	26	1559	26
30	0.001800	0		24
31	0.002200	0		29
AVG.	0.001897	4	1575	25
TOTAL	0.058800	123	7873	772

Sean Kleespies
Project Mananger
Grade IV Cert #7768 W.W.T

OPERATIONAL PERMIT SYSTEM

INDUSTRIAL/COMMERCIAL CONTRIBUTOR MONITORING REPORT

October, 2024 CARROLL COUNTY SOLID WASTE MANAGEMENT COMMISSION

	WASTEWATER PARAMETERS ANALYZED								
DATE	FLOW (MGD)	PH SU	TEMP 0C	TSS LBS/DAY	BOD5 LBS/DAY	NH3 LBS/DAY	TKN MG/L	TKN LBS/DAY	COPPER MG/L
1	0.001800	8.5	17.5	3	4.43	22	1885	28	0.0248
2	0.002100			0	0.00	0		0	
3	0.001800			0	0.00	0		0	
4	0.001900			0	0.00	0		0	
5	0.002000			0	0.00	0		0	
6	0.001900			0	0.00	0		0	
7	0.001900			0	0.00	0		0	
8	0.002000	8.5	18.3	3	4.65	26	1872	31	0.0257
9	0.001900			0	0.00	0		0	
10	0.002000			0	0.00	0		0	
11	0.001800			0	0.00	0		0	
12	0.002000			0	0.00	0		0	
13	0.001900			0	0.00	0		0	
14	0.001800			0	0.00	0		0	
15	0.001700	8.6	12.7	3	3.63	24	2054	29	0.0377
16	0.001800			0	0.00	0		0	
17	0.002000			0	0.00	0		0	
18	0.001900			0	0.00	0		0	
19	0.001800			0	0.00	0		0	
20	0.001900			0	0.00	0		0	
21	0.001900			0	0.00	0		0	
22	0.001900	8.5	16.4	3	3.58	25	1729	27	0.0236
23	0.001900			0	0.00	0		0	
24	0.001800			0	0.00	0		0	
25	0.001900			0	0.00	0		0	
26	0.001600			0	0.00	0		0	
27	0.001900			0	0.00	0		0	
28	0.002000			0	0.00	0		0	
29	0.002000	8.4	20	3	3.55	26	1790	30	0.0367
30	0.001800			0	0.00	0		0	
31	0.002200			0	0.00	0		0	
TOT	0.058800			15	19.85	123		146	
AVG	0.001897	8.5	17.0	0	0.64	4	1866	5	0.0297
MAX	0.002200	8.6	20.0	3	4.65	26	2054	31	0.0377

Sean Kleespies
Project Mananger
Grade IV Cert #7768 W.W.T

CARROLL COUNTY SOLID WASTE MANAGEMENT COMISSION

INDUSTRIAL/COMMERCIAL CONTRIBUTOR MONITORING REPORT

November, 2024

DATE	FLOW (mgd)	TSS (lds/day act.)	TSS (mg/l act.)	TSS (lbs./day avg.)
1	0.00170	0		3
2	0.00190	0		3
3	0.00230	0		4
4	0.00230	0		4
5	0.00240	4	175	4
6	0.00220	0		4
7	0.00170	0		3
8	0.00200	0		3
9	0.00200	0		3
10	0.00180	0		3
11	0.00190	0		3
12	0.00180	3	190	3
13	0.00360	0		6
14	0.00460	0		8
15	0.00290	0		5
16	0.00270	0		4
17	0.00220	0		4
18	0.00520	0		9
19	0.00710	0		12
20	0.00280	4	186	5
21	0.00570	0		9
22	0.00270	0		4
23	0.00280	0		5
24	0.00300	0		5
25	0.00240	0		4
26	0.00260	5	236	4
27	0.00250	0		4
28	0.00230	0		4
29	0.00230	0		4
30	0.00220	0		4
31		0		0
AVG.		1	197	4
TOTAL	0.083600	16	787	137.18

Sean Kleespies
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CARROLL COUNTY SOLID WASTE MANAGEMENT COMISSION

