

Minutes

June 07, 2023

Project name	Brooks Road Landfill	From	Katrina McCullough
Subject	2023 Brooks Road PLC #2	Tel	+1 416-866-2365
Date/Time	June 7, 2023/ 7:00pm-8:00pm	Project no.	018235
Attendees	Katrina McCullough (KM) – GHD Ryan Loveday (RL) – GHD Tim Danyliw (TD) – BRE Michael Durst (MD) – MECP Hamilton District Charlene Anderson (CA) – MECP Hamilton District Dave Bruce (DB) - PLC Member, Chair Dave Glenney (DG) – PLC Member Diane Manto (DM) – Public Kim Seabon (KS) – PLC Member Rod Leclair (RL) – OPP Liaison	Copy to:	All Attendees

Summary of Action Items and Commitments

- TD to check if its possible for DB to visit the site

- Increase the size of the font on future meeting minutes

Minutes	Action
Objectives and Introductions	 KM provided an overview of the meeting agenda. KM reviewed the ground rules as well as the purpose and objectives of the meeting.
Review of Previous Minutes	 No comments on the minutes
Previous Commitments Data logger	 RL reviewed the procedure to download the leachate level from the cell. DM inquired to the size of the pipe, RL noted the figure indicated 450 mm or 18-inch diameter. TD outlined

→ The Power of Commitment

Minutes	Action
Groundwater quality data Food Bank donations Financial Assurance	 the operation of the Leachate Treatment System (LTS) and leachate removal in the cell. KS inquired how leachate collection system generally works across the Site, DB outlined the general basis for leachate collection. DB asked if leachate is being collected constantly and if it runs during the night. TD responded that it is running constantly and overnight, however, how much leachate is collected may fluctuate as needed. DB asked if MECP checks the data. CA responded that they do. KM outlined the information provided to the PLC with respect to groundwater and that the OWDS is utilized for general reference only. Ryan reviewed the south Site property boundary compliance tables, and discussed each item not meeting the Reasonable Use Criteria (RUC). KM noted soil is delivered from construction sites within the GTA and from local businesses in Hamilton and Niagara. The BRE Website was updated to reflect regular donations to the Food Bank. DM inquired how much is donated to the Food Bank, TD noted he is unaware. MD confirmed BRE has provided the appropriate Financial Assurance (FA). MD provided additional background on requirements for the FA. FA is a bond or cash held by the MECP so they could take over the landfill if BRE were to walk away from the site. Currently the FA is approximately \$11.5 Million.
Site Updates	 TD provided the Site Update. TD noted that raw leachate is hauled to Beamsville WWTP, and treated effluent is hauled to Dunnville WWTP. TD noted a large clean of the membranes was completed along with the aeration tank and Dissolved Air Flotation (DAF) tank. A lot of flushing and cleaning was completed in warmer weather. TD noted that discussions have started with the MECP for including the DAF as part of the ECA and LTS. The sand filtration will not be pursued. TD outlined the summary of complaints (no complaints in March, April and May 2023). Tim noted contact information is included on the slides to lodge a complaint. TD outlined volumes of leachate removed from the Site and corresponding leachate levels. The increase in leachate level in April 2023 was attributed to the cleaning and flushing of the MBR, DAF and aeration tank. TD reviewed the overall considerations for leachate generation and removal, waste compaction and application of cover soil.

Minutes	Action
	 DB asked if there is less leachate generated because there is less exposed waste. TD confirmed that was correct.
Landfill Life Expectancy	 RL reviewed the landfill life expectancy based on survey (December 2022), and projected tonnage and waste characteristics (type, compaction, density, consolidation). As of the previous PLC, the lifespan was approximately 1 year, so closure would be projected to be end of 2023 or into Q1 2024 (depending on waste type, compaction, etc.). DG asked to confirm that most of the waste received is contaminated soil. TD confirmed that it was.
MECP Update	 CA introduced herself as the new Environmental Officer, recently took over Haldimand County. CA completed a Site inspection on May 23, 2023, no concerns at this time. No complaints received by MECP at this time.
Approvals	 KM reviewed site approvals. Noted that we are currently looking at Summer 2023 for Open House 2 and the PLC will be updated once a date is set. No date is currently set.
Next Meeting and Other Business	 Next meeting is scheduled for November 1, 2023 – as part of that meeting, there will be meetings set for 2024. DB noted it is currently dry weather, but it was very wet in March and April and inquired how rainwater is captured in the capped area. TD responded that runoff from the capped area is directed to the perimeter ditch and treated as surface water and runoff from the uncapped or active area or tip face (contact water) is treated as leachate. DB inquired if he can tour the site. TD noted he would check if that's possible. DM inquired if funds go to the community (for example the City of Toronto provides \$4/tonne to the community where their landfill is located). TD responded that an agreement like that is not in place. MD noted that the Councillor may be best suited to respond. KM noted it would be a discussion between the municipality and BRE. DG inquired about a completion or approval date for the expansion. KM noted that the completion date is to be determined and the schedule will be updated during Open House #2. Following the meeting DM requested that the font size for the meeting minutes be increased.

5.4 Groundwater Quality

The groundwater quality monitoring program for the current monitoring period was performed by GHD. A sample key for the groundwater samples collected and analyzed during the current monitoring period is presented in Table 5.2 and the groundwater quality results for the reporting period are provided in Tables 5.4, 5.5 and 5.6 for the shallow overburden, basal overburden/shallow bedrock, and bedrock wells respectively.

Although not a requirement for Site compliance, the discussion of water quality includes an evaluation of analytical results against the criteria listed in the Technical Support Document for Ontario Drinking Water Standards, Objectives and Guidelines, published by the MECP in June 2003, and revised in June 2006 (ODWS). The ODWS includes operational guidelines (OG), aesthetic objectives (AO), maximum acceptable concentrations (MAC), and interim maximum acceptable concentrations (IMAC) are used. Where an ODWS criterion was not available, criteria have been used from Table 2 of the *Soil, Ground Water and Sediment Standards for Use Under part XV.1 of the Environmental Protection Act*, dated April 15, 2011. This evaluation is provided for information and comparative purposes only.

Groundwater quality at the Site is assessed in terms of the presence and magnitude of potential effects from landfilling on groundwater quality primarily through examining the spatial and temporal patterns in leachate indicator parameter concentrations. For the purposes of the Site groundwater, alkalinity, boron, chloride, DOC, hardness, sodium, and TDS have been selected as appropriate leachate indicator parameters (identified in Section 5.2.2.). To aid in the assessment, concentration versus time plots of these parameters for each groundwater monitoring well are provided in Appendix G-2.

An assessment of the groundwater quality relative to the Reasonable Use Criteria (RUC) at boundary monitoring wells is discussed in Section 6.1 and presented in Tables 6.1 to 6.4.

5.4.1 Shallow Overburden Unit

The shallow overburden unit is assessed using groundwater quality data collected from ten on-Site (MW1B-13, MW2B-07, OW1B-06, OW3B-13, OW5B-06, OW8B-06, OW9B-06, MW10B-18, MW11B-19, MW12B-19) and two off-Site (MW5B-09, MW6B-07) shallow overburden wells. As previously indicated monitoring wells MW2B-07, MW5B-07, and MW12B-19 were noted as dry or insufficient volume to sample during the November monitoring event.

Monitoring wells MW1B-13, OW3B-13 and OW9B-06 are located upgradient relative to the landfill. Accordingly, water quality from these locations is interpreted to represent water quality flowing on-Site from upgradient. As OW3B-13 is located further from the landfill footprint than OW9B-06 and further from Brooks Road than MW1B-13, OW3B-13 represents the most conservative upgradient location. As such, the water quality data from this well has been included on the concentration versus time plots in Appendix G-2.A so that comparison of water quality at each location to OW3B-13 can be made.

General Chemistry and Metals analytical results are summarized in Table 5.4A. Organics (VOCs and PAHs) results are summarized in Table 5.4B. Historical data is provided in Appendix G-1.

The following paragraphs describe the observations of shallow overburden water quality during the current monitoring period.

North Side of Landfill (Upgradient)

Water quality at MW1B-13 is generally similar to that observed at OW3B-13, however concentrations of chloride, sodium and TDS continue to be higher at this location. The proximity of this well to Brooks Road is interpreted to be the reason for these elevated parameters as road salt application on Brooks Road is a source of these parameters, particularly in shallow groundwater. Hardness is also elevated at MW1B-13 but with low concentrations of alkalinity, boron, and DOC, this is not interpreted to be related to the landfill.

Water quality at OW9B-06 is generally similar to that at OW3B-13, although concentrations of sodium and chloride are slightly elevated. Concentrations of sodium and chloride have been slowly increasing at this location since 2010 but

have been generally stable or decreasing since 2019. The well is located in close proximity to the landfill; however, the water quality results do not suggest significant impairment of shallow groundwater at this location as the remainder of indicator parameters are at or not significantly elevated over background levels. Concentrations of alkalinity are slightly elevated over levels reported at OW3B-13 however alkalinity levels have remained relatively stable suggesting that the landfill is not the source of the slightly elevated alkalinity or increasing chloride observed. In addition, alkalinity concentrations are similar to those reported at historical background monitoring well OW1B-07.

Sulphate concentrations at MW1B-13 are elevated. Historically, sulphate has been frequently reported in samples from this well at concentrations greater than 1,000 mg/L. Similar sulphate levels have also been reported at OW9B-06. The absence of other leachate indicator parameters suggest that these levels are naturally occurring. Elevated sulphate levels are also observed within shallow overburden groundwater elsewhere on the Site. The source of the sulphate concentrations is suspected to be the influence of basal overburden/shallow bedrock flow zone water quality, as this flow zone frequently exhibits sulphate concentrations greater than 4,000 mg/L at the nested basal overburden/shallow bedrock monitoring well MW1A-13. Sulphate concentrations in the basal overburden/shallow bedrock unit are greater than 2,000 mg/L at most monitoring locations.

East Side of Landfill

MW2B-07 is a shallow overburden groundwater monitoring well located along the east side of the landfill. MW2B-07 had insufficient groundwater volume to sample in November 2022.

Water quality at MW2B-07 shows evidence of influence from landfilling with slightly elevated concentrations of chloride, sodium, hardness and TDS. There is some evidence of a trend of increases in these parameter concentrations during recent monitoring events. Continued monitoring will provide additional insight into this potential trend.

Elevated naturally occurring concentrations of sulphate at this location represents substantial proportions of the elevated TDS reported.

West Side of Landfill

Monitoring wells MW1-03, MW2-03, MW3-03 and MW10B-18 are shallow overburden groundwater monitoring wells located to the west of the landfill. These monitoring wells are located in close proximity to Brooks Road. Since the beginning of 2019, MW1-03, MW2-03, and MW3-03 have been included in the monitoring program for hydraulic monitoring purposes only.

As illustrated on the concentration versus time plots included in Appendix G-2.A, water quality at MW1-03, MW2-03 and MW3-03 has not been assessed since fall 2018. Groundwater quality at these wells is similar to background water quality other than trends of increasing sodium, chloride and TDS. The source of these increases is interpreted to be road salt application along Brooks Road. This is consistent with previous interpretations.

Water quality at MW10B-18 is also essentially at background levels, except for chloride concentrations. In the absence of other indicators of landfill-related impacts, the mildly elevated chloride concentrations are not interpreted to be landfill-related.

South Side of Landfill

Monitoring well OW5B-06 is located to the south of the landfill approximately 80 m from the landfill footprint and 50 m upgradient of the south Site boundary. Water quality at OW5B-06 was historically consistent with background water quality, however trends of increases in chloride, sodium, hardness, TDS and to a lesser extent boron, were observed between 2013 and 2016. Since 2016 water quality has demonstrated decreasing trends in these parameters with the exception of elevated chloride in November 2022. In the absence of other indicators of landfill-related impacts, the mildly elevated chloride concentrations are not interpreted to be landfill-related. The source of these trends in water quality is not known at this time. It should be noted that elevated concentrations of sulphate at this location represent a substantial proportion of the TDS concentrations reported.

Considering the improvements in water quality at this location during recent monitoring years, it is recommended that monitoring continue, and future reports consider the historical context of trends in water quality at this location. A discussion of the geochemical characteristics of water quality at select monitoring wells is provided under *Geochemical Fingerprint – Piper Diagram*, below.

Water quality at OW1B-06 is similar to background levels, however, increases in chloride concentrations have been observed between 2014 and 2016. Elevated chloride concentrations were identified in November 2022 at OW1B-06. In the absence of other indicators of landfill-related impacts, the elevated chloride concentration is not interpreted to be landfill-related. Continued monitoring will provide additional insight into this potential trend. Hardness, sodium and to a lesser extent TDS, are slightly elevated above background levels. Elevated sulphate concentrations contribute to the elevated TDS concentrations reported.

Water quality at OW8B-06 is similar to background water quality, with slightly elevated chloride, sodium and TDS. This monitoring well is located in close proximity to Brooks Road and road salt is likely a source of these parameters at this monitoring well. Boron concentrations are slightly elevated over background levels. Other leachate indicator parameters are at or near background levels. In May 2020, chloride, sodium, and TDS increased sharply (particularly chloride). The concentrations of these parameters have decreased since May 2021 but remain elevated above historical concentrations. The sudden increase may indicate well integrity issues. In May 2022, Aardvark Drilling Inc (Aardvark) and GHD inspected the monitoring well and no visual deficiencies were identified.

Monitoring wells MW11B-19 and MW12B-19 were installed in proximity to the south Site boundary in 2019 and therefore have limited groundwater results. Water quality at MW11B-19 shows evidence of influence from landfilling with slightly elevated but stable concentrations of alkalinity, boron, hardness, and TDS. Sodium concentrations are elevated above OW3B-13 background concentrations but remain stable.

Water quality at MW12B-19 shows evidence of influence from landfilling with slightly elevated but stable concentration of alkalinity, boron, hardness, sodium and TDS.

Sulphate concentrations are elevated at both monitoring wells MW11B-19 and MW12B-19, suggesting that water quality at these locations is naturally poor, contributing to the elevated TDS concentrations reported.

Organics

In May 2022, PAH detections were identified from samples collected from shallow monitoring wells MW2B-07, OW8B-06 for parameters including: Anthracene, Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene/Benzo(j)fluoranthene, Benzo(g,h,i)perylene, Benzo(k)fluoranthene, Chrysene, Fluoranthene, Indeno(1,2,3-cd)pyrene, Phenanthrene, and Pyrene. Benzo(a)pyrene concentrations at MW2B-07 (0.0282 µg/L) and OW8B-06 (<0.0208 µg/L), located to the east and south of the landfill, respectively, were identified above the ODWS of 0.01 µg/L for the May 2022 samples. Benzo(a)pyrene has historically been detected above the ODWS at these

In May 2020, chloroform was detected at MW11B-19 ($2.7 \mu g/L$) above the ODWS of 2.4 $\mu g/L$. Concentrations in June 2021 and May 2022 decreased and were detected at 1.4 and 0.86 $\mu g/L$, respectively. There were no other detections of VOCs reported in any samples from 2022. PAH and VOC parameter concentrations at shallow overburden unit monitoring wells are presented in Table 5.4B.

Geochemical Fingerprint – Piper Diagram

locations. No other exceedances of PAHs were identified.

In order to supplement the evaluation of potential landfill-related impacts to shallow overburden groundwater quality, an analysis of the geochemical "fingerprints" of shallow groundwater quality and leachate was undertaken. This analysis was accomplished through plotting major anion and cation on a Piper diagram for the May 2022 shallow overburden unit groundwater chemistry (Figure 5.9). A Piper diagram presents the major ions as percentages and is used to determine patterns in the geochemical character of water samples. Cations (positive ions) and anions (negative ions) are potted in two triangles at the base of the diagram. The compositions from the base triangles are then projected up to the central diamond. This central diamond therefore presents the data from all of the major ions on a single plot. On a Piper diagram, samples with similar geochemical character will plot relatively close to one

another. Because the major ions are used, a Piper diagram is useful for detecting large differences in the geochemical characteristics between water samples. Data on the central diamond presents a line of evidence that assists in interpreting the likelihood of a monitoring location being affected by landfill-derived impacts. The likelihood of impacts can be gauged by the monitoring well's proximity to leachate and other locations showing definite leachate-derived impacts. The following shallow overburden monitoring wells are used to plot the Piper diagram: MW1B-13, OW3B-13, OW9B-06, MW2B-07, MW10B-18, OW8B-06, OW1B-06, OW5B-06, MW11B-19, MW12B-19, and MW6B-07.

The Piper diagram demonstrates that the pattern of major ions associated with the leachate chemistry is different from the pattern of major ions observed in shallow overburden monitoring wells. It is important to note that OW5B-06 (located immediately downgradient of the landfill footprint) plots far away from the leachate source. This pattern indicates that the elevated concentrations of analytes within groundwater, including OW5B-06, are not likely attributable to leachate migration beyond the landfill footprint. Relative to observations made in June 2021, the pattern of major ions observed in May 2022 is largely unchanged. This finding is further substantiated with the apparent immobility of groundwater chemistry in the shallow overburden groundwater, as historically observed around the decommissioned OLA.

5.4.2 Basal Overburden/Shallow Bedrock Unit

The basal overburden/shallow bedrock unit was assessed in 2022 based on groundwater monitoring data collected from ten basal overburden/shallow bedrock monitoring wells, as listed in Table 5.2. Of these monitoring wells, ten are located throughout the Site (MW1A-13, MW2A-01, OW1A-06, OW3A-13, OW5A-06, OW8A-06, OW9A-06, MW10A-18, MW11A-19, MW12A-19), and of the three off-Site basal overburden/shallow bedrock monitoring wells, two (MW5A-09, MW6A-07) are located approximately 150 m south of the Site, and one (MW4A-09) is located to the west of, and in close proximity to the OLA. As previously indicated monitoring well MW2A-01, OW5A-06, and OW8A-06 were noted as dry or insufficient volume to sample during the May monitoring event. Since the beginning of 2019, MW4A-09 has been included in the monitoring program for hydraulic monitoring purposes only. Off-Site groundwater monitoring of the basal overburden/shallow bedrock unit downgradient of the Site is currently monitored at MW5A-09 and MW6A-07.

General Chemistry and Metals analytical results are summarized in Table 5.5A. Organics (VOCs and PAHs) results are summarized in Table 5.5B. Historical data, including concentration versus time plots of landfill indicator parameters are provided in Appendix G.

5.4.2.1 On-Site Basal Overburden/Shallow Bedrock Monitoring

Monitoring wells MW1A-13, OW3A-13 and OW9A-06 are located upgradient relative to the landfill. Accordingly, water quality from these locations is interpreted to represent water quality flowing on-Site from upgradient. Water quality data from OW3A-13 has been included on the concentration versus time plots in Appendix G-2 so that comparison of water quality at each location to OW3A-13 can be made.

It is noted that water quality within the basal overburden/shallow bedrock flow zone is generally poor, including at upgradient monitoring locations. Concentrations of alkalinity, sulphate, hardness and TDS are all naturally elevated, often well above their respective ODWS.

The following paragraphs describe the observations of basal overburden/shallow bedrock groundwater quality during the current monitoring period.

North Side of Landfill (Upgradient)

Water quality at upgradient monitoring wells MW1A-13, OW3A-13 and OW9A-06 is generally poor with elevated concentrations of alkalinity, sulphate, hardness and TDS. Water quality, though variable, is generally stable over time. Concentrations of chloride and sodium decreased significantly between 2013 and 2016 at MW1A-13.

East Side of Landfill

MW2A-01 is completed within the basal overburden/shallow bedrock flow zone along the east side of the landfill. Water quality at this location is similar to that observed upgradient of the landfill. There is no indication of landfill-related water quality alterations at this location.

West Side of Landfill

MW4A-09 and MW10A-18 are completed within the basal overburden/shallow bedrock flow zone along the west side of the landfill. Water quality at this MW4A-09, prior to 2019, is similar to that observed upgradient of the landfill. There is no indication of landfill-related water quality alterations at this location. This location is currently used for hydraulic monitoring purposes only.

Water quality at this MW10A-18 is similar to that observed upgradient of the landfill. There is no indication of landfill-related water quality alterations at MW10A-18.

South Side of Landfill

Monitoring wells OW1A-06, OW5A-06, OW8A-06, MW11A-19 and MW12A-19 are completed within the basal overburden/shallow bedrock flow zone to the south of the landfill. Water quality at OW1A-06, OW5A-06 and OW8A-06 continues to be similar to upgradient and demonstrates no evidence of impact from the landfill. DOC concentrations at OW5A-06A were identified slightly elevated above background in November 2022. In the absence of other indicators of landfill-related impacts, the elevated DOC concentration is not interpreted to be landfill-related. Continued monitoring will provide additional insight into this potential trend.

