



REPORT

2024 Environmental Monitoring and Operations Report

Renfrew Landfill Site

Submitted to:

Town of Renfrew

Department of Development and Works
127 Raglan Street South
Renfrew, Ontario
K7V 1P8

Submitted by:

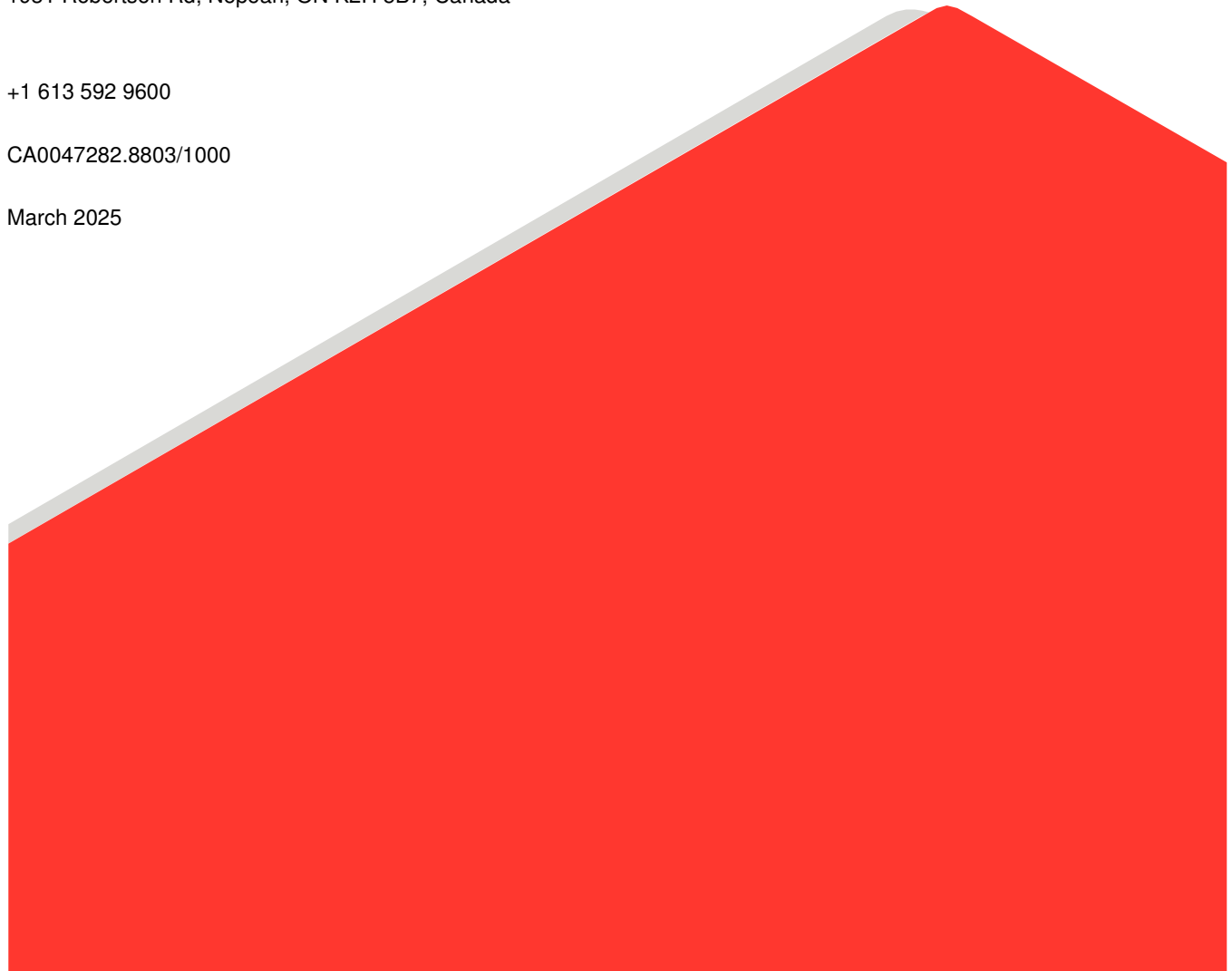
WSP Canada Inc.

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CA0047282.8803/1000

March 2025



Appendix D-Monitoring and Screening Checklist

General Information and Instructions

General Information: The checklist is to be completed, and submitted with the Monitoring Report.

Instructions: A complete checklist consists of:

- (a) a completed and signed checklist, including any additional pages of information which can be attached as needed to provide further details where indicated.
- (b) completed contact information for the Competent Environmental Practitioner (CEP)
- (c) self-declaration that CEP(s) meet(s) the qualifications as set out below and in Section 1.2 of the Technical Guidance Document.

Definition of Groundwater CEP:

For groundwater, the CEP must have expertise in hydrogeology and meet one of the following:

- (a) the person holds a licence, limited licence or temporary licence under the *Professional Engineers Act*; or
- (b) the person holds a certificate of registration under the *Professional Geoscientists Act, 2000* and is a practicing member, temporary, member or limited member of the Association of Professional Geoscientists of Ontario. O. Reg. 66/08, s. 2..

Definition of Surface water CEP:

A CEP for surface water assessments is a scientist, professional engineer or professional geoscientist as described in (a) and (b) above with demonstrated experience and post-secondary education, either a diploma or degree, in hydrology, aquatic ecology, limnology, aquatic biology, physical geography with specialization in surface water, and/or water resource management.

The type of scientific work that a CEP performs must be consistent with that person's education and experience. If an individual has appropriate training and credentials in both groundwater and surface water and is responsible for both areas of expertise, the CEP may then complete and validate both sections of the checklist.

Monitoring Report and Site Information	
Waste Disposal Site (WDS) Name	Renfrew Landfill Site
Location (e.g. street address, lot, concession)	Part of Lot 14, Concession II
GPS Location (taken within the property boundary at front gate/ front entry)	Latitude: 45.485553°, Longitude: -76.692971°
Municipality	Town of Renfrew
Client and/or Site Owner	Town of Renfrew, Department of Development and Works 127 Raglan Street South Renfrew, Ontario
Monitoring Period (Year)	2024
This Monitoring Report is being submitted under the following:	
Environmental Compliance Approval (ECA) Number (formerly "Certificate of Approval" (C of A)) :	A410401
Director's Order No.:	n/a
Provincial Officer's Order No.:	n/a

Other:	n/a		
Report Submission Frequency	☒ Annual ☐ Other		
The site is: (Operation Status)	☒ Open ☐ Inactive ☐ Closed		
Is there an active waste transfer station at the site?	☐ Yes ☒ No		
Does this WDS have a Closure Plan?	☒ Not yet submitted ☐ Submitted and under review ☐ Submitted and approved		
Total Approved Capacity as per condition 7.4 of ECA	1,069,000	Units	Cubic Metres
Maximum Approved Fill Rate		Units	Tonnes per Day
Total Waste Received within Monitoring Period (Year)	7,062	Units	Tonnes
Total Waste Received within Monitoring Period (Year) <i>Describe the methodology used to determine this quantity</i>	Weighed		
Estimated Remaining Capacity	700,973	Units	Cubic Metres
Estimated Remaining Capacity <i>Describe the methodology used to determine this quantity</i>	Estimation based on Calculation		
Estimated Remaining Capacity <i>Date Last Determined</i>	December 2024		
Non-Hazardous Approved Waste Types	☒ Domestic ☒ Industrial, Commercial & Institutional (IC&I) ☐ Source Separated Organics (Green Bin) ☒ Tires	☒ Contaminated Soil ☒ Wood Waste ☒ Blue Box Material ☐ Processed Organics ☒ Leaf and Yard Waste	☐ Food Processing/Preparation Operations Waste ☒ Hauled Sewage Other:
Subject Waste Approved Waste Classes: Hazardous & Liquid Industrial <i>(separate waste classes by comma)</i>	None		

Year Site Opened (enter the Calendar Year <u>only</u>)	1955	Current ECA Issue Date	4-Dec-2024
Is your Site required to submit Financial Assurance?		☐ Yes ☒ No	
Describe how your WDS is designed.		☒ Natural Attenuation only ☐ Fully engineered Facility ☐ Partially engineered Facility	
Does your Site have an approved Contaminant Attenuation Zone?		☐ Yes ☒ No	
If closed, specify ECA, control or authorizing document closure date:		Select Date	
Has the nature of the operations at the site changed during this monitoring period?	☐ Yes ☒ No		
If yes, provide details:			

Have any measurements been taken since the last reporting period that indicate landfill gas volumes have exceeded the MOE limits for subsurface or adjacent buildings? (i.e. exceeded the LEL for methane)	☐ Yes ☒ No

Groundwater WDS Verification:

Based on all available information about the site and site knowledge, it is my opinion that:

Sampling and Monitoring Program Status:

1) The monitoring program continues to effectively characterize site conditions and any groundwater discharges from the site. All monitoring wells are confirmed to be in good condition and are secure:	☒ Yes ☐ No	
2) All groundwater, leachate and landfill gas sampling and monitoring for the monitoring period being reported on was successfully completed as required by ECA or other relevant authorizing/ control document(s):	☐ Yes ☒ No ☐ Not Applicable	If no, list exceptions below or attach information.

Groundwater Sampling Location	Description/Explanation for change (change in name or location, additions, deletions)	Date
OMM15	A sample from OMM15 was inadvertently missed in the fall of 2024.	

3) a) Some or all groundwater, leachate and landfill gas sampling and monitoring requirements have been established or defined outside of a ministry ECA, authorizing, or control document; or Ministry concurrence.		☐ Yes ☒ No ☐ Not Applicable
b) If yes, the sampling and monitoring identified under 3(a) for the monitoring period being reported on was successfully completed in accordance with established protocols, frequencies, locations, and parameters developed as per the Technical Guidance Document:		☐ Yes ☐ No ☒ Not Applicable If no, list exceptions below or attach additional information.
Groundwater Sampling Location	Description/Explanation for change (change in name or location, additions, deletions)	Date

4) All field work for groundwater investigations was done in accordance with Standard Operating Procedures (SOP) as established/outlined per the Technical Guidance Document (including internal/external QA/QC requirements) (Note: A SOP can be from a published source, developed internally by the site owner's consultant, or adopted by the consultant from another organization):	☐ Yes ☒ No	WSP Canada Inc. standard practices were followed as described in the report.

Sampling and Monitoring Program Results/WDS Conditions and Assessment:

5) The site has an adequate buffer, Contaminant Attenuation Zone (CAZ) and/or contingency plan in place. Design and operational measures, including the size and configuration of any CAZ, are adequate to prevent potential human health impacts and impairment of the environment.	☒ Yes ☐ No	
6) The site meets compliance and assessment criteria.	☒ Yes ☐ No	
7) The site continues to perform as anticipated. There have been no unusual trends/ changes in measured leachate and groundwater levels or concentrations.	☒ Yes ☐ No	

1) Is one or more of the following risk reduction practices in place at the site: (a) There is minimal reliance on natural attenuation of leachate due to the presence of an effective waste liner and active leachate collection/ treatment; or (b) There is a predictive monitoring program in-place (modeled indicator concentrations projected over time for key locations); or (c) The site meets the following two conditions (typically achieved after 15 years or longer of site operation): <i>i.</i> The site has developed stable leachate mound(s) and stable leachate plume geometry/ concentrations; and <i>ii.</i> Seasonal and annual water levels and water quality fluctuations are well understood.	☒ Yes ☐ No	Note which practice(s):	☐ (a) ☐ (b) ☒ (c)
9) Have trigger values for contingency plans or site remedial actions been exceeded (where they exist):	☐ Yes ☒ No ☐ Not Applicable	In accordance with Condition 15 of the ECA, the Town of Renfrew is working to acquire the ground water easement to the Contaminant Attenuation Zone required to bring the Site into compliance with respect to groundwater.	

Groundwater CEP Declaration:

I am a licensed professional Engineer or a registered professional geoscientist in Ontario with expertise in hydrogeology, as defined in Appendix D under Instructions. Where additional expertise was needed to evaluate the site monitoring data, I have relied on individuals who I believe to be experts in the relevant discipline, who have co-signed the compliance monitoring report or monitoring program status report, and who have provided evidence to me of their credentials.

I have examined the applicable Environmental Compliance Approval and any other environmental authorizing or control documents that apply to the site. I have read and followed, *as deemed appropriate for this site in my professional judgement*, the Monitoring and Reporting for Waste Disposal Sites Groundwater and Surface Water Technical Guidance Document (MOE, 2010, or as amended), and associated monitoring and sampling guidance documents, as amended from time to time. I have reviewed all of the data collected for the above-referenced site for the monitoring period(s) identified in this checklist. Except as otherwise agreed with the ministry for certain parameters, all of the analytical work has been undertaken by a laboratory which is accredited for the parameters analysed to ISO/IEC 17025-2005 (E)- General requirements for the competence of testing and calibration laboratories, or as amended from time to time by the ministry.

If any exceptions or potential concerns have been noted in the questions in the checklist attached to this declaration, it is my opinion that these exceptions and concerns are minor in nature and will be rectified for the next monitoring/reporting period. Where this is not the case, the circumstances concerning the exception or potential concern and my client's proposed action have been documented in writing to the Ministry of the Environment District Manager in a letter from me dated:

Recommendations:

Based on my technical review of the monitoring results for the waste disposal site:

☐ No changes to the monitoring program are recommended

☒ The following change(s) to the monitoring program is/are recommended:

Bacterial analysis will be undertaken at BH11-01, OMM6, OMM7, OMM14S, OMM14M, and BH10-2B as recommended by the MECP groundwater reviewer.

☐ No Changes to site design and operation are recommended

☒ The following change(s) to the site design and operation is/are recommended:

The Town is undertaking a review and update to the approved top of waste contours in 2025.

Name:

Andria Caletti

Seal:

Add Image

Signature:		Date:	31-Mar-2025
CEP Contact Information:			
Company:	WSP Canada Inc.		
Address:	1931 Robertson Road, Ottawa, ON, K2H 5B7		
Telephone No.:	613-592-9600	Fax No. :	
E-mail Address:	andria.caletti@wsp.com		
Co-signers for additional expertise provided:			
Signature:		Date:	
Signature:		Date:	
Surface Water WDS Verification:			
Provide the name of surface water body/bodies potentially receiving the WDS effluent and the approximate distance to the waterbody (including the nearest surface water body/bodies to the site):			
Name (s)	Bonnechere River Marshy Area		

Distance(s)	Bonnechere River: 220 metres southeast Marshy Area: at southern property boundary	
Based on all available information and site knowledge, it is my opinion that:		
Sampling and Monitoring Program Status:		
1) The current surface water monitoring program continues to effectively characterize the surface water conditions, and includes data that relates upstream/background and downstream receiving water conditions:	☒ Yes ☐ No	
2) All surface water sampling for the monitoring period being reported was successfully completed in accordance with the ECA or relevant authorizing/control document(s) (if applicable):	☒ Yes ☐ No ☐ Not applicable	If no, specify below or provide details in an attachment.
Surface Water Sampling Location	Description/Explanation for change (change in name or location, additions, deletions)	Date
3) a) Some or all surface water sampling and monitoring program requirements for the monitoring period have been established outside of a ministry ECA or authorizing/control document, or Ministry concurrence.	☐ Yes ☒ No ☐ Not Applicable	
b) If yes, all surface water sampling and monitoring identified under 3 (a) was successfully completed in accordance with the established program from the site, including sampling protocols, frequencies, locations and parameters) as developed per the Technical Guidance Document:	☐ Yes ☐ No ☒ Not Applicable	If no, specify below or provide details in an attachment.

Surface Water Sampling Location	Description/Explanation for change (change in name or location, additions, deletions)		Date
4) All field work for surface water investigations was done in accordance with SOP, including internal/external QA/QC requirements, as established/outlined as per the Technical Guidance Document, MOE 2010, or as amended. (Note: A SOP can be from a published source, developed internally by the site owner's consultant, or adopted by the consultant from another organization):	☐ Yes ☒ No	WSP Canada Inc. standard practices were followed as described in the report.	
Sampling and Monitoring Program Results/WDS Conditions and Assessment:			
5) The receiving water body meets surface water-related compliance criteria and assessment criteria: i.e., there are no exceedances of criteria, based on MOE legislation, regulations, Water Management Policies, Guidelines and Provincial Water Quality Objectives and other assessment criteria (e.g., CWQGs, APVs), as noted in Table A or Table B in the Technical Guidance Document (Section 4.6):			☐ Yes ☒ No
If no, list parameters that exceed criteria outlined above and the amount/percentage of the exceedance as per the table on the following page or provide details in an attachment:			

Parameter	Compliance or Assessment Criteria or Background	Amount by which Compliance or Assessment Criteria or Background Exceeded
e.g. Nickel	e.g. ECA limit, PWQO, background	e.g. X% above PWQO
Iron	PWQO	S6 557% (April) and 17% (October) above PWQO S7D 93% (December) above PWQO S8 49% (October) above PWQO
Dissolved Oxygen	PWQO	S6 75% (October) and below PWQO
Silver	PWQO	S6 200% (October) above PWQO
Total Phosphorus	PWQO	S6 400% (October) above PWQO
6) In my opinion, any exceedances listed in Question 5 are the result of non-WDS related influences (such as background, road salting, sampling site conditions)?	☒ Yes ☐ No	Although surface water sampling station S6 is interpreted to be impacted by landfill leachate, the parameters with reported PWQO exceedances in 2024 are often naturally elevated in stagnant waters with decaying organic soils, such as the conditions in the marshy areas on the Renfrew Landfill Site property. Storm water runoff and drainage from the marshy area are directed to a natural depression or "sump" near the southeast corner of the property for infiltration into the sandy soils adjacent to Bruce Street (sampling station S6). Concentrations of silver are not consistently elevated at S6. Elevated iron concentrations at surface water monitoring stations S8 are not interpreted to be from WDS influences. The elevated iron concentrations at S8 were within the range of historic concentrations at upriver monitor S7D and in the water treatment plant effluent data (further upstream).

7) All monitoring program surface water parameter concentrations fall within a stable or decreasing trend. The site is not characterized by historical ranges of concentrations above assessment and compliance criteria.	☒ Yes ☐ No	
8) For the monitoring program parameters, does the water quality in the groundwater zones adjacent to surface water receivers exceed assessment or compliance criteria (e.g. , PWQOs, CWQGs, or toxicity values for aquatic biota (APVs)):	☒ Yes ☐ No ☐ Not Known ☐ Not Applicable	In 2024, PWQO exceedances were reported for total phosphorus (TP) (BH10-2A during the spring monitoring session), and iron (BH10-2A and BH10-2B during both monitoring sessions). The concentration of TP was within historical ranges of background monitor OMM15 at both BH10-2A during the spring. Based on a calculation of contaminant loading of iron to the Bonnehchere River based on historical high concentrations of iron at monitoring wells BH10-2A and BH10-2B, the concentration of iron discharging in groundwater is not expected to significantly increase the total concentration of iron in the Bonnehchere River. As concentrations of iron at BH10 2A and BH10-2B in 2024 are below the historical high concentrations used in the contaminant loading calculation, this interpretation is still considered appropriate.
9) Have trigger values for contingency plans or site remedial actions been exceeded (where they exist):	☐ Yes ☒ No ☐ Not Applicable	

Surface Water CEP Declaration:

I, the undersigned hereby declare that I am a Competent Environmental Practitioner as defined in Appendix D under Instructions, holding the necessary level of experience and education to design surface water monitoring and sampling programs, conduct appropriate surface water investigations and interpret the related data as it pertains to the site for this monitoring period.

I have examined the applicable Environmental Compliance Approval and any other environmental authorizing or control documents that apply to the site. I have read and followed, as deemed appropriate for this site in my professional judgement, the Monitoring and Reporting for Waste Disposal Sites Groundwater and Surface Water Technical Guidance Document (MOE, 2010, or as amended), and associated monitoring and sampling guidance documents, as amended from time to time. I have reviewed all of the data collected for the above-referenced site for the monitoring period(s) identified in this checklist. Except as otherwise agreed with the ministry for certain parameters, all of the analytical work has been undertaken by a laboratory which is accredited for the parameters analysed to *ISO/IEC 17025-2005 (E)- General requirements for the competence of testing and calibration laboratories*, or as amended from time to time by the ministry.

If any exceptions or potential concerns have been noted in the questions in the checklist attached to this declaration, it is my opinion that these exceptions and concerns are minor in nature or will be rectified for future monitoring events. Where this is not the case, the circumstances concerning the exception or potential concern and my client's proposed action have been documented in writing to the Ministry of the Environment District Manager in a letter from me dated:

Recommendations:

Based on my technical review of the monitoring results for the waste disposal site:

☒ No Changes to the monitoring program are recommended ☐ The following change(s) to the monitoring program is/are recommended:	
☒ No changes to the site design and operation are recommended ☐ The following change(s) to the site design and operation is/are recommended:	

CEP Signature		
Relevant Discipline	P.Eng. with demonstrated relevant experience	
Date:	31-Mar-2025	
CEP Contact Information:	Andria Caletti, P.Eng.	
Company:	WSP Canada Inc.	
Address:	1931 Robertson Road, Ottawa, ON, K2H 5B7	
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Fax No. :		
E-mail Address:	andria.caletti@wsp.com	
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Distribution List

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Executive Summary

This report presents the results of the environmental monitoring program, including groundwater, surface water and landfill gas monitoring, conducted by WSP Canada Inc. (WSP) during 2024 at the Renfrew Landfill Site. This report also serves as the 2024 site operations report. This report has been prepared to comply with the reporting requirements outlined in Conditions 6(6) and 6(7) of Environmental Compliance Approval No. A 410401, dated December 4, 2024.

The following executive summary highlights key points only; for complete information and findings, as well as the limitations provided below, it is necessary for the reader to examine the complete report.