INDUSTRIAL/COMMERCIAL CONTRIBUTOR MONITORING REPORT

November, 2024

DATE	FLOW (mgd)	BOD5 (lbs./day act.)	BOD5 (mg/l)	BOD5 (lbs./day avg.)
1	0.001700	0		3.218
2	0.001900	0		3.597
3	0.002300	0		4.354
4	0.002300	0		4.354
5	0.002400	5	252	4.544
6	0.002200	0		4.165
7	0.001700	0		3.218
8	0.002000	0		3.786
9	0.002000	0		3.786
10	0.001800	0		3.408
11	0.001900	0		3.597
12	0.001800	0		3.408
13	0.003600	0		6.815
14	0.004600	0		8.709
15	0.002900	0		5.490
16	0.002700	0		5.112
17	0.002200	0		4.165
18	0.005200	0		9.845
19	0.007100	0		13.442
20	0.002800	0		5.301
21	0.005700	0		10.791
22	0.002700	0		5.112
23	0.002800	0		5.301
24	0.003000	0		5.680
25	0.002400	0		4.544
26	0.002600	4	202	4.922
27	0.002500	0		4.733
28	0.002300	0		4.354
29	0.002300	0		4.354
30	0.002200	0		4.165
31	0.000000	0		0.000
AVG.	0.002697	0	227	5.105
TOTAL	0.083600	9	454	158.270

Sean Kleespies
Project Mananger
Grade IV Cert #7768 W.W.T

CARROLL COUNTY SOLID WASTE MANAGEMENT COMISSION

INDUSTRIAL/COMMERCIAL CONTRIBUTOR MONITORING REPORT

November, 2024

DATE	FLOW (mgd)	NH3 (lbs./day act.)	NH3 (mg/l)	NH3 (lbs./day avg.)
1	0.001700	0		20
2	0.001900	0		22
3	0.002300	0		27
4	0.002300	0		27
5	0.002400	32	1612	28
6	0.002200	0		26
7	0.001700	0		20
8	0.002000	0		23
9	0.002000	0		23
10	0.001800	0		21
11	0.001900	0		22
12	0.001800	25	1634	21
13	0.003600	0		42
14	0.004600	0		53
15	0.002900	0		34
16	0.002700	0		31
17	0.002200	0		26
18	0.005200	0		60
19	0.007100	0		83
20	0.002800	15	639	33
21	0.005700	0		66
22	0.002700	0		31
23	0.002800	0		33
24	0.003000	0		35
25	0.002400	0		28
26	0.002600	37	1690	30
27	0.002500	0		29
28	0.002300	0		27
29	0.002300	0		27
30	0.002200	0		26
31	0.000000	0		0
AVG.	0.002697	3	1394	31
TOTAL	0.083600	108	5575	972

Sean Kleespies
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Grade IV Cert #7768 W.W.T

OPERATIONAL PERMIT SYSTEM

INDUSTRIAL/COMMERCIAL CONTRIBUTOR MONITORING REPORT

November, 2024 CARROLL COUNTY SOLID WASTE MANAGEMENT COMMISSION

	WASTEWATER PARAMETERS ANALYZED								
DATE	FLOW (MGD)	PH SU	TEMP 0C	TSS LBS/DAY	BOD5 LBS/DAY	NH3 LBS/DAY	TKN MG/L	TKN LBS/DAY	COPPER MG/L
1	0.001700			0	0.00	0		0	
2	0.001900			0	0.00	0		0	
3	0.002300			0	0.00	0		0	
4	0.002300			0	0.00	0		0	
5	0.002400	8.4	12.6	4	5.04	32	1814	36	0.0375
6	0.002200			0	0.00	0		0	
7	0.001700			0	0.00	0		0	
8	0.002000			0	0.00	0		0	
9	0.002000			0	0.00	0		0	
10	0.001800			0	0.00	0		0	
11	0.001900			0	0.00	0		0	
12	0.001800	8.6	11.5	3	0.00	25	1937	29	0.03
13	0.003600			0	0.00	0		0	
14	0.004600			0	0.00	0		0	
15	0.002900			0	0.00	0		0	
16	0.002700			0	0.00	0		0	
17	0.002200			0	0.00	0		0	
18	0.005200			0	0.00	0		0	
19	0.007100			0	0.00	0		0	
20	0.002800	8.5	11.6	4	0.00	15	716	17	0.0213
21	0.005700			0	0.00	0		0	
22	0.002700			0	0.00	0		0	
23	0.002800			0	0.00	0		0	
24	0.003000			0	0.00	0		0	
25	0.002400			0	0.00	0		0	
26	0.002600	8.7	13	5	4.38	37	1693	37	0.0163
27	0.002500			0	0.00	0		0	
28	0.002300			0	0.00	0		0	
29	0.002300			0	0.00	0		0	
30	0.002200			0	0.00	0		0	
31	0.000000			0	0.00	0		0	
TOT	0.083600			16	9.42	108		119	
AVG	0.002697	8.6	12.2	1	0.30	3	1540	4	0.026275
MAX	0.007100	8.7	13.0	5	5.04	37	1937	37	0.0375