Monitoring wells MW11A-19 and MW12A-19 were installed in mid-2019 have been sampled seven and six times, respectively. Sample results suggest water quality is similar to upgradient locations and unaffected by the landfill. The November 2020 results from MW11A-19 show elevated concentrations of alkalinity and DOC. In 2021 and 2022, alkalinity and DOC were similar to background water quality indicating that the fall 2020 results are not consistent with the previous two samples and following four sampling events.

Organics

During the current monitoring period, for comparison and informational purposes, all VOC and PAH parameter concentrations at basal overburden/shallow bedrock monitoring locations were below their respective ODWS and Table 2 criteria as shown in Table 5.5B. In light of the general absence of evidence of landfill-related water quality impacts in this flow zone, the occasional low-level detections of VOCs or PAHs reported in these monitoring wells are not considered to be landfill-related.

5.4.2.2 Off-Site Basal Overburden/Shallow Bedrock Aquifer Monitoring

Basal overburden/shallow bedrock aquifer monitoring wells MW6A-07 and MW5A-09 were installed to monitor water quality downgradient of the Site. The 2022 monitoring results for general chemistry and metals are provided in Table 5.5A. During the current monitoring period, for comparison and informational purposes, all VOC and PAH parameter concentrations at off-Site basal overburden/shallow bedrock monitoring locations were below their respective laboratory detection limits as shown in Table 5.5B. Phenanthrene was detected in the groundwater at monitoring well MW5A-09 in May 2020 and June 2021. In light of the general absence of evidence of landfill-related water quality impacts in this flow zone, the occasional low-level detections of VOCs or PAHs reported in these monitoring wells are not interpreted to be landfill-related. Historical data, including concentration versus time plots for leachate indicator parameters, are provided in Appendix G-2.B.

In general, the results from these monitoring wells are consistent with current and historical observations obtained from on-Site basal overburden/shallow bedrock monitoring locations. The concentration versus time plots provided in Appendix G-2.B illustrate that water quality at these monitoring locations is very similar to that observed upgradient of the landfill.

On the basis of the pattern in water quality observed at MW6A-07 and MW5A-09, there is no evidence of landfill-related water quality impacts in the basal overburden/shallow bedrock water quality off-Site.

5.4.3 Bedrock Unit Monitoring

The bedrock unit is monitored through groundwater monitoring data collected from six on-Site bedrock monitoring wells (MW1S-07, MW1D-07, MW2S-07, MW2D-07, OW8S-07, OW8D-07). The bedrock unit is divided into two hydraulic units (intermediate bedrock and deep bedrock). In general, the water quality in the bedrock units is poor and comparable to the basal overburden/shallow bedrock aquifer unit.

General Chemistry and Metals analytical results are summarized in Table 5.6A. Organics (VOCs and PAHs) results are summarized in Table 5.6B. Historical data, including concentration versus time plots of landfill indicator parameters are provided in Appendix G-2.C.

It should be noted that MW1S-07 was not sampled following the 2017 monitoring events due to excessive sediment infilling within the monitoring well. The source of the infilling is suspected to be re-grading undertaken around the well during 2018. Water quality results following the monitoring well repair in August 2019 are comparable with historic ranges.

Water quality in the bedrock unit is poor and is characterized by elevated concentrations of hardness, sulphate, TDS, boron, iron, and manganese. These parameters generally exceed their respective ODWS. Water quality is generally stable at each monitoring well, with the exception of some variability noted at monitoring well MW1D-07.

A comparison of nested wells illustrates that water quality in the deep and shallow well nests for are generally similar in quality for leachate indicator parameters for MW1D/S-07 and MW2D/S-07 well nests. Water quality from the deep bedrock location OW8D-07 is characterized by lower alkalinity and sodium, and higher boron and chloride compared to the other five bedrock monitoring wells locations.

Based on the pattern of leachate indicator parameter concentrations in the bedrock unit monitoring wells, there is no evidence of landfill-related water quality impacts in the bedrock unit.

Sample results from bedrock unit monitoring wells, in particular monitoring well MW1D-07 and MW1S-07, have historically reported low-level detections above the ODWS of various PAH parameters. In light of the absence of landfill-related impacts, and the multiple flow zones between this monitoring well and the landfill, the PAH detections are considered unrelated to the landfill.

5.5 Surface Water Quality

The 2022 surface water quality monitoring program was performed by GHD. A sample key of the surface water samples collected and analyzed is presented in Table 5.7 and a summary of the surface water quality results for the 2017 through 2022 monitoring periods is provided in Tables 5.8A and 5.8B. Assessment of the potential influence of leachate impacts on surface water quality is undertaken primarily through comparing the pattern of leachate indicator parameter concentrations at each monitoring station against the criteria listed in the Water Management Policies, Guidelines, Provincial Water Quality Objectives (PWQO), published by the MECP in July 1994, and reprinted February 1999 is also presented in this Section.

Historical surface water quality results are provided in Appendix G-1. Concentration versus time plots of leachate indicator parameters at each surface water monitoring station are included in Appendix G-2.D.

The surface water monitoring locations include three off-site background locations: SW1, SW8, and SW9. All three have been established to document the background water quality in the local ditches and ponds. The on-Site surface water monitoring locations include one pond (SW5) located in the southern portion of the Site and one on-Site surface water ditch (SW2) located at the discharge from the Site SWMS. Off-Site surface water monitoring locations include two ponds (SW6 and SW7) located to the south of the Site, one drainage ditch located immediately downstream of the Site discharge point (SW3), and one drainage ditch (SW4) situated approximately 1 kilometre (km) south and downstream of the Site. SW9 is located immediately north of the Site, north of OW3A/B-13.

Table 5.4A

Summary of Groundwater Analytical Results - Shallow Overburden 2022 Operations and Monitoring Report Brooks Road Landfill Site Haldimand County, Ontario

Sample Location:			MW1B-13	MW1B-13	MW2B-07	MW5B-09	MW6B-07	MW6B-07	MW10A-18	MW10A-18	MW10B-18	MW10B-18	MW11B-19	MW11B-19	MW12B-19	OW1B-06	OW1B-06	OW3B-13	OW3B-13	OW5B-06	OW5B-06	OW8B-06	OW8B-06	OW9B-06	OW9B-06
Sample ID:			GW-MW1B	GW-18235-1122 BK-MW1B	GW-MW2B	GW-MW5B	GW-MW6B	GW-18235-1122- BK-MW6B	GW-MW10A	GW-18235-1122 PW-MW10A	GW-MW10B	GW-18235-1122- PW-MW10B	GW-MW11B	GW-18235-1122- PW-MW11B	GW-MW12B	GW-OW1B	GW-18235-1122- PW-OW1B	GW-OW3B	GW-18235-1122- PW-OW3B	GW-OW5B	GW-18235-1122- PW-OW5B	GW-OW8B	GW-18235-1122 PW-OW8B	GW-OW9B	GW-18235-1122- BK-OW9B
Sample Date:		0.014(0)	5/10/2022	11/7/2022	5/11/2022	5/12/2022	5/11/2022	11/7/2022	5/10/2022	11/3/2022	5/10/2022	11/3/2022	5/9/2022	11/3/2022	5/10/2022	5/10/2022	11/3/2022	5/12/2022	11/3/2022	5/10/2022	11/3/2022	5/9/2022	11/3/2022	5/10/2022	11/7/2022
Parameters	Units	ODWS ⁽¹⁾ a																							
Field Parameters																									
Conductivity, field	mS/cm	-	2.82	2.84	-	0.575	-	2.73	3.91	4.04	1.34	-	8.23	8.43	2.55	1.75	2.23	0.884	0.919	2.49	3.02	1.80	1.92	2.15	2.06
Dissolved oxygen (DO), field	mg/L	-	0.00	1.41	-	7.65	-	1.50	0.0	-	9.47	-	8.01	-	3.96	1.78	-	0.0	0.51	0.54	-	2.38	-	0.0	4.92
Not sampled Oxidation reduction potential (ORP), field	none millivolts		- 225	109		- 86	-	- 82	- 56	-	- 126		- 146		- 158	143		-26	- 74	133		- 80		232	- 146
pH, field	S.U.	6.5-8.5 (OG)	7.29	6.79	NM	7.97	NM	6.88	7.43	7.34	7.70	NM	7.92	7.32	8.48	8.01	7.69	7.19	7.10	7.94	7.56	8.25	7.55	7.33	7.09
Temperature, field	Deg C	15 (AO)	12.81	12.63	-	11.85	-	12.58	13.44	11.43	14.89	-	13.88	11.11	18.49ª	12.64	12.50	13.94	14.14	12.75	12.29	17.50	13.41	17.69 ^a	11.85
Turbidity, field	NTU	5.0/5.0 (MAC/A) 1000 ª	307ª	-	1000 ^a] -	46.2ª	1000 ^a	1000 ^a	763ª] - [787ª	140ª	58.9ª	347ª	48.7 ^a	263ª	179 ^ª	155°	27.4 ^ª	113*	8.1ª	477 ^a	429 ^a
General Chemistry																									
Alkalinity, total (as CaCO3)	mg/L	30-500 (OG)	523	598	600	250	444	460	462	415 J	443	382 J	348	728 J	1010	677	659 J	376	296	652	604 J	567	608 J	719	731
Ammonia-N Rischomical avurant demand (ROD)	mg/L	-	< 0.0293 < 3.0 J	4.16	0.0552 J+ 5.1 J	< 0.0055 < 3.0	< 0.0050 < 3.0 J	< 0.0050	0.0579 J+ < 3.0 J	0.102 J	0.0546 J+ < 3.0 J	0.0815 J	< 0.0275 < 3.0 J	0.0121 J	< 0.0050 < 3.0 J	< 0.0050 < 3.0 J	< 0.0050 J	0.0713 J+ < 3.0	0.0275	< 0.0050 < 3.0 J	0.0078 J	< 0.0127 < 3.0 J	0.0059 J	< 0.0050 < 3.0 J	< 0.0050
Biochemical oxygen demand (BOD) Chemical oxygen demand (COD)	mg/L mg/L	-	< 3.0 J 53	- 110	5.1 J 112	< 3.0	< 3.0 J 16	- < 10	< 3.0 J 46	- 48 J	< 3.0 J 39	- 35 J	< 3.0 J 43	- 30 J	< 3.0 J 17	< 3.0 J 21	- < 10 J	< 3.0 14	- 12	< 3.0 J 16	- 14 J	< 3.0 J < 10	- 18 J	< 3.0 J 21	- 10
Chloride	mg/L	250 (AO)	61.2 *	67.1 *	25.4 *	2.69 *	157 *	159 *	10.8 *	400 11.4 J *	48.7 *	46.0 J *	10.0 *	22.7 J *	31.2 *	35.2 *	358 J **	1.06 *	1.34 *	197 *	376 J *ª	178 *	144 J *	42.6 *	44.1 *
Conductivity	mS/cm	-	2.98	3.03	2.5	0.648	2.63	2.81	4.16	3.99 J	1.37	1.24 J	4.39	8.56 J	2.99	2.23	2.14 J	0.838	0.903	2.5	2.95 J	1.96	1.82 J	2.3	2.12
Dissolved organic carbon (DOC)	mg/L	-	4.78	15.4	6.38	5.86	3.49	4.10	1.89	3.79 J	6.94	9.07 J	8.00	12.3 J	6.34	4.81	5.04 J	4.75	1.91	4.92	6.51 J	2.54	6.94 J	9.72	10.2
Hardness	mg/L	80-100 (OG)	1600	-	1480	194	1670	-	2810	-	682	-	7380	-	1800	1160	-	462	-	1440	-	930	-	1100	-
Nitrate (as N)	mg/L	10.0 (MAC)	< 0.100	< 0.100	< 0.100 J	0.045	< 0.100 J	< 0.100	< 0.100	< 0.100 J	0.104	< 0.100 J	< 0.100 J	< 0.200 J	0.231 J	< 0.100	< 0.100 J	< 0.020	0.035	< 0.100 J	< 0.100 J	< 0.100 J	< 0.100 J	< 0.100	< 0.100
Nitrite (as N)	mg/L	1.0 (MAC)	< 0.050	-	< 0.050 J	< 0.010	< 0.050 J	-	< 0.050		< 0.050	-	< 0.050 J		< 0.050 J	< 0.050	-	< 0.010	-	< 0.050 J	-	< 0.050 J	-	< 0.050	-
pH, lab Phenolics (total)	s.u.	6.5-8.5 (OG)	7.67 < 0.0010	7.48	8.04 < 0.0010	7.98 < 0.0010	7.96 < 0.0011	7.55	7.29 < 0.0010	7.80 J	7.36 < 0.0010	7.63 J	7.68 < 0.0010	8.00 J	7.97 < 0.0010	7.86 < 0.0010	8.20 J	7.63 < 0.0011	8.04	7.77 < 0.0010	7.89 J	7.81 < 0.0010	8.19 J	7.80 < 0.0010	7.69
Phosphorus	mg/L mg/L		0.170		3.18	0.161	0.0110		0.522	-	0.122		0.185		0.0179	0.0517		0.0340		0.0402		< 0.0010		0.0669	
Sulfate	mg/L	500 (AO)	1370 *ª	1440 * ^a	1120 **	100 *	1080 **	1230 *	2510 *ª	2550 J *	324 *	304 J *	2870 **	6810 J *	1110 *ª	748 * ^a	617 J *	114 *	210 *	711 **	652 J *	293 *	286 J *	730 *ª	611 **
Total dissolved solids (TDS)	mg/L	500 (AO)	2490 ^a	2030ª	1660	404	2100 ^a	2270ª	3980ª	3920 J ^a	980 ^ª	969 J ^a	4160*	10300 J ^a	2160*	1530ª	1480 J ^a	526 ^ª	625 ^a	1770°	2160 J ^a	1150°	1200 J ^a	1590*	1390 ^a
Total kjeldahl nitrogen (TKN)	mg/L	-	0.547	-	< 5.00	0.588	0.193		< 0.500	-	< 0.500	-	< 0.500	-	0.243	< 0.500	-	< 0.500	-	0.258	-	0.109	-	< 0.500	· ·
Total suspended solids (TSS)	mg/L	-	330	-	7560	762	11.9	-	1190	-	119	-	240	-	11.6	153	-	54.5	-	21.8	-	57.2	-	136	-
Turbidity	NTU	5.0/5.0 (MAC/A	D) -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-
Dissolved Metals Aluminum		0.40 (00)	< 0.0118			. 0.0050	< 0.0119				< 0.0043		0.054		. 0.0100	. 0.0405		. 0.0500		< 0.0104		. 0.0100		0.457.1.	
Aluminum Arsenic	mg/L mg/L	0.10 (OG) 0.010 (IMAC) (a		-	< 0.0333 < 0.00100	< 0.0259 0.00102	< 0.00100	-	< 0.0292 < 0.00100	-	< 0.0043	-	0.251 < 0.00100	-	< 0.0100 < 0.00100	< 0.0195 < 0.00100	-	< 0.0596 0.00159	-	< 0.0104	-	< 0.0100 < 0.00100	-	0.157 J+ < 0.00100	
Barium	mg/L	1.0 (MAC) (a	0.0435	0.0570	0.0388	0.0251	0.0141	0.0168	0.00591	- 0.0145 J	0.0605	0.0344 J	0.0146	- 0.0141 J	0.0383	0.0237	0.0239 J	0.0737	0.0699	0.0238	- 0.0298 J	0.0313	0.0352 J	0.0299	0.0300
Beryllium	mg/L	-	< 0.000200	-	< 0.000200	< 0.000020	< 0.000200	-	< 0.000200	-	< 0.000020	-	< 0.000200	-	< 0.000200	< 0.000200	-	< 0.000020	-	< 0.000200	-	< 0.000200	-	< 0.000200	-
Boron	mg/L	5.0 (IMAC)	< 0.100	< 0.100	< 0.100	0.012	< 0.100	< 0.100	0.526	0.493 J	0.044	0.039 J	0.479	0.418 J	< 0.100	< 0.100	0.114 J	0.036	< 0.100	< 0.100	0.148 J	0.935	0.814 J	0.123	0.127
Cadmium	mg/L	0.005 (MAC)	0.0000952	-	< 0.0000500	0.0000061	< 0.0000500	-	< 0.0000500	-	0.0000092	-	< 0.0000500	-	< 0.0000500	< 0.0000500	-	0.0000353	-	< 0.0000500	-	< 0.0000500	-	< 0.0000500	-
Calcium	mg/L	-	184	254	106	22.1	194	231	517	502 J	218	234 J	416	454 J	73.8	151	143 J	122	126	156	187 J	122	93.5 J	89.6	103
Chromium	mg/L	0.05 (MAC)	< 0.00500	-	< 0.00500	< 0.00050	< 0.00500	-	< 0.00500	-	< 0.00050	-	< 0.00500	-	< 0.00500	< 0.00500	-	< 0.00050	-	< 0.00500	-	< 0.00500	-	< 0.00500	-
Cobalt Copper	mg/L mg/L	- 1.0 (AO)	0.00398 0.00247	-	0.00128	< 0.00010 0.00129	< 0.00100 < 0.00200	-	0.00125	-	0.00030 0.00295	-	0.00701 < 0.00200	-	< 0.00100 < 0.00200	< 0.00100 < 0.00200	-	0.00266 0.00297	-	< 0.00100 < 0.00200	-	< 0.00100 < 0.00200	-	< 0.00100 < 0.00200	-
Iron	mg/L	0.30 (AO)	< 0.100	0.262	0.218	0.014	< 0.100	< 0.100	0.158	0.543 J	< 0.010	- < 0.010 J	0.269	< 0.100 J	< 0.100	< 0.100	< 0.100 J	0.944 ^a	< 0.100	< 0.100	- < 0.100 J	< 0.100	< 0.100 J	0.156	< 0.100
Lead	mg/L	0.01 (MAC)	< 0.000500	-	< 0.000500	0.000051	< 0.000500	-	< 0.000500	0.043.0	< 0.000050		< 0.000500	-	< 0.000500	< 0.000500	-	0.000128		< 0.000500	-	< 0.000500	-	< 0.000500	-
Magnesium	mg/L		276	280	294	33.7	287	297	368	351 J	33.4	32.8 J	1540	1370 J	392	190	191 J	38.2	42.7	254	257 J	152	151 J	214	225
Manganese	mg/L	0.05 (AO)	0.256 ^a	-	0.182 ^a	0.00027	< 0.00100	- [0.342 ^a	- 1	0.182 ^a] - [0.104	-	0.00577	0.00139	- [0.412°	-	0.00106	-	< 0.00100	-	0.00473	-
Mercury	mg/L	0.001 (MAC)	< 0.0000050	-	< 0.0000050	< 0.0000050	< 0.0000050		< 0.0000050	-	< 0.0000050	-	< 0.0000050	-	< 0.0000050	< 0.0000050		< 0.0000050	-	< 0.0000050	-	< 0.0000050	-	< 0.0000050	-
Molybdenum	mg/L	-	0.00498	-	0.00231	0.00416	0.000815	-	0.00710	-	0.000840	-	0.00304	-	0.00265	0.00158	-	0.00256	-	0.00280	-	0.00274	-	0.00195	-
Nickel Potassium	mg/L	-	0.00817 2.65	-	< 0.00500	< 0.00050 1.35	< 0.00500	-	0.00953	-	0.00231 3.03	-	< 0.00500 17.0	-	< 0.00500 7.48	< 0.00500	-	0.00318	-	< 0.00500 2.86	-	< 0.00500	-	< 0.00500 4.61	-
Potassium Silver	mg/L mg/L	-	2.65	-	4.52 < 0.000100	1.35 < 0.000010	2.31 < 0.000100		6.28 < 0.000100	-	3.03	-	17.0 < 0.000100	-	7.48 < 0.000100	2.38 < 0.000100	-	1.71	-	2.86		2.68 < 0.000100	-	4.61 < 0.000100	
Sodium	mg/L	- 200 (AO)	132	- 160	156	< 0.000010 54.3	88.1	92.2	116	- 112 J	17.9	- 18.5 J	413 ^a	409 J	172	71.1	- 71.4 J	16.5	- 10.5	103	- 104 J	105	- 93.6 J	117	- 118
Thallium	mg/L	-	< 0.000100	-	< 0.000100	< 0.000010	< 0.000100	-	< 0.000100	-	0.000015	-	< 0.000100	4030	< 0.000100	< 0.000100	-	0.000026	-	< 0.000100	-	< 0.000100	-	< 0.000100	-
Vanadium	mg/L	-	< 0.00500	-	< 0.00500	< 0.00050	< 0.00500	-	< 0.00500	-	0.00135	-	< 0.00500	-	< 0.00500	< 0.00500	-	< 0.00050	-	< 0.00500	-	< 0.00500	-	< 0.00500	-
Zinc	mg/L	5.0 (AO)	< 0.0100	-	< 0.0100	0.0011	< 0.0100	-	0.0150	-	0.0022	-	< 0.0100	-	< 0.0100	< 0.0100	-	0.0021	-	< 0.0100	-	< 0.0100	-	< 0.0100	-
		/																							

Notes:

 Ontario Drinking Water Standards (ODWS), June 2003; revised June 2006, prepared by the MOECC.
 No Value/Not Analyzed.
 The result is an estimated value.
 R Rejected.
 Obes not meet the applicable ODWS/O. Reg 153/04 criteria.
 0.10 Method detection limit does not meet ODWS/O. Reg 153/04 criteria.
 0.20 Method detection limit.
 (a) Current criteria for arsenic is provided wich came into affect 2018. Previous data is subjected to a limit of 0.025 mg/L.