The volume of waste added to the waste mound in 2024 was estimated by comparing topographic data from the November 20, 2024, survey to the November 2022 aerial drone survey (see **Figure 2**). The volume of waste added to the waste mound (including daily/interim cover material) based on this comparison is estimated to be 25,516 cubic metres. This volume excludes soil material placement that occurred within the waste footprint for various operational purposes. The tonnage of waste material received by the landfill in 2024 (see **APPENDIX H**) based on weigh scale data was 7,062 tonnes while in 2023 it was 6,893 tonnes. Based on the percentage of waste received during 2023 and 2024 and the airspace consumed by waste and cover between November 2022 and November 2024, it is considered that the volume of waste added to the waste mound in 2023 was about 12,604 cubic metres and in 2024 was 12,912 cubic metres. The estimated total volumetric capacity remaining at the site in 2024 of approximately 700,973 cubic metres is based on a comparison between the 2024 survey and the approved final contours within the licensed fill limit. Of this volume, 272,802 cubic metres are estimated to remain in Stage 4. Based on a five-year average annual volume of airspace consumed of 13,700 cubic metres, it is estimated that the remaining site life for Stage 4 is in the range of about 20 years.

Based on a review of the 2024 groundwater level data, the interpreted direction of groundwater flow is across the site from northwest to southeast. This is consistent with previous interpretations at this site. In recent years, groundwater elevations at OMM 15 are occasionally lower than groundwater elevations at OMM 2. Based on the thick sand and gravel overburden deposits at the Site and the prevalent groundwater flow direction toward the Bonnechere River to the east of the Site, as well as the low concentrations of leachate indicator parameters and lack of increasing trends in concentrations of leachate indicator parameters at OMM15, it is not at this time considered likely that there is a component of groundwater flow from the landfill toward the northwest. OMM15 still remains useful as a background monitor for the Site, however this will continue to be monitored.

It is considered that all of the existing groundwater monitors installed to the east of Bruce Street, and monitoring well OMM 9 and OW 10 located west of Bruce Street, may be impacted by some combination of landfill leachate and road salting activities, with the exception of BH07-1, which was previously interpreted (i.e., when this monitor was last functional) to be impacted by road salting activities only as this well is not hydrogeologically downgradient of the landfill. Future groundwater assessments should continue to compare groundwater quality to background conditions (i.e., based on OMM 15) and historic groundwater quality from BH07-1 to differentiate landfill impacts from road salt impacts.

Volatile organic compounds (VOCs) were not detected at any monitoring well in 2024 except at BH11-01 for 1,4-dichlorobenzene, benzene, and chlorobenzene. The VOCs typically detected and their concentrations to date are not considered to be an issue of concern with respect to the overall degree of leachate impact on groundwater

quality or site compliance. VOC exceedances of ODWQS have not been detected at monitored groundwater locations since monitoring began in 2005. No changes to the monitoring program for VOCs are recommended at this time. Based on the results of the 2024 groundwater impact assessment, it is concluded that the site may be operating in compliance with MECP Guideline B-7. The Town has taken steps to gain control of the groundwater use downgradient of the site for the purposes of establishing a CAZ over the area between Bruce Street and the Bonnechere River, east of the existing landfill property. Over time the Town will obtain the groundwater rights of all the land in the Area of Potential Leachate Impact, at which point a Contaminant Attenuation Zone can be registered on title. Since any groundwater migrating through the overburden materials east of the site would be expected to discharge to the Bonnechere River, and with the Town working toward obtaining control of downgradient groundwater rights for establishment of a CAZ, it was recommended that site compliance be assessed by evaluating impacts to surface water quality along the downgradient boundary of the CAZ (i.e., along the reach of the Bonnechere River in the area denoted as the “Area of Potential Leachate Impact” in the Town’s Official Plan). It was discussed and generally agreed upon during the meeting on-site with groundwater and surface water representatives from the MECP on July 17, 2018, that site compliance be evaluated based on surface water quality in the Bonnechere River. Surface water monitoring in the Bonnechere River was commenced in 2018 and described in **Sections 1.2 and 7.0**. A revised trigger mechanism was submitted to the MECP in accordance with Condition 8(8) of the ECA in 2023. As discussed in **Section 1.2.3**, the revised trigger mechanism for the site was added to the ECA in December 2024.

Groundwater monitors BH10-2A and BH10-2B were installed in 2010 at the furthest locations downgradient of the landfill site, west of the Bonnechere River. Prior to these wells being installed, monitors BH07-2, BH07-3, BH07-4 were the furthest downgradient (southeast) and considered to be potentially impacted by landfill leachate. The reported concentrations of leachate indicator parameters observed at BH10-2A and BH10-2B appear to be in keeping with other potentially impacted groundwater monitors east of Bruce Street. Based on the groundwater quality observed at groundwater monitors BH10-2A and BH10-2B, it is interpreted any impacts on groundwater quality from the Renfrew Landfill Site do not have the potential to negatively impact overall surface water quality in the Bonnechere River with regards to the PWQO.

Based on a review of the 2024 surface water quality data (see **Table 5**), surface water sampling station S6 at the east end of the site is interpreted to be impacted by landfill leachate. This interpretation is based primarily on historic surface water chloride concentrations and the surface water concentrations of several of the same parameters observed as being elevated in leachate-impacted groundwater samples at this site, in comparison to normal background levels in surface waters in similar hydrogeological settings. PWQO exceedances of iron, were noted at S6 in 2024, however these concentrations present in surface water at levels exceeding the PWQO may be unrelated to the landfill site and may be attributed to the decaying soils in the marshy area.

In 2024, surface water sampling was conducted at three locations in the Bonnechere River and analyzed for the same list parameters as S6. A new surface water trigger mechanism was proposed in July of 2023 and adopted with the issuance of ECA No. A410401, dated December 4, 2024. The surface water trigger mechanism was used in this report to assess site compliance. Based on the results of the 2024 surface water impact assessment, it does not appear that the Renfrew Landfill is having a comparatively observable impact on water quality in the Bonnechere River. It is recommended that S7D (as background), S8 and S9 continue to be monitored, and that site compliance be assessed in the Bonnechere River moving forward. There were no trigger exceedances in 2024 and the three-step plan to determine if a contingency plan is required was not implemented.

Indoor gas monitoring was conducted monthly by Town staff in 2024 at the scales and garage. WSP conducted indoor gas monitoring at the garage three times in 2024. The indoor gas monitoring completed by the Town and by WSP in the garage during all 2024 events reported methane at 0 percent gas by volume of air. The results were below the lower explosive limit for methane of 5 percent (by volume) and below the Ontario Regulation 232/98 limit of 1.0 percent methane gas in an on-site building.

In 2024, concentrations of methane were detected within the waste mound and outside of the waste footprint. Although methane was detected it was below the 2.5% threshold at the property boundary required by O.Reg. 232/98. It is recommended that a third landfill gas monitoring session be undertaken during the summer in addition to the regular scheduled monitoring sessions.

Proposed groundwater, surface water and landfill gas monitoring programs for 2025 are described in **Section 10.0** and summarized in **Tables 6, 7 and 8**, respectively.

Groundwater comments from the MECP on the 2023 Environmental Monitoring and Operation Report (WSP, May 2024) were received in a memorandum prepared by Matthew DeGeer dated January 17, 2025 (provided in **APPENDIX A**). Refer to **Section 1.2.2** for responses to these comments.

On January 11, 2024, a call was held between representatives of the Town, WSP, MECP Ottawa District Office, groundwater and surface water reviewers from the MECP Eastern Region Office, and MECP Environmental Permissions Branch to discuss issues related to the waste slope geometry, existing sand slopes and proposed revision to the final contours. During the call and consistent with the approach discussed in 2023, it was proposed that an ECA amendment to revise the final contours for the Site would be applied for. It was proposed during this call that the revision to the final contours would also include a revision to the waste fill limit. The proposed change would extend the waste fill limit toward the west (while not exceeding the approved capacity for the site and respecting the required 30m buffer). The MECP clarified that a revision to the final contours (whether the waste limit is proposed to change or not) would require: a revision to the Design and Operations (D&O) Report for the Site, to be submitted as supporting documentation for the ECA Amendment Application for the final contour revision; and, concurrence from Groundwater and Surface Water Technical Support with the monitoring programs proposed in the D&O Report. The proposed groundwater and surface water monitoring program was submitted in a memorandum to the MECP Ottawa District Office for distribution to Groundwater and Surface Water Technical Support on March 11, 2025.

Study Limitations

This report was prepared for the exclusive use of the Town of Renfrew. The report, which specifically includes all tables, figures and appendices, is based on data and information collected by WSP Canada Inc. and is based solely on the conditions of the properties at the time of the work, supplemented by historical information and data obtained by WSP Canada Inc. as described in this report. Each of these reports must be read and understood collectively and can only be relied upon in their totality. Electronic media is susceptible to unauthorized modification, deterioration and incompatibility and therefore authenticity of any electronic media versions of WSP's report should be verified.

WSP Canada Inc. has relied in good faith on all information provided and does not accept responsibility for any deficiency, misstatements, or inaccuracies contained in the reports as a result of omissions, misinterpretation, or fraudulent acts of the persons contacted or errors or omissions in the reviewed documentation.

The assessment of environmental conditions at this site has been made using the results of physical measurements and chemical analyses of liquids from a number of locations. The site conditions between sampling locations have been inferred based on conditions observed at borehole locations, groundwater monitoring wells, gas monitoring wells and/or surface water sampling locations. Subsurface conditions may vary from these sampled locations.

The services performed, as described in this report, were conducted in a manner consistent with that level of care and skill normally exercised by other members of the engineering and science professions currently practicing under similar conditions, subject to the time limits and financial and physical constraints applicable to the services.

Any use which a third party makes of this report, or any reliance on, or decisions to be made based on it, are the responsibilities of such third parties. WSP Canada Inc. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

The findings and conclusions of this report are valid only as of the date of this report. If new information is discovered in future work, including excavations, borings, or other studies, WSP Canada Inc. should be requested to re-evaluate the conclusions of this report, and to provide amendments as required. The groundwater monitors are the property of the Town of Renfrew and not WSP Canada Inc.

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1.0 INTRODUCTION

This report presents the results of the environmental monitoring program, including groundwater, surface water and landfill gas monitoring, conducted by WSP Canada Inc. (WSP) and the Town of Renfrew (Town) during 2024 at the Renfrew Landfill Site. This report also serves as the 2024 site operations report. The Renfrew Landfill Site is located on Part of Lot 14, Concession II in the Town of Renfrew, at the location illustrated in the Key Plan, **Figure 1**.

This report has been prepared to comply with the reporting requirements outlined in Conditions 6(6) and 6(7) of Environmental Compliance Approval (ECA) No. A 410401, dated December 4, 2024. Condition 6(6) requires submission of an Annual Report to the District Manager of the Ministry of the Environment, Conservation and Parks (MECP) by March 31st of the year following the calendar year covered by the report. Condition 6(7) lists in detail the requirements of the Annual Report. A copy of the ECA is included in **APPENDIX F** of this report.

1.1 Overview of Site History and Setting

The Renfrew Landfill Site has operated as a waste disposal site since the mid-1950s.

The current Operations and Development report was prepared by Oliver, Mangione, McCalla & Associates Limited in 1996. Minor revisions to the report were made in December 1997 and the revised Operations and Development report was submitted to the MECP in support of an amendment application to ECA No. A 410401. This amendment application (and supporting documentation) is presently listed as Item 6 in Schedule “A” of the ECA. An addendum (Addendum #1) to the Operations and Development report, prepared by Trow Consulting Engineers Ltd. (formerly Oliver, Mangione, McCalla & Associates), dated February 28, 2002, is included as Item 8 in Schedule “A” of the current ECA.

The following site description has been summarized based on the approved Operations and Development report.

The total area of the Renfrew Landfill Site is approximately 40.73 hectares. The licensed waste footprint occupies an area on-site of approximately 10 hectares. The site property boundaries and licensed waste footprint (fill limit) are illustrated in the Site Plan, **Figure 2**.

The site is bounded by a cemetery on the north side, a major arterial road into town (Bruce Street) on the east side, private property in the Township of Horton to the west and a combination of open space and a residential area (Grigg Avenue/Moore Street) to the south. All residences in the immediate vicinity of the Renfrew Landfill Site (i.e., to the east across Bruce Street, and to the south – Grigg Avenue/Moore Street area) are serviced by the Town of Renfrew’s water supply.

The Township property to the west is generally undeveloped and is zoned as “Rural” and “Mineral Aggregate Resource”. Future development could include sand and gravel pits and associated manufacturing activities such as crushing, screening, asphalt plants and concrete plants.

The Bonnechere River is located approximately 220 metres east of Bruce Street and represents a potential point of discharge for groundwater migrating across the Renfrew Landfill Site. There are no known existing users of groundwater downgradient between the eastern site property boundary and the Bonnechere River.

The Operations and Development report describes the hydrogeological regime in the vicinity of the site as being a relatively thick accumulation of glacial outwash sands and gravels. The thickness of the granular overburden materials has been reported to be in excess of 60 metres with a hydraulic conductivity on the order of about

10^{-4} centimetres per second (cm/s). As discussed in **Section 4.2** of this report, horizontal hydraulic conductivity was calculated from rising head tests in 2009 to range between 3.0×10^{-3} cm/s and 5.5×10^{-3} cm/s. Groundwater flow in the unconfined granular deposit has been reported to be generally from west to east, toward Bruce Street and the Bonnechere River. Previous annual monitoring reports have indicated that the groundwater flow is locally affected by the high topographic relief near the perimeter of the property, groundwater recharge within the marshy area south of the waste footprint and by mounding of groundwater beneath the waste (Trow, 2005).

In the 2004 annual monitoring report (Trow, 2005), it is reported that fine-grained clays and silts overlie the glacial deposits in the Bonnechere River, based on review of available mapping of the area, and that these materials may extend onto the landfill property.

The site is located in a low-lying area south of local bedrock highlands. Prior to landfilling, much of the outwash sands and gravels were removed by either erosion or human activity. The removal of material has resulted in the formation of an escarpment with a height up to 30 metres greater in elevation than the waste disposal area, surrounding the site to the west, south and north (Trow, 2005).

The waste disposal area is bounded to the south by a marshy area within the south buffer lands owned by the Town (see **Figure 2**). Overland drainage from the landfill areas is directed to a natural depression or “sump” near the southeast corner of the property, adjacent to the embankment on which Bruce Street is located. The Operations and Development report indicates that there is no natural surface water outlet from the landfill site and that water leaves the site by infiltrating into the groundwater regime and/or by evaporation and evapotranspiration processes. It has been indicated that drainage from the marshy area is also directed past the waste footprint via a culvert that discharges to the sump area near the southeast corner of the landfill property, adjacent to Bruce Street, for infiltration.

1.2 Ministry of the Environment, Conservation and Parks Correspondence and Approvals

1.2.1 MECP Site Inspections

There were no inspections by the MECP in 2024.

1.2.2 Annual Monitoring Report Review Comments

Groundwater comments from the MECP on the 2023 Environmental Monitoring and Operation Report (WSP, May 2024) were received in a memorandum prepared by Matthew DeGeer dated January 17, 2025 (provided in **APPENDIX A**). The following is a summary of the recommendations provided in the memorandum. Responses provided by WSP are indicated in bold.

- *The previous MECP groundwater memorandum dated June 18, 2020, notes that landfill leachate extends beyond the property limits as far as the Bonnechere River. Based on review of the 2024 Annual Monitoring Report, I agree with this finding. **Response: Noted. As discussed in Sections 5.0 and 6.0 of this report, it is considered that groundwater monitors located east of Bruce Street are potentially impacted by leachate and that groundwater quality at these monitors may be impacted by other sources.***
- *Although most of the monitoring wells downgradient from OMM15 are interpreted to be impacted by landfill leachate, there remains uncertainty. It is recommended that a Per- and Polyfluoroalkyl Substances “PFAS” in groundwater study be conducted to isolate leachate impacted groundwater from those interpreted to be impacted by a separate source and the vertical extent of the leachate plume. PFAS is commonly found in*

landfill leachate (and leachate impacted groundwater) originating from a number of discarded consumer products. PFAS are man-made and have no natural source. These compounds are also known to be mobile in groundwater and persistent in the environment. PFAS assessment has been used at a number of landfill sites in Eastern Region to provide additional information on leachate plume delineation and to differentiate landfill impacts from other sources. The study should include PFAS sampling at selected leachate characterization wells, downgradient wells known to be impacted by leachate, and downgradient wells where WSP has suggested impacts from other sources. PFAS analyses are available at private laboratories and samples should be analysed to the lowest available levels. Care must be taken to collect PFAS samples owing to the ubiquitous nature of these compounds. I recommend that a study should be developed and submitted to the ministry for review prior to implementation. **Response: WSP will prepare a study on the sampling and analysis of PFAS for review and concurrence from MECP prior to implementation.**

- Municipal sewage sludge is accepted at the landfill. I recommend that bacterial analysis (E.coli, fecal coliforms, and total coliforms) be assessed for monitoring wells BH11-01, OMM6, OMM7, OMM14S, OMM14M, and BH10-2B. **Response: Bacterial analysis will be included for monitoring wells BH11-01, OMM6, OMM7, OMM14S, OMM14M, and BH10-2B for the 2025 monitoring year.**
- Analytical results associated with the parameters listed as leachate indicators are recommended to be presented graphically as time-concentration plots for all monitoring wells. **Response: Time-concentration plots are provided in APPENDIX J within this report for leachate indicator parameters at all monitoring wells.**
- It is recommended that biannual sampling (twice per annum) continue in accordance with ECA A410401. **Response: Monitoring will continue in accordance with ECA No. A410401.**
- The annual report should include a description of the purged waters describing colours, odours, and a subjective description of sediment quantity (i.e., none, trace, some, moderate, heavy). **Response: Table 6 includes the description of purged water for each monitoring session and has been included with this report.**
- An updated figure depicting lands/groundwater easements acquired by the Town as part of the Contaminant Attenuation Zone (CAZ) should be submitted to the ministry for review. **Response: An updated figure depicting lands/groundwater easements has been provided in APPENDIX I of this report.**
- The leachate plume is interpreted to extend and discharge into a surface water body located to the southeast of the Site, the Bonnechere River. The Site is noncompliant with Guideline B-7 because groundwater impacts are above reasonable use limits at the property boundary and an approved CAZ has not been established. The Township has until July 20, 2025, to provide the ministry with documents in support of an approved CAZ i.e., groundwater rights or acquired lands and to become compliant with Guideline B-7. **Response: The Town is currently working towards obtaining groundwater rights within the Contaminant Attenuation Zone. It is noted that the date upon which the Town is to have established the CAZ was extended to December 4, 2026 (i.e., two years from the date of the revision to the ECA dated December 4, 2024).**

Surface water comments from the MECP on the 2023 Environmental Monitoring and Operation Report (WSP, May 2024) and on the Revised Trigger Mechanism dated July 20, 2023 by WSP (see **Section 1.2.3**) were received in a memorandum dated November 15, 2024, prepared by Dana Cruikshank (provided in **APPENDIX A**).

The following recommendation was provided in the memorandum. Response provided by WSP are indicated in bold.

- *The reviewer agrees with the proposed trigger mechanism for surface water with the addition of manganese as a CEP [Compliance Evaluation Parameter]. **The proposed trigger mechanism was revised to include manganese as a CEP and resubmitted on December 2, 2024.***

It is noted that the surface water reviewer also suggests that there is a minor impact to water quality in the Bonnechere River as a result of leachate impacted groundwater entering the river based on an assessment of average water quality data between 2018 and 2023. Based on a comparison of the data at the locations considered downstream of the landfill to the background location during each singular monitoring occasion, leachate indicator parameters are not consistently elevated in the downstream locations. This is discussed further in **Section 7.2**.

1.2.3 Submission of Trigger Mechanism and Contingency Measures

In accordance with Condition 8(9) of the July 2020 revision to ECA No. A410401, the Town submitted a summary of possible contingency measures to be considered by the Town in the event of a confirmed exceedance of site-specific trigger level relating to leachate-impacted groundwater discharge to surface water causing impacts to the Bonnechere River. The summary was provided in a letter to the MECP Ottawa District Manager by Golder (now WSP) dated July 20, 2021 (provided in **APPENDIX A**). This was added to the revised ECA A410401 (December 2024), forming item No. 29 of Schedule 1.

In accordance with Condition 8(8) of the July 2020 revision to ECA No. A410401, the Town submitted a revised Bonnechere River trigger mechanism for consideration by the MECP. The trigger mechanism was prepared by WSP and was submitted July 20, 2023. The reason for submission of the trigger mechanism three years after the issue of the revised ECA was to allow for additional data to be obtained from the new surface water monitoring locations in the Bonnechere River (established in 2018) prior to determining trigger concentrations. As discussed in **Section 1.2.2**, comments on the proposed trigger mechanism were received from the MECP in November 2024 recommending that manganese be added as a Compliance Evaluation Parameter. The proposed trigger mechanism was revised and resubmitted on December 2, 2024. A copy of the revised trigger mechanism is provided in **APPENDIX A**. This was added to the revised ECA A410401 (December 2024), forming item No. 28 of Schedule 1.