Sean Kleespies
Project Mananger
Grade IV Cert #7768 W.W.T

CARROLL COUNTY SOLID WASTE MANAGEMENT COMISSION

INDUSTRIAL/COMMERCIAL CONTRIBUTOR MONITORING REPORT

December, 2024

DATE	FLOW (mgd)	TSS (lds/day act.)	TSS (mg/l act.)	TSS (lbs./day avg.)
1	0.00230	0		4
2	0.00220	0		4
3	0.00210	5	276	4
4	0.00250	0		4
5	0.00220	0		4
6	0.00230	0		4
7	0.00230	0		4
8	0.00250	0		4
9	0.00230	0		4
10	0.00220	3	169	4
11	0.00190	0		3
12	0.00200	0		3
13	0.00200	0		3
14	0.00200	0		3
15	0.00210	0		4
16	0.00220	0		4
17	0.00200	3	175	3
18	0.00200	0		3
19	0.00200	0		3
20	0.00180	0		3
21	0.00180	0		3
22	0.00210	0		4
23	0.00200	0		3
24	0.00180	3	217	3
25	0.00200	0		3
26	0.00200	0		3
27	0.00190	0		3
28	0.00200	0		3
29	0.00200	0		3
30	0.00200	0		3
31	0.00180	3	199	3
AVG.		1	207	4
TOTAL	0.064300	18	1036	111.11

Sean Kleespies
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Grade IV Cert #7768 W.W.T

CARROLL COUNTY SOLID WASTE MANAGEMENT COMISSION

INDUSTRIAL/COMMERCIAL CONTRIBUTOR MONITORING REPORT

December, 2024

DATE	FLOW (mgd)	BOD5 (lbs./day act.)	BOD5 (mg/l)	BOD5 (lbs./day avg.)
1	0.002300	0		4.753
2	0.002200	0		4.547
3	0.002100	4	229	4.340
4	0.002500	0		5.167
5	0.002200	0		4.547
6	0.002300	0		4.753
7	0.002300	0		4.753
8	0.002500	0		5.167
9	0.002300	0		4.753
10	0.002200	5	247	4.547
11	0.001900	0		3.927
12	0.002000	0		4.133
13	0.002000	0		4.133
14	0.002000	0		4.133
15	0.002100	0		4.340
16	0.002200	0		4.547
17	0.002000	4	255	4.133
18	0.002000	0		4.133
19	0.002000	0		4.133
20	0.001800	0		3.720
21	0.001800	0		3.720
22	0.002100	0		4.340
23	0.002000	0		4.133
24	0.001800	4	262	3.720
25	0.002000	0		4.133
26	0.002000	0		4.133
27	0.001900	0		3.927
28	0.002000	0		4.133
29	0.002000	0		4.133
30	0.002000	0		4.133
31	0.001800	4	246	3.720
AVG.	0.002074	1	248	4.287
TOTAL	0.064300	20	1239	132.886

Sean Kleespies
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Grade IV Cert #7768 W.W.T

CARROLL COUNTY SOLID WASTE MANAGEMENT COMISSION

INDUSTRIAL/COMMERCIAL CONTRIBUTOR MONITORING REPORT

December, 2024

DATE	FLOW (mgd)	NH3 (lbs./day act.)	NH3 (mg/l)	NH3 (lbs./day avg.)
1	0.002300	0		28
2	0.002200	0		27
3	0.002100	25	1400	25
4	0.002500	0		30
5	0.002200	0		27
6	0.002300	0		28
7	0.002300	0		28
8	0.002500	0		30
9	0.002300	0		28
10	0.002200	32	1760	27
11	0.001900	0		23
12	0.002000	0		24
13	0.002000	0		24
14	0.002000	0		24
15	0.002100	0		25
16	0.002200	0		27
17	0.002000	25	1480	24
18	0.002000	0		24
19	0.002000	0		24
20	0.001800	0		22
21	0.001800	0		22
22	0.002100	0		25
23	0.002000	0		24
24	0.001800	21	1370	22
25	0.002000	0		24
26	0.002000	0		24
27	0.001900	0		23
28	0.002000	0		24
29	0.002000	0		24
30	0.002000	0		24
31	0.001800	19	1240	22
AVG.	0.002074	4	1450	25
TOTAL	0.064300	121	7250	778