Table 5.4B

Summary of Groundwater Analytical Results - Shallow Overburden 2022 Operations and Monitoring Report Brooks Road Landfill Site Haldimand County, Ontario

Sample Location:				MW1B-13	MW2B-07	MW5B-09	MW6B-07	MW10B-18	MW11B-19	MW12B-19	OW1B-06	OW3B-13	OW5B-06	OW8B-06
Sample ID:				GW-MW1B	GW-MW2B	GW-MW5B	GW-MW6B	GW-MW10B	GW-MW11B	GW-MW12B	GW-OW1B	GW-OW3B	GW-OW5B	GW-OW8B
Sample Date:			(7)	5/10/2022	5/11/2022	5/12/2022	5/11/2022	5/10/2022	5/9/2022	5/10/2022	5/10/2022	5/12/2022	5/10/2022	5/9/2022
Parameters	Units	ODWS ⁽¹⁾ a	Table 2 ⁽²⁾ b											
Semi-volatile Organic Compounds														
1-Methylnaphthalene	μg/L	-	-	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
1-Methylnaphthalene/2-Methylnaphthalene 2-Methylnaphthalene	μg/L μg/L	-	3.2	< 0.015 0.010	< 0.015 < 0.010	< 0.015 < 0.010	< 0.015 < 0.010	< 0.015 < 0.010	< 0.015 < 0.010	< 0.015 < 0.010	< 0.015 < 0.010	< 0.015 < 0.010	< 0.015 < 0.010	< 0.015 < 0.010
Acenaphthene	μg/L		4.1	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Acenaphthylene	μg/L	-	1	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Anthracene	μg/L	-	2.4	< 0.010	0.015	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Benzo(a)anthracene	μg/L	-	1	< 0.010	0.042	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.015
Benzo(a)pyrene		0.01 (MAC)	0.01	< 0.0050	0.0282 ^{ab}	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0208 ^{ab}
Benzo(b)fluoranthene	μg/L	-	0.1	-	-	-	-	-	-	-	-	-	-	-
Benzo(b)fluoranthene/Benzo(j)fluoranthene	μg/L	-	0.1	< 0.010	0.041	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.031
Benzo(g,h,i)perylene Benzo(k)fluoranthene	μg/L μg/L	-	0.2 0.1	< 0.010 < 0.010	0.017 0.020	< 0.010 < 0.010	0.015 0.012							
Chrysene	μg/L	-	0.1	< 0.010	0.063	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.012
Dibenz(a,h)anthracene	μg/L	-	0.2	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050
Fluoranthene	μg/L	-	0.41	0.013	0.125	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.033
Fluorene	μg/L	-	120	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Indeno(1,2,3-cd)pyrene	μg/L	-	0.2	< 0.010	0.020	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.020
Naphthalene	μg/L	-	11	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Phenanthrene	μg/L	-	1	< 0.020	0.055	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Pyrene	μg/L	-	4.1	0.015	0.103	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.029
Volatile Organic Compounds 1,1,1,2-Tetrachloroethane	μg/L	-	1.1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1,1-Trichloroethane	μg/L	-	200	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1,2,2-Tetrachloroethane	μg/L	-	1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1,2-Trichloroethane	μg/L	-	4.7	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1-Dichloroethane	μg/L	-	5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50 J
1,1-Dichloroethene	μg/L	14 (MAC)	1.6	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-Dibromoethane (Ethylene dibromide)	μg/L	-	0.2	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
1,2-Dichlorobenzene	1.0	200 (MAC)	3	< 0.50 < 0.50	< 0.50 < 0.50	< 0.50	< 0.50 < 0.50	< 0.50	< 0.50 < 0.50	< 0.50	< 0.50	< 0.50 < 0.50	< 0.50	< 0.50
1,2-Dichloroethane 1,2-Dichloropropane	μg/L μg/L	5 (IMAC)	1.6 5	< 0.50	< 0.50	< 0.50 < 0.50	< 0.50	< 0.50 < 0.50	< 0.50	< 0.50 < 0.50	< 0.50 < 0.50	< 0.50	< 0.50 < 0.50	< 0.50 < 0.50
1.3-Dichlorobenzene	μg/L	-	59	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,4-Dichlorobenzene	μg/L	5 (MAC)	1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
2-Butanone (Methyl ethyl ketone) (MEK)	μg/L	-	1800	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
2-Hexanone	μg/L	-	-	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)) μg/L	-	640	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
Acetone	μg/L	-	2700	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
Benzene	μg/L	1 (MAC)	5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromodichloromethane Bromoform	μg/L	-	16 25	< 0.50 < 0.50	< 0.50 < 0.50	< 0.50 < 0.50	< 0.50 < 0.50	< 0.50 < 0.50	< 0.50 < 0.50	< 0.50 < 0.50	< 0.50 < 0.50	< 0.50 < 0.50	< 0.50 < 0.50	< 0.50 < 0.50
Bromomethane (Methyl bromide)	μg/L μg/L	-	0.89	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Carbon disulfide	μg/L	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon tetrachloride	μg/L	2 (MAC)	0.79	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Chlorobenzene	μg/L	80 (MAC)	30	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Chloroethane	μg/L	-		< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Chloroform (Trichloromethane)	μg/L	-	2.4	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.86	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Chloromethane (Methyl chloride)	μg/L	-	-	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
cis-1,2-Dichloroethene cis-1,3-Dichloropropene	μg/L	-	1.6	< 0.50 < 0.30	< 0.50 < 0.30	< 0.50 < 0.30	< 0.50 < 0.30	< 0.50 < 0.30	< 0.50 < 0.30	< 0.50 < 0.30	< 0.50 < 0.30	< 0.50 < 0.30	< 0.50 < 0.30	< 0.50 < 0.30
cis-1,3-Dichloropropene/trans-1,3-Dichloropropene	μg/L μg/L			< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	μg/L	-	25	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Dichlorodifluoromethane (CFC-12)	μg/L	-	590	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	μg/L	140 (MAC)	2.4	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Hexane	μg/L	-	51	-	-	-	-	-	-	-	-	-	-	-
m&p-Xylenes	μg/L	-	-	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40
Methyl tert butyl ether (MTBE)	μg/L	15 (AO)	15	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Methylene chloride	μg/L	50 (MAC)	50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
o-Xylene	μg/L	-	-	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30
Styrene Tetrachloroethene	μg/L	- 10 (MAC)	5.4	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Toluene	μg/L μg/L	10 (MAC) 60 (MAC)	1.6 24	< 0.50 < 0.50	< 0.50 < 0.50	< 0.50 < 0.50	< 0.50 < 0.50	< 0.50 < 0.50	< 0.50 < 0.50	< 0.50 < 0.50	< 0.50 < 0.50	< 0.50 < 0.50	< 0.50 < 0.50	< 0.50 < 0.50
trans-1,2-Dichloroethene	μg/L μg/L	-	1.6	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
trans-1,3-Dichloropropene	μg/L		-	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30
Trichloroethene	μg/L	5 (MAC)	1.6	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Trichlorofluoromethane (CFC-11)	μg/L	-	150	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Trihalomethanes		100 (MAC)	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl chloride	μg/L	1 (MAC)	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Xylenes (total)	μg/L	90 (MAC)	300	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50

OW9B-06

GW-OW9B

5/10/2022

< 0.010 < 0.015 < 0.010 < 0.010 < 0.010 < 0.010 < 0.010 < 0.0050 < 0.010 < 0.010 < 0.010 < 0.0050 < 0.010 < 0.010 < 0.010 < 0.050 < 0.020 < 0.010 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50-< 0.50 < 0.50 < 1.0 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.50 < 0.

Table 5.5A

Summary of Groundwater Analytical Results - Basal Overburden/Shallow Bedrock 2022 Operations and Monitoring Report Brooks Road Landfill Site Haldimand County, Ontario