1.2.4 Waste Slope Geometry, Existing Sand Slopes and Revision to Final Contours

On January 11, 2024, a call was held between representatives of the Town, WSP, MECP Ottawa District Office, groundwater and surface water reviewers from the MECP Eastern Region Office, and MECP Environmental Permissions Branch to discuss issues related to the waste slope geometry, existing sand slopes and proposed revision to the final contours. These issues were previously discussed with the MECP as detailed in the 2023 Annual Monitoring and Operations Report (WSP, 2024). Specifically, the existing native topography surrounding the northwest edge of the landfill footprint has changed since the 2002 design of the approved final contours due to aggregate (sand) extraction, resulting in a design that cannot be constructed as is without importing significant amounts of fill material. In addition, the changes to the topography surrounding the landfill footprint in the north portion of the Site since 2002 has resulted in steeper angles than what would be required to provide an adequate factor of safety against slope failure (sloughing) (a geotechnical assessment subsequently undertaken by WSP dated January 2025 confirmed that the native sand slopes surrounding the landfill are potentially unstable in the areas where the slope is greater than 2 horizontal to 1 vertical (2H:1V)). Further, the ability to place additional

waste with adequate compaction and cover application to the approved top of waste elevations is significantly limited by the existing geometry (i.e., steep waste slopes). During the call and consistent with the approach discussed in 2023, it was proposed that an ECA amendment to revise the final contours for the Site would be applied for. It was proposed during this call that the revision to the final contours would also include a revision to the waste fill limit. The proposed change would extend the waste fill limit toward the west (while not exceeding the approved capacity for the site and respecting the required 30m buffer). The MECP confirmed that a hydrogeological study would not be required to support such a change to the waste limit, unless the revision resulted in a volume exceeding 557,400 m³ in which case a hydrogeological study would be required in accordance with Condition 7.6 of ECA No. A410401. GW Technical Support and SW Technical Support indicated that they had no issue with the westward extension of the waste limit as described. The MECP clarified that a revision to the final contours (whether the waste limit is proposed to change or not) would require: a revision to the Design and Operations (D&O) Report for the Site, to be submitted as supporting documentation for the ECA Amendment Application for the final contour revision; and, concurrence from Groundwater and Surface Water Technical Support with the monitoring programs proposed in the D&O Report. Both the representatives from GW Technical Support and SW Technical Support agreed that the proposed monitoring programs could be provided separate from the D&O Report for review. The representative from SW Technical Support indicated that they would like for the proposed surface water monitoring program to include the full suite of leachate indicator parameters for the stations in the Bonnechere River.

The proposed groundwater and surface water monitoring program was submitted in a memorandum to the MECP Ottawa District Office for distribution to Groundwater and Surface Water Technical Support on March 11, 2025. A copy of this memorandum is included in **APPENDIX A**. A summary of the January 11, 2024, meeting is included as an attachment to this memorandum.

1.2.5 Hours of Operation and Addition of Township of Whitewater Region to Service Area for HHW Depot

On March 20, 2024 WSP, on behalf of the Town, submitted an ECA amendment application for the addition of the Township of Whitewater Region to the Household Hazardous Waste depot participants and also to change the landfill and HHW operational hours to be open Monday to Sunday, 7am to 5pm, with public receipt of waste between the hours of 8:30am to 4pm Tuesday to Thursday, and 8:30am to 2pm on Friday and Saturday. This amendment was adopted with the issuance of ECA No. A410401 on December 4, 2024.

2.0 SITE OPERATIONS

This section provides a summary of the operational items required to be reported in accordance with Condition 6(7) in ECA No. A 401410.

2.1 Waste Quantities and Airspace Consumption

As per the ECA No. A401410, a biennial survey was conducted on November 20, 2024. The aerial survey (drone) was undertaken by Canadian UAV Surveys. The site topography and waste mound contours based on the 2024 survey are illustrated in the Site Plan (**Figure 2**). The surveyed topography in 2024 ("2024 survey") and the approved final landfill elevations are illustrated along lines through the waste footprint in a series of six cross-sections in **Figures 3, 4 and 5**.

The volume of waste added to the waste mound in 2024 was estimated by comparing topographic data from the November 20, 2024, survey to the November 2022 aerial drone survey (see **Figure 2**). The volume of waste

added to the waste mound (including daily/interim cover material) based on this comparison is estimated to be 25,516 cubic metres. This volume excludes soil material placement that occurred within the waste footprint for various operational purposes as discussed below.

The tonnage of waste material received by the landfill in 2024 (see **APPENDIX H**) based on weigh scale data was 7,062 tonnes while in 2023 it was 6,893 tonnes. It should be noted that the waste tonnage for 2023 is lower than the tonnage reported in the 2023 annual monitoring report of 10,626 tonnes; of the 10,626 tonnes landfilled in 2023, approximately 3,733 tonnes was soil material, and the Town has indicated that this is an atypically high quantity of soil. As such, for the purpose of calculating airspace consumption rates used to estimate the remaining site life, this quantity has been discounted. Based on the percentage of waste received during 2023 and 2024 and the airspace consumed by waste and cover between November 2022 and November 2024, it is considered that the volume of waste added to the waste mound in 2023 was about 12,604 cubic metres and in 2024 was 12,912 cubic metres.

The calculated rates of fill since 2006 are shown in the following table:

Year	Airspace Consumed (cubic metres)
2006	17,706
2007	21,295
2008	12,655
2009	23,266
2010	22,270
2011	15,313
2012	13,328
2013*	3,156*
2014*	3,206*
2015	14,840
2016	18,256
2017*	3,341*
2018*	3,290*
2019	11,905
2020	9,578*
2021	15,550
2022	15,520
2023	12,604
2024	12,912

Notes:

* Not considered typical and therefore not included in average airspace consumed at the site.

Similar to 2013/2014 and 2017/2018, the airspace utilization calculated in 2020 is lower than the five-year average volume of airspace consumed of approximately 17,000 cubic metres per year between 2008 and 2012. As reported in the 2014 Annual Monitoring Report (Golder, 2015), it is considered that notable operational changes at the landfill in 2013 and 2014, including regrading of the landfill, new compacting equipment, and the use of alternative daily cover material such as a tarp cover influenced the apparent volume of airspace consumed, resulting in considerably lower volumes than typically consumed at this site during that time. For example, the regrading work may have resulted in further compaction of underlying (old) waste layers.

A full site survey was completed in December 2020, with the previous site survey being completed in 2010. Although the airspace utilization rate for 2020 and 2019 is lower than the 5-year average between 2008 and 2012, the consumed airspace is more similar to previous years than the airspace consumed in 2013/2014 and 2017/2018. The amount of waste received at the Site in 2020 was 6,573 tonnes, which is approximately 20% less than recent historical tonnages in 2019 (8,171 tonnes), 2018 (8,782 tonnes) and 2017 (8,918 tonnes); this could contribute to a lower volume of airspace consumed between 2019 and 2020. It is also noted that waste settlement between the 2018 and 2020 surveys could also have contributed to a lower apparent volume of airspace consumed.

Since the airspace volume consumed in 2013, 2014, 2017 and 2018 and 2020 is low, it will not be used in calculations of the average annual airspace consumption rate at this time.

In 2023 and 2024, the airspace utilization rate is slightly lower than 2021 and 2022, however the tonnage of waste landfilled was similar to 2023 and 2024 (7,005 and 6,990 tonnes, respectively in 2021 and 2022). It is considered that sub-optimal compaction during that time could be a contributor to the higher ratio of volume consumption per tonne of waste landfilled. It is also possible that the increased density of survey points provided by the aerial survey compared to previous ground surveys could be influencing the apparent fill (including some areas within Stage 5 where waste has not been placed since the previous full site survey in 2020, but where 2022 topographic contours differ slightly in elevation from the 2020 survey).

The 5-year average airspace utilization rate based on the years 2024, 2023, 2022, 2021 and 2019 is estimated to be approximately 13,700 cubic meters per year.

In addition to the waste material placed in 2023 and 2024, various operational activities occurred at the site which contributed to airspace consumption during this time, including soil material that was placed for the construction of a new access road bisecting the waste footprint to the south of Stage 4 (constructed in 2023 and 2024), soil placement undertaken at the western toe of the slope as part of remedial efforts for the steep waste slopes in this area of the site (in 2024), and soil material that was placed in the northeast corner adjacent to the active waste area partly outside of the waste limit. Both the soil material placed in the west area of the site and at the northeast corner was placed partly outside of the waste limit; the Town has indicated that the source of the soil material placed in these areas was from infrastructure projects within the Town, and some of the material is understood to exceed MECP Table 3 Soil Standards. In the case of the soil material placed in the west area of the site, this material is anticipated to fall within the future proposed western extension of the waste limit (refer to **Section 1.2.4**). In the case of the material placed in the northeast corner of the site, due to an error in survey information at the time of placement, it was not realized that the material was placed outside of the approved waste limit. Since the 2024 topographic survey, the Town has taken efforts to relocate some of this material to within the waste limit and intends to relocate the remainder. Of the soil material placed in the northeast corner and the western area of the site that could consist of material exceeding MECP Table 3 Soil Standards, approximately

2,750 cubic metres was placed outside of the waste limit (and would therefore be considered Fill Beyond Approved Limits (FBAL)).

As indicated in a letter to the MECP from Golder dated November 29, 2007, the Town inspected areas of potential Fill Beyond Approved Limits (FBAL) at the site in 2007. It was determined at this time that waste had indeed been placed beyond the approved fill limits. The approximate volume of fill beyond approved limits was estimated to be approximately 9,250 cubic metres. Two areas of waste outside the fill limits had been identified, one extending approximately 10 metres beyond the northwest edge of the waste footprint (upgradient of the approved fill limits and approximately 8,500 cubic metres of waste fill) and a smaller area extending approximately 5 metres beyond the southwestern edge of the waste footprint (approximately 750 cubic metres of waste fill). In 2016, the FBAL area at the southwestern edge of the waste footprint was excavated, and the waste placed within the approved footprint. The remaining FBAL area is illustrated in **Figure 2**.

The waste to the northwest of the approved fill limits is currently within the site boundaries, is upgradient of the approved fill area and, due primarily to the depth of waste, would require considerable excavation to remove. Cover and vegetative growth have also been observed in this area.

In 2019, the survey of the west corner of the Site showed the existing bank extends slightly beyond the approved toe of waste. Due to the base preparation activity, which included sand excavation from within and beyond the waste footprint, and due to snow cover during the January 2019 survey, it was not possible to determine at that time if waste had been placed beyond the approved waste footprint. There was no fill to this area from 2019 to 2023. As discussed above, in 2024, soil material was placed in this area of the site as part of the waste slope remedial efforts by the Town.

Additional fill above approved limits (FAAL) was noted during the 2024 survey, appearing as stockpiles on cross sections B'B' on **Figure 3**, and cross section G-G' and H-H' on **Figure 5**. The Town has confirmed that these stockpiles consisted of ground leaf and yard waste or soil material stored temporarily for use as daily cover. These stockpiles have been or will be depleted as the material is placed as daily cover within the waste limit.

The practical alternative to deal with the FBAL and FAAL is to leave the waste in place with existing final cover over the FBAL / FAAL area. With respect to the previously identified FBAL, the MECP has agreed to this alternative, as discussed in Golder (2010), and a figure depicting the FBAL is included in the report listed as Item 17 of Schedule 'A' of ECA No. A410401. The approximate volume of FBAL (8,500 cubic metres) will be subtracted from the total remaining volume at the landfill. With respect to the potential FBAL in the west area of the Site, existing FAAL, as discussed in **Section 1.2.4**, the Town will be submitting revised final contours for approval to address the fill above approved limits and slope geometry issues. The FBAL (soil material not meeting MECP Table 3 Soil Standards) in the northeast corner is planned to be relocated to within the waste footprint.

The overall volumetric capacity remaining at the Renfrew Landfill Site was estimated by WSP based on a comparison between the 2024 survey and the approved final contours within the licensed fill limit. The estimated total volumetric capacity remaining at the site in 2024 of approximately 712,222 cubic metres (WSP, 2024); this remaining airspace accounts for FAAL which is assumed to detract from the total remaining capacity, as well as soil placed for operational purposes located within the waste footprint. Subtracting the previous known approximate approved FBAL volume of 8,500 cubic metres and the estimated volume of additional FBAL material added in 2023 and 2024 in the northeast corner and in the western area of the site (2,750 cubic metres), the total volumetric capacity remaining at the Renfrew Landfill Site is approximately 700,973 cubic metres. It should be noted that the approved final waste contours in some locations do not extend to the edge of the licensed fill limit

(for example, refer to cross-sections A-A', B-B', C-C' and G-G'); as such, the actual volume remaining may be slightly greater than indicated. Additionally, facilities associated with operation of the landfill and the HHW Depot (including buildings, public drop off area, and temporary storage of materials to be ground for use as alternative daily cover) are located within the waste limit and are expected to be detracting from the remaining volumetric capacity at the Site. This will be corrected in the submission of the revised final contours as discussed in **Section 1.2.4**.

In Trow (2005) it was reported that the remaining site capacity was previously calculated based on a base survey completed in 1993. The overall remaining site capacity in 1993 was estimated to be 961,805 cubic metres. Of this remaining volume, 533,634 cubic metres remained available in Stage 4 (i.e., the western portion of the site), leaving 428,171 cubic metres in Stage 5 (which requires submission of an updated Design and Operations report and an updated Hydrogeological Report to the MECP for approval prior to developing Stage 5, in accordance with Condition 7(6) of ECA No. A401410).

Since no landfilling in Stage 5 has taken place since 1993, the predicted volume remaining in Stage 5 in 1993 should remain unchanged. As such, considering the estimated overall remaining site capacity of 700,973 cubic metres, 272,802 cubic metres are estimated to remain in Stage 4. The annual consumption rate has varied since 2006. Based on a five-year average annual volume of airspace consumed of 13,700 cubic metres, it is estimated that the remaining site life for Stage 4 is in the range of about 20 years.

2.2 Cover Material Quantities

No final cover or vegetation was placed in 2024.

2.3 Changes to Operations or Equipment

Although a new ECA was issued on December 4, 2024, with changes to the landfill operational hours, these were not put into effect until 2025. Therefore, there were no changes to operations or equipment in 2024.

As discussed in **Section 1.2.4**, the Town completed construction of an access road to facilitate correction of the over steepened waste slopes.

2.4 Operating Difficulties and Complaints

There were no complaints received at the Site in 2024.

2.5 Daily Inspections and Log Book

To comply with Conditions 6(1) through 6(2) of ECA No. A410401, a daily log book/daily inspection form was implemented at the site in early 2010. The daily log book/daily inspection form is included in **APPENDIX G**.

2.6 Waste Diversion

According to the Operation and Development Report for the Town of Renfrew Landfill Site (OMM, A. Trow Company, December 1997), which is listed as Item Number 6 in Schedule 1 of the ECA, "continued expansion and promotion of the recycling program as dictated by market adjustments is recommended." In an effort to extend the life of the landfill, the Town continues to make efforts to divert more recyclable material from the landfill. The Town has established a gravel pad diversion area near the entrance of the landfill site, which has well marked areas for stockpiles or bins of diverted material including tires, metal, cardboard, bricks, white goods, drywall, blue box material (including paper), wood, leaf and yard waste, E-waste and wood to be chipped, as

shown on **Figure 2**. There is also a saw-toothed area where residents are able to place small amounts of waste and diverted materials in bins from ground level. As per Condition 10(4) of ECA No. A401410, recyclable material are transferred off-site once their storage bins are full and the waste placed in bins will be moved to the tipping face as the bin is filled.

The July 2020 revision to ECA No. A410401 approved the operation of a Re-Use Centre (detailed in Item 26 of Schedule “1”), provided that it is constructed as approved before December 4, 2029.

2.7 Waste Quantities Received in 2024

In accordance with Condition 6(7)(f) of ECA No. A410401, a summary of the total annual quantity of waste received at the Site (in tonnes) is provided in **APPENDIX H**.

3.0 FIELD PROCEDURES

The objective of the 2024 environmental monitoring program was to comply with Conditions 8(1), 8(3), 8(4), 8(5) and 8(7) of ECA No. A 410401, dated December 4, 2024, which pertains to landfill gas monitoring, surface water monitoring and groundwater monitoring.

The scope of the 2024 environmental monitoring program followed the approved monitoring program referenced in Schedule 2 and Schedule 3 of the ECA, noting however that a sample was not collected from groundwater monitoring well OMM15 in error during the fall sampling session.

The locations of all groundwater monitors, surface water sampling stations and landfill gas monitoring wells are shown on **Figure 2**.

3.1 Groundwater Monitoring Procedures

The 2024 spring and fall groundwater monitoring sessions were carried out on April 25, 2024, and on October 22 and 23, 2025, respectively, by WSP. The details of the groundwater monitors are provided in **Table 2**. Borehole log and well construction details are provided in **APPENDIX B**.

Groundwater levels were measured in each of the monitors included in the sampling program during the 2024 spring and fall monitoring sessions with the exception of OMM15 which was assumed dry in error during the October monitoring session and was subsequently measured on November 20, 2024, along with nearby OMM2. All monitors sampled were developed through the removal of at least three standing volumes of water using the dedicated samplers consisting of low-density polyethylene (LDPE) tubing and a Waterra foot valve or with a gas-powered pump. Sampling of groundwater was generally performed immediately after monitor development.

The temperature, pH and electrical conductivity of the groundwater samples were measured in the field at the time of sample collection. All field instruments were calibrated prior to use. All samples collected were entered on a Chain of Custody Form and placed in coolers with ice packs until they were delivered to the private analytical laboratory.

The groundwater samples were collected, prepared and preserved in the field as follows:

- One amber glass bottle, unfiltered and preserved with sulphuric acid for analysis of ammonia, total kjeldahl nitrogen (TKN), and total phosphorus.

- One high density polyethylene (HDPE) plastic bottle, unfiltered and unpreserved for analysis of alkalinity, total dissolved solids (TDS), chloride, nitrite, nitrate, and sulphate.
- One HDPE plastic bottle, field filtered to 0.45 microns and preserved with nitric acid for analysis of calcium, magnesium, sodium, potassium, arsenic, barium, boron, cadmium, chromium, copper, iron, lead, manganese, and zinc.
- One amber glass bottle, filtered to 0.45 microns and preserved with hydrochloric acid for analysis of mercury.
- One amber glass bottle, unfiltered and preserved with sulphuric acid for analysis of chemical oxygen demand (COD).
- One amber glass bottle, unfiltered and preserved with sulphuric acid for analysis of phenolics.
- Two amber glass bottles, filtered and preserved with sulphuric acid for analysis of dissolved organic carbon (DOC).

Additionally, groundwater samples were collected from OMM 7, OMM 8, OMM 9, OMM 14D, and BH11-01 during the fall 2024 monitoring session for analysis of VOCs by US EPA Method 624. A VOC sample was not collected at OMM15 as this well was assumed dry in error during the fall sampling session. The groundwater samples collected for VOC analyses were collected in two amber glass bottles unfiltered and preserved with sodium bisulphate with no headspace for analysis of VOCs.

Paracel Laboratories Ltd. in Ottawa, Ontario performed all laboratory chemical and physical analyses on the groundwater water samples. The Certificate of Analysis sheets from Paracel Laboratories Ltd. are provided in **APPENDIX C** on USB.

3.2 Surface Water Monitoring Procedures

The 2024 spring and fall surface water monitoring sessions were carried out on April 25, 2024, October 22 and 23, 2024, and on December 5, 2024, respectively, by WSP. Surface water samples were collected from four locations referenced in the approved monitoring program outlined in ECA No. A410401. This includes the three surface water sampling stations in the Bonnechere River. The details of the surface water monitoring stations are provided in **Table 3** and photographs of the surface water monitoring stations from the spring and fall monitoring sessions are shown on **Figures 9 and 10**, respectively.

The temperature, pH, electrical conductivity and dissolved oxygen concentration of the surface water samples were measured in the field at the time of sample collection. All field instruments were calibrated prior to use. All samples collected were entered on a Chain of Custody Form and placed in coolers with ice packs until they were delivered to the private analytical laboratory.

The surface water samples were collected, prepared and preserved in the field as follows:

- One HDPE plastic bottle, unfiltered and unpreserved for analysis of alkalinity, TDS, total suspended solids (TSS), chloride, nitrite, nitrate, and sulphate.
- One HDPE plastic bottle, unfiltered and preserved with nitric acid for analysis of calcium, magnesium, sodium, potassium, arsenic, barium, boron, cadmium, chromium, copper, iron, lead, manganese, and zinc.
- One amber glass bottle, field filtered to 0.45 microns and unpreserved for analysis of mercury.

- One amber glass bottle, unfiltered and preserved with sulphuric acid for analysis of phenols.
- One amber glass bottle, unfiltered and preserved with sulphuric acid for analysis of COD.
- Two amber glass bottles, filtered and preserved with sulphuric acid for analysis of DOC.
- One amber glass bottle, unfiltered and preserved with sulphuric acid for analysis of ammonia, TKN, and total phosphorus.
- One HDPE plastic bottle, unfiltered and unpreserved for analysis of Biochemical Oxygen Demand (BOD) (5 day).

Paracel Laboratories Ltd. in Ottawa, Ontario performed all laboratory chemical and physical analyses on the surface water samples. The Certificate of Analysis sheets from Paracel Laboratories Ltd. are provided in **APPENDIX C** on USB.

3.3 Landfill Gas Monitoring Procedures

3.3.1 Indoor Gas Monitoring

Methane, carbon dioxide, hydrogen sulphide, and oxygen concentrations (as a percentage by volume) in the garage were measured by WSP in the spring (April 25, 2024), late summer (September 20, 2024), and fall (October 23, 2024) using a landfill gas analyzer/extraction monitor. The landfill gas analyzer/ extraction monitor was rented and calibrated prior to delivery to WSP. **Table E1** in **APPENDIX E** presents the results of this monitoring.

Indoor gas monitoring was conducted monthly by Town staff in 2024 in the scale house and the garage. The results of the indoor monitoring are provided in **APPENDIX E**.