Sean Kleespies
Project Mananger
Grade IV Cert #7768 W.W.T

OPERATIONAL PERMIT SYSTEM

INDUSTRIAL/COMMERCIAL CONTRIBUTOR MONITORING REPORT

December, 2024 CARROLL COUNTY SOLID WASTE MANAGEMENT COMMISSION

	WASTEWATER PARAMETERS ANALYZED								
DATE	FLOW (MGD)	PH SU	TEMP 0C	TSS LBS/DAY	BOD5 LBS/DAY	NH3 LBS/DAY	TKN MG/L	TKN LBS/DAY	COPPER MG/L
1	0.002300			0	0.00	0		0	
2	0.002200			0	0.00	0		0	
3	0.002100	8.6	14.2	5	4.01	25	1843	32	0.0219
4	0.002500			0	0.00	0		0	
5	0.002200			0	0.00	0		0	
6	0.002300			0	0.00	0		0	
7	0.002300			0	0.00	0		0	
8	0.002500			0	0.00	0		0	
9	0.002300			0	0.00	0		0	
10	0.002200	8.8	7.8	3	4.53	32	1819	33	0.0366
11	0.001900			0	0.00	0		0	
12	0.002000			0	0.00	0		0	
13	0.002000			0	0.00	0		0	
14	0.002000			0	0.00	0		0	
15	0.002100			0	0.00	0		0	
16	0.002200			0	0.00	0		0	
17	0.002000	8.7	8.1	3	4.25	25	1927	32	0.0283
18	0.002000			0	0.00	0		0	
19	0.002000			0	0.00	0		0	
20	0.001800			0	0.00	0		0	
21	0.001800			0	0.00	0		0	
22	0.002100			0	0.00	0		0	
23	0.002000			0	0.00	0		0	
24	0.001800	8.5	14.3	3	3.93	21	1974	30	0.0273
25	0.002000			0	0.00	0		0	
26	0.002000			0	0.00	0		0	
27	0.001900			0	0.00	0		0	
28	0.002000			0	0.00	0		0	
29	0.002000			0	0.00	0		0	
30	0.002000			0	0.00	0		0	
31	0.001800	8.6	12.1	3	3.69	19	1922	29	0.0319
TOT	0.064300			17	20.42	121		156	
AVG	0.002074	8.6	11.3	1	0.66	4	1897	5	0.0292
MAX	0.002500	8.8	14.3	5	4.53	32	1974	33	0.0366

Sean Kleespies
Project Mananger
Grade IV Cert #7768 W.W.T

Customer Service Report

Customer:	Carroll County Landfill	**Report Number:**	1665
		Date(s):	7/8 thru 7/11/2024
Contact:	Ms. Mary Wittry, Director		
Address:	19111 Kittyhawk Ave	**Page:**	4
	Carroll, IA 51401	**On-Site Hours:**	27.0
		Mob. Hours:	--

Description: Jet leachate collection system and televise pipes at the Carroll County Landfill

Jetting Summary

Description	Leachate Pipe	Length Jet(ft.)	Comments
MH2B	North Active Cell Cleanout	800	
MH2A	North Active Cell Cleanout	750	Jetting Hose Stopped
MH1B	North Active Cell Cleanout	710	Jetting Hose Stopped
MH1A	North Active Cell Cleanout	710	Jetting Hose Stopped
CO to MH4A	North Active Cell Cleanout	800	
CO to MH2B	North Active Cell Header Cleanout	320	
MH1B	East Header Cleanout	200	Jet to MH2B
MH1B	West Header Cleanout	400	Jet to MH1A
MH1A	Header Cleanout towards MH-10	650	Jetting Hose Stopped
MH10	Header Cleanout towards MH1A	400	
MH9	Header Cleanout towards MH10	300	
MH8	Header Cleanout towards MH9	400	
MH7	Header Cleanout towards MH8	400	
MH7	Header Cleanout towards MH6	400	
MH5	Header Cleanout towards MH6	400	
MH5	Jet to lift station	400	
MH6	South Active Cell Cleanout	650	Jetting Hose Stopped
MH5B	South Active Cell Cleanout	725	Jetting Hose Stopped
MH5A	South Active Cell Cleanout	750	Jetting Hose Stopped
MH4B	South Active Cell Cleanout	800	
MH4A	South Active Cell Cleanout	675	
MH5A	West Header Cleanout	400	Jet to MH4A
MH5A	East Header Cleanout	550	Jet towards MH4