Sample Location:			MW1A-13	MW1A-13	MW2A-01	MW5A-09	MW5A-09	MW6A-07	MW6A-07	MW11A-19	MW11A-19	MW12A-19	MW12A-19	MW12A-19	OW1A-06	OW1A-06	OW1A-06	OW3A-13	OW3A-13	OW5A-06	OW8A-06	OW9A-06	OW9A-06
Sample ID:			GW-MW1A	GW-18235-1122 PW-MW1A	GW-18235-1122- BK-MW2A	GW-MW5A	GW-18235-1122- BK-MW5A	GW-MW6A	GW-18235-1122- BK-MW6A	GW-MW11A	GW-18235-1122- PW-MW11A	GW-MW12A	GW-18235-1122- PW-MW12A	GW-18235-1122- PW-MW12X	GW-OW1A	GW-DUP1	GW-18235-1122- PW-OW1A	GW-OW3A	GW-18235-1122- PW-OW3A	GW-18235-1122 PW-OW5A	- GW-18235-1122- PW-OW8A	GW-OW9A	GW-18235-1122- BK-OW9A
Sample Date:			5/10/2022	11/3/2022	11/7/2022	5/12/2022	11/7/2022	5/11/2022	11/7/2022	5/9/2022	11/3/2022	5/10/2022	11/3/2022	11/3/2022	5/10/2022	5/10/2022	11/3/2022	5/12/2022	11/3/2022	11/3/2022	11/3/2022	5/10/2022	11/7/2022
Parameters	Units	ODWS ⁽¹⁾ a												Duplicate		Duplicate							
Field Parameters																							
Conductivity, field	mS/cm	-	4.84	4.82	3.87	4.35	3.85	-	3.65	3.89	4.22	3.27	3.52	3.52	3.91	3.91	4.11	3.74	3.47	3.37	3.84	3.79	3.74
Dissolved oxygen (DO), field Not sampled	mg/L none	-	0.00	0.00	7.21	0.0	0.00	-	2.04	0.54	-	0.0	0.00	0.00	0.0	0.0	-	0.14	0.90	-	-	4.89	8.68
Oxidation reduction potential (ORP), fie		- s -	122	49	53	-38	-27	-	-37	-17	-	17	21	21	-41	-41	-	40	99	-	-	184	44
pH, field	s.u.	6.5-8.5 (OG)	6.85	6.82	6.52	6.82	6.44 ^ª	NM	6.54	7.51	7.36	7.61	6.79	6.79	7.71	7.71	7.37	7.91	6.87	7.40	7.00	6.87	6.23 ^a
Temperature, field	Deg C		14.16	12.62	11.29	13.37	10.74	-	10.91	17.01ª	10.59	12.40	12.91	12.91	14.48	14.48	10.87	12.66	13.57	10.97	11.97	16.92	11.00
Turbidity, field	NIU	5.0/5.0 (MAC/AO) <u>1000</u> ª	1000 ^ª	14.9 ^ª	381 ^ª	1000 ^ª	-	990 ^ª	205ª	48.6ª	966*	1000 ^a	1000°	445°	445 ^ª	52.0 ^ª	361 ^ª	165 ^ª	97.3 ^ª	124 ^a	655 [°]	28.3ª
General Chemistry																							
Alkalinity, total (as CaCO3)	mg/L	30-500 (OG)	509	483	343	387	381	440	438	402	391 J	500	480	471	472	460	472 J	410	407	396 J	431 J	475	446
Ammonia-N Rischemissel exercen demand (ROD)	mg/L	-	0.482 < 3.0 J	0.417	0.0711 J+	0.650 < 3.0	0.720	0.426 < 3.0 J	0.408	0.384 < 3.0 J	0.413 J	0.139	0.232	0.229	0.647 < 3.0 J	0.617	0.498 J	< 0.0366 < 3.0	0.0665	0.494 J	0.438 J	0.250 < 3.0 J	0.236
Biochemical oxygen demand (BOD) Chemical oxygen demand (COD)	mg/L mg/L	-	< 3.0 J 32	63	- < 10	< 3.0	- 34	< 3.0 J 44	- 19	< 3.0 J 11	- < 10 J	< 3.0 J 41	- 41	- 44	< 3.0 J 17	< 3.0 J 19	- 58 J	< 3.0 14	- < 10	- 11 J	- 12 J	< 3.0 J 23	- < 10
Chloride	mg/L	250 (AO)	21.6 *	22.7 *	15.8 *	13.5 *	14.8 *	10.2 *	10.9 *	13.0 *	12.5 J *	14.2 *	13.6 *	13.7 *	12.1 *	12.2 *	12.4 J *	8.67 *	9.66 *	7.07 J *	12.0 J *	12.1 *	12.0 *
Conductivity	mS/cm	-	5.14	5.18	4.16	4.05	4.06	3.7	3.78	4.27	4.09 J	3.55	3.84	3.75	4.12	4.14	3.87 J	3.45	3.67	3.33 J	3.82 J	3.98	3.97
Dissolved organic carbon (DOC)	mg/L	-	3.10	2.35	2.49	2.49	3.10	2.54	2.65	1.92	2.50 J	3.07	2.69	2.51	2.23	1.79	2.36 J	2.31	1.73	11.0 J	2.57 J	1.50	2.33
Hardness Nitrate (as N)	mg/L mg/L	80-100 (OG) 10.0 (MAC)	3370 < 0.100	< 0.200	- < 0.100	2780 < 0.100	- < 0.100	2640 < 0.100 J	- < 0.100	2950 < 0.100 J	- < 0.200 J	2220 < 0.100 J	- < 0.100	- < 0.100	2830 < 0.100	2820 < 0.100	- < 0.100 J	2390 < 0.100	- < 0.100	- < 0.100 J	- < 0.100 J	2380 < 0.100	- < 0.100
Nitrite (as N)	mg/L	1.0 (MAC)	< 0.050	-	-	< 0.050	-	< 0.050 J	-	< 0.050 J	-	< 0.050 J	-	-	< 0.050	< 0.050	-	< 0.050	-	-	-	< 0.050	-
pH, lab	s.u.	6.5-8.5 (OG)	7.42	7.91	7.58	7.34	7.47	7.55	7.46	7.40	8.00 J	7.71	7.84	7.80	7.52	7.52	8.03 J	7.34	7.83	7.87 J	7.88 J	7.42	7.26
Phenolics (total)	mg/L	-	< 0.0010	-	-	< 0.0011 0.135	-	< 0.0018 0.0572	-	< 0.0010	-	< 0.0010	-	-	< 0.0010	< 0.0010	-	< 0.0016	-	-	-	< 0.0010	-
										0.0826		0.777	-		0.131	0.129		0.0574				0.134	
Phosphorus Sulfate	mg/L	- 500 (AO)	0.696	2700 *8	2750 *8		2010 *8		2460 *8		2520 1 *8		2250 *8	2250 *8			2200 1 **		2240 *8	2020 1 *8	2420 1 *8		2560 *8
Phosphorus Sulfate Total dissolved solids (TDS)	mg/L	500 (AO) 500 (AO)	3650 * ^a	3700 ** 5330*	2750 ** 3860*	2690 *ª 2650ª	2910 *ª 3920ª	2400 * ^a 3560 ^a	2460 * ^a 3610 ^a	2700 * ^a 4080 ^a	2530 J * ^a 4340 J ^a	2190 * ^a 3490 ^a	2250 *ª 3720ª	2250 * ^a 3570 ^a	2580 ** 3870*	2630 ** 3830*	2300 J ** 3470 J*	2230 ** 3310*	2240 * ^a 3660 ^a	2020 J ** 3050 J*	2420 J * ^a 3840 J ^a	2660 *ª	2560 *ª 3660ª
Sulfate			3650 * ^a 5360 ^a 0.782		2750 * ⁸ 3860 ⁸	2690 * ^a 2650 ^a 0.673		2400 * ^a 3560 ^a 0.802		2700 * ^a 4080 ^a 0.497		2190 ** 3490* 0.523			2580 * ^a 3870 ^a 0.668	2630 * ^a 3830 ^a 0.937		2230 * ^a 3310 ^a 0.137		2020 J *ª 3050 Jª		2660 ** 3990* 0.535	
Sulfate Total dissolved solids (TDS) Total kjeldahl nitrogen (TKN) Total suspended solids (TSS)	mg/L mg/L mg/L mg/L	500 (AO) - -	3650 * ^a 5360 ^a 0.782 1780	5330ª	2750 * ^a 3860 ^a	2690 *ª 2650ª		2400 ** 3560*	3610ª	2700 * ^a 4080 ^a	4340 J ^a	2190 ** 3490*			2580 ** 3870*	2630 * ^a 3830 ^a		2230 * ^a 3310 ^a 0.137 98.5		2020 J * ^a 3050 J ^a		2660 * ^a 3990 ^a 0.535 645	3660ª
Sulfate Total dissolved solids (TDS) Total kjeldahl nitrogen (TKN)	mg/L mg/L mg/L mg/L		3650 * ^a 5360 ^a 0.782 1780	5330*	2750 * ^a 3860 ^a	2690 * ^a 2650 ^a 0.673		2400 * ^a 3560 ^a 0.802	3610ª	2700 * ^a 4080 ^a 0.497	4340 J ^a	2190 ** 3490* 0.523			2580 * ^a 3870 ^a 0.668	2630 * ^a 3830 ^a 0.937		2230 * ^a 3310 ^a 0.137		2020 J *ª 3050 Jª		2660 ** 3990* 0.535	3660°
Sulfate Total dissolved solids (TDS) Total kjeldahl nitrogen (TKN) Total suspended solids (TSS)	mg/L mg/L mg/L mg/L	500 (AO) - -	3650 * ^a 5360 ^a 0.782 1780	5330ª	2750 * ^a 3860 ^a	2690 * ^a 2650 ^a 0.673		2400 * ^a 3560 ^a 0.802	3610ª	2700 * ^a 4080 ^a 0.497	4340 J ^a	2190 ** 3490* 0.523			2580 * ^a 3870 ^a 0.668	2630 * ^a 3830 ^a 0.937		2230 * ^a 3310 ^a 0.137 98.5		2020 J *ª 3050 Jª		2660 * ^a 3990 ^a 0.535 645	3660ª
Sulfate Total dissolved solids (TDS) Total kigledahl nitrogen (TKN) Total suspended solids (TSS) Turbidity Dissolved Metals Aluminum	mg/L mg/L mg/L NTU mg/L	500 (AO) - 5.0/5.0 (MAC/AO 0.10 (OG)	3650 * ^a 5360 ^a 0.782 1780)) - < 0.0100	5330ª	2750 * ⁸ 3860 ^a	2690 ** 2650* 0.673 391 - < 0.0100		2400 * ^a 3560 ^a 0.802 846 - < 0.0146	3610ª	2700 * ⁴ 4080 ^a 0.497 161 - < 0.0100	4340 J ^a	2190 ** 3490* 0.523 945 - < 0.0100			2580 ** 3870* 0.668 162 - < 0.0100	2630 * ^a 3830 ^a 0.937 114 - < 0.0100		2230 ** 3310* 0.137 98.5 - < 0.0100		2020 J * ^a 3050 J ^a		2660 ** 3990* 0.535 645 - 4.94	3660ª
Sulfate Total dissolved solids (TDS) Total kjeldahl nitrogen (TKN) Total suspended solids (TSS) Turbidity Dissolved Metals Aluminum Arsenic	mg/L mg/L mg/L NTU mg/L mg/L	500 (AO) - - 5.0/5.0 (MAC/AO 0.10 (OG) 0.010 (IMAC) (a)	3650 *** 5360* 0.782 1780)) - < 0.0100) 0.00346	5330°	3860*	2690 ** 2650* 0.673 391 - < 0.0100 0.0131*	3920*	2400 ** 3560* 0.802 846 - < 0.0146 0.00170	<u>3610°</u>	2700 ** 4080* 0.497 161 - < 0.0100 0.00622	4340 J ^a	2190 * ⁸ 3490 ⁸ 0.523 945 - < 0.0100 0.00401	3720°	3570ª	2580 ** 3870* 0.668 162 - < 0.0100 0.00735	2630 ** 3830* 0.937 114 - < 0.0100 0.00674	3470 J ^a	2230 * ⁸ 3310 ⁸ 0.137 98.5 - < 0.0100 < 0.00100	3660*	3050 J ^a	3840 J ^a	2660 * ⁸ 3990 ⁸ 0.535 645 - 4.94 0.00226	3660°
Sulfate Total dissolved solids (TDS) Total kigledahl nitrogen (TKN) Total suspended solids (TSS) Turbidity Dissolved Metals Aluminum	mg/L mg/L mg/L NTU mg/L mg/L mg/L	500 (AO) - 5.0/5.0 (MAC/AO 0.10 (OG)	3650 *** 5360* 0.782 1780)) - < 0.0100) 0.00346 0.00747	5330ª	3860ª	2690 ** 2650* 0.673 391 - - < 0.0100 0.0131* 0.00492		2400 ** 3560* 0.802 846 - < 0.0146 0.00170 0.00634	3610"	2700 ** 4080* 0.497 161 - < 0.0100 0.00622 0.00707	4340 J ^a	2190 * ⁸ 3490 ⁸ 0.523 945 - < 0.0100 0.00401 0.0309	3720°		2580 ** 3870* 0.668 162 - <0.0100 0.00735 0.00594	2630 ** 3830* 0.937 114 - < 0.0100 0.00674 0.00573		2230 ** 3310* 0.137 98.5 - < 0.0100 < 0.00100 0.0257	3660*	2020 J ** 3050 J* - - - 0.00649 J		2660 ** 3990* 0.535 645 - 4.94 0.00226 0.0536	<u>3660°</u>
Sulfate Total dissolved solids (TDS) Total kjeldahl nitrogen (TKN) Total suspended solids (TSS) Turbidity Dissolved Metals Aluminum Arsenic Barium	mg/L mg/L mg/L NTU mg/L mg/L	500 (AO) - - 5.0/5.0 (MAC/AO 0.10 (OG) 0.010 (IMAC) (a)	3650 *** 5360* 0.782 1780)) - < 0.0100) 0.00346	5330ª - - - 0.00541	3860*	2690 ** 2650* 0.673 391 - < 0.0100 0.0131*	3920*	2400 ** 3560* 0.802 846 - < 0.0146 0.00170	3610° - - - 0.00651	2700 ** 4080* 0.497 161 - < 0.0100 0.00622	4340 J ^a	2190 * ⁸ 3490 ⁸ 0.523 945 - < 0.0100 0.00401	3720°	3570ª	2580 ** 3870* 0.668 162 - < 0.0100 0.00735	2630 ** 3830* 0.937 114 - < 0.0100 0.00674	3470 J ^a	2230 * ⁸ 3310 ⁸ 0.137 98.5 - < 0.0100 < 0.00100	3660*	3050 J ^a	3840 J ^a	2660 * ⁸ 3990 ⁸ 0.535 645 - 4.94 0.00226	3660°
Sulfate Total dissolved solids (TDS) Total kjeldahl nitrogen (TKN) Total suspended solids (TSS) Turbidity Dissolved Metals Aluminum Arsenic Barium Beryllium Boron Cadmium	mg/L mg/L mg/L NTU mg/L mg/L mg/L mg/L	500 (AO) - 5.0/5.0 (MAC/AO 0.10 (OG) 0.010 (IMAC) (a) 1.0 (MAC)	3650 ** 5360* 0.782 1780) - < 0.0100 0.00346 0.00747 < 0.000200 0.625 < 0.0000500	0.00541 0.617	3860° - - 0.00391 - 0.470	2690 ** 2650* 0.673 391 - <0.0100 0.0131* 0.00492 <0.000200 0.712 <0.0000500	<u>3920</u>	2400 ** 3560* 0.802 846 - < 0.0146 0.00170 0.00634 < 0.000200 0.494	0.00651 0.490	2700 ** 4080* 0.497 161 - < 0.0100 0.00622 0.00707 < 0.000200 0.676 < 0.0000500	4340 J* - - 0.00774 J - 0.534 J	2190 ** 3490* 0.523 945 - < < < < < < < 0.0100 0.00401 0.0309 < < 0.000200 0.186 < < <	3720* - 0.0146 0.293	3570* - - 0.0139 - 0.280	2580 ** 3870* 0.668 162 - < 0.00100 0.00735 0.00594 < 0.000200 0.597 < 0.0000500	2630 ** 3830* 0.937 114 - < 0.0100 0.00674 0.00573 < 0.000200 0.573 < 0.0000500	3470 J*	2230 ** 3310* 0.137 98.5 - < 0.0100 < 0.00100 0.0257 < 0.000200 0.455 0.0000581	3660* - - 0.0125 - 0.516 -	3050 J* - - 0.00649 J - 0.475 J	3840 J*	2660 ** 3990* 0.535 645 - 4.94 0.00226 0.0536 0.000222 0.420 0.0000541	- - - 0.0117 - - 0.510 -
Sulfa ⁱ e Total dissolved solids (TDS) Total kijeldahl nitrogen (TKN) Total suspended solids (TSS) Turbidity Dissolved Metals Aluminum Arsenic Barium Beryllium Boron Cadmium Calcium	mg/L mg/L mg/L NTU mg/L mg/L mg/L mg/L mg/L mg/L	500 (AO) - - 5.0/5.0 (MAC/AO 0.010 (IMAC) (a) 1.0 (MAC) - 5.0 (IMAC) - -	3650 ** 5360* 0.782 1780 0) - < 0.0100 0.00346 0.00747 < 0.000200 0.625 < 0.0000500 448	5330* - - - 0.00541 - 0.617 - 439	3860 ^a - - 0.00391	2690 ** 2650* 0.673 391 - - <0.0100 0.0131* 0.00492 <0.000200 0.712 <0.0000500 482	3920* - - - 0.00784 - 0.624	2400 ** 3560* 0.802 846 - - 0.00170 0.00634 < 0.000200 0.494 < 0.0000500 490	3610 ^a - - - - - - - - - - - - - - - - - - -	2700 ** 4080* 0.497 161 - - 0.00707 < 0.000200 0.676 < 0.0000500 482	4340 J ^a - - 0.00774 J	2190 ** 3490* 0.523 945 - - <0.0100 0.00401 0.0309 <0.000200 0.186 <0.0000500 494	3720 ^a - - 0.0146 - 0.293	3570* - - 0.0139	2580 ** 3870* 0.668 162 - - < 0.0100 0.00735 0.00594 < 0.000200 0.597 < 0.0000500 422	2630 ** 3830* 0.937 114 - < 0.0100 0.00674 0.00573 < 0.000200 0.573 < 0.0000500 425	3470 J*	2230 ** 3310* 0.137 98.5 - <0.00100 0.0257 <0.000200 0.455 0.0000581 505	3660* - - - 0.0125 - 0.516 - 502	3050 J ^a - - 0.00649 J	3840 J* - - 0.00522 J	2660 ** 3990* 0.535 645 - - 0.00226 0.00226 0.000222 0.000222 0.420 0.000541 451	3860° - - 0.0117 0.510 - 538
Sulfate Total dissolved solids (TDS) Total kjeldahl nitrogen (TKN) Total suspended solids (TSS) Turbidity Dissolved Metals Aluminum Arsenic Barium Beryllium Boron Cadmium	mg/L mg/L mg/L TU NTU mg/L mg/L mg/L mg/L mg/L mg/L	500 (AO) - 5.0/5.0 (MAC/AO 0.10 (OG) 0.010 (IMAC) (a) 1.0 (MAC) - 5.0 (IMAC)	3650 ** 5360* 0.782 1780) - <0.0100 0.0346 0.00747 <0.000200 0.825 <0.0000500 448 <0.00500	0.00541 0.617	3860° - - 0.00391 - 0.470	2690 ** 2650* 0.673 391 - - <0.0100 0.0131* 0.00492 <0.000492 <0.000492 <0.000492 <0.000492 <0.0100 0.712 <0.0000500 482 <0.00500	<u>3920</u>	2400 ** 3550* 0.802 846 - - 0.00170 0.00634 < 0.000200 0.494 < 0.000200 490 < 0.00500	0.00651 0.490	2700 ** 4080* 0.497 161 - - 0.00707 < 0.000200 0.676 < 0.0000500 482 < 0.00500	4340 J* - - 0.00774 J - 0.534 J	2190 ** 3490* 0.523 945 - - <0.0100 0.00401 0.0309 <0.000200 0.186 <0.0000500 494 <0.00500	3720* - 0.0146 0.293	3570* - - 0.0139 - 0.280	2580 ** 3870* 0.668 162 - - < 0.0100 0.00735 0.00594 < 0.000200 0.597 < 0.000500 422 < 0.0500	2630 ** 3830* 0.937 114 - <0.0100 0.00674 0.00573 <0.000200 0.573 <0.0000500 425 <0.00500	3470 J*	2230 ** 3310* 0.137 98.5 - - < 0.0100 0.0257 < 0.00200 0.455 0.0000581 505 < 0.00500	3660* - - 0.0125 - 0.516 -	3050 J* - - 0.00649 J - 0.475 J	3840 J*	2660 ** 3990* 0.535 645 - 4.94 0.00226 0.0536 0.000222 0.420 0.0000541	- - 0.0117 - 0.510 -
Sulfate Total dissolved solids (TDS) Total kjeldahl nitrogen (TKN) Total suspended solids (TSS) Turbidity Dissolved Metals Aluminum Arsenic Barium Beryllium Boron Cadmium Calcium Chromium	mg/L mg/L mg/L NTU mg/L mg/L mg/L mg/L mg/L mg/L	500 (AO) - - 5.0/5.0 (MAC/AO 0.010 (IMAC) (a) 1.0 (MAC) - 5.0 (IMAC) - -	3650 ** 5360* 0.782 1780 0) - < 0.0100 0.00346 0.00747 < 0.000200 0.625 < 0.0000500 448	5330 ⁴ - - 0.00541 - 0.617 - 439	3860° - - 0.00391 - 0.470	2690 ** 2650* 0.673 391 - - <0.0100 0.0131* 0.00492 <0.000200 0.712 <0.0000500 482	3920 ^a	2400 ** 3560* 0.802 846 - - 0.00170 0.00634 < 0.000200 0.494 < 0.0000500 490	3610 ^a - - 0.00651 - 0.490 - 508	2700 ** 4080* 0.497 161 - - 0.00707 < 0.000200 0.676 < 0.0000500 482	4340 J ^a - - 0.00774 J - 0.534 J 465 J	2190 ** 3490* 0.523 945 - - <0.0100 0.00401 0.0309 <0.000200 0.186 <0.0000500 494	3720* - 0.0146 0.293	3570* - - 0.0139 - 0.280	2580 ** 3870* 0.668 162 - - < 0.0100 0.00735 0.00594 < 0.000200 0.597 < 0.0000500 422	2630 ** 3830* 0.937 114 - < 0.0100 0.00674 0.00573 < 0.000200 0.573 < 0.0000500 425	3470 J*	2230 ** 3310* 0.137 98.5 - <0.00100 0.0257 <0.000200 0.455 0.0000581 505	3660* - - - 0.0125 - 0.516 - 502	3050 J* - - 0.00649 J - 0.475 J	3840 J*	2660 ** 3990* 0.535 645 - 4.94 0.00226 0.00226 0.000222 0.420 0.000541 451 0.00766	3660° - - 0.0117 - 0.510 - 538
Sulfate Total dissolved solids (TDS) Total kjeldahl nitrogen (TKN) Total suspended solids (TSS) Turbidity Dissolved Metals Aluminum Arsenic Barium Beryllium Boron Cadmium Calcium Chromium Cobalt Copper Iron	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	500 (AO) 	3650 ** 5360* 0.782 1780) - < 0.0100 0.03346 0.00747 < 0.000200 0.825 < 0.000500 448 < 0.00500 < 0.00500 0.03309 < 0.00200	5330 ⁴ - - 0.00541 - 0.617 - 439	3860° - - 0.00391 - 0.470	2690 ** 2650* 0.673 391 - - <0.0100 0.0131* 0.00492 <0.000200 0.712 <0.0000500 482 <0.000500 <482 <0.00100 <0.00500 <0.00100 -	3920 ^a	2400 ** 3560* 0.802 846 - - < 0.0146 0.00170 0.00634 < 0.000200 0.494 < 0.0000500 490 < 0.00100 < 0.00100 < 0.00100 < 0.00200 3.38*	3610* - - - - - - - - - - - - - - - - - - -	2700 ** 4080* 0.497 161 - < 0.0100 0.00622 0.00707 < 0.000200 0.676 < 0.000500 482 < 0.00500 < 0.00500 < 0.00500 < 0.00500 < 2.00100 < 0.00200 2.94* 	4340 J* - - 0.00774 J - 0.534 J - 465 J - - 2.89 J*	2190 ** 3490* 0.523 945 - - < 0.0100 0.00401 0.0309 < 0.000200 0.186 < 0.000500 494 < 0.00500 0.00135 < 0.00200 0.00200 0.897* 	3720* - 0.0146 0.293	3570* - - - 0.0139 - 0.280 - 498 - - - 1.41*	2580 ** 3870* 0.668 162 - - < 0.00100 0.00735 0.00594 < 0.000200 0.597 < 0.0000500 422 < 0.00100 < 0.00100 < 0.00100 < 0.00100 < 2.00100 	2630 ** 3830* 0.937 114 - <0.00100 0.00674 0.00573 <0.000200 425 <0.000500 <0.00100 <0.00200 2.36*	3470 J*	2230 ** 3310* 0.137 98.5 - <0.00100 0.0257 <0.000200 0.455 0.0000581 505 <0.00500 0.00136 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.00200 <0.000000 <0.00200 <0.00200 <0.000000 <0.000000 <0.000000 <0.000000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.000000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.00000 <0.000000 <0.000000 <0.000000 <0.0000000 <0.0000000 <0.000000 <0.0000000 <0.0000000000	3660* - - - 0.0125 - 0.516 - 502	3050 J* - - 0.00649 J - 0.475 J	3840 J*	2660 ** 3990* 0.535 645 - 4.94 0.00226 0.00222 0.420 0.0000541 451 0.00766 0.00494 0.00729 7.70*	3660° - - 0.0117 - 0.510 - 538 - - - 1.48°
Sulfaie Total dissolved solids (TDS) Total kjeldahl nitrogen (TKN) Total suspended solids (TSS) Turbidity Dissolved Metals Aluminum Arsenic Barium Beryllium Boron Cadmium Calcium Chromium Cobalt Copper Iron Lead	mg/L mg/L mg/L TU mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	500 (AO) 	3650 ** 5360* 0.782 1780) - (0.0100) 0.00346 0.00747 < 0.000000 0.625 < 0.000500 448 < 0.000500 0.0309 < 0.00200 0.388* < 0.000500	5330* - - - - - - - - - - - - - - - - - - -	3860* - - - - - - - - - - - - - - - - - - -	2690 ** 2650* 0.673 391 - - <0.0100 0.0131* 0.00492 <0.000200 0.712 <0.000500 482 <0.00500 <0.00100 <0.00200 3.20* <0.00200	3920* - - - - - - - - - - - - - - - - - - -	2400 ** 3560* 0.802 846 - - <0.0146 0.00170 0.00634 <0.000200 0.494 <0.0000500 490 <0.00100 <0.00100 <0.00200 3.38* <0.00200	3610 ^a - - - - - - - - - - - - - - - - - - -	2700 ** 4080* 0.497 161 - - < 0.0100 0.00622 0.00707 < 0.000200 0.676 < 0.000500 482 < 0.00500 < 0.00100 < 0.0020 < 0.00200 < 0.00500 < 0.00200 < 0.00500 < 0.00200 < 0.00500 <	- 4340 J* 	2190 ** 3490* 0.523 945 - - <0.0100 0.00401 0.0309 <0.000200 0.186 <0.0000500 494 <0.000500 0.00135 <0.00200 0.897* <0.00200	3720 ^a - - - - - - - - - - - - - - - - - - -	3570* - - - - - - - - - - - - - - - - - - -	2580 ** 3870* 0.668 162 - - <0.0100 0.00735 0.00594 <0.000200 422 0.000500 422 <0.000500 <0.00100 <0.00200 2.69* <0.00200	2630 ** 3830* 0.937 114 - - <0.0100 0.00674 0.00573 <0.000200 425 <0.00500 425 <0.00500 <0.00500 2.36* <0.00200 2.36*	3470 J*	2230 ** 3310* 0.137 98.5 - 0.00100 0.0257 0.000200 0.455 0.000581 505 0.00500 0.00136 0.00200 <0.100 <0.00500 	3660* - - - - - - - - - - - - - - - - - - -	0.00649 J 0.475 J 494 J - - - 4.26 J ^a	3840 J* - - 0.00522 J - - 0.538 J - 463 J - - - - - - - - - - - - - - - - - - -	2660 ** 3990* 0.535 645 - - 4.94 0.00226 0.0536 0.000222 0.420 0.0000541 451 0.00729 0.00729 7.70* 0.00727	
Sulfate Total dissolved solids (TDS) Total kjeldahl nitrogen (TKN) Total suspended solids (TSS) Turbidity Dissolved Metals Aluminum Arsenic Barium Beryllium Boron Cadmium Calcium Chromium Cobalt Copper Iron	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	500 (AO) 	3650 ** 5360* 0.782 1780 - < 0.0100 0.0346 0.00747 < 0.000200 0.625 < 0.000500 448 < 0.00200 0.0309 < 0.388* < 0.00200 546	5330* - - - - - - - - - - - - - - - - - - -	3860° - - - - - - - - - - - - - - - - - - -	2690 ** 2650* 0.673 391 - - <0.0100 0.0131* 0.00492 <0.000200 0.712 <0.0000500 482 <0.000500 <482 <0.00100 <0.00500 <0.00100 -	3920* - - - 0.00784 - - - - - - - - - - - - - - - - - - -	2400 ** 3560* 0.802 846 - - 0.0146 0.00170 0.00634 0.000500 0.494 0.000500 490 0.00500 490 0.00500 3.38* 0.000500 3.43 	3610* - - - - - - - - - - - - - - - - - - -	2700 ** 4080* 0.497 161 - <0.0100 0.00622 0.00707 <0.000200 0.676 <0.000200 482 <0.00500 482 <0.00500 2.94* <0.00500 424	4340 J* - - 0.00774 J - 0.534 J - 465 J - - 2.89 J*	2190 ** 3490* 0.523 945 - - < 0.00401 0.0309 < 0.000200 0.186 < 0.000500 494 < 0.00500 0.00135 < 0.00500 0.897* < 0.00500 241	3720* 	3570* - - - 0.0139 - 0.280 - 498 - - - 1.41*	2580 ** 3870* 0.668 162 - - < 0.00100 0.00735 0.00594 < 0.000200 0.597 < 0.0000500 422 < 0.00100 < 0.00100 < 0.00100 < 0.00100 < 2.00100 	2630 ** 3830* 0.937 114 - <0.0100 0.00674 0.00573 <0.000200 425 <0.000500 425 <0.00100 <0.00100 2.36* <0.000500 425	3470 J*	2230 ** 3310* 0.137 98.5 - <0.00100 <0.00100 0.0257 <0.000200 0.455 0.000581 505 <0.00500 0.00136 <0.00200 <0.100 <0.100 <0.000500 275	3660* - - - - - - - - - - - - - - - - - - -	3050 J ⁴ - - - - - - - - - - - - - - - - - - -	3840 J* - - 0.00522 J - 0.538 J - 463 J -	2660 ** 3990* 0.535 645 - 4.94 0.00226 0.000222 0.420 0.0000541 451 0.00766 0.00494 0.00729 7.70* 0.00527 305	3660° - - 0.0117 - 0.510 - 538 - - - 1.48°