3.3.2 Landfill Gas Monitoring

The landfill gas monitoring program for 2024 consisted of monitoring methane, carbon dioxide and oxygen levels (percent by volume) at each of the eight gas monitoring well locations (GW1, GW2, GW3, GW4, GW07-5, GW09-1, GW11-1 and GW14-01) in accordance with the approved monitoring schedule referenced in the ECA with an additional monitoring session in September. The rationale for additional landfill gas monitoring sessions is discussed in **Section 9.2.2**. Landfill gas readings were taken on April 25, September 20, and October of 2024 by WSP using a landfill gas analyzer/extraction monitor. **Table E2** in **APPENDIX E** presents the results of this monitoring.

3.4 Status of Monitoring Well Network

In 2024, an examination of the monitoring wells was undertaken by a field technician to assess conformance with Regulation 903 as per Condition 6(7)j of the ECA. The condition of each of the groundwater monitors sampled during 2024 was noted during the spring and fall sampling sessions. The condition of each groundwater monitor during the fall sampling session is presented in **Table 2**. All monitors were observed to be in generally good condition with minor repairs required for OMM15.

3.5 Quality Assurance and Quality Control

The quality of the laboratory data used in this report (i.e., groundwater and surface water quality results) was evaluated based on laboratory QA/QC results and field duplicate and trip blank results. All laboratory chemical and physical analyses on groundwater and surface water samples were performed by Paracel Laboratories Ltd. in

Ottawa, Ontario, which is accredited to ISO/IEC 17025:2005 (E), *General requirements for the competence of testing and calibration laboratories*. The laboratory performs internal QA/QC checks including matrix spikes, spiked blanks, method blanks, and laboratory duplicates. WSP has reviewed the laboratory QA/QC results provided in the Certificates of Analysis and found them to be acceptable. In the spring of 2024, the laboratory reported spike recovery outside acceptable limits for manganese, sodium, tungsten, boron, iron, and magnesium for the groundwater submission and that the spike level was outside control limits for selenium and zinc for the surface water submission. The sample bottle for analysis of COD and phenols received in the spring for OMM-15 was empty, therefore, analysis of these parameters were sub-sampled by the laboratory from another sample bottle. In the fall of 2024, the spike recovery was outside acceptable limits for magnesium and silver for the groundwater submission and was outside acceptable limits for zinc and calcium for the surface water submission. Additional labeling issues were noted by the lab on the fall groundwater submission. All fall surface water samples submitted to the laboratory were noted as having water (melted ice) in the coolers received.

The field QA/QC program also included two duplicate groundwater samples and one duplicate surface water sample during each monitoring session. Analytical results on blind sample duplicates are deemed to be outside of acceptable tolerance limits if the RPD between the original sample and its duplicate is greater than 50% and both analytical results are greater than 10 times the detection limit, or if the RPD is greater than 30% and both analytical results are greater than 20 times the detection limit. In the spring, the RPD limits were exceeded for the surface water duplicate from sampling location S6 for iron (55% RPD). The original result and the duplicate result are within the historical data ranges identified at S6 and therefore despite the difference, the data is considered reliable to interpret. No exceedances of the RPD were found in the groundwater results from the 2024 spring monitoring session. In the fall, the RPD limits were exceeded for the surface water duplicate from sampling location S6 for lead (165%). The original sample concentration represents a historical high concentration for this parameter at this location. The RPD limits were also exceeded for the groundwater duplicate from groundwater monitor BH10-2A (171%) for selenium. The original sample concentration represents a historical high concentration for this parameter at this location. The laboratory performed an internal check and found no discrepancies in the data.

A trip blank and field blank were prepared for VOCs during the fall monitoring session in 2024 and all reported results were non-detect and deemed acceptable.

The field equipment used to measure temperature, pH, conductivity and dissolved oxygen was calibrated each day prior to use.

3.6 Precipitation Events

Data from the nearest Environment Canada meteorological station at the Pembroke Airport (Station ID 6106367, located approximately 60 kilometres northwest of the Renfrew Landfill Site) for each of the monitoring events was reviewed. The precipitation during the week leading up to the April 25, 2024, monitoring session was 16.1 millimetres (mm) with a mean temperature on April 25, 2024, of 0.8 degrees Celsius, respectively. The precipitation during the week leading up to the October 22 and 23, 2024 monitoring session was 0.9 mm with a mean temperature on October 22 and 23, 2024 of 15.8 and 11.5 degrees Celsius, respectively. The precipitation during the week leading up to the December 5, 2024, monitoring session was 5.5 mm with a mean temperature on December 5, 2024, of -3.9 degrees Celsius. The 30-year (1981 to 2010) climate normal at the Renfrew climate station (Climate ID: 6107002) located approximately 400 metres southwest of the Renfrew Landfill Site report an average precipitation in April of 69.8 mm compared to April 2024 that had 82.9 mm, an average precipitation in

October of 71.0 mm compared to October 2024 that had 51.6 mm and an average precipitation in December of 53.1 compared to December 2024 that had 61.9 mm.

4.0 PHYSICAL HYDROGEOLOGY

4.1 Water Level Data

The groundwater level data collected by WSP during the 2024 spring and fall monitoring sessions, along with historical groundwater elevations since 2006 are provided in **Table 1**. These water levels are also illustrated in plan, together with the interpreted groundwater elevation contours and interpreted flow directions in **Figures 6 and 7** for the spring and fall 2024 monitoring sessions, respectively. The groundwater elevations presented in this report were calculated based on the top of pipe (TOP) elevations.

Based on a review of the 2024 groundwater level data, the interpreted direction of groundwater flow is across the site from northwest to southeast. This is consistent with the interpretation in previous years. As described in Golder (2006), it is believed that the groundwater elevations at groundwater monitors OMM 6, OMM 7, and OW 10 are reflective of perched groundwater conditions. Based on the observed groundwater elevations at BH11-01 since 2011, it is believed that the groundwater elevations at BH11-01 are reflective of perched groundwater conditions similar to OMM 6, OMM 7, and OW 10. Therefore, the groundwater elevations recorded for OMM6, OMM 7, OW 10, and BH11-01 during 2024 were excluded from the interpretation of groundwater contours presented in **Figures 6 and 7** of this report.

In spring of 2024, the groundwater elevation at OMM 14S was approximately 4 to 4.5 metres lower than historical groundwater elevations at this location, indicating upward gradient (discharging) conditions, which has not previously been observed during monitoring sessions at this location. The water level at returned to within historic ranges in the fall. Typically, OMM14S is used in the interpretation of groundwater flow direction, however it was excluded from the spring 2024 groundwater flow interpretation on **Figure 6** as this is considered anomalous. The groundwater elevation at BH10-1 in fall 2024 was approximately 1.5 to 2 metres higher than historical groundwater elevations at this location and was excluded from the fall 2024 groundwater contour interpretation on **Figure 7** as this is considered anomalous.

Between November 2013 and June of 2018, the groundwater elevations at background monitoring well OMM 15 were approximately 3 to 5 metres higher than typical earlier historical elevations at this location, with the exception of the spring of 2016 and 2017. Since November 2018, groundwater elevations at OMM15 have been generally consistent and remaining closer to pre-2013 levels, fluctuating approximately 0.2 to 0.3 metres in elevation over this time period, with the exception of an increase of about 1 metre in fall 2021. The area around OMM 15 is inspected annually during monitoring, but no reason for the increase has ever been found. Groundwater elevations are generally higher at OMM 15 compared to OMM 2, except for a few monitoring sessions between 2019 and 2022 where the elevations at OMM2 were higher than at OMM 15. Historically, this has occurred occasionally but typically not consistently (11 of 36 monitoring sessions since 2006). Based on the thick sand and gravel overburden deposits at the Site and the interpreted groundwater flow direction toward the Bonnechere River to the east of the Site, as well as the low concentrations of leachate indicator parameters and lack of increasing trends in concentrations of leachate indicator parameters at OMM15, it is not at this time considered likely that there is a component of groundwater flow from the landfill toward the northwest. OMM15 still remains useful as a background monitor for the Site, however this will continue to be monitored. It is noted that measurement of a groundwater level for OMM15 was inadvertently missed during the fall monitoring session on October 22, 2024. Water levels for OMM15 and OMM2 were subsequently measured on November 20, 2024; at

that time, the groundwater elevation at OMM15 was confirmed to be greater than OMM2. The groundwater elevation at OMM15 shown in **Table 1** and on **Figure 7** is from the measurement on November 20, 2024.

Based on a review of the historic borehole log for OMM 4, which indicates that the bottom of the waste mound is at an elevation of approximately 102 metres above sea level, it is estimated that the water table under the northwest half of the licensed fill area (i.e., Stage 4) is approximately 5 to 6 metres below the underside of the waste. Based on a review of the borehole log for BH11-01, which indicates that the bottom of the waste mound is at an elevation of approximately 96.9 metres above sea level, it is estimated that the water table at the southeast portion of Stage 4 is below the approximate underside of the waste by approximately 2 to 3 metres, as the water level in BH11-01 appears to represent perched groundwater conditions in or near the bottom of the waste.

In 2024, groundwater elevations were within historic ranges with the exception of OMM 14S and BH10-1 as noted above.

Consistent downward hydraulic gradients have been reported previously (Trow, 2005) at OMM14, based on higher groundwater elevations in the shallow well, OMM 14S, than the deeper wells at this location (OMM 14M and OMM 14D). In the spring of 2024, there was an upward hydraulic gradient between the shallow well, OMM14 S and the deeper wells, OMM 14M and OMM14 D. This upward hydraulic gradient returned to a downward hydraulic gradient in the fall of 2024. Since 2006, the vertical gradient between OMM14S and OMM14D and OMM14M has been downward, except for the spring of 2024. There appears to be very little to no vertical hydraulic gradient between OMM 14M and OMM 14D in 2024, consistent with historical measurements. During the spring and fall monitoring sessions there was a slight upward vertical hydraulic gradient observed at BH10-2 (typical for this location).

Based on the borehole logs for BH10-1 and BH10-2A (provided in **APPENDIX B**), the bedrock surface at these locations is interpreted to be at elevations of approximately 56.69 and 53.69 metres above sea level, respectively. Based on a distance of approximately 310 metres between these two boreholes, it is considered that the overall slope of the bedrock may be approximately 0.01 towards the southeast. Based on the groundwater elevation data at these same borehole locations, it is noted that the horizontal hydraulic gradient between monitors BH10-1 and BH10-2A is similar to the bedrock slope at a magnitude of approximately between 0.006 to 0.011. The calculated horizontal gradient in the fall of 2024 between BH10-1 and BH10-2A was approximately 0.015, which is slightly higher than historical horizontal gradients at this location, related to the historical high groundwater elevation at BH10-1 during the fall monitoring session.

4.2 Horizontal Hydraulic Conductivity

As requested by the MECP groundwater technical reviewer, estimates of the horizontal hydraulic conductivities (K) of the overburden unit in the vicinity of the monitoring well intake screens were calculated from rising head tests performed on selected monitoring wells on August 13, 2009. The data from rising head tests were analyzed using the Hvorslev method (Hvorslev, 1951) and test results for the rising head tests conducted in 2009 are given in Golder (2010). The horizontal hydraulic conductivity ranged from 3.0×10^{-3} cm/s to 5.5×10^{-3} cm/s.

These values are considered generally representative of what would be expected for the sand overburden deposit present in the subsurface at the site (Freeze and Cherry, 1979).

5.0 GROUNDWATER QUALITY

5.1 Interpretation of Groundwater Quality Data

The results of all field and laboratory chemical and physical analyses conducted during the 2024 groundwater monitoring program along with the relevant Ontario Drinking Water Quality Standards, Objectives and Guidelines (ODWQS) are provided in **APPENDIX D-I** for inorganic parameters and **Appendix D-II** for volatile organic compounds. **APPENDIX D-I and APPENDIX D-II** are provided in electronic format on USB and include historical results for the groundwater monitors included in the 2024 groundwater monitoring program.

This section discusses the chemical and physical groundwater quality data at the monitors sampled during the 2024 groundwater monitoring program and, where appropriate, provides a discussion of the apparent trends in groundwater quality over time at each monitoring location. Discussion relating to compliance with the ODWQS relates specifically to non-health related objectives (i.e., aesthetic parameters) and health related parameters for which a Maximum Acceptable Concentration (MAC) or Interim Maximum Acceptable Concentration (IMAC) have been established.

The parameters with reported levels exceeding their respective ODWQS; trend(s) in groundwater quality (where appropriate); a listing of parameters elevated in 2024 compared to background conditions; and an interpretation of the groundwater quality data are summarized in **Table 4** for the groundwater monitors included in the 2024 groundwater monitoring program.

5.2 Background Monitor

The background groundwater quality within the overburden in the vicinity of the landfill site was monitored during 2024 through the inclusion of groundwater monitor OMM15 in the spring session. As discussed in **Section 3.1**, sampling of OMM15 was inadvertently missed in the fall of 2024. This monitor is screened within the unconfined sandy overburden approximately 100 metres northwest and hydrogeologically upgradient of the waste footprint (see Site Plan, **Figure 2**).

Trow (2005) reports that groundwater monitor OMM 2 was historically used to assess background groundwater conditions but that historic variations in groundwater quality at this location suggested possible landfill leachate impacts; therefore, OMM 15 was installed as a replacement background groundwater monitor in 2004. As such, any discussion related to background groundwater quality in this report considers only the groundwater quality data collected from OMM 15.

The groundwater quality during spring 2024 at monitor OMM 15 met the ODWQS for all parameters analyzed. The water quality at this location is generally consistent over time and is characterized by consistently low chloride concentrations (2.9 to 5.2 mg/L).

5.3 Leachate Quality

Prior to February 2011, groundwater monitor OMM 1 was the only functional groundwater monitor installed within the waste footprint. Based on a review of the historic water quality data at OMM 1, it was considered that the groundwater quality from this monitor is representative of leachate-impacted groundwater near the active landfilling area, however this monitor was removed from the monitoring program in 2021 with the issuance of amended ECA No. 410401. BH11-01 was installed in February 2011 to address an MECP request for a method of providing representative 'maximum strength' leachate data, as discussed in Golder (2010). The installation of this monitor is described in more detail in Golder (2011). BH11-01 is located immediately southeast and directly

downgradient of the active waste disposal area, compared to OMM 1 which is located cross-gradient of the active waste disposal area (see **Figure 2**). Based on a comparison of water quality from the samples collected at BH11-01 since 2011 to the water quality observed in samples collected from OMM 1 between 2011 and 2020, it is considered that monitor BH11-01 is a more appropriate representation of leachate quality from the Renfrew Landfill Site.

In comparison to background conditions, the groundwater quality in 2024 at BH11-01 was characterized by elevated concentrations of the following parameters: alkalinity, ammonia, arsenic, barium, boron, chloride, COD (fall only), DOC (fall only), hardness (calcium (fall only) and magnesium), iron, manganese, nitrite (spring only), total phosphorus (spring only), potassium (fall only), sodium, sulphate (spring only), TDS, and TKN during both monitoring sessions. These parameters are similar to those that have historically been found to be elevated at OMM 1 compared with background.

The barium, iron, manganese, and TDS (fall only) concentrations reported at BH11-01 in 2024 exceeded their respective ODWQS during one or both monitoring sessions. Based on data from BH11-01, the groundwater appears generally consistent to slightly decreasing in parameter concentrations over time (i.e. no notable increasing or decreasing trends observed), with the exception of a slight increasing trend in the concentrations of sulphate and manganese.

5.4 Impact Evaluation Monitors

The monitors that are not referred to as background or leachate monitors are identified as impact evaluation monitors. Groundwater monitors OMM 5, 6, 7, 8, and 9, and BH10-1 are all located on-site, hydrogeologically downgradient of the landfill. OMM 5, 6, 7, 8, 9, and groundwater monitor BH10-1 are located between the east limits of the waste footprint and the east property boundary. Groundwater monitors OMM 14S, 14M, and 14D are located off-site, hydrogeologically downgradient of the landfill, approximately 200 metres east of the east limits of the waste footprint (and only 60 metres from the eastern property limit). Groundwater monitors BH10-2A and BH10-2B are located east of Bruce Street, approximately 350 metres east of the east limits of the waste footprint and 30 metres west of the Bonnechere River.

An interpretation of the groundwater quality data for the impact evaluation monitors, including parameters with reported levels exceeding their respective ODWQS, trends in groundwater quality, and a listing of parameters elevated in 2024 compared to background conditions, are summarized in **Table 4**. Time concentration plots of leachate indicator parameters for impact evaluation monitors as well as comparison to the background monitoring well, OMM15, and the leachate monitoring well, BH11-01, are provided in **APPENDIX J**.

Based on a review of the 2024 groundwater quality data (see **Table 4**), groundwater monitors OMM 5, OMM 6, OMM 7, OMM 8, OMM 9, and BH10-1 are interpreted to be impacted by landfill leachate. Additionally, based on elevated concentrations of sodium and chloride at OMM 9, it is considered that other sources, such as road salting, may be influencing this monitoring location.

The groundwater quality at OMM 14S, OMM 14M, OMM 14D, BH10-2A, and BH10-2B is interpreted to be potentially impacted by landfill leachate based on elevated concentrations of several of the same parameters observed as being elevated at BH11-01 in comparison to background, while considering possible impacts from road salting activities along Bruce Street at all of these wells. Monitoring wells OMM 2, BH07-2, BH07-3, and BH07-4 were also considered potentially impacted by landfill leachate prior to their removal from the groundwater monitoring program in 2020. Of these potentially impacted wells, the screened intervals of monitoring wells of

OMM 14S, OMM 14M, and BH10-2B are located within the depth of the potential leachate plumes identified by the geophysical analysis described in the memorandum from Golder dated November 17, 2014 and included with the 2014 monitoring report (Golder, 2015). The screened intervals of monitoring wells OMM 14D and BH10-2A are located deeper than the potential leachate plumes identified by the geophysical analysis and hence the linkage to impact from landfill leachate is less certain.

It is noted that iron concentrations in groundwater monitors OMM 5, OMM 6, OMM 7, and BH10-1 that are interpreted to be impacted by landfill leachate are, in general, much higher (i.e., by approximately two orders of magnitude) than other groundwater monitors, including other monitors interpreted to be impacted by landfill leachate.

Previous comparisons between parameter concentrations that were elevated above background conditions at monitoring well BH07-3 and OMM 14M as well as monitoring well BH07-4 and OMM 14S were noted due to being screened at similar intervals. Historical concentrations of some leachate indicator parameters (see **Section 5.8**) tended to be higher in the downgradient monitoring wells BH07-3 and BH07-4 (2020) compared to the current upgradient monitors OMM 14M and OMM 14S. This trend contradicted what would have been expected if the Renfrew Landfill Site was the sole source of these elevated concentrations (i.e., a consistent or decreasing trend with distance from the site would be expected while the landfill is in operation). Additionally, based on the geophysical analysis conducted by Golder (Golder, 2015), it was considered that BH07-3 was screened at an interval deeper than the potential leachate plumes identified by the geophysical analysis, where OMM 14M was interpreted to be screened at a depth that would fall within the interpreted leachate plume. This further contradicted what would have been expected if the Renfrew Landfill Site was the sole source of elevated concentrations (i.e., the concentration of parameters exceeding background conditions would be expected to be higher at OMM 14M, screened within the depth of the plume, compared to BH07-3, screened deeper than the plume while the landfill is in operation). Considering this, OMM 14S and OMM 14M have been described to be only potentially impacted by landfill leachate.

In addition to the parameters listed as elevated at BH11-01 (see **Section 5.3**), the following parameters at leachate impact evaluation monitors during the 2024 monitoring sessions were elevated compared to the background range:

- OMM9: nitrate

5.5 Bonnechere River Groundwater Monitors Evaluated Based on PWQO

As indicated in Golder (2011), the MECP requested that groundwater quality at the monitors installed at borehole locations OMM 14, BH07-2, BH07-3, and BH07-4 be compared to the Provincial Water Quality Objectives (PWQO) to assess if sampling in the Bonnechere River should be implemented. Groundwater monitors BH07-2, BH07-3, and BH07-4 have since been removed from the monitoring program. Given that monitors BH10-2A and BH10-2B were installed during 2010 directly adjacent to the Bonnechere River, it is now considered appropriate and more relevant to only compare the groundwater quality at BH10-2A and BH10-2B to the PWQO.

A comparison of groundwater quality in the samples collected in 2024 from the groundwater monitors at BH10-2A and BH10-2B to the PWQO indicated that concentrations for all parameters are below their respective PWQO with the exception of total phosphorus (BH10-2A during the spring monitoring session), and iron (BH10-2A and BH10-2B during both monitoring sessions).

Although elevated above the PWQO, the total phosphorus concentration reported at BH10-2A in the spring of 2024 was within the historical range of concentrations reported at background monitoring well OMM 15. It is also noted that the concentrations of total phosphorus at BH10-2A have been above recent concentrations of total phosphorus in upgradient monitoring well OMM 14D (screened at a similar interval as BH10-2A) including in 2024, indicating that there may be another source of total phosphorus at this location. It is not expected that landfill leachate is causing total phosphorus concentrations in excess of the PWQO in groundwater entering the Bonnechere River. The concentrations of iron at BH10-2A and BH10-2B were elevated above the background range of concentrations at OMM 15 during the spring and fall monitoring sessions in 2024. The iron concentrations at BH10-2A were also elevated compared to OMM 14D during the 2024 monitoring session, but was still within historical concentrations at BH10-2A. The concentrations of iron in 2024 at BH10-2B were elevated compared to typical background ranges, but still within historical concentration ranges at BH10-2B. Iron concentrations at BH10-2B in 2024 were comparable to concentrations at OMM 14M but were elevated compared to OMM 14S and lower than iron concentrations at OMM 14D.