Superior Jetting, Inc.
P.O. Box 357 Zimmerman, MN 55398
Phone/Fax: (763) 631-3133

Superior Jetting

Customer Service Report

MH4	Header Cleanout towards MH6	700	Jetting Hose Stopped
MH3	Header Cleanout towards MH4	600	
MH2	Header Cleanout towards MH3	625	
MH1	Header Cleanout towards MH2	550	
MH1	Jet to lift station	400	

Superior Jetting, Inc.
P.O. Box 357 Zimmerman, MN 55398
Phone/Fax: (763) 631-3133

Additional Comments

July 8, 2024 **Arrived on Site: 1:30 pm**

- Jet cleanout CO towards MH4A to the distance indicated above. No problems encountered.
- Jet cleanout CO to MH2B to the distance indicated above. No problems encountered.
- Jet cleanout MH2B to the distance indicated above. No problems encountered.

Left Site: 5:30 pm

July 9, 2024 **Arrived on Site: 7:00 am**

- Jet cleanout MH2A to the distance indicated above. No problems encountered.
- Jet cleanout MH1B to the distance indicated above. No problems encountered.
- Jet cleanout MH1B header east to the distance indicated above. No problems encountered.
- Jet cleanout MH1B header west to the distance indicated above. No problems encountered.
- Jet cleanout MH1A to the distance indicated above. No problems encountered.
- Jet cleanout MH1A header to the distance indicated above. No problems encountered.
- Jet cleanout MH10 towards MH-1A to the distance indicated above. No problems encountered.
- Jet cleanout MH9 to MH 10 to the distance indicated above. No problems encountered. Vaccuumed leachate rock from MH.
- Jet cleanout MH8 to MH 9 to the distance indicated above. No problems encountered. Vaccuumed leachate rock from MH.
- Jet cleanout MH7 to MH8 to the distance indicated above. No problems encountered. Vaccuumed leachate rock from MH.
- Jet cleanout MH6 to MH7 to the distance indicated above. No problems encountered.
- Jet cleanout MH5 to MH 6 to the distance indicated above. No problems encountered. Vaccuumed leachate rock from MH.
- Jet cleanout MH5 to lift station to the distance indicated above. No problems encountered. Vaccuumed leachate rock from MH.
- Jet cleanout MH4A to the distance indicated above. No problems encountered.

Left Site: 5:00 pm

Superior Jetting, Inc.
P.O. Box 357 Zimmerman, MN 55398
Phone/Fax: (763) 631-3133

July 10, 2024 **Arrived on Site: 7:00 am**

- Jet cleanout MH4B to the distance indicated above. No problems encountered.
- Jet cleanout MH5A to the distance indicated above. No problems encountered.
- Jet cleanout MH5A header west to the distance indicated above. No problems encountered.
- Jet cleanout MH5A header east to the distance indicated above. No problems encountered.
- Jet cleanout MH5B to the distance indicated above. No problems encountered.
- Jet cleanout MH6 to the distance indicated above. No problems encountered.
- Jet cleanout MH4 to MH6 to the distance indicated above. No problems encountered.
- Jet cleanout MH3 to MH4 to the distance indicated above. Vaccuumed leachate rock from MH.
- Jet cleanout MH2 to MH3 to the distance indicated above. Vaccuumed leachate rock from MH.
- Jet cleanout MH1 to MH2 to the distance indicated above. Vaccuumed leachate rock from MH.
- Jet cleanout MH1 to lift station to the distance indicated above. Vaccuumed leachate rock from MH.

Left Site: 5:00 pm

July 11, 2024 **Arrived on Site: 7:00 am**

- Televised MH-1A east with push-cam equipment to a distance of 300'.
- Televised MH-1A east with push-cam equipment to a distance of 212'.
- Attempted to televise MH-5A east with push-cam equipment. Camera could not make sweep in pipe because of potential leachate rock and design of pipe.
- Attempted to televise MH-5A west with push-cam equipment. Camera could not make sweep in pipe because of potential leachate rock and design of pipe.

Left Site: 10:00 am

Superior Jetting, Inc.
P.O. Box 357 Zimmerman, MN 55398
Phone/Fax: (763) 631-3133