Sulfate Total dissolved solids (TDS) Total kjeldahl nitrogen (TKN) Total suspended solids (TSS) Turbidity Dissolved Metals Aluminum Arsenic Barium Beryllium Boron Calcium Calcium Chromium Cobalt Copper Iron Lead Magnesium	mg/L mg/L mg/L TU mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	500 (AO) 	3650 ** 5360* 0.782 1780) - (0.0100) 0.00346 0.00747 < 0.000000 0.625 < 0.000500 448 < 0.000500 0.0309 < 0.00200 0.388* < 0.000500	5330* - - - - - - - - - - - - - - - - - - -	3860* - - - - - - - - - - - - - - - - - - -	2690 ** 2650* 0.673 391 - - - - - - - - - - - - -	3920* - - - 0.00784 - - - - - - - - - - - - - - - - - - -	2400 ** 3560* 0.802 846 - - <0.0146 0.00170 0.00634 <0.000200 0.494 <0.0000500 490 <0.00100 <0.00100 <0.00200 3.38* <0.00200	3610 ^a - - - - - - - - - - - - - - - - - - -	2700 ** 4080* 0.497 161 - - < 0.0100 0.00622 0.00707 < 0.000200 0.676 < 0.000500 482 < 0.00500 < 0.00100 < 0.0020 < 0.00200 < 0.00500 < 0.00200 < 0.00500 < 0.00200 < 0.00500 <	- 4340 J* 	2190 ** 3490* 0.523 945 - - <0.0100 0.00401 0.0309 <0.000200 0.186 <0.0000500 494 <0.000500 0.00135 <0.00200 0.897* <0.00200	3720* 	3570* - - - - - - - - - - - - - - - - - - -	2580 ** 3870 ⁴ 0.668 162 - - < 0.0100 0.00735 0.00594 < 0.000500 0.597 < 0.000500 422 < 0.000500 422 < 0.000500 < 0.000100 < 0.000100 < 0.000500 432	2630 ** 3830* 0.937 114 - - <0.0100 0.00674 0.00573 <0.000200 425 <0.00500 425 <0.00500 <0.00500 2.36* <0.00200 2.36*	3470 J*	2230 ** 3310* 0.137 98.5 - 0.00100 0.0257 0.000200 0.455 0.000581 505 0.00500 0.00136 0.00200 <0.100 <0.00500 	3660* - - - - - - - - - - - - - - - - - - -	0.00649 J 0.475 J 494 J - - - 4.26 J ^a	3840 J* - - 0.00522 J - - 0.538 J - 463 J - - - - - - - - - - - - - - - - - - -	2660 ** 3990* 0.535 645 - - 4.94 0.00226 0.0536 0.000222 0.420 0.0000541 451 0.00729 0.00729 7.70* 0.00727	3860° - - 0.0117 0.510 - 538 - - - - - - - - - - - - - - - - - - -
Sulfate Total dissolved solids (TDS) Total kjeldahl nitrogen (TKN) Total suspended solids (TSS) Turbidity Dissolved Metals Aluminum Arsenic Barium Beryllium Boron Cadmium Calcium Chromium Calcium Chromium Cobalt Copper Iron Lead Magnesium Manganese Mercury Molybdenum	mg/L mg/L mg/L Mg/L Mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L m	500 (AO) 	3650 ** 5360* 0.782 1780 - < 0.0100 0.0346 0.00747 < 0.000200 0.625 < 0.000500 < 0.00200 448 < 0.00200 < 0.00200 0.388* < 0.00200 546 0.216* < 0.000050 0.00667	5330* - - - - - - - - - - - - - - - - - - -	3860* - - - - - - - - - - - - - - - - - - -	2690 ** 2650* 0.673 391 - - - - - - - - - - - - -	3920* - - - 0.00784 - - - - - - - - - - - - - - - - - - -	2400 ** 3560* 0.802 846 - - 0.0146 0.00170 0.00634 0.000500 0.494 0.0000500 490 0.00100 0.00100 0.00100 3.38* 0.119* 0.000050 0.00456 	3610 ^a - - - - - - - - - - - - - - - - - - -	2700 ** 4080* 0.497 161 - < 0.0100 0.00622 0.00707 < 0.000200 0.676 < 0.0000500 < 0.00100 < 0.00100 < 0.000500 2.94* < 0.00100 424 0.191* < 0.000050 0.000507	- 4340 J* 	2190 ** 3490* 0.523 945 - - 0.00401 0.0309 0.000200 0.186 0.0000500 0.00135 0.000300 241 0.0983* 0.000500 241 0.0983* 0.000500 241 0.0983* 0.000368 	3720* 	3570* - - - - - - - - - - - - - - - - - - -	2580 ** 3870 ⁴ 0.668 162 - - < 0.0100 0.00735 0.00594 < 0.000500 422 < 0.0000500 422 < 0.0000500 < 0.0000500 432 0.109 ⁴ < 0.000050 0.000050	2630 ** 3830* 0.937 114 - (0.0100 0.00674 0.00573 (0.000200 0.573 (0.000500 425 (0.000500 2.36* (0.000500 2.36* (0.000500 426 0.112* (0.000050 0.00376 (0.000500 0.00376 (0.00376) 0.00376 (0.00376) 0.00376 (0.00376) 0.00376 (0.00376) 0.00376 (0.00376) 0.00376 (0.00050 0.00050 0.00376 (0.00050 0.00376 (0.00050 0.00376 (0.00376 (0.00050 0.00376 (0.00050 0.00376 (0.	3470 J*	2230 ** 3310* 0.137 0.137 98.5 <0.00100 <0.00257 <0.000200 0.455 0.0000581 505 <0.00200 <0.0136 <0.00200 <0.0100 <0.000500 275 0.279* <0.0000500 275 0.279* <0.0000567 <0.0000567	3660* - - - - - - - - - - - - - - - - - - -	0.00649 J 0.475 J 494 J - - - 4.26 J ^a	3840 J* - - 0.00522 J - - 0.538 J - 463 J - - - - - - - - - - - - - - - - - - -	2660 ** 3990* 0.535 645 - 4.94 0.00226 0.000222 0.420 0.000541 451 0.00766 0.00434 0.00729 7.70* 0.00527 305 0.261* 0.000090 0.00516	3860° - - 0.0117 0.510 - 538 - - - - - - - - - - - - - - - - - - -
Sulfaie Total dissolved solids (TDS) Total kjeldahl nitrogen (TKN) Total suspended solids (TSS) Turbidity Dissolved Metals Aluminum Arsenic Barium Beryllium Boron Cadmium Calcium Chromium Cobalt Copper Iron Lead Magnesium Manganese Mercury Molybdenum	mg/L mg/L mg/L Mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L m	500 (AO) 	3650 ** 5360* 0.782 1780) - <0.0100 0.0346 0.00747 <0.000200 448 <0.00500 <0.00500 <0.00200 0.388* <0.000500 546 0.000667 <0.00667 <0.0535	5330* - - - - - - - - - - - - - - - - - - -	3860* - - - - - - - - - - - - - - - - - - -	2690 ** 2650* 0.673 391 - - <0.0100 0.0131* 0.00492 <0.000200 0.712 <0.000500 482 <0.000500 <0.00200 3.20* <0.000500 382 0.00306 <0.0000500 382 0.00306 <0.0000500 382 0.00306 <0.0000500 382 0.0000500 .000406 <0.000500 .000406 <0.000500 .000406 .000500 .000406 .000500 .000406 .000500 .000406 .000500 .000	3920* - - - 0.00784 - - - - - - - - - - - - - - - - - - -	2400 * ³ 3560 ⁸ 0.802 846 (0.0146 0.00170 0.00634 < 0.000200 0.494 < 0.0000500 490 < 0.00500 < 0.00100 < 0.00200 3.38 ^a 0.119 ^a < 0.0000500 0.0456 < 0.00500	3610 ^a - - - - - - - - - - - - - - - - - - -	2700 ** 4080* 0.497 161 - (0.00622 0.00707 < 0.000200 0.676 < 0.000500 482 < 0.000500 < 0.000500 2.94* < 0.000500 424 0.00537 < 0.000500 	- 4340 J* 	2190 ** 3490* 0.523 945 - - < 0.0100 0.00401 0.0309 < 0.000200 0.186 < 0.000500 494 < 0.000500 0.00135 < 0.000200 241 0.000500 241 0.000050 241 0.000050	3720* 	3570* - - - - - - - - - - - - - - - - - - -	2580 ** 3870* 0.668 162 - - (0.00100 0.00735 0.00534 < 0.0000500 422 < 0.000500 422 < 0.000500 < 0.000100 < 0.000200 2.69* < 0.000050 432 0.0059 < 0.0000050 432 0.0059 < 0.0000050 432 0.0059 < 0.0000050 432 0.0059 < 0.0000050 432 0.0059 < 0.0000050 432 0.0059 < 0.0000050 432 0.0059 < 0.0000050 432 0.0059 < 0.0000050 3.55 0.00550 - - - - - - - - - - - - -	2630 ** 3830* 0.937 114 - (0.00674 0.00573 < 0.000200 0.573 < 0.000500 425 < 0.000500 < 0.000500 < 0.000200 2.36* < 0.000200 2.26* 0.112* < 0.000376 < 0.000376	3470 J*	2230 ** 3310* 0.137 98.5	3660* - - - - - - - - - - - - - - - - - - -	0.00649 J 0.475 J 494 J - - - 4.26 J ^a	3840 J* - - 0.00522 J - - 0.538 J - 463 J - - - - - - - - - - - - - - - - - - -	2660 ** 3990* 0.535 645 - - 4.94 0.00226 0.00226 0.00022 0.420 0.0000541 451 0.00729 7.70* 0.00527 0.0057 0.0057 0.005777 0.005777 0.005777 0.005777 0.0057777777777 0.0057777777777777777777777777777777777	
Sulfaie Total dissolved solids (TDS) Total kjeldahl nitrogen (TKN) Total suspended solids (TSS) Turbidity Dissolved Metals Aluminum Arsenic Barium Beryllium Boron Cadmium Calcium Chromium Calcium Chromium Cobalt Copper Iron Lead Magnesium Manganese Mercury Molybdenum Nickel Potassium	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	500 (AO) 	3650 ** 5360* 0.782 1780 0 0 0.0346 0.000200 0.625 < 0.0000500 448 < 0.000500 0.388* < 0.000500 546 0.216* 0.000500 546 0.216* 0.000535 4.88	5330* - - - - - - - - - - - - - - - - - - -	3860* - - - - - - - - - - - - - - - - - - -	2690 ** 2650* 0.673 391 - - - - - - - - - - - - -	3920* - - - 0.00784 - - - - - - - - - - - - - - - - - - -	2400 ** 3560* 0.802 846 - - (0.0146 0.00170 0.00634 <0.000200 0.494 <0.000200 490 <0.00500 490 <0.00500 3.38* <0.000500 343 0.119* <0.00500 0.00456 <0.00500 4.71	3610 ^a - - - - - - - - - - - - - - - - - - -	2700 * ³ 4080 ^a 0.497 161 - (0.00707 0.00622 0.00707 <0.000200 0.676 <0.000200 482 <0.00500 482 <0.00500 2.94 ^a <0.00500 424 0.191 ^a <0.000500 0.00537 <0.000500 5.89	- 4340 J* 	2190 ** 3490* 0.523 945 - - <0.0100 0.00401 0.0309 <0.000200 0.186 <0.000200 494 <0.00500 494 <0.00500 0.00135 <0.00200 0.897* <0.000500 241 0.0883* <0.00500 241 0.0983* <0.00500 3.70	3720* 	3570* - - - - - - - - - - - - - - - - - - -	2580 ** 3870 ⁴ 0.668 162 - - - - - - - - - - - - -	2630 ** 3830* 0.937 114 - < 0.0100 0.00674 0.00573 < 0.0000200 425 < 0.000500 425 < 0.000500 2.36* < 0.000500 426 < 0.00200 2.36* < 0.00200 2.36* < 0.00200 2.36* < 0.000500 425 < 0.000500 425 < 0.000500 425 < 0.000500 425 < 0.000500 425 < 0.000500 425 < 0.000500 426 </th <th>3470 J*</th> <th>2230 ** 3310* 0.137 98.5 - * 0.00100 0.0257 <0.000200 0.455 0.0000581 505 <0.00500 0.00136 <0.00200 <0.000500 275 0.279* <0.006677 4.86</th> <th>3660* - - - - - - - - - - - - - - - - - - -</th> <th>0.00649 J 0.475 J 494 J - - - 4.26 J^a</th> <th>3840 J* - - 0.00522 J - - 0.538 J - 463 J - - - - - - - - - - - - - - - - - - -</th> <th>2660 ** 3990* 0.535 645 - 4.94 0.00226 0.000222 0.420 0.000541 451 0.00766 0.000541 451 0.00769 7.70* 0.00769 0.00729 7.70* 0.00527 305 0.264* 0.000541 0.000547 0.00527 305 0.264* 0.000548 0.000547 0.00548 0.000548 0.000548 0.000548 0.000548 0.000548 0.000548 0.000548 0.000548 0.000548 0.000548 0.000548 0.000548 0.000548 0.000548 0.000548 0.000568 0.000588</th> <th>3860° - - - 0.0117 - - 0.510 - 538 - - 538 - - - - - - - - - - - - - - - - - - -</th>	3470 J*	2230 ** 3310* 0.137 98.5 - * 0.00100 0.0257 <0.000200 0.455 0.0000581 505 <0.00500 0.00136 <0.00200 <0.000500 275 0.279* <0.006677 4.86	3660* - - - - - - - - - - - - - - - - - - -	0.00649 J 0.475 J 494 J - - - 4.26 J ^a	3840 J* - - 0.00522 J - - 0.538 J - 463 J - - - - - - - - - - - - - - - - - - -	2660 ** 3990* 0.535 645 - 4.94 0.00226 0.000222 0.420 0.000541 451 0.00766 0.000541 451 0.00769 7.70* 0.00769 0.00729 7.70* 0.00527 305 0.264* 0.000541 0.000547 0.00527 305 0.264* 0.000548 0.000547 0.00548 0.000548 0.000548 0.000548 0.000548 0.000548 0.000548 0.000548 0.000548 0.000548 0.000548 0.000548 0.000548 0.000548 0.000548 0.000548 0.000568 0.000588	3860° - - - 0.0117 - - 0.510 - 538 - - 538 - - - - - - - - - - - - - - - - - - -
Sulfaie Total dissolved solids (TDS) Total kjeldahl nitrogen (TKN) Total suspended solids (TSS) Turbidity Dissolved Metals Aluminum Arsenic Barium Beryllium Boron Cadmium Calcium Chromium Cobalt Copper Iron Lead Magnesium Manganese Mercury Molybdenum	mg/L mg/L mg/L Mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L m	500 (AO) 	3650 ** 5360* 0.782 1780) - <0.0100 0.0346 0.00747 <0.000200 448 <0.00500 <0.00500 <0.00200 0.388* <0.000500 546 0.000667 <0.00667 <0.0535	5330* - - - - - - - - - - - - - - - - - - -	3860* - - - - - - - - - - - - - - - - - - -	2690 ** 2650* 0.673 391 - - <0.0100 0.0131* 0.00492 <0.000200 0.712 <0.000500 482 <0.000500 <0.00200 3.20* <0.000500 382 0.00306 <0.0000500 382 0.00306 <0.0000500 382 0.00306 <0.0000500 382 0.0000500 .00406 <0.000500 .00406 <0.000500 .00406 .004050 .00406 .004050 .00406 .004050 .00406 .004050 .00406 .004050 .00406 .0000500 .00406 .0000500 .00406 .0000500 .00406 .0000500 .00406 .0000500 .000	3920* - - - 0.00784 - - - - - - - - - - - - - - - - - - -	2400 * ³ 3560 ⁸ 0.802 846 (0.0146 0.00170 0.00634 < 0.000200 0.494 < 0.0000500 490 < 0.00500 < 0.00100 < 0.00200 3.38 ^a 0.119 ^a < 0.0000500 0.0456 < 0.00500	3610 ^a - - - - - - - - - - - - - - - - - - -	2700 ** 4080* 0.497 161 - (0.00622 0.00707 < 0.000200 0.676 < 0.000500 482 < 0.000500 < 0.000500 2.94* < 0.000500 424 0.00537 < 0.000500 	- 4340 J* 	2190 ** 3490* 0.523 945 - - < 0.0100 0.00401 0.0309 < 0.000200 0.186 < 0.000500 494 < 0.000500 0.00135 < 0.000200 241 0.000500 241 0.000050 241 0.000050	3720* 	3570* - - - - - - - - - - - - - - - - - - -	2580 ** 3870* 0.668 162 - - (0.00100 0.00735 0.00534 < 0.0000500 422 < 0.000500 422 < 0.000500 < 0.000100 < 0.000200 2.69* < 0.000050 432 0.0059 < 0.0000050 432 0.0059 < 0.0000050 432 0.0059 < 0.0000050 432 0.0059 < 0.0000050 432 0.000050 0.00385 < 0.0000050 0.00385 < 0.0000050 0.00385 < 0.0000050 0.00385 < 0.0000050 0.00385 < 0.0000050 0.00385 < 0.0000050 0.00385 < 0.0000050 0.00385 < 0.0000050 0.0059 < 0.0000050 0.00500 < 0.000500 < 0.000500 - - - - - - - - - - - - -	2630 ** 3830* 0.937 114 - (0.00674 0.00573 < 0.000200 0.573 < 0.000500 425 < 0.000500 < 0.000500 < 0.000200 2.36* < 0.000200 2.26* 0.112* < 0.000376 < 0.000376	3470 J*	2230 ** 3310* 0.137 98.5	3660* - - - - - - - - - - - - - - - - - - -	0.00649 J 0.475 J 494 J - - - 4.26 J ^a	3840 J* - - 0.00522 J - - 0.538 J - 463 J - - - - - - - - - - - - - - - - - - -	2660 ** 3990* 0.535 645 - - 4.94 0.00226 0.00226 0.00022 0.420 0.0000541 451 0.00729 7.70* 0.00527 0.0057 0.0057 0.005777 0.005777 0.005777 0.005777 0.0057777777777 0.0057777777777777777777777777777777777	
Sulfaie Total dissolved solids (TDS) Total kjeldahl nitrogen (TKN) Total suspended solids (TSS) Turbidity Dissolved Metals Aluminum Arsenic Barium Beryllium Boron Cadmium Calcium Cadmium Calcium Chromium Cabalt Copper Iron Lead Magnesium Manganese Mercury Molybdenum Nickel Potassium Silver Solium	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	500 (AO) 	3650 ** 5360* 0.782 1780 0 0 0.0346 0.00747 < 0.000200 0.625 < 0.000500 448 < 0.000500 .0388* < 0.0000500 546 0.216* < 0.0000050 .0665 .0.00530 .00057 .000535 4.88 < 0.000100 155 < 0.000100	5330* - - - - - - - - - - - - - - - - - - -	3860 ^a - - - - - - - - - - - - - - - - - - -	2690 ** 2650* 0.673 391 - - - - - - - - - - - - -	3920* - - - - - - - - - - - - - - - - - - -	2400 ** 3560* 0.802 846 - - 0.0146 0.00170 0.00634 0.000500 0.494 0.000500 490 0.000500 3.84* 0.000500 3.43* 0.119* 0.000500 3.419* 0.000500 3.419* 0.000500 3.419* 0.000500 3.4119* 0.0000500 4.711 <0.000100 112 <0.000100 	3610 ^a - - - - - - - - - - - - - - - - - - -	2700 ** 4080* 0.497 161 - < 0.0100 0.00622 0.00707 < 0.000200 0.676 < 0.000500 482 < 0.00500 482 < 0.00500 2.94* < 0.000500 424 0.191* < 0.00500 5.89 < 0.000100 134 < 0.000100		2190 ** 3490* 0.523 945 - - 0.0100 0.00401 0.0309 0.000500 0.186 0.000500 494 0.00500 0.00135 0.00500 0.00135 0.00500 241 0.0897* 0.000500 241 0.0897* 0.00500 241 0.0898* 0.00500 3.70 0.000100 	3720* - - - - - - - - - - - - - - - - - - -	3570* - - - - 0.0139 - - - - - - - - - - - - - - - - - - -	2580 ** 3870 ⁴ 0.668 162 - - (0.00594 <0.000500 422 <0.000500 422 <0.00500 422 <0.00500 422 <0.00500 422 <0.00500 422 <0.00500 422 <0.00500 422 <0.00500 422 <0.00500 422 <0.00500 422 <0.00500 422 <0.00500 422 <0.00500 422 <0.00500 422 <0.00500 422 <0.00500 422 <0.00500 422 <0.00500 422 <0.00500 422 <0.00500 422 <0.00500 422 <0.00500 422 <0.00500 422 <0.00500 422 <0.00500 422 <0.00500 422 <0.00500 422 <0.00500 422 <0.00500 422 <0.00500 422 <0.00500 422 <0.00500 422 <0.000500 422 <0.000500 422 <0.000500 422 <0.000500 422 <0.000500 422 <0.000500 422 <0.000500 422 <0.000500 422 <0.000500 422 <0.000500 422 <0.000500 422 <0.000500 422 <0.000500 422 <0.000500 422 <0.000500 422 <0.000500 422 <0.000500 422 <0.000500 422 <0.000500 422 <0.000500 427 <0.000500 427 <0.000500 427 <0.000500 427 <0.000500 427 <0.000500 478 <0.0000100 477 <0.0000100 477 <0.0000100 477 <0.0000100 477 <0.0000100 477 <0.0000100 477 <0.0000100 477 <0.0000100 477 <0.0000100 477 <0.0000100 477 <0.0000100 477 <0.0000100 477 <0.0000100 477 <0.0000100 477 <0.0000100 477 <0.0000100 477 <0.000100 477 <0.000100 477 <0.000100 477 <0.000100 477 <0.000100 477 <0.000100 477 <0.000100 477 <0.000100 477 <0.000100 477 <0.000100 477 <0.000100 477 <0.000100 477 477 477 477 477 477 477 4	2630 ** 3830* 0.937 114 - (0.00573) (0.000500) 425 < 0.000500 425 < 0.000500 2.38* < 0.000500 2.38* < 0.000500 2.38* < 0.000500 4.85 < 0.0000500 4.85 < 0.000100 143 < 0.000100	3470 J* - - - 0.00483 J 0.504 J - - - - - - - - - - - - - - - - - - -	2230 ** 3310* 0.137 98.5 - (0.0100 <0.00100 0.0257 <0.000200 0.455 0.0000581 505 <0.00500 0.00136 <0.000500 2075 0.279* <0.0000500 277 0.00677 0.00677 0.00677 4.86 <0.000100 103 <0.000100	3660* - - - - - - - - - - - - - - - - - - -	3050 J* - - - 0.00649 J - - 494 J - - - - - - - - - - - - - - - - - - -	3840 J* - - - 0.00522 J - - - - - - - - - - - - - - - - - - -	2660 ** 3990* 0.535 645 - 4.94 0.00226 0.000222 0.420 0.000541 451 0.00766 0.00494 0.007729 7.70* 0.00527 305 0.264* 0.000527 305 0.264* 0.000527 3.05 0.264* 0.000527 3.05 0.264* 0.000527 3.05 0.264* 0.000527 3.05 0.264* 0.000527 3.05 0.264* 0.000527 0.000527 3.05 0.000527 0.000527 3.05 0.000527 0.000527 3.05 0.000527 0.000100 0.00516 0.000100 0.00016 0.000100 0.00016 0.000100 0.0000000000	3660* - - - 0.0117 - - 0.510 - - 538 - - - - - - - - - - - - - - - - - - -
Sulfaie Total dissolved solids (TDS) Total kjeldahl nitrogen (TKN) Total suspended solids (TSS) Turbidity Dissolved Metals Aluminum Arsenic Barium Beryllium Boron Cadmium Calcium Chromium Cobalt Copper Iron Lead Magnesium Manganese Mercury Molybdenum Nickel Potassium Silver Sodium	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	500 (AO) 	3650 ** 5360* 0.782 1780) - <0.0100 0.0346 0.00747 <0.00000 0.625 <0.000500 448 <0.000500 546 0.00667 0.00667 0.00535 4.88 <0.000100 155	5330* - - - - - - - - - - - - - - - - - - -	3860 ^a - - - - - - - - - - - - - - - - - - -	2690 ** 2650* 0.673 391 - - <0.0100 0.0131* 0.00492 <0.000200 0.712 <0.0000500 482 <0.000500 <0.00100 <0.00200 <0.00200 <0.00200 3.20* <0.0000500 3.20* <0.0000500 3.20* <0.0000500 3.20* <0.0000500 3.20* <0.0000500 3.20* <0.0000500 3.20* <0.0000500 3.20* <0.0000500 3.20* <0.0000500 3.20* <0.0000500 3.20* <0.0000500 3.20* <0.0000500 3.20* <0.0000500 3.20* <0.0000500 3.20* <0.0000500 3.20* <0.0000500 3.20* <0.0000500 3.20* <0.0000500 3.20* <0.0000500 3.20* <0.0000500 3.20* <0.0000500 3.20* <0.0000500 3.20* <0.0000500 3.20* <0.0000500 3.20* <0.0000500 3.20* <0.0000500 3.20* <0.0000500 3.20* <0.0000500 3.20* <0.0000500 3.20* <0.0000500 3.20* <0.000500 3.20* <0.000500 3.20* <0.000500 3.20* <0.000500 3.20* <0.000500 3.20* <0.000500 3.20* <0.000500 3.20* <0.000500 3.20* <0.000500 3.20* <0.000500 3.20* <0.000500 3.20* <0.000500 3.20* <0.000500 3.20* <0.000500 3.20* <0.000500 3.20* <0.000500 3.20* <0.000500 3.20* <0.000500 3.20* <0.000500 3.20* <0.000500 3.20* <0.000500 3.20* <0.000500 3.20* <0.000500 3.20* <0.000500 3.20* <0.000500 3.20* <0.000500 3.20* <0.000500 3.20* <0.000500 3.20* <0.000500 3.20* <0.000500 3.20* <0.000500 3.20* <0.000500 3.20* <0.000500 3.20* <0.000500 3.20* <0.000500 3.20* <0.000500 3.20* <0.000500 3.20* <0.000500 3.25* <0.000500 3.25* <0.000500 3.25* <0.000500 3.25* <0.000500 3.25* <0.000500 3.25* <0.000500 3.25* <0.000500 3.25* <0.000500 3.25* <0.000500 3.25* <0.000500 3.25* <0.000500 3.25* <0.000500 3.25* <0.000500 3.25* 3.5* 3.5* 3.5*	3920* - - - - - - - - - - - - - - - - - - -	2400 ** 3550* 0.802 846 - - 0.0146 0.00170 0.00634 0.000200 0.494 0.0000500 490 0.000500 4.00100 0.000500 3.38* 0.109* 0.000500 3.43 0.119* 0.000456 0.000456 0.000456 0.000456 0.000456 0.000456 1.12 	3610 ^a - - - - - - - - - - - - - - - - - - -	2700 ** 4080* 0.497 161 - - < 0.0100 0.00622 0.00707 < 0.000200 0.676 < 0.000500 482 < 0.00500 < 0.00100 < 0.000500 424 0.000500 424 < 0.000500 5.89 < 0.000100 134		2190 ** 3490* 0.523 945 - - 0.00401 0.0309 0.000200 0.186 0.000500 494 0.00500 0.00135 <0.000500 241 0.000500 241 0.000500 241 0.000500 241 0.000500 241 0.00368 <0.00500 3.70 <0.000100 83.1 	3720* - - - - - - - - - - - - - - - - - - -	3570* - - - - 0.0139 - - - - - - - - - - - - - - - - - - -	2580 ** 3870* 0.668 162 - - (0.00100 0.00735 0.00554 < 0.000200 0.597 < 0.000500 422 < 0.000500 < 0.000100 2.69* < 0.000500 432 0.000500 432 0.000500 4.78 < 0.000100 147	2630 ** 3830* 0.937 114 - <0.00674 0.00573 <0.000200 0.573 <0.000200 0.573 <0.000500 425 <0.000500 <0.00200 <0.00000 <0.00000 <0.000200 <0.000200 <0.000200 <0.000200 <0.000200 <0.000200 <0.000200 <0.00200 <0.000200 <0.000200 <0.000200 <0.000200 <0.000200 <0.000200 <0.000200 <0.000200 <0.000000 4.85 <0.000100 143	3470 J* - - - 0.00483 J 0.504 J - - - - - - - - - - - - - - - - - - -	2230 ** 3310* 0.137 98.5	3660* - - - - - - - - - - - - - - - - - - -	3050 J* - - - 0.00649 J - - 494 J - - - - - - - - - - - - - - - - - - -	3840 J* - - - 0.00522 J - - - - - - - - - - - - - - - - - - -	2660 ** 3990* 0.535 645 - - 0.00226 0.00226 0.00022 0.420 0.0000541 451 0.00729 7.70* 0.00527 0.00576 0.00576 0.00576 0.00576 0.00056 0.00576 0.00056 0.	3660* - - - 0.0117 - - 0.510 - - 538 - - - - - - - - - - - - - - - - - - -