A calculation of contaminant loading of iron to the Bonnechere River based on the maximum historical concentration of iron at BH10-2A and BH10-2B is presented in the 2015 annual monitoring report (Golder, 2016). This calculation was conducted using the historical high concentration of iron at monitoring wells BH10-2A and BH10-2B of 7.03 mg/L. This calculation indicated that the concentration of iron discharging in groundwater is not expected to significantly increase the total concentration of iron in the Bonnechere River. As concentrations of iron at BH10-2A and BH10-2B are below the historical high concentrations used in the contaminant loading calculation, this interpretation is still considered appropriate.

Based on the groundwater quality observed at groundwater monitors BH10-2A and BH10-2B and as discussed in the following section, it is interpreted that impacts on groundwater quality from the Renfrew Landfill Site at this time do not have the potential to negatively impact overall surface water quality in the Bonnechere River with regards to the PWQO.

5.6 Evaluation of Potential Road Salt Impacts Versus Landfill Leachate Impacts

In 2009 and 2010, the contribution of road salting activities to the water quality east (downgradient) of Bruce Street was evaluated (Golder, 2010 and 2011) by comparing the leachate indicator parameter concentrations in the groundwater during discrete sampling from monitoring wells east of Bruce Street (OMM 14S, OMM 14M, OMM 14D, BH07-2, BH07-3, and BH07-4) to the leachate indicator parameter concentrations in the groundwater during the corresponding sampling sessions from monitoring well BH07-1, which is interpreted to be impacted by road salting activities only, as this well is not hydrogeologically downgradient of the landfill. Based on this evaluation, a shortened list of relevant leachate indicator parameters was derived, including alkalinity, ammonia, boron, DOC, iron, manganese, potassium, and TKN. Elevated concentrations of these parameters in groundwater monitors east of Bruce Street are not indicative of impacts from road salting activities alone and may suggest some degree of impact from landfill leachate.

Concentrations of the shortened list of leachate indicator parameters for the 2024 monitoring sessions are plotted on **Figures 11, 12 and 13** for shallow, medium depth, and deep wells east of Bruce Street, respectively. Each figure also includes concentrations at background monitoring well OMM 15, concentrations at leachate monitoring well BH11-01, concentrations at groundwater monitors BH10-2A and BH10-2B (located east of Bruce Street, further downgradient) and at a leachate-impacted monitoring well west of Bruce Street of

appropriate depth. As discussed previously, a sample from monitoring well OMM15 was inadvertently missed during the fall monitoring session. The figures indicate potential impact to the groundwater east of Bruce Street since the concentrations of some parameters are higher than background concentrations. **Figure 12** shows that concentrations of some of the parameters on the shortened list of leachate indicator parameters are generally higher at BH10-2B compared to OMM14M (i.e., alkalinity, boron, and potassium), which is installed further upgradient to a similar depth, suggesting either a source other than the landfill may be contributing to these higher concentrations or different natural groundwater quality in this area. Similarly, **Figure 13** shows that alkalinity, ammonia, boron, DOC, iron, TKN and potassium concentrations are higher at monitor BH10-2A than at OMM 14D in 2024.

Based on the notably lower concentrations of the shortened list of leachate indicator parameters reported during 2024 at the monitoring wells east of Bruce Street, compared to the leachate-impacted groundwater monitors west of Bruce Street, as depicted in **Figures 11, 12 and 13**, it is considered that the groundwater quality at monitors OMM 14S, OMM 14M, OMM 14D, BH10-2A, and BH10-2B are only potentially impacted by landfill leachate. Road salt impact monitor BH07-1 was installed in 2007, and groundwater quality data was collected until early summer 2010. Based on the water quality data collected to date at BH07-1, it cannot definitively be concluded that the above noted groundwater monitors east of Bruce Street are only impacted by landfill leachate. This is similar to the conclusion drawn from the 2008 to 2023 groundwater monitoring data (Golder, 2009 to 2022 and WSP, 2023 to 2024).

5.7 Volatile Organic Compounds

Volatile organic compounds (VOC) analyses by US EPA Method 624 were conducted on samples collected from monitors OMM 7, OMM 8, OMM 9, OMM 14D, OMM 15, and BH11-01 during the fall 2024 monitoring session. Current and historic results for organic compounds are provided in **APPENDIX D**. No VOCs were detected in the samples collected from the downgradient groundwater monitoring wells during 2024. VOCs were detected at the leachate monitoring well BH11-01 for 1,4-dichlorobenzene, benzene, and chlorobenzene. The VOCs detected and their concentrations to date are not considered to be an issue of concern with respect to the overall degree of leachate-impact on groundwater quality or site compliance. Exceedances of ODWQS have not been detected in the downgradient groundwater monitors since monitoring of VOCs began in 2005.

Due to the historic detection of VOCs at monitor OMM 7, it is recommended that VOC analyses be continued in future monitoring programs. No changes to the monitoring program for VOCs are recommended at this time. It is recommended that the VOC samples continue to be collected during the fall monitoring session instead of the spring monitoring session as site conditions appear to be typically drier in the fall than the spring, based on a review of previous groundwater level data.

5.8 Review of Site-Specific Leachate Indicator Parameters

As indicated in **Section 5.3**, the leachate-impacted groundwater in leachate monitor BH11-01 is characterized by elevated concentrations of the following parameters in 2024: alkalinity, ammonia, arsenic, barium, boron, chloride, COD (fall only), DOC (fall only), hardness (calcium (fall only) and magnesium), iron, manganese, nitrite (spring only), total phosphorus (spring only), potassium (fall only), sodium, sulphate (spring only), TDS, and TKN during both monitoring sessions., compared to background conditions at OMM 15. These parameters are similar to those that have historically been found to be elevated in OMM 1 (traditionally used to monitor leachate quality) compared with background. Arsenic is typically detected at BH11-01 but has only sporadically been detected in groundwater samples collected from OMM 1 and other impact evaluation groundwater monitors. Since arsenic is

not persistently present in samples collected from OMM 1 (previously used to characterize leachate quality) or other impact evaluation groundwater monitors, this parameter is not considered as an appropriate site-specific *Leachate Indicator Parameter* for the Renfrew Landfill Site as although present it does not appear to be mobile. It is noted that arsenic was observed at detectable concentrations in the fall of 2024 at impact evaluation monitors located west of Bruce Street; concentrations of arsenic will be monitored and evaluated at these and other impact evaluation monitors in 2025.

Total phosphorus, sulphate and zinc have not previously been listed as leachate indicator parameters for this site as they were not persistently present at concentrations higher than background conditions in groundwater samples collected from OMM 1 or other impact evaluation groundwater monitors. The total phosphorus concentrations measured at BH11-01 have been above the background range for this parameter during twenty-six of the twenty-nine sampling events since the monitoring well was installed at the beginning of 2011. However, the total phosphorus concentrations at downgradient groundwater monitoring wells that are interpreted to be impacted by landfill leachate are not consistently or significantly above the concentrations found in the groundwater from background groundwater monitoring well OMM 15, indicating that the total phosphorus is not mobile at this site. As such, total phosphorus will not be added to the list of leachate indicator parameters. Zinc and sulphate have previously been elevated at BH11-01 compared to background conditions but are not consistently elevated compared to background quality at OMM 15, and therefore have not been added to the list of leachate indicator parameters.

In surface water comments received from the MECP on the 2014 Annual Monitoring Report, the reviewer stated that phenols should be sampled at downgradient groundwater wells, and that if detected at downgradient wells, it should be listed as a site-specific *Leachate Indicator Parameter*. Phenols were analyzed in all groundwater monitoring wells in the spring and fall of 2024. Phenols were reported at non-detectable concentrations in all groundwater monitoring wells during the 2024 sampling sessions. Historically, phenols have not been persistently detected in monitoring well BH11-01 and all downgradient groundwater monitors. Due to the historically non-persistent concentration of phenols in BH11-01 and the historically non-detectable concentrations of phenols in all downgradient groundwater monitors, it is considered that phenols is not a site-specific *Leachate Indicator Parameter*. It is recommended, that phenols be analyzed in groundwater monitoring wells again in 2025 to further support the exclusion of phenols from the list of *Leachate Indicator Parameters*.

Therefore, the fourteen parameters that comprise the site-specific *Leachate Indicator Parameters* for the Renfrew Landfill Site are as follows:

Alkalinity	Ammonia	Barium	Boron	Chloride
COD	DOC	Hardness	Iron	Manganese
Potassium	Sodium	TDS	TKN	

This list is identical to the list identified in WSP (2024).

Based on the evaluation of contributions to the groundwater quality east of Bruce Street from road salting activities discussed in **Section 5.6**, the full Leachate Indicator Parameters list may not be appropriate for evaluating leachate impact to the groundwater east of Bruce Street. The eight parameters that comprise the site-specific short list of Leachate Indicator Parameters for the groundwater east of Bruce Street are as follows:

Alkalinity	Ammonia	Boron	DOC	Iron	Manganese
Potassium	TKN				

6.0 GROUNDWATER COMPLIANCE ASSESSMENT

6.1 Introduction

MECP Guideline B-7 (MOE, 1994b) addresses the levels of off-site leachate impact on groundwater considered acceptable by the MECP and defines the level of impact on groundwater beyond which some form of mitigation measure(s) would be warranted. This section provides a site compliance assessment under MECP Guideline B-7 based on the 2024 spring and fall groundwater quality data.

Under MECP Guideline B-7 (the “Reasonable Use” guideline), a change in the quality of groundwater on adjacent properties will only be acceptable if the quality is not degraded in excess of fifty percent of the difference between background concentrations and established water quality criteria for aesthetic-related parameters, and twenty-five percent of the difference between background conditions and established water quality criteria for health-related parameters.

As discussed in **Section 6.4**, Condition 1(18) and 8(15) of revised ECA No. A410401 issued on December 4, 2024 requires the Town to complete the establishment of a Contaminant Attenuation Zone (CAZ) to bring the Site into compliance with respect to groundwater by December 4, 2026. Once the CAZ is established, it is understood that site compliance will be assessed based on surface water quality in the Bonnechere River. Until such time as the CAZ is established, the report on the annual monitoring program will continue to provide a discussion of compliance with MECP Guideline B-7 in accordance with Condition 8(2) of the ECA.

6.2 Compliance Concentrations

For the purpose of this site evaluation under MECP Guideline B-7, the background groundwater quality data collected to date from groundwater monitor OMM 15 have been considered. The standards and objectives described in the ODWQS have been used to represent the established water quality criteria.

The range in background groundwater quality with respect to ODWQS parameters for which a Maximum Acceptable Concentration (MAC), Interim Maximum Acceptable Concentration (IMAC) or Aesthetic Objective (AO) has been established is provided in the following table, along with the Reasonable Use Performance Objectives (RUPOs). Previously, the upper tolerance limit background concentration was used to calculate RUPOs for the site. Sufficient background groundwater quality data has been collected for this site to justify using a statistical approach to assess the presence and degree of groundwater quality impact, based on the establishment of tolerance intervals, to determine the natural variability in concentration of each indicator parameter. From the tolerance intervals, one-sided upper tolerance limits (TL) can be determined that specify the upper limit of natural variability in concentration of each parameter with a confidence level of 95 percent. The upper tolerance limits have been calculated assuming a normal distribution of background data. Based on technical review comments received from the MECP in 2014 (Golder, 2015), it is now proposed that both median and tolerance limit background values be considered to calculate RUPOs. Consideration was only given to the *Leachate Indicator Parameters* described in **Section 5.8** with established ODWQS.

Parameter	ODWQS (mg/L)	Background Range Based on Monitoring Well OMM15 (mg/L)	Median (mg/L)	Upper Tolerance Limit (mg/L)	RUPO (mg/L)	
					Median	TL
Barium	1 (MAC)	0.079 – 0.145	0.093	0.115	0.32	0.34
Boron	5 (IMAC)	ND – 0.035	0.011	0.026	1.26	1.27
Chloride	250 (AO)	2.9 – 5.2	4	5.17	127	127.6
DOC	5 (AO)	ND – 4.3	1.00	2.83	3.00	3.92
Iron	0.3 (AO)	ND – 0.299	0.05	0.168	0.175	0.234
Manganese	0.05 (AO)	ND – 0.16	0.003	0.056*	0.03	0.056*
Sodium	200 (AO)	3.0 – 6.0	3.94	5.28	102	102.6
TDS	500 (AO)	276 – 352	308	363	404	432

Notes:

mg/L – milligrams per litre

* Tolerance Limit exceeds ODWQS.

ND – concentration below detection limit

Entered by: ETB

Checked by: ALC

For manganese, the upper tolerance limit background concentration is higher than the respective ODWQS and therefore compliance concentrations have been established at the upper tolerance limit background concentration. All other parameters in background groundwater have been reported at concentrations below the respective ODWQS and therefore the compliance concentrations were calculated in accordance with MECP Guideline B-7, as described above.

The historic maximum background concentration of concentration of iron (3.91 mg/L) was reported in 2001 during the first sampling session, but the concentration of iron at the background monitor has been non-detect since 2005, except in spring 2022. Previously, the 2001 concentration has been used in the calculation of the RUPO, however it is interpreted that this historic high concentration is anomalous and the 2001 iron concentration has been excluded from the RUPO calculation.

6.3 Compliance Assessment

It is noteworthy that MECP Guideline B-7 applies to groundwater quality impact at the site boundary (i.e., the point of compliance). Multi-level monitoring well OMM 14 is an appropriate location at which to assess compliance with Reasonable Use Guideline B-7. While monitoring well OMM 7 is located approximately 90 metres upgradient from the southeast property boundary, it is expected that natural attenuation of contaminants of concern identified at monitoring well OMM 7 will continue before reaching the property boundary. Multi-level monitoring well OMM 14 is located approximately 60 metres southeast (downgradient) of the southeast property boundary. The lands located between multi-level monitoring well OMM 14 and the property boundary consist entirely of a road embankment for a municipal road (i.e., Bruce Street). As discussed in **Sections 5.4 and 5.6**, groundwater monitors OMM 14S, OMM 14M, and OMM 14D are interpreted to be potentially impacted by landfill leachate. As discussed in previous annual monitoring reports (Golder, 2020), it was concluded that the interpreted potential leachate plumes identified by the geophysical analysis undertaken in 2014 would be intercepted by the monitoring well sand packs at OMM 14S and OMM 14M. As such, multi-level monitoring wells at OMM14 are recommended as the compliance evaluation locations, as the monitoring well sand pack intervals are appropriately placed to allow evaluation of compliance with Guideline B-7.

A summary of the parameters with concentrations exceeding the RUPO at each of these groundwater monitors, based on the results of the 2024 monitoring program, is provided in the following table.

Monitor	Parameter	RUPO (mg/L)		Spring 2024 Concentration (mg/L)	Fall 2024 Concentration (mg/L)
		Median	TL		
OMM 14S	Barium	0.32	0.34	0.355	0.468
	Chloride	127	127.6	--	159
	Manganese	0.03	0.056	0.078	0.035
	TDS	404	432	--	490
OMM 14M	Barium	0.32	0.34	0.419	0.475
	Chloride	127	127.6	158	143
	Iron	0.175	0.234	0.345	0.271
	Manganese	0.03	0.056	0.126	0.125
OMM 14D	TDS	404	432	482	480
	Barium	0.32	0.34	0.373	0.456
	Iron	0.18	0.235	0.732	0.477
	Manganese	0.03	0.056	0.222	0.25
	TDS	404	432	410	440

Notes:

Spring monitoring occurred on April 25, 2024

Fall monitoring occurred on October 22, 2024

-- no exceedance

Bold indicates Median RUPO was exceeded.

Italics indicates Tolerance Limit RUPO was exceeded

Created by: ETB

Checked by: ALC

As indicated above, several parameters have been recorded at concentrations exceeding the RUPO at the groundwater monitor cluster at OMM 14. Historically, groundwater quality at monitoring well BH07-1, which, based on its location, is interpreted to not be impacted by landfill leachate, exceeded the RUPO for barium. As discussed in **Section 5.6**, some leachate indicator parameters are not considered appropriate for use east of Bruce Street due to impacts from road salting activities. Barium, chloride, and TDS are among the parameters considered to not be appropriate.

Based on the similarity of TDS and barium concentrations to historic concentrations observed in monitoring well BH07-1 and on the exclusion of TDS and barium from the short list for *Leachate-Impacted Parameters* for groundwater east of Bruce Street (see **Section 5.8**), the TL and median RUPO exceedances for barium and TDS at monitoring well OMM 14S, OMM 14M, and OMM 14D may not be related to landfill leachate. Since barium is not included on the short list for *Leachate-Impacted Parameters* for groundwater east of Bruce Street and since generally the barium concentrations at multi-level monitoring well OMM 14 are higher than the concentrations reported for this parameter at the upgradient groundwater monitors in the vicinity of OMM 6, 7, 8, and 9, it is considered that the TL and median RUPO exceedances for barium at OMM 14S, OMM 14M, and OMM 14D may be due to road salt impacts or a source other than the landfill.

The chloride concentration reported in groundwater at monitor OMM 14S and OMM 14M exceeded the RUPO TL and median for chloride during the spring 2024 monitoring session, and during the spring and fall of 2024 monitoring sessions, respectively. Chloride concentrations at monitors OMM 14S and OMM 14M are generally higher than the concentrations in monitors west of Bruce Street (with the exception of OMM 9, which has been interpreted to be potentially impacted by other sources as well as landfill leachate) and the chloride concentrations

reported in 2024 at OMM14S and OMM 14M (as well as OMM 14D) are generally higher than concentrations reported at the leachate monitor BH11-01 (including during both monitoring sessions in 2024). Considering that chloride concentrations are lower within the landfill area; it is likely that the chloride concentrations at monitors OMM 14S and OMM 14M are not solely related to landfill leachate.

The concentrations of manganese in the groundwater at monitors at OMM 14S, OMM 14M, and OMM 14D have shown some slight variability over time and range from 0.01 mg/L to 0.23 mg/L, 0.08 mg/L to 0.2 mg/L, and 0.1 mg/L to 0.27 mg/L, respectively. The concentration of manganese at these monitors is similar to the concentration of manganese at the leachate monitor (BH11-01), but significantly lower than the concentration of manganese at monitoring well OMM1 (former leachate well), and impact evaluation monitors OMM5, OMM6, and OMM7. Further, concentrations of manganese are typically highest in OMM 14D, which has been interpreted to be screened below the elevation of the leachate plume; in 2024, concentrations of manganese at OMM14D were elevated above the concentrations at BH11-01. Contrarily, manganese concentrations at BH07-1 and in the background monitor, OMM 15, which are interpreted to be un-impacted by landfill leachate, are significantly lower (or non-detect) compared to those observed at OMM 14. Considering the slight variability and concentration comparisons between the leachate wells, impact evaluation monitors, and BH07-1, it is possible that the manganese at OMM14 could be naturally occurring, or partly due to landfill leachate impact or an alternative source.

Iron exceeded the RUPO calculated based on the median and the upper tolerance limit at OMM 14D, and OMM 14M, during both the spring and the fall monitoring sessions. The concentrations of iron at multi-level monitoring well OMM 14 have been variable over time but do not show an overall increasing trend and are consistently at least one order of magnitude lower than the concentration at most wells interpreted to be impacted by landfill leachate. Therefore, it is possible that the RUPO exceedances of iron are not necessarily indicative of landfill leachate impact.

6.4 Conclusions and Discussion

Based on the results of the 2024 groundwater impact assessment, it is concluded that the site may be operating in compliance with MECP Guideline B-7.

It is considered that all of the groundwater monitors to the east of Bruce Street may be impacted by some combination of landfill leachate and road salting activities, with the exception of BH07-1, that was previously interpreted (i.e., when this monitor was last functional) to be impacted by road salting activities only as this well is not hydrogeologically downgradient of the landfill.

Groundwater monitors BH10-2A and BH10-2B were installed in 2010 at the furthest locations downgradient of the landfill site, west of the Bonnechere River. Prior to these wells being installed the monitors BH07-2, BH07-3, BH07-4 were the furthest downgradient (southeast) and considered to be potentially impacted by landfill leachate. The reported concentrations of leachate indicator parameters observed at BH10-2A and BH10-2B appear to be in keeping with other potentially impacted groundwater monitors east of Bruce Street.

Since 2018, the Town has taken steps to gain control of the groundwater use downgradient of the site for the purposes of establishing a CAZ over the area between Bruce Street and the Bonnechere River, east of the existing landfill property. The Condition 1(18) of the December 2024 revision to the ECA requires that the Town establish a contaminant attenuation zone (CAZ) either by fee simple or by establishing a groundwater easement and submit to the Director a Certificate of Requirement. The time frame for establishing the CAZ is noted in Condition 8(15) as two years from the date of the December 2024 ECA. There are presently no known groundwater users downgradient of the Site, and the Town has amended the Official Plan to include a condition

with the intent of facilitating the Town to obtain groundwater rights of any land in the Area of Potential Leachate Impact for which development is proposed. Over time the Town will obtain the groundwater rights of all the land in the Area of Potential Leachate Impact, at which point a Contaminant Attenuation Zone can be registered on title. It should be noted that many of the properties in this area are already owned by the Town, and in 2023 the Town negotiated a groundwater easement with some additional property owners downgradient of the Site. Note that the figure showing ownership of downgradient lands in **APPENDIX I** has not been updated for this report; a revised version will be provided to the MECP. Since any groundwater migrating through the overburden materials east of the site would be expected to discharge to the Bonnechere River, and with the Town working toward obtaining control of downgradient groundwater rights for establishment of a CAZ, it was recommended that site compliance be assessed by evaluating impacts to surface water quality along the downgradient boundary of the CAZ (i.e., along the reach of the Bonnechere River in the area denoted as the “Area of Potential Leachate Impact” in the Town’s Official Plan). It was discussed and generally agreed upon during the meeting on-site with groundwater and surface water representatives from the MECP on July 17, 2018, that site compliance be evaluated based on surface water quality in the Bonnechere River. Surface water monitoring in the Bonnechere River was commenced in 2018 and described in **Sections 1.2 and 7.0**. As discussed in **Section 1.2.3**, the revised trigger mechanism for the site was added to the ECA in December 2024.