Ontario Drinking Water Standards (ODWS), June 2003; revised June 2006, prepared by the MOECC. No Value/Not Analyzed. The result is an estimated value. Rejected. Does not meet the applicable ODWS/O. Reg 153/04 criteria. Method detection limit does not meet ODWS/O. Reg 153/04 criteria. Result below method detection limit. Current criteria for arsenic is provided wich came into affect 2018. Previous data is subjected to a limit of 0.025 mg/L.

Notes:	
(1)	Ontario Drinking Water Standards (ODWS), June 2003; revised June 2006, prepared by the MOECC.
-	No Value/Not Analyzed.
J	The result is an estimated value.
R	Rejected.
0.054ª	Does not meet the applicable ODWS/O. Reg 153/04 criteria.
< 0.10	Method detection limit does not meet ODWS/O. Reg 153/04 criteria.
< 0.20	Result below method detection limit.
(a)	Current criteria for arsenic is provided wich came into affect 2018. Previous data is subjected to a limit of 0.025 mg/L

Table 5.5B

Summary of Groundwater Analytical Results - Basal Overburden/Shallow Bedrock 2022 Operations and Monitoring Report Brooks Road Landfill Site Haldimand County, Ontario

						Haiuillali	d county, ontand	,					
Sample Location:				MW1A-13	MW5A-09	MW6A-07	MW10A-18	MW11A-19	MW13A-22	MW14A-22	OW1A-06	OW1A-06	OW3A-13
Sample ID:				GW-MW1A	GW-MW5A	GW-MW6A	GW-MW10A	GW-MW11A	GW-MW13A	GW-MW14A	GW-OW1A	GW-DUP1	GW-OW3A
Sample Date:		ODWS ⁽¹⁾	Table 2 ⁽²⁾	5/10/2022	5/12/2022	5/11/2022	5/10/2022	5/9/2022	5/10/2022	5/10/2022	5/10/2022	5/10/2022 Duplicate	5/12/2022
Parameters	Units		b										
Semi-volatile Organic Compounds													
1-Methylnaphthalene	μg/L	-	-	0.034	< 0.010	0.010	0.042	< 0.010	0.047	0.681	< 0.010	< 0.010	< 0.010
1-Methylnaphthalene/2-Methylnaphthalene	μg/L	-	3.2	0.071	< 0.015	0.023	0.080	< 0.015	0.098	1.42	< 0.015	< 0.015	< 0.015
2-Methylnaphthalene	μg/L	-	-	0.037	< 0.010	0.013	0.038	< 0.010	0.051	0.734	< 0.010	< 0.010	< 0.010
Acenaphthene	μg/L	-	4.1 1	< 0.010 < 0.010	< 0.020 < 0.010	< 0.078 < 0.027	< 0.010 < 0.010	< 0.010 < 0.010	< 0.010 < 0.010				
Acenaphthylene Anthracene	μg/L μg/L	-	2.4	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.122	< 0.010	< 0.010	< 0.010
Benzo(a)anthracene	μg/L	-	1	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.014	< 0.010	< 0.010	< 0.010
Benzo(a)pyrene		0.01 (MAC)	0.01	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0085	< 0.0050	< 0.0050	< 0.0050
Benzo(b)fluoranthene	μg/L	- '	0.1	-	-	-	-	-	-	-	-	-	-
Benzo(b)fluoranthene/Benzo(j)fluoranthene	μg/L	-	0.1	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.024	< 0.010	< 0.010	< 0.010
Benzo(g,h,i)perylene	μg/L	-	0.2	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	0.011	< 0.010	< 0.010	< 0.010
Benzo(k)fluoranthene	μg/L	-	0.1	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Chrysene	μg/L	-	0.1	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.012	< 0.050	< 0.010	< 0.010	< 0.010
Dibenz(a,h)anthracene	μg/L	-	0.2	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050 0.131	< 0.0050	< 0.0050	< 0.0050
Fluoranthene Fluorene	μg/L μg/L	-	0.41 120	0.011 0.014	< 0.010 < 0.010	< 0.010 < 0.010	< 0.010 0.015	< 0.010 < 0.010	0.049 0.019	0.131	< 0.010 < 0.010	< 0.010 < 0.010	< 0.010 < 0.010
Indeno(1,2,3-cd)pyrene	μg/L μg/L	-	0.2	< 0.014	< 0.010	< 0.010	< 0.015	< 0.010	< 0.019	< 0.010	< 0.010	< 0.010	< 0.010
Naphthalene	μg/L		11	< 0.050	< 0.050	< 0.010	0.375	< 0.010	< 0.050	< 0.269	< 0.050	< 0.050	< 0.010
Phenanthrene	μg/L		1	< 0.020	< 0.020	0.035	< 0.020	< 0.020	0.047	0.460	< 0.020	< 0.020	< 0.020
Pyrene	μg/L	-	4.1	0.027	< 0.010	0.013	0.010	< 0.010	0.058	0.129	< 0.010	< 0.010	< 0.010
Volatile Organic Compounds	- //			4 0 50	< 0.50	- 0 50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1,1,2-Tetrachloroethane 1,1,1-Trichloroethane	μg/L μg/L	-	1.1 200	< 0.50 < 0.50	< 0.50	< 0.50 < 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1,2,2-Tetrachloroethane	μg/L	_	1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1,2-Trichloroethane	μg/L	-	4.7	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1-Dichloroethane	μg/L	-	5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,1-Dichloroethene	μg/L	14 (MAC)	1.6	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-Dibromoethane (Ethylene dibromide)	μg/L	-	0.2	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
1,2-Dichlorobenzene		200 (MAC)	3	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-Dichloroethane	μg/L	5 (IMAC)	1.6	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,2-Dichloropropane	μg/L	-	5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
1,3-Dichlorobenzene 1,4-Dichlorobenzene	μg/L	- 5 (MAC)	59 1	< 0.50 < 0.50	< 0.50 < 0.50								
2-Butanone (Methyl ethyl ketone) (MEK)	μg/L μg/L	- J (IVIAC)	1800	< 20	< 20	< 20	< 20	< 20	< 20	< 0.30 76	< 20	< 20	< 20
2-Hexanone	μg/L	-	-	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK		-	640	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
Acetone	μg/L	-	2700	< 20	< 20	< 20	< 20	< 20	< 20	70	< 20	< 20	< 20
Benzene	μg/L	1 (MAC)	5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromodichloromethane	μg/L	-	16	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromoform	μg/L	-	25	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Bromomethane (Methyl bromide)	μg/L	-	0.89	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Carbon disulfide	μg/L	- 2 (MAC)	- 0.79	- < 0.20	- < 0.20	- < 0.20	- < 0.20	- < 0.20					
Carbon tetrachloride Chlorobenzene	μg/L μg/L	2 (MAC) 80 (MAC)	30	< 0.20	< 0.20 < 0.50	< 0.20	< 0.20	< 0.20 < 0.50	< 0.20 < 0.50	< 0.20 < 0.50	< 0.20	< 0.20 < 0.50	< 0.20
Chloroethane	μg/L	-	-	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Chloroform (Trichloromethane)	μg/L	-	2.4	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Chloromethane (Methyl chloride)	μg/L	-	-	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
cis-1,2-Dichloroethene	μg/L	-	1.6	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
cis-1,3-Dichloropropene	μg/L	-	-	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30
cis-1,3-Dichloropropene/trans-1,3-Dichloropropene	μg/L	-	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	μg/L	-	25	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Dichlorodifluoromethane (CFC-12)	μg/L		590	-	-	-	-	-	-	-	-	-	-
Ethylbenzene		140 (MAC)	2.4	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Hexane	μg/L	-	51	- 0.40	-	-	-	-	-	-		-	-
m&p-Xylenes Methyl tert butyl ether (MTRE)	μg/L μg/l	- 15 (AO)	- 15	< 0.40 < 0.50	< 0.40 < 0.50								
Methyl tert butyl ether (MTBE) Methylene chloride	μg/L μg/l		50	< 0.50 < 1.0	< 0.50 < 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 0.50 < 1.0	< 0.50 < 1.0	< 1.0	< 1.0
o-Xylene	μg/L μg/L	- (IVIAC)	-	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30
Styrene	μg/L	-	5.4	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Tetrachloroethene	μg/L		1.6	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Toluene	μg/L		24	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.67	0.56	< 0.50	< 0.50	< 0.50
trans-1,2-Dichloroethene	μg/L	-	1.6	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
trans-1,3-Dichloropropene	μg/L	-	-	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30
Trichloroethene	μg/L	5 (MAC)	1.6	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Trichlorofluoromethane (CFC-11)	μg/L	-	150	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Trihalomethanes		100 (MAC)	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Vinyl chloride	μg/L		0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Xylenes (total)	μg/L	90 (MAC)	300	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50

DW3A-13	OW9A-06
W-OW3A	GW-OW9A
/12/2022	5/10/2022
< 0.010 < 0.015 < 0.010 < 0.010 < 0.010 < 0.010 < 0.010 : 0.0050	< 0.010 < 0.015 < 0.010 < 0.010 < 0.010 < 0.010 < 0.010 < 0.0050
- 0.010 < 0.010 < 0.010 < 0.010 < 0.010 < 0.0050 < 0.010 < 0.010 < 0.050 < 0.020 < 0.020 < 0.020	 < 0.010 < 0.010 < 0.010 < 0.010 < 0.0050 < 0.011 < 0.010 < 0.010 < 0.050 < 0.020 < 0.010
< 0.50 < 20 < 20 < 20 < 20 < 20 < 20 < 20 < 0.50 <	< 0.50 < 2.0 < 20 < 20 < 20 < 20 < 20 < 0.50 < 0.50
 < 0.50 < 0.50 < 2.0 < 0.50 < 0.30 < 0.5 < 0.50 < 0.50 	< 0.50 < 0.50 < 2.0 < 0.50 < 0.30 < 0.5 < 0.50
 - 0.40 < 0.50 < 1.0 < 0.30 < 0.50 	 < 0.40 < 0.50 < 1.0 < 0.50

Table 5.6A

Summary of Groundwater Analytical Results - Bedrock 2022 Operations and Monitoring Report Brooks Road Landfill Site Haldimand County, Ontario