7.0 SURFACE WATER QUALITY

The results of all field and laboratory chemical and physical analyses conducted during the 2024 surface water monitoring program along with the relevant PWQO are provided electronically in **APPENDIX D-III** on USB.

This section discusses the chemical and physical surface water quality data at the stations sampled during the 2024 surface water monitoring program and, where appropriate, provides a discussion of the apparent trends in surface water quality over time at each station.

It has previously been reported that there is no available surface water sampling station at the Renfrew Landfill Site for the purpose of monitoring ‘background’ surface water quality in the marshy area within the south buffer lands owned by the Town (Trow, 2005). It is considered that it would be difficult to establish a surface water sampling station on the property that would truly represent natural or background surface water quality in this area. Specifically, the surface water within the marshy area is believed to originate as groundwater discharge or as precipitation contributing to runoff from the adjacent lands and as such has no ‘upstream’ reference quality. In the following discussion, reference is occasionally made to ‘normal background’ surface water quality. These ‘normal’ levels are not specific to the Renfrew Landfill Site but rather are based on WSP’s general experience on various sites with natural waters in Eastern Ontario.

Surface water sampling was undertaken in April, October, and December at three locations in the Bonnechere River in 2024. Surface water monitoring typically occurs in the spring and fall. However, in 2024, the list of expanded parameters for the Bonnechere River samples (requested by the MECP but not yet part of the monitoring program listed in ECA A410401) were missed during the regularly scheduled fall monitoring session and so the Bonnechere River monitors were re-sampled in December.

7.1 Flow System

As discussed in **Section 1.1**, previous investigations by others have indicated that there is no natural surface water outlet from the landfill site. Surface water has been interpreted to exit the site via the subsurface and/or by evaporation and evapotranspiration processes only. Stormwater runoff from the landfill areas is directed to a

natural depression or “sump” near the southeast corner of the property. Drainage from the marshy area in the south buffer lands is directed past the waste footprint via a culvert that discharges to the same sump area, adjacent to the Bruce Street embankment, for infiltration. In addition to the culvert, WSP has also observed a natural depression or drainage swale that runs along a similar alignment to the culvert, discharging to the same approximate area as the culvert outfall. Surface water flow has been observed in this swale during very wet periods, although in recent years stagnant surface water conditions have been observed in the area of this swale due to beaver activity.

Surface water sampling stations S3, S4 and S5 were previously established around the east, south and north sides of the marshy area, respectively (see **Figure 2**). Surface water station S6 was established in 2006 in the location where stormwater runoff and drainage from the marshy area are directed to a natural depression or “sump” near the southeast corner of the property for infiltration into the sandy soils adjacent to Bruce Street. Surface water sampling stations S3, S4, S5 were removed from the monitoring program following the issuance of ECA No. 410401 on July 20, 2020. In accordance with Item 8(3) of the ECA, S6 and the three locations within the Bonnechere River, S7D, S8, and S9, were sampled in 2024.

S7D is located upriver from the Site, situated immediately downstream of the dam located approximately 600 metres from S9. S7D is meant to provide background surface water quality data prior to any potential impact from the landfill. S8 is located downstream in the Bonnechere River, approximately 400 metres from S9 and just upriver from the sewage treatment plant. S9 is located immediately adjacent to where groundwater downgradient of the landfill is expected to discharge to the Bonnechere River. The location of S7D, S8 and S9 are provided on **Figure 8**.

In previous years, surface water has been observed flowing through the culvert during the fall monitoring session, near abandoned surface water sampling location, S2, discharging drainage from the on-site marshy area to the northwest (as described above). Surface water was not observed in this area during the spring monitoring session in 2024. Iron staining was observed in the spring and fall monitoring sessions. No beaver activity was noted at surface water sampling location S6 during 2024 monitoring sessions. The surficial ponding observed near the garage and north of OMM9 in the spring of 2017 and the previously observed ponding near S2 in the early summer of 2018 are not considered permanent features.

7.2 Interpretation of Surface Water Quality Data

The parameters with reported levels exceeding their respective PWQO; trend(s) in surface water quality (where appropriate); and an interpretation of the surface water quality data are summarized in **Table 5** for the surface water stations included in the 2024 surface water monitoring program.

Based on a review of the surface water quality data between 2002 and 2020, surface water sampling stations S3, S4 and S5 in the marshy area were interpreted to be impacted by landfill leachate. This interpretation was based primarily on historic surface water chloride concentrations and the surface water concentrations of several of the same parameters observed as being elevated in leachate-impacted groundwater samples at this site, in comparison to normal background levels in surface waters in similar hydrogeological settings. Based on the data collected to date at S6, the surface water quality at this location is also interpreted to be impacted by landfill leachate based on several of the same parameters observed in 2024 as being elevated in leachate-impacted groundwater samples at this site in comparison to normal background levels in surface waters in similar hydrogeological settings. Differing concentrations of some parameters at S6 compared to historic concentrations

at the monitoring locations in the marshy area have been interpreted to potentially be a result of runoff from other areas on-site and/or from Bruce Street.

Concentrations of iron (spring and fall) were outside the PWQO at surface water sampling station S6 in 2024. Phenols were not detected at S6 in 2024. Phenols have been detected above the PWQO at S6 occasionally, most recently in 2020 and 2021, but are not consistently detected at this location. Future phenol concentration exceedances of the PWQO will be monitored. Phenols have historically been detected at low concentrations in both leachate-impacted groundwater samples and background groundwater samples occasionally and, as such, phenols have not been listed as a site-specific *Leachate-Indicator Parameter*.

Surface water stations S7D, S8 and S9 in the Bonnechere River were sampled and tested for the list of parameters for monitoring station S6 as listed in Schedule 1 of ECA No. A410401. The list of parameters was voluntarily expanded following discussions with MECP surface water reviewer during the January 2024 meeting (refer to **Section 1.2.4**). There were no exceedances of the PWQO at the surface water stations in the Bonnechere River, with the exception of iron at S8 (October only) and iron at S7D (December only). Surface water monitoring results from the Bonnechere River were compared to raw water quality data for alkalinity, DOC, iron and manganese between January 2017 and December 2024 from the Town's water treatment plant located upriver from the Site, provided in **Figure 14**. All data collected from the surface water monitors in the Bonnechere River in 2024 were below or similar to the concentrations observed at the water treatment plant in 2024, with the exception of:

- DOC: at all locations in the fall (October) of 2024. The concentration of DOC at all locations in the fall was within historic ranges at the monitoring locations except for S7D which was a historic high concentration, and the range of concentrations at the water treatment plant in 2024.
- Iron: at all locations in the spring, fall (October), and December of 2024. The concentration of iron at all locations in the spring and fall was within historic ranges at the monitoring locations, and the range of concentrations at the water treatment plant in 2024.
- Manganese: all locations in the spring and fall (October and December) of 2024. The concentration of manganese at all locations in the spring and fall was within historic ranges at the monitoring locations, and the range of concentrations at the water treatment plant in 2024.

Concentrations of all parameters that have been monitored since 2018 exhibited similar trend profiles in 2024 at S8 and S9, with generally elevated concentrations in the spring and lower concentrations in the fall. The trend profile at S7D was similar to S8 and S9 in 2024 for most parameters. Occasionally S7D can be different than S8 and S9 with some parameters with concentrations lower in the spring and elevated in the fall.

While it is too early to evaluate trends in the concentrations of additional parameters analyzed in 2024, concentrations of the additional parameters in the samples from S8 and S9 monitoring locations are generally similar to concentrations at the background monitor S7D.

Concentrations at the Bonnechere River monitoring locations are generally similar to the Water Treatment Plant data for the shortened list of leachate indicator parameters, and while concentrations of some parameters have been observed to be elevated at S8 and/or S9, concentrations at S7D (background) have also been elevated compared to S8 and/or S9. Further, concentrations of most parameters that have been evaluated since 2018 typically exhibit similar trend profiles at all locations in the Bonnechere River and no one location and/or

parameter is consistently elevated above the others, it appears that the processes in the Bonnechere river which contribute to its variability in water chemistry has a more significant impact on the water quality than the Landfill. While there is limited volume of data to assess whether S8 and S9 are showing impacts from the Landfill, based on the discussion above, it does not appear that the Renfrew Landfill is having a comparatively observable impact on water quality in the Bonnechere River. It is recommended that S7D (as background), S8 and S9 continue to be monitored.

8.0 SURFACE WATER COMPLIANCE ASSESSMENT

8.1 Compliance Assessment

PWQO exceedances were noted at the surface water sampling stations included in the 2024 surface water monitoring program (see **Table 5** and **Section 7.2**).

Iron concentrations exceeded the PWQO at surface water sampling station, S6, during both the spring and fall monitoring sessions. This parameter is often naturally elevated in stagnant waters with decaying organic soils, such as the conditions in the marshy area on the Renfrew Landfill Site property. Phenols have occasionally exceeded the PWQO at surface water monitoring stations although not in 2024. Phenols are not considered a leachate indicator parameter for this site as they have historically only occasionally been detected at low concentrations in both leachate-impacted groundwater samples.

Of the Bonnechere River monitoring stations, there were no exceedances of PWQO in 2024 with the exception of iron concentrations at S7D during the fall (December) monitoring session and S8 during the fall (October) monitoring session. The concentration of iron observed at S8 was within the range of historic concentrations at upriver monitor S7D. The concentration of iron observed at S7D during the fall (December) session was 93% above the PWQO but was still within the historical concentration range at that location.

8.2 Conclusions and Discussion

As noted in **Section 7.1**, previous investigations by others have indicated that there is no natural surface water outlet from the landfill site. Storm water runoff and drainage from the marshy area are directed to a natural depression or “sump” near the southeast corner of the property for infiltration into the sandy soils adjacent to Bruce Street (sampling station S6). Since surface water exits the site via the groundwater, compliance for the site has historically been based on groundwater quality.

As discussed in **Section 6.4**, surface water compliance for the site will be evaluated based on surface water monitoring in the Bonnechere River. The groundwater downgradient of the landfill is interpreted to ultimately be discharging to the Bonnechere River, and with the Town pursuing control the groundwater use downgradient of the landfill, it is no longer relevant to assess site compliance with Guideline B-7, but instead site compliance can be assessed by evaluating impacts to surface water quality along the downgradient boundary of the CAZ (i.e., along the reach of the Bonnechere River in the area denoted as the “Area of Potential Leachate Impact” in the Town’s Official Plan, provided in **APPENDIX I**).

In 2023 the Town submitted a proposed surface water trigger mechanism in accordance with Condition 8(8) of the July 2020 revision to ECA No. A410401. The trigger mechanism was prepared by WSP and was submitted July 20, 2023. The delay in submittal of the trigger mechanism was to allow for additional data to be obtained from the new surface water monitoring locations in the Bonnechere River (established in 2018) prior to determining trigger concentrations. A revised trigger mechanism was submitted on December 2, 2024, incorporating comments from

the MECP Surface Water Reviewer (refer to **Section 1.2.3**). A copy of the revised trigger mechanism is provided in **APPENDIX A**.

The leachate indicator parameters for the Renfew Landfill are identified as alkalinity, ammonia, DOC, TKN, boron, iron, manganese and potassium. The proposed surface water compliance evaluation parameters are considered to be the leachate indicator parameters with PWQO: iron, boron, and unionized ammonia. At the request of the MECP Surface Water Reviewer in comments provided November 15, 2024, manganese will also be considered a Compliance Evaluation Parameter. The proposed compliance evaluation location is S9. The proposed trigger concentration is 75% of the PWQO if the surface water compliance evaluation parameter is a Policy 1 parameter. Alternatively, if the compliance parameter is a Policy 2 parameter, the surface water trigger concentration is the background surface water quality concentration at S7D collected during the same monitoring event. The trigger concentration for manganese will be the concentration provided by the Canadian Water Quality Guidelines (CWQG) for the protection of aquatic life for dissolved manganese.

If the exceedance of a Trigger Concentration is confirmed, a three-step process will be initiated for the purpose of determining whether implementation of the contingency plan is warranted.

The three-step process will be as follows:

Step 1: Assess whether or not the exceedance of the Trigger Concentration is likely due to the discharge of leachate-impacted groundwater into the river or whether it is partially or wholly explicable by other factors.

This can be achieved by immediately re-sampling all surface water locations in the monitoring program within 60 days of the exceedance of the Trigger Concentration if deemed necessary. If re-sampling confirms that the concentration is above the Trigger Concentration, this shall be considered one trigger exceedance.

Step 2: When three confirmed consecutive sampling sessions exceeding the Trigger Concentration occur representatives of the Town and the MECP will discuss the results of Step 1 to decide whether implementation of an additional investigation program and/or the contingency plan is warranted.

Step 3: If the conclusion of Step 3 is affirmative, then the additional investigation program and/or the contingency plan would be implemented.

Based on a review of background surface water quality at S7D the proposed compliance evaluation parameters are all presently interpreted to be Policy 1 parameters except for iron in the fall, which is interpreted to be a Policy 2 parameter. Hence the trigger concentration for iron (spring), boron, and unionized ammonia will be 75% of the PWQO. The trigger concentration for iron (fall) will be 579 mg/L, as reported during the fall monitoring session. The trigger concentration for manganese is based on the hardness concentration at the respective monitoring locations which ranged between 6.01 and 4.56 mg/L in 2024. In 2024 surface water quality data at the compliance evaluation location S9 met the trigger concentration for all parameters. Therefore, the proposed three step trigger mechanism is not required to be implemented.:

Based on the results of the 2024 surface water impact assessment, it is concluded that the site is operating in compliance with PWQO and the proposed trigger mechanism when assessed in the Bonnechere River.

9.0 LANDFILL GAS MONITORING RESULTS

9.1 Introduction

The natural biodegradation of putrescible waste in a landfill is expected to produce gas. The generated gases vary depending upon the stage of decomposition and the characteristics of the waste. The major constituents of landfill gas are methane (CH₄) and carbon dioxide (CO₂), with small amounts of compounds such as hydrogen sulphide (H₂S), mercaptans and non-methane organic compounds. The landfill gas is emitted to the atmosphere through the landfill cover or after it migrates some distance laterally through the subsurface.

The methane component of gas can pose an explosion hazard if trapped in an enclosed space at concentrations between the lower explosive limit of 5 percent methane gas by volume in air to the upper explosive limit of 15 percent methane gas by volume in air. Concentrations of methane in the vicinity of the waste area are monitored to ensure that methane is not migrating laterally, and measures can be taken to control the landfill gas.

Under Ontario Regulation 232/98 (which is not directly applicable to the Renfrew Landfill Site), specified methane concentration limits include:

- less than 1.0 percent methane gas in an on-site building, or its foundation
- less than 2.5 percent methane gas in the subsurface at the property boundary
- less than 0.05 percent methane in a building, or its foundation, which is located off-site

9.2 Landfill Gas Monitoring Program

The objectives of the 2024 landfill gas monitoring program were:

- to monitor the landfill gas being produced due to the decomposition of waste
- to determine the need for contingency implementation

This section discusses the results of the 2024 landfill gas monitoring program.

9.2.1 Indoor Gas Monitoring Program

The indoor gas readings conducted by WSP during the spring and fall monitoring session in 2024, as well as an additional voluntary gas monitoring session in September 2024, are presented in **APPENDIX E, Table E-1**.

Indoor gas monitoring was conducted monthly by Town staff in 2024 at the garage and scales. The results of the indoor monitoring are provided in **APPENDIX E**. The indoor gas monitoring completed by the Town and by WSP in the garage at all times reported methane at 0 percent gas by volume of air. The results were below the Ontario Regulation 232/98 limit of 1.0 percent methane gas in an on-site building and were below the lower explosive limit for methane of 5 percent (by volume). It should be noted that the large bay doors for the garage are typically left open during operational hours. It was noted in the 2016 MECP Site Inspection that the garage doors should remain closed during monitoring; the garage doors were closed during landfill gas sampling during all monitoring sessions in 2024.

9.2.2 Landfill Gas Monitoring

Landfill gas monitoring from gas monitoring wells was conducted by WSP during the spring and fall monitoring sessions in 2024, as well as one additional voluntary gas monitoring sessions in September 2024. The results of the landfill gas monitoring are presented in **APPENDIX E, Table E-2**.

Gas monitoring wells GW1, GW2, GW3, GW4 and GW09-1 are all completed within the waste mound and, therefore, are expected to produce methane gas. As expected, methane was recorded at each of these gas monitoring wells with less methane or an absence of methane at GW1 and GW09-1, which is consistent with past results. These wells are the furthest from the active waste disposal area. The concentration of methane at GW09-1 during the November 2022 monitoring session was higher than typical at this location and was comparable to the concentration at gas wells located closer to the waste mound. The concentrations recorded at GW09-1 returned to within historical values in 2023. The percentage of methane by volume is typically lower in the colder months. During the 2024 monitoring sessions, field technicians began with monitoring gas monitoring wells located outside of the waste footprint first.

Gas monitoring well GW07-5 was completed in sand and gravel at the northeast corner of the site. Methane was not detected at this location during the April, September, or October monitoring sessions. In previous years, concentrations of methane above 2.5% methane by volume have been recorded at GW07-5 which is located near the property boundary. These concentrations indicate that landfill gas could be migrating off-site via the subsurface in this area although below the Ontario Regulation 232/98 concentration limits in past years.

Gas monitoring well GW11-1 was installed on the southern side of the creek (i.e., beyond the waste mound) between the waste disposal area and the residentially zoned area further to the south/southwest. Gas monitoring well GW14-01, installed on October 2, 2014, as requested by the MECP to determine the potential for landfill gas migration off-site to the southeast, is located immediately southeast of the waste footprint proximal to groundwater monitoring wells OMM 5, OMM 6 and OMM 7. During the 2018 monitoring session, methane was detected at GW14-01 during the fall at a concentration of 17.9%. As a confirmatory measure, GW14-01 was subsequently monitored during March 2019 and the concentration was observed to be 0%. While the March 2019 sampling indicated that methane gas was not migrating offsite at that time, it was recommended the Town undertake additional voluntary monthly landfill gas monitoring during the summer months to confirm this interpretation. Since 2019, methane concentrations have been either 0%, or less than the 2.5% threshold at the property boundary indicated by O.Reg. 232/98 indicating that landfill gas in concentrations of concern is not likely migrating off-site via the subsurface in this area. Methane was detected at GW11-1 and GW14-01 during the April 2024 monitoring session only at concentrations of 0.3% and 0.1% by volume, less than the 2.5% threshold at the property boundary.

Historically, methane had not been detected at concentrations elevated above O.Reg. 232/98 compliance concentrations at any of the gas monitoring wells located outside of the waste footprint. However, methane concentrations have recently been detected in 2018, 2021, and 2022 above O.Reg. 232/98 compliance concentrations at locations located outside of the waste footprint. Landfill gas is not interpreted to be persistently present in the subsurface outside of the waste footprint. GW11-01, GW14-01, GW07-5 are proposed to be monitored during the regular scheduled monitoring sessions in 2025 (spring and fall). Given that methane was detected during all monitoring sessions at GW11-1 during the 2022 monitoring session and the concentration of methane observed at GW07-5 has previously exceeded O.Reg. 232/98 compliance concentrations, it is recommended that the voluntary summer monitoring session be continued in 2024.

10.0 PROPOSED 2025 MONITORING PROGRAM AND ACTION ITEMS

The proposed groundwater, surface water and landfill gas monitoring programs for 2025 are summarized in **Tables 8, 9 and 10**, respectively. The proposed groundwater, surface water and landfill gas monitoring programs are the same as the environmental monitoring program approved on December 4, 2024 and listed as Schedule 2 and 3 and Item 1b in ECA No. A410401 with the exception that surface water monitoring locations S7D, S8 and S9 will now be monitored for the more comprehensive list of parameters in lieu of just the leachate indicator parameters and bacterial analysis will be undertaken at BH11-01, OMM6, OMM7, OMM14S, OMM14M, and BH10-2B as recommended by the MECP groundwater reviewer (refer to **Section 1.2.2**). It is recommended that an additional voluntary landfill gas monitoring session be undertaken in the summer in 2025.

As discussed in **Section 5.5**, attention should continue to be paid to groundwater quality at monitors BH10-2A and BH10-2B in future monitoring sessions, with particular attention paid to iron and total phosphorus concentrations to further assess the potential for leachate impacts on groundwater quality to negatively impact surface water quality in the Bonnechere River with regards to the PWQO.

As discussed in **Section 8.0**, attention to phenols concentrations reported at surface water sampling station S6 is also recommended.

It is noted that the MECP Technical Support Section groundwater reviewer also recommended the undertaking of a study to analyze groundwater for Per and Polyfluoroalkyl Substances (PFAS) to isolate leachate impacted groundwater from those interpreted to be impacted by a separate source and to delineate the vertical extent of the leachate plume. It is understood that this recommendation is to conduct a study and that at this time sampling and analysis for PFAS in groundwater is not proposed to become a regular part of the monitoring program. As such PFAS monitoring is not included in the details in **Table 8**.

Signature Page

We trust this report meets your current needs. If you have any questions regarding this report, please contact the undersigned.

WSP Canada Inc.