Sample Location:			MW1D-07	MW1S-07	MW2D-07	MW2S-07	OW8D-07	OW8S-07
Sample ID:			GW-MW1D	GW-MW1S	GW-MW2D	GW-MW2S	GW-OW8D	GW-OW8S
Sample Date:		ODWS ⁽¹⁾	5/11/2022	5/11/2022	5/11/2022	5/11/2022	5/9/2022	5/9/2022
Parameters	Units	a						
Field Parameters								
Conductivity, field	mS/cm	-	3.62	3.80	4.00	4.05	2.96	-
Dissolved oxygen (DO), field	mg/L	-	0.0	3.58	0.0	0.0	1.01	-
Oxidation reduction potential (ORP), field	millivolts	; -	-44	-3	63	44	-296	-
pH, field	s.u.	6.5-8.5 (OG)	7.64	7.76	7.46	7.56	8.27	NM
Temperature, field	Deg C	15 (AO)	13.53	20.94 ^a	12.78	11.63	14.78	-
Turbidity, field	NTU	5.0/5.0 (MAC/AO)	1000 ^a	445 ^a	116 ^a	0.4	118 ^a	-
General Chemistry								
Alkalinity, total (as CaCO3)	mg/L	30-500 (OG)	577	357	408	413	204	406
Ammonia-N	mg/L	-	0.993	0.386	0.166	0.197	3.52	0.306
Biochemical oxygen demand (BOD)	mg/L	-	6.6 J	6.1 J	< 3.0 J	< 3.0 J	70.0 J	< 3.0 J
Chemical oxygen demand (COD)	mg/L	-	1220	693	< 10	< 10	148	11
Chloride	mg/L	250 (AO)	13.0 *	12.7 *	12.9 *	12.6 *	23.9 *	13.6 *
Conductivity	mS/cm	-	3.66	2.92	3.95	3.93	3.33	4.17
Dissolved organic carbon (DOC)	mg/L	-	3.41	2.58	2.58	1.70	3.47	2.36
Hardness	mg/L	80-100 (OG)	3630	2660	2900	2860	2260	2830
Nitrate (as N)	mg/L	10.0 (MAC)	< 0.100 J	0.115 J	< 0.100 J	< 0.100 J	< 0.100 J	< 0.100 J
Nitrite (as N)	mg/L	1.0 (MAC)	< 0.050 J	< 0.050 J	< 0.050 J	< 0.050 J	< 0.050 J	< 0.050 J
pH, lab	s.u.	6.5-8.5 (OG)	7.51	7.70	7.52	7.52	8.17	7.44
Phenolics (total)	mg/L	-	< 0.0100	< 0.0100	< 0.0010	< 0.0010	< 0.0100	< 0.0026
Phosphorus	mg/L	-	13.2	10.8	0.0329	0.0024	0.103	0.0218
Sulfate	mg/L	500 (AO)	2280 * ^a	1850 * ^a	2610 * ^a	2600 * ^a	2060 * ^a	2690 * ^a
	-							
Total dissolved solids (TDS)	mg/L	500 (AO)	3450 ^a	2690 ^a	4020 ^a	3970 ^a	3310ª	3860 ^a
Total dissolved solids (TDS) Total kjeldahl nitrogen (TKN)	mg/L mg/L		3450 ª 22.3	<mark>2690^a</mark> < 5.00	4020 ^a 0.236	3970^a 0.264	3310^a < 5.00	3860 ^a 0.428
Total dissolved solids (TDS)	mg/L		3450 ^a	2690 ^a	4020 ^a	3970 ^a	3310ª	3860 ^a
Total dissolved solids (TDS) Total kjeldahl nitrogen (TKN) Total suspended solids (TSS) Turbidity	mg/L mg/L mg/L	500 (AO) - -	3450 ^ª 22.3 64700	<mark>2690^a</mark> < 5.00	4020ª 0.236 103	3970^a 0.264	3310^a < 5.00 400	3860 ^a 0.428 26.0
Total dissolved solids (TDS) Total kjeldahl nitrogen (TKN) Total suspended solids (TSS) Turbidity Dissolved Metals	mg/L mg/L mg/L NTU	500 (AO) - 5.0/5.0 (MAC/AO)	3450 ^a 22.3 64700 -	2690 ^a < 5.00 12400 -	4020 ^a 0.236 103 -	3970 ^a 0.264 4.5 -	3310 ^a < 5.00 400 -	3860 ^a 0.428 26.0
Total dissolved solids (TDS) Total kjeldahl nitrogen (TKN) Total suspended solids (TSS) Turbidity Dissolved Metals Aluminum	mg/L mg/L mg/L NTU mg/L	500 (AO) - 5.0/5.0 (MAC/AO) 0.10 (OG)	3450 ^a 22.3 64700 - 84.8	2690 ^a < 5.00 12400 - 0.418	4020 ^a 0.236 103 - < 0.0758	3970 ^a 0.264 4.5 - < 0.0100	3310 ^a < 5.00 400 -	3860 ^a 0.428 26.0 - < 0.0100
Total dissolved solids (TDS) Total kjeldahl nitrogen (TKN) Total suspended solids (TSS) Turbidity Dissolved Metals Aluminum Arsenic	mg/L mg/L mg/L NTU mg/L mg/L	500 (AO) - - 5.0/5.0 (MAC/AO) 0.10 (OG) 0.010 (IMAC) (a)	3450 ^a 22.3 64700 - 84.8 0.0272 ^a	2690 ^a < 5.00 12400 - 0.418 0.00619	4020 ^a 0.236 103 - < 0.0758 < 0.00100	3970 ^a 0.264 4.5 - < 0.0100 0.00123	3310 ^a < 5.00 400 - 0.680 0.00244	3860 ^a 0.428 26.0 - < 0.0100 0.00391
Total dissolved solids (TDS) Total kjeldahl nitrogen (TKN) Total suspended solids (TSS) Turbidity Dissolved Metals Aluminum Arsenic Barium	mg/L mg/L MTU MTU mg/L mg/L	500 (AO) - 5.0/5.0 (MAC/AO) 0.10 (OG)	3450 ^a 22.3 64700 - 84.8 0.0272 ^a 0.583	2690 ^a < 5.00 12400 - 0.418 0.00619 0.0267	4020 ^a 0.236 103 - < 0.0758 < 0.00100 0.00713	3970 ^a 0.264 4.5 - < 0.0100 0.00123 0.00324	3310 ^a < 5.00 400 - 0.680 0.00244 0.00931	3860 ^a 0.428 26.0 - < 0.0100 0.00391 0.00436
Total dissolved solids (TDS) Total kjeldahl nitrogen (TKN) Total suspended solids (TSS) Turbidity Dissolved Metals Aluminum Arsenic Barium Beryllium	mg/L mg/L NTU mg/L mg/L mg/L	500 (AO) - 5.0/5.0 (MAC/AO) 0.10 (OG) 0.010 (IMAC) (a) 1.0 (MAC) -	3450 ^a 22.3 64700 - 84.8 0.0272 ^a 0.583 0.00412	2690 ^a < 5.00 12400 - 0.418 0.00619 0.0267 < 0.000200	4020 ^a 0.236 103 - < 0.0758 < 0.00100 0.00713 < 0.000200	3970 ^a 0.264 4.5 - < 0.0100 0.00123 0.00324 < 0.000200	3310 ^a < 5.00 400 - 0.680 0.00244 0.00931 < 0.000200	3860 ^a 0.428 26.0 - - < 0.0100 0.00391 0.00436 < 0.000200
Total dissolved solids (TDS) Total kjeldahl nitrogen (TKN) Total suspended solids (TSS) Turbidity Dissolved Metals Aluminum Arsenic Barium Beryllium Boron	mg/L mg/L NTU mg/L mg/L mg/L mg/L	500 (AO) - 5.0/5.0 (MAC/AO) 0.10 (OG) 0.010 (IMAC) (a) - 5.0 (IMAC)	3450 ^a 22.3 64700 - 84.8 0.0272 ^a 0.583 0.00412 0.766	2690 ^a < 5.00 12400 - 0.418 0.00619 0.0267 < 0.000200 0.514	4020 ^a 0.236 103 - < 0.0758 < 0.00100 0.00713 < 0.000200 0.526	3970 ^a 0.264 4.5 - < 0.0100 0.00123 0.00324 < 0.000200 0.509	3310 ^a < 5.00 400 - - 0.680 0.00244 0.00931 < 0.000200 10.6 ^a	3860 ^a 0.428 26.0 - - < 0.0100 0.00391 0.00436 < 0.000200 0.579
Total dissolved solids (TDS) Total kjeldahl nitrogen (TKN) Total suspended solids (TSS) Turbidity Dissolved Metals Aluminum Arsenic Barium Beryllium Boron Cadmium	mg/L mg/L NTU mg/L mg/L mg/L mg/L mg/L	500 (AO) - 5.0/5.0 (MAC/AO) 0.10 (OG) 0.010 (IMAC) (a) 1.0 (MAC) -	3450 ^a 22.3 64700 - 84.8 0.0272 ^a 0.583 0.00412 0.766 0.000750	2690 ^a < 5.00 12400 - 0.0267 < 0.000200 0.514 < 0.0000500	4020 ^a 0.236 103 - < 0.0758 < 0.00100 0.00713 < 0.000200 0.526 < 0.0000500	3970 ^a 0.264 4.5 - - < 0.0100 0.00123 0.00324 < 0.000200 0.509 < 0.0000500	3310 ^a < 5.00 400 - - 0.680 0.00244 0.00931 < 0.000200 10.6 ^a < 0.0000500	3860 ^a 0.428 26.0 - - 0.00391 0.00436 < 0.000200 0.579 < 0.0000500
Total dissolved solids (TDS) Total kjeldahl nitrogen (TKN) Total suspended solids (TSS) Turbidity Dissolved Metals Aluminum Arsenic Barium Beryllium Boron Cadmium Calcium	mg/L mg/L NTU mg/L mg/L mg/L mg/L mg/L	500 (AO) - - 5.0/5.0 (MAC/AO) 0.10 (OG) 0.010 (IMAC) (a) - 5.0 (IMAC) - 5.0 (IMAC) 0.005 (MAC)	3450 ^a 22.3 64700 - 84.8 0.0272 ^a 0.583 0.00412 0.766 0.000750 908	2690 ^a < 5.00 12400 - 0.00619 0.0267 < 0.000200 0.514 < 0.0000500 489	4020 ^a 0.236 103 - < 0.0758 < 0.00100 0.00713 < 0.000200 0.526 < 0.0000500 491	3970 ^a 0.264 4.5 - - 0.00123 0.00324 < 0.000200 0.509 < 0.0000500 478	3310 ^a < 5.00 400 - - 0.680 0.00244 0.00931 < 0.000200 10.6 ^a < 0.0000500 526	3860 ^a 0.428 26.0 - - 0.00391 0.00436 < 0.000200 0.579 < 0.0000500 475
Total dissolved solids (TDS) Total kjeldahl nitrogen (TKN) Total suspended solids (TSS) Turbidity Dissolved Metals Aluminum Arsenic Barium Beryllium Boron Cadmium Calcium Chromium	mg/L mg/L Mg/L Mg/L mg/L mg/L mg/L mg/L	500 (AO) - 5.0/5.0 (MAC/AO) 0.10 (OG) 0.010 (IMAC) (a) - 5.0 (IMAC)	3450 ^a 22.3 64700 - 84.8 0.0272 ^a 0.583 0.00412 0.766 0.000750 908 0.137 ^a	2690 ^a < 5.00 12400 - 0.00619 0.0267 < 0.000200 0.514 < 0.0000500 489 < 0.00500	4020 ^a 0.236 103 - < 0.0758 < 0.00100 0.00713 < 0.000200 0.526 < 0.0000500 491 < 0.00500	3970 ^a 0.264 4.5 - - < 0.0100 0.00123 0.00324 < 0.000200 0.509 < 0.0000500 478 < 0.00500	3310 ^a < 5.00 400 - 0.680 0.00244 0.00931 < 0.000200 10.6 ^a < 0.0000500 526 < 0.00500	3860 ^a 0.428 26.0 - - 0.00391 0.00436 < 0.000200 0.579 < 0.000200 475 < 0.00500
Total dissolved solids (TDS) Total kjeldahl nitrogen (TKN) Total suspended solids (TSS) Turbidity Dissolved Metals Aluminum Arsenic Barium Beryllium Boron Cadmium Calcium Chromium Cobalt	mg/L mg/L Mg/L Mg/L mg/L mg/L mg/L mg/L mg/L	500 (AO) - - 5.0/5.0 (MAC/AO) 0.10 (OG) 0.010 (IMAC) (a) - 5.0 (IMAC) - 5.0 (IMAC) - 0.005 (MAC) - - - - - - - - - - - - -	3450 ^a 22.3 64700 - - 84.8 0.0272 ^a 0.583 0.00412 0.766 0.000750 908 0.137 ^a 0.0695	2690 ^a < 5.00 12400 - 0.00619 0.0267 < 0.000200 0.514 < 0.0000500 489 < 0.00500 0.00139	4020 ^a 0.236 103 - < 0.0758 < 0.00100 0.00713 < 0.000200 0.526 < 0.0000500 491 < 0.00500 0.00235	3970 ^a 0.264 4.5 - 0.0100 0.00123 0.00324 0.000200 0.509 0.0000500 478 0.00500 0.00157 	3310 ^a < 5.00 400 - 0.680 0.00244 0.00931 < 0.000200 10.6 ^a < 0.000500 526 < 0.00500 < 0.00100	3860 ^a 0.428 26.0 - <pre> </pre> < 0.00100 0.00391 0.00436 < 0.000200 0.579 < 0.0000500 475 < 0.000500 0.00225
Total dissolved solids (TDS) Total kjeldahl nitrogen (TKN) Total suspended solids (TSS) Turbidity Dissolved Metals Aluminum Arsenic Barium Beryllium Boron Cadmium Calcium Chromium Cobalt Copper	mg/L mg/L NTU mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	500 (AO) - - 5.0/5.0 (MAC/AO) 0.10 (OG) 0.010 (IMAC) (a) 1.0 (MAC) - 5.0 (IMAC) 0.005 (MAC) - 0.05 (MAC) - 1.0 (AO)	3450 ^a 22.3 64700 - - 84.8 0.0272 ^a 0.583 0.00412 0.766 0.000750 908 0.137 ^a 0.0695 0.139	2690 ^a < 5.00 12400 - - 0.00619 0.0267 < 0.000200 0.514 < 0.0000500 489 < 0.000500 0.00139 < 0.00200	4020 ^a 0.236 103 - < 0.0758 < 0.00100 0.00713 < 0.000200 0.526 < 0.0000500 491 < 0.000500 0.00235 < 0.00200	3970 ^a 0.264 4.5 - 0.0100 0.00123 0.00324 0.000200 0.509 0.0000500 478 0.00500 478 0.00500 0.00157 0.00200 	3310 ^a < 5.00 400 - 0.680 0.00244 0.00931 < 0.000200 10.6 ^a < 0.000500 526 < 0.00500 < 0.00100 < 0.00100 < 0.00200	3860 ^a 0.428 26.0 - - 0.00391 0.00436 < 0.000200 0.579 < 0.0000500 475 < 0.000500 0.00225 < 0.00200
Total dissolved solids (TDS) Total kjeldahl nitrogen (TKN) Total suspended solids (TSS) Turbidity Dissolved Metals Aluminum Arsenic Barium Beryllium Boron Cadmium Calcium Chromium Cobalt Copper Iron	mg/L mg/L NTU mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	500 (AO) - - 5.0/5.0 (MAC/AO) 0.10 (OG) 0.010 (IMAC) (a) 1.0 (MAC) - 5.0 (IMAC) - 0.05 (MAC) - 1.0 (AO) 0.30 (AO)	3450 ^a 22.3 64700 - - 0.583 0.00412 0.766 0.000750 908 0.137 ^a 0.0695 0.139 158 ^a	2690 ^a < 5.00 12400 - - 0.00619 0.0267 < 0.000200 0.514 < 0.000500 489 < 0.00500 0.00139 < 0.00200 2.43 ^a	4020 ^a 0.236 103 - < 0.0758 < 0.00100 0.00713 < 0.000200 0.526 < 0.0000500 491 < 0.000500 0.00235 < 0.00200 0.311 ^a	3970 ^a 0.264 4.5 - 0.00100 0.00123 0.00324 0.000200 0.509 0.0000500 478 0.000500 478 0.00500 0.00157 0.00200 0.479^a 	3310 ^a < 5.00 400 - 0.680 0.00244 0.00931 < 0.000200 10.6 ^a < 0.000500 526 < 0.00500 < 0.00100 < 0.00200 0.236	3860 ^a 0.428 26.0 - <pre></pre>
Total dissolved solids (TDS) Total kjeldahl nitrogen (TKN) Total suspended solids (TSS) Turbidity Dissolved Metals Aluminum Arsenic Barium Beryllium Boron Cadmium Calcium Chromium Cobalt Copper Iron Lead	mg/L mg/L NTU mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	500 (AO) - - 5.0/5.0 (MAC/AO) 0.10 (OG) 0.010 (IMAC) (a) 1.0 (MAC) - 5.0 (IMAC) 0.005 (MAC) - 0.05 (MAC) - 1.0 (AO)	3450 ^a 22.3 64700 - - 84.8 0.0272 ^a 0.583 0.00412 0.766 0.000750 908 0.137 ^a 0.0695 0.139 158 ^a 0.0839 ^a	2690 ^a < 5.00 12400 - 0.418 0.00619 0.0267 < 0.000200 0.514 < 0.0000500 489 < 0.00500 0.00139 < 0.00200 2.43 ^a < 0.000500	4020 ^a 0.236 103 - < 0.0758 < 0.00100 0.00713 < 0.000200 0.526 < 0.0000500 491 < 0.000500 0.00235 < 0.00200 0.311 ^a < 0.000500	3970 ^a 0.264 4.5 - - < 0.00100 0.00123 0.00324 < 0.000200 0.509 < 0.0000500 478 < 0.000500 0.00157 < 0.00200 0.479 ^a < 0.000500	3310 ^a < 5.00 400 - 0.680 0.00244 0.00931 < 0.000200 10.6 ^a < 0.0000500 526 < 0.00500 < 0.00100 < 0.00200 0.236 < 0.000500 < 0.000500	3860 ^a 0.428 26.0 - <pre> </pre> < 0.0100 0.00391 0.00436 < 0.000200 0.579 < 0.0000500 475 < 0.000500 0.00225 < 0.00200 1.85 ^a < 0.000500
Total dissolved solids (TDS) Total kjeldahl nitrogen (TKN) Total suspended solids (TSS) Turbidity Dissolved Metals Aluminum Arsenic Barium Beryllium Boron Cadmium Calcium Chromium Cobalt Copper Iron Lead Magnesium	mg/L mg/L Mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L m	500 (AO) - - 5.0/5.0 (MAC/AO) 0.10 (OG) 0.010 (IMAC) (a) 1.0 (MAC) - 5.0 (IMAC) 0.005 (MAC) - 0.05 (MAC) - 0.05 (MAC) - 0.030 (AO) 0.30 (AO) 0.01 (MAC) - -	3450 ^a 22.3 64700 - - 84.8 0.583 0.00412 0.766 0.000750 908 0.137 ^a 0.0695 0.139 158 ^a 0.0839 ^a 330	2690 ^a < 5.00 12400 - 0.0267 < 0.000200 0.514 < 0.0000500 489 < 0.00500 0.00139 < 0.00200 2.43 ^a < 0.000500 350	4020 ^a 0.236 103 - < 0.0758 < 0.00100 0.00713 < 0.000200 0.526 < 0.0000500 491 < 0.00500 0.00235 < 0.00200 0.311 ^a < 0.000500 407	3970 ^a 0.264 4.5 - < 0.0100 0.00123 0.00324 < 0.000200 0.509 < 0.0000500 478 < 0.00500 0.00157 < 0.00200 0.479 ^a < 0.000500 405	3310 ^a < 5.00 400 - 0.680 0.00244 0.00931 < 0.000200 10.6 ^a < 0.0000500 526 < 0.00500 < 0.00100 < 0.00200 0.236 < 0.000500 231	3860 ^a 0.428 26.0 - <pre></pre>
Total dissolved solids (TDS) Total kjeldahl nitrogen (TKN) Total suspended solids (TSS) Turbidity Dissolved Metals Aluminum Arsenic Barium Beryllium Boron Cadmium Calcium Chromium Cobalt Copper Iron Lead Magnesium Manganese	mg/L mg/L Mg/L Mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L m	500 (AO) - - 5.0/5.0 (MAC/AO) 0.10 (OG) 0.010 (IMAC) (a) - 5.0 (IMAC) - 5.0 (IMAC) 0.005 (MAC) - 0.05 (MAC) 0.30 (AO) 0.30 (AO) 0.01 (MAC) - 0.05 (AO) 0.05 (AO)	3450 ^a 22.3 64700 - - 84.8 0.583 0.00412 0.766 0.000750 908 0.137 ^a 0.0695 0.139 158 ^a 0.0839 ^a 330 3.06 ^a	2690 ^a < 5.00 12400 - - 0.418 0.00619 0.0267 < 0.000200 0.514 < 0.0000500 489 < 0.00500 0.00130 < 0.00200 2.43 ^a < 0.000500 350 0.0911 ^a	4020 ^a 0.236 103 - < 0.0758 < 0.00100 0.00713 < 0.000200 0.526 < 0.0000500 491 < 0.00500 0.00235 < 0.00200 0.311 ^a < 0.000500 407 0.162 ^a	3970 ^a 0.264 4.5 - < 0.0100 0.00123 0.00324 < 0.000200 0.509 < 0.0000500 478 < 0.000500 0.00157 < 0.00200 0.479 ^a < 0.000500 405 0.158 ^a	3310 ^a < 5.00 400 - - 0.680 0.00244 0.00931 < 0.000200 10.6 ^a < 0.0000500 526 < 0.000500 < 0.00100 < 0.00200 0.236 < 0.000500 231 0.0182	3860 ^a 0.428 26.0 - <pre> </pre> < 0.0100 0.00391 0.00436 < 0.000200 0.579 < 0.0000500 475 < 0.000500 0.00225 < 0.000200 1.85 ^a < 0.000500 400 0.215 ^a
Total dissolved solids (TDS) Total kjeldahl nitrogen (TKN) Total suspended solids (TSS) Turbidity Dissolved Metals Aluminum Arsenic Barium Beryllium Boron Cadmium Calcium Chromium Cobalt Copper Iron Lead Magnesium Manganese Mercury	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	500 (AO) - - 5.0/5.0 (MAC/AO) 0.10 (OG) 0.010 (IMAC) (a) 1.0 (MAC) - 5.0 (IMAC) 0.005 (MAC) - 0.05 (MAC) - 0.05 (MAC) - 0.030 (AO) 0.30 (AO) 0.01 (MAC) -	3450 ^a 22.3 64700 - - 84.8 0.0272 ^a 0.583 0.00412 0.766 0.000750 908 0.137 ^a 0.0695 0.139 158 ^a 0.0839 ^a 330 3.06 ^a 0.0000337	2690 ^a < 5.00 12400 - - 0.418 0.00619 0.0267 < 0.000200 0.514 < 0.0000500 489 < 0.000500 0.00139 < 0.00200 2.43 ^a < 0.000500 350 0.0911 ^a < 0.000050	4020 ^a 0.236 103 - < 0.0758 < 0.00100 0.00713 < 0.000200 0.526 < 0.0000500 491 < 0.00500 0.00235 < 0.00200 0.311 ^a < 0.000500 407 0.162 ^a < 0.000050	3970 ^a 0.264 4.5 - <!--</td--><td>3310^a < 5.00 400 - - 0.680 0.00244 0.00931 < 0.000200 10.6^a < 0.000500 526 < 0.000500 < 0.00100 < 0.0200 0.236 < 0.000500 231 0.0182 < 0.000500</td><td>3860^a 0.428 26.0 - <pre> </pre> <pre> </pre> <!--</td--></td>	3310 ^a < 5.00 400 - - 0.680 0.00244 0.00931 < 0.000200 10.6 ^a < 0.000500 526 < 0.000500 < 0.00100 < 0.0200 0.236 < 0.000500 231 0.0182 < 0.000500	3860 ^a 0.428 26.0 - <pre> </pre> <pre> </pre> </td
Total dissolved solids (TDS) Total kjeldahl nitrogen (TKN) Total suspended solids (TSS) Turbidity Dissolved Metals Aluminum Arsenic Barium Beryllium Boron Cadmium Calcium Chromium Cobalt Copper Iron Lead Magnesium Manganese Mercury Molybdenum	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	500 (AO) - - 5.0/5.0 (MAC/AO) 0.10 (OG) 0.010 (IMAC) (a) - 5.0 (IMAC) - 5.0 (IMAC) 0.005 (MAC) - 0.05 (MAC) 0.30 (AO) 0.30 (AO) 0.01 (MAC) - 0.05 (AO) 0.05 (AO)	3450 ^a 22.3 64700 - - 84.8 0.0272 ^a 0.583 0.00412 0.766 0.000750 908 0.137 ^a 0.0695 0.139 158 ^a 0.0839 ^a 330 3.06 ^a 0.0000337 0.00234	2690 ^a < 5.00 12400 - 0.418 0.00619 0.0267 < 0.000200 0.514 < 0.0000500 489 < 0.00500 0.00139 < 0.00200 2.43 ^a < 0.000500 350 0.0911 ^a < 0.000383	4020 ^a 0.236 103 - < 0.0758 < 0.00100 0.00713 < 0.000200 0.526 < 0.0000500 491 < 0.000500 0.00235 < 0.00200 0.311 ^a < 0.000500 407 0.162 ^a < 0.00050 0.00514	3970 ^a 0.264 4.5 - <!--</td--><td>3310^a < 5.00</td> 400 - 0.680 0.00244 0.00931 < 0.000200	3310 ^a < 5.00	3860 ^a 0.428 26.0 - <pre> </pre> < 0.0100 0.00391 0.00436 < 0.000200 0.579 < 0.0000500 475 < 0.000500 0.00225 < 0.000200 1.85 ^a < 0.000500 400 0.215 ^a < 0.000050 0.00492
Total dissolved solids (TDS) Total kjeldahl nitrogen (TKN) Total suspended solids (TSS) Turbidity Dissolved Metals Aluminum Arsenic Barium Beryllium Beryllium Boron Cadmium Calcium Chromium Cobalt Copper Iron Lead Magnesium Manganese Mercury Molybdenum Nickel	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	500 (AO) - - 5.0/5.0 (MAC/AO) 0.10 (OG) 0.010 (IMAC) (a) - 5.0 (IMAC) - 5.0 (IMAC) 0.005 (MAC) - 0.05 (MAC) 0.30 (AO) 0.30 (AO) 0.01 (MAC) - 0.05 (AO) 0.05 (AO)	3450 ^a 22.3 64700 - - 0.583 0.00272 ^a 0.583 0.00412 0.766 0.000750 908 0.137 ^a 0.0695 0.139 158 ^a 0.0695 0.139 158 ^a 330 3.06 ^a 0.0000337 0.00234 0.164	2690 ^a < 5.00 12400 - - 0.0267 < 0.000200 0.514 < 0.0000500 489 < 0.00500 0.00139 < 0.000500 2.43 ^a < 0.000500 350 0.0911 ^a < 0.000050 0.00383 < 0.00500	4020 ^a 0.236 103 - < 0.0758 < 0.00100 0.00713 < 0.000200 0.526 < 0.0000500 491 < 0.000500 0.00235 < 0.000200 0.311 ^a < 0.000500 407 0.162 ^a < 0.000500 0.00514 0.00500	3970 ^a 0.264 4.5 - < 0.0100	3310 ^a < 5.00	3860° 0.428 26.0 - < 0.0100
Total dissolved solids (TDS) Total kjeldahl nitrogen (TKN) Total suspended solids (TSS) Turbidity Dissolved Metals Aluminum Arsenic Barium Beryllium Boron Cadmium Calcium Chromium Cobalt Copper Iron Lead Magnesium Manganese Mercury Molybdenum Nickel Potassium	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	500 (AO) - - 5.0/5.0 (MAC/AO) 0.10 (OG) 0.010 (IMAC) (a) - 5.0 (IMAC) - 5.0 (IMAC) 0.005 (MAC) - 0.05 (MAC) 0.30 (AO) 0.30 (AO) 0.01 (MAC) - 0.05 (AO) 0.05 (AO)	3450 ^a 22.3 64700 - - 0.583 0.00412 0.766 0.000750 908 0.137 ^a 0.0695 0.139 158 ^a 0.0839 ^a 330 3.06 ^a 0.0000337 0.000234 0.164 18.9	2690 ^a < 5.00 12400 - 0.418 0.00619 0.0267 < 0.000200 0.514 < 0.0000500 489 < 0.00500 0.00139 < 0.00200 2.43 ^a < 0.000000 350 0.0911 ^a < 0.000050 0.00383 < 0.00500 5.36	 4020^a 0.236 103 - < 0.0758 < 0.00100 0.00713 < 0.000200 0.526 < 0.0000500 491 < 0.00200 0.0235 < 0.00200 0.311^a < 0.000500 407 0.162^a < 0.000550 0.00514 0.00500 6.46 	3970 ^a 0.264 4.5 - - < 0.0100 0.00123 0.00324 < 0.000200 0.509 < 0.000500 478 < 0.00500 0.00157 < 0.00200 0.479^a < 0.000500 405 0.158^a < 0.000550 0.00498 < 0.00500 6.07 	3310 ^a < 5.00	3860° 0.428 26.0 - < 0.0100
Total dissolved solids (TDS) Total kjeldahl nitrogen (TKN) Total suspended solids (TSS) Turbidity Dissolved Metals Aluminum Arsenic Barium Beryllium Boron Cadmium Calcium Chromium Cobalt Copper Iron Lead Magnesium Manganese Mercury Molybdenum Nickel Potassium Silver	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	500 (AO) - - 5.0/5.0 (MAC/AO) 0.10 (IMAC) (a) 1.0 (MAC) - 5.0 (IMAC) 0.005 (MAC) - 0.05 (MAC) 0.005 (MAC) - 0.05 (AO) 0.01 (MAC) - 0.05 (AO) 0.001 (MAC) - - - - - - - - - - - - -	3450 ^a 22.3 64700 - - 0.583 0.00412 0.766 0.000750 908 0.137 ^a 0.0695 0.139 158 ^a 0.0839 ^a 330 3.06 ^a 0.0000337 0.00234 0.164 18.9 0.000262	2690 ^a < 5.00 12400 - 0.418 0.00619 0.0267 < 0.000200 0.514 < 0.0000500 489 < 0.00500 0.00139 < 0.00200 2.43 ^a < 0.000500 350 0.0911 ^a < 0.000500 0.00383 < 0.00500 5.36 < 0.000100	4020 ^a 0.236 103 - 0.0758 <td>3970^a 0.264 4.5 - < 0.0100</td> 0.00123 0.00324 < 0.000200	3970 ^a 0.264 4.5 - < 0.0100	3310 ^a < 5.00	3860° 0.428 26.0 - < 0.0100
Total dissolved solids (TDS) Total kjeldahl nitrogen (TKN) Total suspended solids (TSS) Turbidity Dissolved Metals Aluminum Arsenic Barium Beryllium Boron Cadmium Calcium Chromium Cobalt Copper Iron Lead Magnesium Manganese Mercury Molybdenum Nickel Potassium Silver Sodium	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	500 (AO) - - 5.0/5.0 (MAC/AO) 0.10 (IMAC) (a) 1.0 (MAC) - 5.0 (IMAC) 0.005 (MAC) 0.05 (MAC) 0.05 (MAC) 0.01 (MAC) 0.01 (MAC) 0.05 (AO) 0.001 (MAC) - - 200 (AO)	3450 ^a 22.3 64700 - - 0.583 0.00412 0.766 0.000750 908 0.137 ^a 0.0695 0.139 158 ^a 0.0695 0.139 158 ^a 0.0839 ^a 330 3.06 ^a 0.0000337 0.00234 0.164 18.9 0.000262 90.6	2690 ^a < 5.00	4020 ^a 0.236 103 - < 0.0758 < 0.00100 0.00713 < 0.000200 0.526 < 0.0000500 491 < 0.00500 0.00235 < 0.00200 0.311 ^a < 0.000500 407 0.162 ^a < 0.00500 0.00514 0.00500 6.46 < 0.000100 124	3970 ^a 0.264 4.5 - < 0.0100	3310 ^a < 5.00	3860° 0.428 26.0 - < 0.0100
Total dissolved solids (TDS) Total kjeldahl nitrogen (TKN) Total suspended solids (TSS) Turbidity Dissolved Metals Aluminum Arsenic Barium Beryllium Boron Cadmium Calcium Chromium Cobalt Copper Iron Lead Magnesium Manganese Mercury Molybdenum Nickel Potassium Silver Sodium Thallium	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	500 (AO) - - 5.0/5.0 (MAC/AO) 0.10 (IMAC) (a) 1.0 (MAC) - 5.0 (IMAC) 0.005 (MAC) - 0.05 (MAC) 0.005 (MAC) - 0.05 (AO) 0.01 (MAC) - 0.05 (AO) 0.001 (MAC) - - - - - - - - - - - - -	3450 ^a 22.3 64700 - - 84.8 0.0272 ^a 0.583 0.00412 0.766 0.000750 908 0.137 ^a 0.0695 0.139 158 ^a 0.0695 0.139 158 ^a 0.0839 ^a 330 3.06 ^a 0.0000337 0.00234 0.164 18.9 0.000262 90.6 0.0000847	2690 ^a < 5.00	4020 ^a 0.236 103 - < 0.0758	3970 ^a 0.264 4.5 - < 0.0100	3310ª < 5.00	3860 ^a 0.428 26.0 - < 0.0100
Total dissolved solids (TDS) Total kjeldahl nitrogen (TKN) Total suspended solids (TSS) Turbidity Dissolved Metals Aluminum Arsenic Barium Beryllium Boron Cadmium Calcium Chromium Cobalt Copper Iron Lead Magnesium Manganese Mercury Molybdenum Nickel Potassium Silver Sodium	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	500 (AO) - - 5.0/5.0 (MAC/AO) 0.10 (IMAC) (a) 1.0 (MAC) - 5.0 (IMAC) 0.005 (MAC) 0.05 (MAC) 0.05 (MAC) 0.01 (MAC) 0.01 (MAC) 0.05 (AO) 0.001 (MAC) - - 200 (AO)	3450 ^a 22.3 64700 - - 0.583 0.00412 0.766 0.000750 908 0.137 ^a 0.0695 0.139 158 ^a 0.0695 0.139 158 ^a 0.0839 ^a 330 3.06 ^a 0.0000337 0.00234 0.164 18.9 0.000262 90.6	2690 ^a < 5.00	4020 ^a 0.236 103 - < 0.0758 < 0.00100 0.00713 < 0.000200 0.526 < 0.0000500 491 < 0.00500 0.00235 < 0.00200 0.311 ^a < 0.000500 407 0.162 ^a < 0.00500 0.00514 0.00500 6.46 < 0.000100 124	3970 ^a 0.264 4.5 - < 0.0100	3310 ^a < 5.00	3860° 0.428 26.0 - < 0.0100