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Senior Geo-environmental Engineer

ETB/ALC/kdv

[https://wsponlinecan.sharepoint.com/sites/ca-ca0047282.8803/shared documents/06. deliverables/2024 annual monitoring report/ca0047282.8803-rev0-renfrew 2024 amr_march2025_final.docx](https://wsponlinecan.sharepoint.com/sites/ca-ca0047282.8803/shared%20documents/06.%20deliverables/2024%20annual%20monitoring%20report/ca0047282.8803-rev0-renfrew%202024%20amr_march2025_final.docx)

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Tables

Monitoring Well	30-Jun-06		28-Nov-06		29-Jun-07		26-Nov-07		13-Jun-08		26-Nov-08		02-Jul-09		4-Dec-09	
	Ground-water Depth (mbTOP)	Ground-water Elev. (masl)	Ground-water Depth (mbTOP)	Ground-water Elev. (masl)	Ground-water Depth (mbTOP)	Ground-water Elev. (masl)	Ground-water Depth (mbTOP)	Ground-water Elev. (masl)	Ground-water Depth (mbTOP)	Ground-water Elev. (masl)	Ground-water Depth (mbTOP)	Ground-water Elev. (masl)	Ground-water Depth (mbTOP)	Ground-water Elev. (masl)	Ground-water Depth (mbTOP)	Ground-water Elev. (masl)
OMM1	19.89	96.052	19.8	96.142	19.89	96.05	19.72	96.22	19.49	96.45	19.59	96.35	19.50	96.44	19.44	96.51
OMM2	17.69	97.247	17.59	97.347	17.69	97.25	17.44	97.50	17.225	97.71	17.31	97.63	18.53	96.41	18.49	96.45
OMM3	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
OMM4	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
OMM5	8.78	89.247	8.31	89.717	8.65	89.38	9.12	88.91	8.51	89.52	8.81	89.22	8.34	89.69	8.39	89.64
OMM6	1.41	96.305	1.38	96.335	1.29	96.43	1.33	96.39	1.23	96.49	1.27	96.45	1.20	96.52	1.26	96.46
OMM7	1.54	96.301	1.5	96.341	1.41	96.43	1.46	96.38	1.35	96.49	1.39	96.45	1.31	96.53	1.38	96.46
OMM8	7.82	89.373	7.31	89.883	7.75	89.44	8.24	88.95	8.05	89.14	7.89	89.30	7.64	89.55	7.70	89.49
OMM9	14.85	89.075	14.44	89.485	14.8	89.13	14.88	89.05	14.63	89.30	14.80	89.13	14.38	89.55	14.40	89.53
OW10	8.78	96.368	8.68	96.468	8.52	96.63	8.63	96.52	8.42	96.73	8.52	96.63	8.40	96.75	8.34	96.81
OMM10	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
OMM11	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
OMM12	NM	NM	NM	NM	3.7	--	3.84	--	3.73	--	3.85	--	3.80	--	3.72	--
OMM13	NM	NM	NM	NM	6.88	--	7.01	--	6.83	--	6.94	--	NM	NM	NM	NM
OMM14S	8.47	88.775	8.39	88.855	8.87	88.38	9.23	88.02	9.035	88.21	8.97	88.28	8.56	88.69	8.61	88.64
OMM14M	10.48	86.743	10.395	86.828	10.5	86.72	10.66	86.56	10.51	86.71	10.53	86.69	10.40	86.82	10.37	86.85
OMM14D	10.92	86.283	10.88	86.323	10.47	86.73	10.68	86.53	10.53	86.67	10.50	86.70	10.37	86.83	10.35	86.85
OMM15	38.97	97.323	38.88	97.413	39.24	97.05	39.94	96.35	39.68	96.61	39.82	96.47	39.71	96.58	39.81	96.48
BH07-1					34.35	88.73	34.74	88.34	34.61	88.47	34.56	88.52	34.16	88.92	33.92	89.16
BH07-2					8.4	86.70	8.73	86.37	8.51	86.59	8.60	86.50	8.53	86.57	8.46	86.64
BH07-3					8.69	87.24	8.90	87.03	8.57	87.36	8.86	87.07	8.67	87.26	8.60	87.33
BH07-4					8.55	87.40	9.03	86.92	8.72	87.23	8.72	87.23	8.50	87.45	8.42	87.53
BH10-1																
BH10-2A																
BH10-2B																
BH11-1																

Notes:
NM Water level reading not monitored
-- Elevation data not available
96.00 Water level reading thought to be an error
masl metres above sea level
mbTOP metres below top of pipe

Entered by: ETB
Checked by: AH/ALC



Monitoring Well	11-Jun-10		03-Dec-10		10-Jun-11		30-Nov-11		22-Jun-12		10-Nov-12		24-Jun-13		20-Nov-13	
	Ground-water Depth (mbTOP)	Ground-water Elev. (masl)	Ground-water Depth (mbTOP)	Ground-water Elev. (masl)	Ground-water Depth (mbTOP)	Ground-water Elev. (masl)	Ground-water Depth (mbTOP)	Ground-water Elev. (masl)	Ground-water Depth (mbTOP)	Ground-water Elev. (masl)	Ground-water Depth (mbTOP)	Ground-water Elev. (masl)	Ground-water Depth (mbTOP)	Ground-water Elev. (masl)	Ground-water Depth (mbTOP)	Ground-water Elev. (masl)
OMM1	19.50	96.44	19.87	96.07	20.02	95.92	19.79	96.15	19.84	96.10	20.05	95.89	19.94	96.00	19.97	95.97
OMM2	8.54	106.40	8.63	106.31	18.73	96.21	17.54	97.40	17.63	97.31	17.86	97.08	17.77	97.17	17.80	97.14
OMM3	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
OMM4	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
OMM5	8.55	89.48	8.82	89.21	8.66	89.37	9.30	88.73	9.20	88.83	9.42	88.61	8.90	89.13	9.35	88.68
OMM6	1.32	96.40	1.22	96.50	1.33	96.39	1.39	96.33	1.50	96.22	1.43	96.29	1.34	96.38	1.51	96.21
OMM7	1.44	96.40	1.42	96.42	1.47	96.37	1.53	96.31	1.62	96.22	1.58	96.26	1.48	96.36	1.64	96.20
OMM8	7.66	89.53	7.82	89.37	7.88	89.31	8.41	88.78	8.33	88.86	8.52	88.67	8.01	89.18	8.45	88.74
OMM9	14.48	89.45	14.89	89.04	14.51	89.42	15.22	88.71	15.09	88.84	15.42	88.51	14.91	89.02	15.33	88.60
OW10	8.40	96.75	10.21	94.94	8.60	96.55	8.71	96.44	8.75	96.40	8.88	96.27	8.71	96.44	8.83	96.32
OMM10	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
OMM11	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
OMM12	3.81	--	3.98	--	3.97	--	8.43	--	NM	NM	11.44	--	NM	--	4.50	--
OMM13	NM	NM	NM	NM	NM	NM	6.67	--	NM	NM	6.84	--	NM	--	6.86	--
OMM14S	8.70	88.55	8.75	88.50	8.84	88.41	9.33	87.92	8.91	88.34	9.33	87.92	9.21	88.04	9.29	87.96
OMM14M	10.44	86.78	10.52	86.70	10.44	86.78	10.69	86.53	10.53	86.69	10.57	86.65	10.48	86.74	10.60	86.62
OMM14D	10.42	86.78	10.56	86.64	10.46	86.74	10.65	86.55	10.56	86.64	10.55	86.65	10.46	86.74	10.58	86.62
OMM15	39.97	96.33	40.01	96.28	40.06	96.23	38.81	97.48	40.50	95.79	39.13	97.16	39.01	97.28	35.66	100.63
BH07-1	34.06	89.02	35.88	87.20	34.31	88.77	NM	NM	34.40	88.68	34.43	88.65	34.39	88.69	34.40	88.68
BH07-2	8.50	86.60	8.63	86.47	8.54	86.56	8.71	86.39	8.76	86.34	8.59	86.51	8.50	86.60	8.54	86.56
BH07-3	8.64	87.29	8.71	87.23	8.78	87.15	9.05	86.88	9.05	86.88	8.66	87.27	8.59	87.34	9.05	86.88
BH07-4	8.48	87.47	8.59	87.36	8.61	87.34	8.95	87.00	8.93	87.02	8.97	86.98	8.88	87.07	8.94	87.01
BH10-1			9.16	88.96	8.77	89.35	9.46	88.66	9.36	88.76	9.43	88.69	9.06	89.06	9.52	88.60
BH10-2A			6.10	86.82	6.46	86.46	6.71	86.21	6.61	86.31	6.69	86.23	6.57	86.35	6.67	86.25
BH10-2B			6.18	86.84	6.57	86.45	6.69	86.33	6.73	86.29	6.81	86.21	6.70	86.32	6.77	86.25
BH11-1					6.39	99.11	8.84	96.66	8.89	96.61	8.96	96.54	8.88	96.62	9.00	96.50

Notes:
NM Water level reading not monitored
-- Elevation data not available
96.00 Water level reading thought to be an error
masl metres above sea level
mbTOP metres below top of pipe

Entered by: ETB
Checked by: AH/ALC



Monitoring Well	27-May-14		24-Nov-14		26-May-15		28-Nov-15		14-Jun-16		29-Nov-16		11-Jun-17		22-Nov-17	
	Ground-water Depth (mbTOP)	Ground-water Elev. (masl)	Ground-water Depth (mbTOP)	Ground-water Elev. (masl)	Ground-water Depth (mbTOP)	Ground-water Elev. (masl)	Ground-water Depth (mbTOP)	Ground-water Elev. (masl)	Ground-water Depth (mbTOP)	Ground-water Elev. (masl)	Ground-water Depth (mbTOP)	Ground-water Elev. (masl)	Ground-water Depth (mbTOP)	Ground-water Elev. (masl)	Ground-water Depth (mbTOP)	Ground-water Elev. (masl)
OMM1	19.98	95.96	19.90	96.04	20.05	95.89	20.11	95.83	19.92	96.02	19.95	95.99	18.48	97.46	19.28	96.66
OMM2	17.88	97.06	17.69	97.25	17.97	96.97	18.02	96.92	17.76	97.18	17.84	97.10	17.24	97.70	16.89	98.05
OMM3	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
OMM4	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
OMM5	8.62	89.41	9.30	88.73	9.13	88.90	9.21	88.82	9.07	88.96	9.01	89.02	7.50	90.53	8.29	89.74
OMM6	1.34	96.38	1.47	96.25	1.48	96.24	1.59	96.13	1.50	96.22	1.50	96.22	1.19	96.53	1.14	96.58
OMM7	1.48	96.36	1.61	96.24	1.62	96.22	1.70	96.14	1.67	96.17	1.61	96.23	1.32	96.52	1.60	96.24
OMM8	7.70	89.49	8.41	88.78	8.21	88.98	8.24	88.95	8.74	88.45	8.18	89.01	6.59	90.60	7.34	89.85
OMM9	14.58	89.35	15.30	88.63	15.09	88.84	15.16	88.77	8.81	95.12	14.98	88.95	13.66	90.27	14.30	89.63
OW10	8.83	96.32	8.78	96.37	8.95	96.20	9.07	96.08	8.85	96.30	8.90	96.25	8.43	96.72	8.29	96.86
OMM10	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
OMM11	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
OMM12		--	4.51	--	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
OMM13	6.56	--	6.84	--	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
OMM14S	8.67	88.58	9.25	88.00	9.17	88.08	9.22	88.03	9.27	87.98	9.10	88.15	7.99	89.26	8.39	88.86
OMM14M	10.21	87.01	10.62	86.60	10.43	86.79	10.50	86.72	10.72	86.50	10.37	86.85	9.66	87.56	10.36	86.86
OMM14D	10.18	87.02	10.59	86.61	10.42	86.78	10.55	86.65	10.69	86.51	10.39	86.81	9.68	87.52	10.39	86.81
OMM15	34.38	101.91	35.60	100.69	34.29	102.00	34.21	102.08	39.02	97.27	34.21	102.08	38.36	97.93	33.87	102.42
BH07-1	34.63	88.45	34.45	88.63	34.79	88.29	34.88	88.20	--	--	--	--	--	--	--	--
BH07-2	8.28	86.82	8.64	86.46	8.36	86.74	8.40	86.70	8.78	86.32	8.22	86.88	7.79	87.31	8.47	86.63
BH07-3	8.58	87.35	8.99	86.94	8.63	87.30	8.69	87.24	9.11	86.82	8.54	87.39	8.05	87.88	8.69	87.24
BH07-4	8.42	87.53	8.86	87.09	8.50	87.45	8.56	87.39	8.96	86.99	8.41	87.54	7.87	88.08	8.55	87.40
BH10-1	8.82	89.30	9.50	88.62	9.33	88.79	9.40	88.72	9.86	88.26	9.24	88.88	7.90	90.22	8.60	89.52
BH10-2A	6.45	86.47	6.56	86.36	6.49	86.43	6.58	86.34	6.66	86.26	6.38	86.54	5.56	87.36	6.37	86.55
BH10-2B	6.26	86.76	6.62	86.40	6.30	86.72	6.37	86.65	6.80	86.22	6.22	86.80	5.81	87.21	6.50	86.52
BH11-1	9.00	96.50	9.03	96.47	9.05	96.45	9.12	96.38	8.98	96.52	9.03	96.47	8.52	96.98	8.32	97.18

Notes:
NM Water level reading not monitored
-- Elevation data not available
96.00 Water level reading thought to be an error
masl metres above sea level
mbTOP metres below top of pipe

Entered by: ETB
Checked by: AH/ALC



Monitoring Well	28-Jun-18		26-Nov-18		18-Jun-19		29-Nov-19		04-Jun-20		30-Nov-20		08-Jun-21		25-Nov-21	
	Ground-water Depth (mbTOP)	Ground-water Elev. (masl)	Ground-water Depth (mbTOP)	Ground-water Elev. (masl)	Ground-water Depth (mbTOP)	Ground-water Elev. (masl)	Ground-water Depth (mbTOP)	Ground-water Elev. (masl)	Ground-water Depth (mbTOP)	Ground-water Elev. (masl)	Ground-water Depth (mbTOP)	Ground-water Elev. (masl)	Ground-water Depth (mbTOP)	Ground-water Elev. (masl)	Ground-water Depth (mbTOP)	Ground-water Elev. (masl)
OMM1	19.32	96.62	19.52	96.42	19.33	96.61	17.60	98.34	19.40	96.54	19.62	96.32	19.64	96.30	19.20	96.74
OMM2	16.99	97.95	17.27	97.67	16.96	97.98	17.31	97.63	17.09	97.85	16.70	98.24	17.42	97.52	16.50	98.44
OMM3	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
OMM4	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
OMM5	8.40	89.63	5.93	92.10	7.88	90.15	5.97	92.06	8.32	89.71	8.78	89.25	8.86	89.17	8.10	89.93
OMM6	1.18	96.54	1.12	96.60	1.16	96.56	1.18	96.54	1.32	96.40	1.28	96.44	1.35	96.37	1.30	96.42
OMM7	1.29	96.55	1.42	96.42	1.26	96.58	1.47	96.37	1.17	96.67	1.43	96.41	1.48	96.36	1.40	96.44
OMM8	8.56	88.63	8.03	89.16	6.72	90.47	8.10	89.09	7.40	89.79	7.86	89.33	8.00	89.19	7.54	89.65
OMM9	14.24	89.69	13.99	89.94	13.89	90.04	14.04	89.89	14.22	89.71	14.83	89.10	14.71	89.22	14.59	89.34
OW10	8.34	96.81	8.56	96.59	8.32	96.83	8.60	96.55	8.40	96.75	8.60	96.55	8.61	96.54	8.10	97.05
OMM10	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
OMM11	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
OMM12	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
OMM13	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
OMM14S	8.78	88.47	9.12	88.13	8.42	88.83	9.19	88.06	8.68	88.57	8.99	88.26	9.15	88.10	8.81	88.44
OMM14M	10.47	86.75	10.61	86.61	10.15	87.07	10.60	86.62	10.29	86.93	10.25	86.97	10.71	86.51	9.82	87.40
OMM14D	10.51	86.69	10.48	86.72	10.12	87.08	10.55	86.65	10.30	86.90	10.22	86.98	10.68	86.52	9.81	87.39
OMM15	33.81	102.48	38.49	97.80	38.59	97.70	38.55	97.74	38.30	97.99	38.60	97.69	38.69	97.60	37.99	98.30
BH07-1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
BH07-2	8.60	86.50	8.68	86.42	8.28	86.82	8.71	86.39	8.40	86.70	8.26	86.84	8.78	86.32	7.97	87.13
BH07-3	8.80	87.13	5.90	90.03	8.48	87.45	6.00	89.93	8.63	87.30	8.69	87.24	9.01	86.92	8.26	87.67
BH07-4	8.64	87.31	5.76	90.19	8.31	87.64	5.81	90.14	8.49	87.46	8.60	87.35	8.85	87.10	8.20	87.75
BH10-1	8.56	89.56	9.13	88.99	8.15	89.97	9.17	88.95	8.51	89.61	9.04	89.08	9.00	89.12	8.74	89.38
BH10-2A	6.51	86.41	6.69	86.23	6.55	86.37	6.74	86.18	6.89	86.03	6.21	86.71	6.78	86.14	5.79	87.13
BH10-2B	6.33	86.69	6.54	86.48	6.28	86.74	6.64	86.38	6.54	86.48	6.25	86.77	6.39	86.63	5.77	87.25
BH11-1	8.37	97.13	8.61	96.89	8.49	97.01	8.63	96.87	8.69	96.81	8.77	96.73	8.71	96.79	8.26	97.24

Notes:
NM Water level reading not monitored
-- Elevation data not available
96.00 Water level reading thought to be an error
masl metres above sea level
mbTOP metres below top of pipe

Entered by: ETB
Checked by: AH/ALC



Monitoring Well	20-Jun-22		23-Nov-22		10-May-23		29-Nov-23		25-Apr-24		22-Oct-24	
	Ground-water Depth (mbTOP)	Ground-water Elev. (masl)	Ground-water Depth (mbTOP)	Ground-water Elev. (masl)	Ground-water Depth (mbTOP)	Ground-water Elev. (masl)	Ground-water Depth (mbTOP)	Ground-water Elev. (masl)	Ground-water Depth (mbTOP)	Ground-water Elev. (masl)	Ground-water Depth (mbTOP)	Ground-water Elev. (masl)
OMM1	19.58	96.36	19.87	96.07	19.64	96.30	19.64	96.30	19.84	96.10	19.91	96.03
OMM2	16.72	98.22	17.70	97.24	18.47	96.47	17.69	97.25	17.85	97.09	17.82	97.12
OMM3	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
OMM4	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
OMM5	8.74	89.29	9.11	88.92	7.62	90.41	9.03	89.00	8.75	89.28	9.38	88.65
OMM6	1.31	96.41	1.45	96.27	1.72	96.00	1.37	96.35	1.45	96.27	1.63	96.09
OMM7	1.47	96.38	1.82	96.02	1.35	96.49	1.50	96.34	1.59	96.25	1.76	96.08
OMM8	7.90	89.29	8.24	88.95	8.14	89.05	8.19	89.00	7.83	89.36	8.48	88.71
OMM9	14.71	89.22	10.09	93.84	13.83	90.10	14.98	88.95	14.86	89.07	15.21	88.72
OW10	8.54	96.61	8.91	96.24	8.54	96.61	8.64	96.51	8.81	96.34	8.95	96.20
OMM10	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
OMM11	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
OMM12	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
OMM13	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
OMM14S	8.78	88.47	9.27	87.98	8.80	88.45	9.83	87.42	13.81	83.44	9.32	87.93
OMM14M	10.19	87.03	10.62	86.60	9.63	87.59	10.63	86.59	10.29	86.93	10.61	86.61
OMM14D	10.18	87.02	10.58	86.62	9.59	87.61	10.60	86.60	10.26	86.94	10.59	86.61
OMM15	38.49	97.80	38.93	97.36	38.84	97.45	38.64	97.65	38.89	97.40	39.04	97.25
BH07-1	--	--	--	--	--	--	--	--	--	--	--	--
BH07-2	6.38	88.72	8.87	86.23	7.76	87.34	8.70	86.40	8.31	86.79	8.64	86.46
BH07-3	8.75	87.18	9.00	86.93	7.94	87.99	8.97	86.96	8.54	87.39	8.99	86.94
BH07-4	8.50	87.45	8.87	87.08	7.74	88.21	8.84	87.11	8.67	87.28	8.88	87.07
BH10-1	9.08	89.04	9.34	88.78	8.02	90.10	9.18	88.94	9.06	89.06	6.42	91.70
BH10-2A	6.24	86.68	6.61	86.31	5.47	87.45	6.62	86.30	6.22	86.70	6.55	86.37
BH10-2B	6.38	86.64	6.66	86.36	4.64	88.38	6.72	86.30	6.29	86.73	6.62	86.40
BH11-1	8.81	96.69	8.94	96.56	8.67	96.83	8.63	96.87	8.96	96.54	9.04	96.46

Notes:

NM Water level reading not monitored

-- Elevation data not available

96.00 Water level reading thought to be an error

masl metres above sea level

mbTOP metres below top of pipe

*Water level reading at OMM15 in fall of 2024 measured on November 20, 2024

Entered by: ETB
Checked by: AH/ALC

Table 2: Groundwater Monitors

Groundwater Monitor (depth, m)	Coordinates (X, Y utm)	Physical Location	Hydrogeological Location	Top of Pipe Elevation ⁽¹⁾	Screened Unit	Fall 2024 Condition
OMM 1 (17.93)	367548, 5038399	Within the north-western portion of the waste footprint.	Within/ Crossgradient	115.94	Sand	Good
OMM 2 (25.05)	367326, 5038447	Immediately adjacent to the west limits of the waste footprint.	Upgradient/ Adjacent	114.94	Sand	Good
OMM 5 (29.10)	367736, 5038092	Approximately 50 metres east of the east limits of the waste footprint.	Downgradient	98.03	Sand	Good
OMM 6 (4.45)	367735, 5038092	Approximately 50 metres east of the east limits of the waste footprint.	Downgradient	97.72	Sand	Good
OMM 7 (14.94)	367733, 5038091	Approximately 50 metres east of the east limits of the waste footprint.	Downgradient	97.84	Sand	Good
OMM 8 (16.91)	367716, 5038043	Approximately 70 metres southeast of the east limits of the waste footprint.	Downgradient	97.19	Sand	Good
OMM 9 (17.91)	367788, 5038172	Approximately 70 metres northeast of the east limits of the waste footprint.	Downgradient	103.93	Sand	Good
OW 10 (10.36)	367675, 5038300	Immediately adjacent to the north limits of the waste footprint near the entrance facilities (scale, etc.).	Crossgradient/ Adjacent	105.15	Sand	Good
OMM 14S (13)*	367851, 5037990	Approximately 200 metres east of the east limits of the waste footprint.	Downgradient	97.25	Sand	Good
OMM 14M (26)*	367851, 5037990	Approximately 200 metres east of the east limits of the waste footprint.	Downgradient	97.22	Sand	Good
OMM 14D (32)*	367851, 5037990	Approximately 200 metres east of the east limits of the waste footprint.	Downgradient	97.20	Sand	Good
OMM 15 (54.86)	367289, 5038565	Approximately 100 metres northwest of the waste footprint.	Downgradient	136.29	Sand	Needs new 2" cap
BH07-1 (38.10)	367913, 5038277	Northeast of the landfill and east of Bruce Street.	Crossgradient	123.08 ⁽²⁾	Sand	Damaged and unable to sample since 2010
BH07-2 (12.19)	367921, 5037975	East of the landfill and east of Bruce Street, approximately 260 metres east of the east limits of the waste footprint.	Downgradient	95.10 ⁽²⁾	Sand	Good

Groundwater Monitor (depth, m)	Coordinates (X, Y utm)	Physical Location	Hydrogeological Location	Top of Pipe Elevation ⁽¹⁾	Screened Unit	Fall 2024 Condition
BH07-3 (26.21)	367892, 5037927	East of the landfill and east of Bruce Street, approximately 270 metres east of the east limits of the waste footprint.	Downgradient	95.93 ⁽²⁾	Sand	Good
BH07-4 (10.97)	367892, 5037931	East of the landfill and east of Bruce Street, approximately 270 metres east of the east limits of the waste footprint.	Downgradient	95.95 ⁽²⁾	Sand	Good
BH10-1 (40.54)	367735, 5038095	Approximately 40 metres east of the east limits of the waste footprint.	Downgradient	98.12 ⁽³⁾	Sand	Good
BH10-2A (38.38)	368003, 5037932	East of the landfill and east of Bruce Street, approximately 340 metres east of the east limits of the waste footprint.	Downgradient	92.92 ⁽³⁾	Sand	Good
BH10-2B (20.12)	368001, 5037932	East of the landfill and east of Bruce Street, approximately 340 metres east of the east limits of the waste footprint.	Downgradient	93.02 ⁽³⁾	Sand	Good
BH11-1 (10.67)	367548, 5038256	Within the central portion of the waste footprint, immediately southeast of the active waste disposal area.	Within	105.503 ⁽⁴⁾	Sand	Good

Notes:

* Depths for wells at OMM 14 approximated from borehole log.