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Table 5.6B

Summary of Groundwater Analytical Results - Bedrock 2022 Operations and Monitoring Report Brooks Road Landfill Site Haldimand County, Ontario

Sample Location:				MW1D-07	MW1S-07	MW2D-07	MW2S-07	OW8D-07	OW8
Sample ID:				GW-MW1D	GW-MW1S	GW-MW2D	GW-MW2S	GW-OW8D	GW-C
Sample Date:		ODWS ⁽¹⁾	Table 2 ⁽²⁾	5/11/2022	5/11/2022	5/11/2022	5/11/2022	5/9/2022	5/9/3
Parameters	Units	a	b						
Semi-volatile Organic Compounds									
1-Methylnaphthalene	μg/L	-	-	0.093	0.031	< 0.010	< 0.010	0.014	< 0.
1-Methylnaphthalene/2-Methylnaphthalene	μg/L	-	3.2	0.191	0.071	< 0.015	< 0.015	0.033	< 0
2-Methylnaphthalene	μg/L	-	-	0.098	0.040	< 0.010	< 0.010	0.019	< 0
Acenaphthene	μg/L	-	4.1	0.054	0.022	< 0.010	< 0.010	< 0.010	< 0
Acenaphthylene	μg/L	-	1	0.051	0.012	< 0.010	< 0.010	< 0.010	< 0
Anthracene	μg/L	-	2.4	0.246	0.078	< 0.010	< 0.010	< 0.010	< 0
Benzo(a)anthracene	μg/L	-	1	0.604	0.195	< 0.010	< 0.010	< 0.010	< 0
Benzo(a)pyrene	μg/L	0.01 (MAC)	0.01	0.426 ^{ab}	0.168 ^{ab}	< 0.0050	< 0.0050	< 0.0050	< 0.
Benzo(b)fluoranthene	μg/L	-	0.1	-	-	-	-	-	
Benzo(b)fluoranthene/Benzo(j)fluoranthene	μg/L	-	0.1	0.657 ^b	0.225 ^b	< 0.010	< 0.010	< 0.010	< 0
Benzo(g,h,i)perylene	μg/L	-	0.2	0.278 ^b	0.100	< 0.010	< 0.010	< 0.010	< 0
Benzo(k)fluoranthene	μg/L	-	0.1	0.243 ^b	0.094	< 0.010	< 0.010	< 0.010	< 0
Chrysene	μg/L	-	0.1	0.722 ^b	0.220 ^b	< 0.010	< 0.010	< 0.010	< 0
Dibenz(a,h)anthracene	μg/L	-	0.2	0.0658	0.0241	< 0.0050	< 0.0050	< 0.0050	< 0.
Fluoranthene	μg/L	-	0.41	2.23 ^b	0.650 ^b	< 0.010	< 0.010	< 0.010	< 0
Fluorene	μg/L	-	120	0.165	0.043	< 0.010	< 0.010	< 0.010	< 0
Indeno(1,2,3-cd)pyrene	μg/L	-	0.2	0.385 ^b	0.140	< 0.010	< 0.010	< 0.010	< 0
Naphthalene	μg/L	-	11	0.225	0.122	< 0.050	< 0.050	< 0.050	< 0
Phenanthrene	μg/L	-	1	1.18 ^b	0.384	< 0.020	< 0.020	< 0.020	< 0
Pyrene	μg/L	_	4.1	1.78	0.522	< 0.010	< 0.010	< 0.010	< 0
. ,	rg/ ⊏				0.022	0.010	0.010	0.010	- 0
Volatile Organic Compounds				- 0 - 50	× 0.50	10.50	10.50	10.50	
1,1,1,2-Tetrachloroethane	μg/L	-	1.1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< (
1,1,1-Trichloroethane	μg/L	-	200	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< (
1,1,2,2-Tetrachloroethane	μg/L	-	1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< (
1,1,2-Trichloroethane	μg/L	-	4.7	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< (
1,1-Dichloroethane	μg/L	-	5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< (
1,1-Dichloroethene	μg/L	14 (MAC)	1.6	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< (
1,2-Dibromoethane (Ethylene dibromide)	μg/L	-	0.2	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< (
1,2-Dichlorobenzene	μg/L	200 (MAC)	3	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< (
1,2-Dichloroethane	μg/L	5 (IMAC)	1.6	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< (
1,2-Dichloropropane	μg/L	-	5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< (
1,3-Dichlorobenzene	μg/L	-	59	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< (
1,4-Dichlorobenzene	μg/L	5 (MAC)	1	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< (
2-Butanone (Methyl ethyl ketone) (MEK)	μg/L	-	1800	< 20	< 20	< 20	< 20	< 20	<
2-Hexanone	μg/L	-	-	< 20	< 20	< 20	< 20	< 20	<
4-Methyl-2-pentanone (Methyl isobutyl ketone) (MIBK)		-	640	< 20	< 20	< 20	< 20	< 20	<
Acetone	μg/L	-	2700	< 20	< 20	< 20	< 20	< 20	<
Benzene	μg/L	1 (MAC)	5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< (
Bromodichloromethane	μg/L	-	16	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< (
Bromoform	μg/L	_	25	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< (
Bromomethane (Methyl bromide)	μg/L	_	0.89	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< (
Carbon disulfide	μg/L	_	-	- 0.50	- 0.00	- 0.00	- 0.00	- 0.00	
Carbon tetrachloride	μg/L	2 (MAC)	0.79	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< (
Chlorobenzene	μg/L	80 (MAC)	30	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< (
Chloroethane	μg/L	-	-	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< (
Chloroform (Trichloromethane)	μg/L	-	2.4	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1
Chloromethane (Methyl chloride)	μg/L μg/L	_		< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	<
cis-1,2-Dichloroethene	μg/L μg/L	-	1.6	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< (
cis-1,3-Dichloropropene	μg/L μg/L	-	-	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< (
cis-1,3-Dichloropropene/trans-1,3-Dichloropropene		-	-	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	<
Dibromochloromethane	μg/L	-	25	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< (
Dichlorodifluoromethane (CFC-12)	μg/L	-	25 590	~ 0.00	< 0.00	< 0.00	~ 0.00	~ 0.00	~ (
	μg/L	- 140 (MAC)	2.4	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< (
Ethylbenzene Hexane	μg/L μg/L	140 (IVIAC) -	2.4 51	< 0.50 -	< 0.50 -	< 0.50	< 0.50 -	< 0.50 -	< 1
m&p-Xylenes	μg/L μg/L	-	-	< 0.40	< 0.40	< 0.40	< 0.40	< 0.40	< (
Methyl tert butyl ether (MTBE)	μg/L	15 (AO)	15	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< (
Methylene chloride	μg/L		50	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<
o-Xylene		30 (MAO)	- 50	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< (
Styrene	μg/L	-	5.4	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< (
Tetrachloroethene	μg/L	10 (MAC)	5.4 1.6	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< (
	μg/L	10 (MAC)							
Toluene	μg/L	60 (MAC)	24	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< (
trans-1,2-Dichloroethene	μg/L	-	1.6	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1
trans-1,3-Dichloropropene	μg/L	-	-	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< (
Trichloroethene	μg/L	5 (MAC)	1.6	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 1
Trichlorofluoromethane (CFC-11)	μg/L	-	150	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< (
Trihalomethanes		100 (MAC)	-	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	<
Vinyl chloride	μg/L	1 (MAC)	0.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< (
Viriyi chionde		90 (MAC)							

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