(1) From survey in 2006 by JL Richards unless otherwise stated.

(2) From survey in 2007 by JL Richards.

(3) From survey in 2010 by Basemapping.

(4) From survey in 2013 by Golder Associates Ltd.

Prepared by: ETB

Checked by: AH

Table 3: Surface Water Monitoring Stations

Surface Water Monitoring Station	Coordinates (X, Y UTM)	Location	Characteristics
S6	399468, 4909770	Sump area	Permanent
S7D	367764, 5037448	Downstream of dam	Bonnechere River
S8	368343, 5037988	Upstream from sewage outlet	Bonnechere River
S9	368020, 5037877	Adjacent to potential discharge site	Bonnechere River

Prepared by: ETB
Checked by: ALC

Table 4: Interpretation of 2024 Groundwater Quality Data

Monitoring Well (Depth (m))	Parameters Exceeding ODWQS in 2024***	Trend(s)	Parameters Exceeding Background Conditions* in 2024	Hydrogeological Interpretation
OMM 5 (29.10)	Iron, Manganese, TDS (fall only)	- Overall increasing trend in chloride. Historical high concentration of chloride in spring 2023 returned to within historical concentrations in 2024. - Concentrations of sodium remain slightly elevated (as noted in 2023) but within historic concentrations. - Historically variable total phosphorus concentrations have generally stabilized. - Increasing trend in sulphate concentrations since 2017. Concentrations of sulphate in 2024 returned to within historical concentrations after historical high concentration of sulphate in spring 2022 and elevated concentrations in 2023 returned to within historical concentrations in 2024. - Historical low concentration of boron in spring 2023 returned to within historical concentrations in 2024. - Concentrations of hardness, calcium, and magnesium becoming slightly more stable since 2019. Concentrations were slightly elevated in the fall of 2024 compared to historic concentrations at this location. - Concentration of arsenic in fall 2024 equal to historic high detectable concentration. - Detectable concentration of lead in spring 2024 (non-detect in fall).	Alkalinity, Ammonia, Arsenic (fall only), Barium, Boron, Chloride, Hardness (fall only), Iron, Manganese, Sodium, TDS	- Monitoring well OMM 5 is located hydrogeologically downgradient of the landfill, approximately 50 metres east of the east limits of the waste footprint. - Groundwater quality at this deep well is generally similar to the intermediate well at this location, OMM 7. Historically, higher concentrations of barium and lower concentrations of alkalinity, ammonia, DOC, TKN, iron, hardness (calcium and magnesium), manganese and potassium have been observed at OMM 5. During the 2024 monitoring session, chloride, barium, sodium, and sulphate concentrations were similar or higher at OMM 5 than at OMM 7. - Groundwater quality at OMM 5 is interpreted to be impacted by landfill leachate.
OMM 6 (4.45)	DOC, Iron, Manganese, TDS	- Variable COD, iron and manganese concentrations over time. - Previously reported increasing trend in calcium concentrations since 2004, appears to be stabilizing within historical concentration range. - Increasing trend in potassium concentrations since 2017 with historical high concentration in spring 2024.	Alkalinity, Ammonia, Arsenic (fall only), Barium, Boron, Calcium, Chloride, DOC, Hardness, Iron, Manganese, Sodium, TDS, TKN (fall only)	- Monitoring well OMM 6 is located hydrogeologically downgradient of the landfill, approximately 50 metres east of the east limits of the waste footprint. - Groundwater quality at this shallow well has historically been characterized by generally lower ammonia, iron, hardness (calcium and magnesium) (since 2012), manganese, TKN and potassium concentrations than the deeper wells at this location, OMM 5 and

Monitoring Well (Depth (m))	Parameters Exceeding ODWQS in 2024***	Trend(s)	Parameters Exceeding Background Conditions* in 2024	Hydrogeological Interpretation
		■ Slight increasing trend in nitrate concentrations since 2019 with historical high concentration of nitrate in spring 2022. Concentrations in the spring have been generally increasing while concentrations in the fall have remained non-detect, except for fall 2022 and 2023. Concentrations in 2024 were within historical ranges. ■ Historical high concentration of DOC in fall 2023 returned to within historical ranges in 2024. ■ Historical high concentration of ammonia in fall 2024. ■ Historical high field conductivity measured in spring 2024. ■ Concentration of arsenic in fall 2024 equal to historic high detectable concentration. ■ Elevated concentrations of TKN in spring and fall 2024 compared to historic concentrations at this location. ■ Detectable concentration of lead in spring 2024 (non-detect in fall).		OMM 7. In recent years, this well has been characterized by higher sodium and higher hardness (calcium and magnesium) compared to the deeper wells OMM5 and OMM7. In 2024, alkalinity, COD, chloride, DOC, hardness (calcium and magnesium), nitrate (spring only), sulphate (spring only), TDS, TKN, boron, cadmium (fall only), copper (spring only), iron (fall only), manganese, potassium, and sodium concentrations at OMM 6 were elevated either above or close to concentrations at OMM5. ■ Groundwater quality at OMM 6 is interpreted to be impacted by landfill leachate. ■ Variability in groundwater quality may be a result of shallow perched aquifer conditions and response to precipitation.
OMM 7 (14.94)	DOC (spring only), Iron, TDS, Manganese	■ Variable COD concentrations over time. ■ Previously reported slight increases or increases in most parameters since 2010 had reduced concentrations in late 2017. Concentrations of these parameters appear to be stabilizing or decreasing ■ Concentration of sulphate elevated between 2017 and 2022, has decreased since 2022. ■ Elevated concentration of total phosphorus in fall 2023, returned to typical historical ranges in 2024. ■ Low pH measured in the field in spring 2023 and fall 2024. Concentrations of hardness (calcium and magnesium) elevated in spring and/or fall 2024 compared to recent concentrations at this location.	Alkalinity, Ammonia, Barium, Boron, Calcium (fall only), Chloride, DOC, Hardness, Iron, Magnesium, Manganese, Potassium (fall only), Sodium, TKN, TDS	■ Monitoring well OMM 7 is located hydrogeologically downgradient of the landfill, approximately 50 metres east of the east limits of the waste footprint. ■ Groundwater quality at this intermediate well is similar to the deep well at this location, OMM 5. Historically, concentrations of barium are lower and concentrations of alkalinity, ammonia, DOC, TKN, iron, hardness (calcium and magnesium), manganese and potassium are higher at OMM 7. During the 2024 monitoring session, chloride, barium, sulphate, and sodium concentrations are similar or lower at OMM 7 than at OMM 5. ■ Groundwater quality at OMM 7 is interpreted to be impacted by landfill leachate.

Monitoring Well (Depth (m))	Parameters Exceeding ODWQS in 2024***	Trend(s)	Parameters Exceeding Background Conditions* in 2024	Hydrogeological Interpretation
		■ Detectable concentration of lead in spring 2024 (non-detect in fall).		■ Perched aquifer conditions are interpreted at this location as indicated by groundwater elevations.
OMM 8 (16.91)	Temperature (fall only)	■ Variable concentrations of COD, chloride and sodium with historical high concentration of chloride in spring 2024. Historical high concentration of sodium in spring 2023 returned to within historical ranges in 2024. ■ Overall slight decreasing trend in concentrations of manganese appear to be stabilizing. ■ Slight decreasing trend in potassium since 2019 appears to be stabilizing. ■ Detectable concentration of lead in spring 2024 (non-detect in fall).	Barium (spring only), Chloride, Sodium	■ Monitoring well OMM 8 is located hydrogeologically downgradient of the landfill, approximately 70 metres southeast of the east limits of the waste footprint. ■ Groundwater quality at OMM 8 is interpreted to be impacted by landfill leachate.
OMM 9 (17.91)	TDS, Temperature (fall only)	■ Previously reported increasing concentrations of chloride, TDS, sodium, hardness (calcium and magnesium), potassium and barium appear to be stabilizing despite some historical high concentrations and elevated parameters in 2023 (including chloride, conductivity, magnesium, and sodium) which returned to within historical concentration ranges in 2024, with a historical low field conductivity measured in spring 2024. Previously reported elevated parameters calcium, TDS, and potassium were no longer elevated in 2024. ■ Historically variable concentrations of COD. ■ Decreasing trend in boron concentrations since 2009. ■ Historical high concentration of nitrate in spring 2023 returned to within historical ranges in 2024. Nitrate concentrations appear to be increasing. ■ Low pH measured in the field in spring 2023 returned to within historical ranges in 2024.	Alkalinity, Barium, Boron, Calcium, Chloride, Hardness, Magnesium, Nitrate, Sodium, TDS	■ Monitoring well OMM 9 is located hydrogeologically downgradient of the landfill, approximately 70 metres northeast of the east limits of the waste footprint. ■ Groundwater quality at OMM 9 is interpreted to be impacted by landfill leachate. Based on elevated concentrations of chloride and sodium compared to concentrations at the leachate monitoring well BH11-01, it is interpreted that OMM 9 may also be impacted by other sources.

Monitoring Well (Depth (m))	Parameters Exceeding ODWQS in 2024***	Trend(s)	Parameters Exceeding Background Conditions* in 2024	Hydrogeological Interpretation
		■ Historical high concentration of strontium in spring 2023 returned to within historical ranges in 2024 with a historical low concentration in fall 2024. ■ Detectable concentration of selenium in fall 2024 following a period of non-detect concentrations from 2016 to spring 2024. ■ Detectable concentration of lead in spring 2024 (non-detect in fall). ■ Detectable concentration of arsenic in fall 2024.		
OMM 14S (13)**	Manganese (spring only)	■ Historically variable chloride, COD and iron concentrations. Chloride concentrations are greater than the concentrations observed in leachate well BH11-01. ■ Previously reported decreasing trend in boron concentrations since 2008 has been increasing since 2019 but remains within historic concentrations. ■ Previously noted decreasing trend in alkalinity and TDS concentrations since 2008 have been stabilizing to pre-2008 concentrations since 2014. Previously reported recent slight increasing trend in concentrations of TDS appears to be stabilizing. Low pH measured in the field in spring 2023, remained low in spring and fall 2024. ■ Non-detect concentration of ammonia in fall 2024. Previously non-detect concentration was reported in 2005. ■ Elevated concentration of barium and sodium in fall 2024 compared to recent concentrations but still within historical ranges. ■ Slight decreasing trend in manganese since 2020. ■ Detectable concentration of lead in spring 2024 (non-detect in fall).	Barium, Boron, Chloride, Sodium, TDS	■ Monitoring well OMM 14S is located hydrogeologically downgradient of the landfill, approximately 200 metres east of the east limits of the waste footprint. ■ Groundwater quality in the shallow, intermediate/middle, and deep wells at this location is generally very similar with the exception of slightly higher chloride in the shallow and/or middle wells than the deep well and slightly higher ammonia, boron, manganese and iron in the deep well than the shallow and middle wells. ■ Groundwater quality at OMM 14S is interpreted to be potentially impacted by landfill leachate based on elevated concentrations of several of the same parameters observed as being elevated at BH11-01 in comparison to background. It is considered that sources other than the landfill may be contributing to observed impacts at this location.

Monitoring Well (Depth (m))	Parameters Exceeding ODWQS in 2024***	Trend(s)	Parameters Exceeding Background Conditions* in 2024	Hydrogeological Interpretation
OMM 14M (26)**	Iron (spring only), Manganese	■ General increasing trend in concentrations of chloride and sodium potentially showing signs of stabilizing. Chloride concentrations are greater than the concentrations observed in leachate well BH11-01. ■ Variable COD and TKN concentrations over time. ■ General decreasing trend in boron concentrations since 2008 appears to be increasing, but concentrations are within historic ranges. ■ Previously reported increasing trend in concentrations of alkalinity since 2014 appears to be stabilizing. ■ Previously reported increasing trend concentrations of barium since 2008 appears to be stabilizing. ■ Previously reported increasing concentrations of sulphate appear to be stabilizing. ■ Concentration of copper have been frequently but not persistently above the detection limit since 2019, including during both monitoring sessions in 2024 (within historical concentrations). ■ Historical high field measured conductivity in fall of 2022 and 2023 returned to within historical levels but was still elevated compared to historical data. ■ Historical low pH in spring 2023 followed by another historical low pH in spring 2024. pH increased slightly in fall 2024 but remained low compared to historical pH levels. ■ Detectable concentration of lead in spring 2024 (non-detect in fall).	Ammonia, Barium, Boron, Chloride, Iron (spring only), Sodium, TDS	■ Monitoring well OMM 14M is located hydrogeologically downgradient of the landfill, approximately 200 metres east of the east limits of the waste footprint. ■ Groundwater quality in the shallow, intermediate/middle, and deep wells at this location is generally very similar with the exception of slightly higher chloride in the shallow and/or middle wells than the deep well and slightly higher ammonia, boron, manganese and iron in the deep well than the shallow and middle wells. ■ Groundwater quality at OMM 14M is interpreted to be potentially impacted by landfill leachate based on elevated concentrations of several of the same parameters observed as being elevated at BH11-01 in comparison to background. It is considered that sources other than the landfill may be contributing to observed impacts at this location.
OMM 14D (32)**	Iron, Manganese	■ Variable COD concentrations. ■ General decreasing trend in concentrations of hardness (calcium and magnesium) are stabilizing.	Ammonia, Barium, Boron, Chloride, Iron, Manganese, Sodium, TDS	■ Monitoring well OMM 14D is located hydrogeologically downgradient of the landfill, approximately 200 metres east of the east limits of the waste footprint.

Monitoring Well (Depth (m))	Parameters Exceeding ODWQS in 2024***	Trend(s)	Parameters Exceeding Background Conditions* in 2024	Hydrogeological Interpretation
		■ Previously noted decreasing trend in concentrations of boron appear to be increasing or stabilizing. ■ Previously noted decreasing trend in alkalinity and TDS concentrations since 2008 generally stabilizing since 2014. ■ General increasing trend in chloride over time. Previously reported lower concentrations in 2021 have increased to reach a new historical high in fall 2023 and again in fall 2024. Chloride concentrations are greater than the concentrations observed in leachate well BH1101. General slight decreasing trend in barium concentrations. Concentration in the fall of 2024 slightly elevated but within range of historic concentrations. ■ General increasing trend in field conductivity concentrations, with 2023 and 2024 concentrations approaching historical high reported in 2011. ■ Low pH measured in the field in spring 2023 and in the spring and fall in 2024. ■ Lowest concentration of iron reported in fall 2024 since 2005. ■ Elevated manganese concentration reported in fall 2024. ■ Detectable concentration of lead in spring 2024 (non-detect in fall). ■ Detectable concentration of cadmium in fall 2024. ■ Elevated concentration of sodium in fall 2024.		■ Groundwater quality in the shallow, intermediate/middle, and deep wells at this location is generally very similar with the exception of slightly higher chloride in the shallow and/or middle wells than the deep well and slightly higher ammonia, boron, manganese and iron in the deep well than the shallow and middle wells. ■ While groundwater quality at OMM 14D could be interpreted to be potentially impacted by landfill leachate based on elevated concentrations of several of the same parameters observed as being elevated at BH11-01 in comparison to background, the screened interval of the monitoring well is located deeper than the potential leachate plumes identified by the geophysical analysis conducted in 2014 (Golder, 2015). It is considered that sources other than the landfill may be contributing to observed impacts at this location.
OMM 15 (54.86) (Background)*	None	■ Groundwater quality consistent over time. ■ Chloride concentrations have been reported at consistently low levels (2.9 to 5.2 mg/L) since monitoring began at this well. ■ Variable COD concentrations over time.	N/A	■ Monitoring well OMM 15 is located hydrogeologically upgradient of the landfill, approximately 100 metres northwest of the waste footprint. ■ Groundwater quality at OMM 15 is interpreted to be representative of

Monitoring Well (Depth (m))	Parameters Exceeding ODWQS in 2024***	Trend(s)	Parameters Exceeding Background Conditions* in 2024	Hydrogeological Interpretation
		■ Slight decreasing trend in calcium since 2017. ■ Elevated field conductivity in fall 2023 returned to within typical ranges in 2024. ■ Historical low concentrations of barium and TDS in fall 2023 returned to within typical concentrations in 2024.		background overburden groundwater quality in this area.
BH10-1 (40.54)	Iron, Manganese	■ Variable concentrations of chloride. Historical high for chloride concentrations in spring 2023 returned to within historical ranges in 2024. ■ Slight increasing trend in alkalinity and ammonia concentrations since 2016 are stabilizing. ■ Seasonally variable sodium concentrations (i.e., lower in spring). Concentrations of sodium were elevated in 2023 but decreased in 2024, noting that typical seasonal variability was not observed in 2024. ■ Previously reported decreasing concentrations of sulphate appear to be stabilizing with elevated concentration of sulphate reported in fall 2024. ■ TDS concentrations generally stable over time (previously reported to be decreasing). ■ Several parameters including barium, boron, calcium, hardness, iron, magnesium, manganese, TKN and potassium decreased from 2014 to 2017 and have generally stabilized since 2017 ■ Historical high concentration of COD and molybdenum in fall 2023 returned to within historical concentration ranges in 2024. ■ Historical high concentrations of copper in spring 2023 returned to within historical ranges (non-detect) in fall 2024. Detectable concentration of lead in spring 2024 (non-detect in fall).	Alkalinity, Ammonia, Barium, Boron, Chloride, Iron, Manganese, Sodium, TKN (fall only), TDS	■ Monitoring well BH10-1 is located hydrogeologically downgradient of the landfill, approximately 40 metres east of the east limits of the waste footprint. ■ Groundwater quality at BH10-1 is interpreted to be impacted by landfill leachate.

Monitoring Well (Depth (m))	Parameters Exceeding ODWQS in 2024***	Trend(s)	Parameters Exceeding Background Conditions* in 2024	Hydrogeological Interpretation
		■ Historical high pH measured in the field in fall 2024.		
BH10-2A (38.38)	TDS, Barium (fall only), Iron, Manganese	■ Variable hardness, calcium, iron, manganese, sulphate and COD concentrations over time. Historical high concentration of manganese in fall 2023, spring of 2024 and fall 2024. Historical high concentration of calcium and hardness in fall 2024 (magnesium was also slightly elevated in fall 2024). ■ Slight increasing trend in potassium concentrations. ■ Slight increasing trend in the concentration of ammonia, with historical high concentration in fall of 2023 and fall 2024. ■ Previous slight decreasing trend in sodium concentrations appears to have stabilized. ■ Historical high concentration of TKN in spring 2022. TKN decreased to within historic ranges since but remains slightly elevated compared to previous years. ■ Historical high concentration of alkalinity in fall 2025. ■ Recent historic high concentration of barium and TDS in fall of 2024. ■ Low field measured pH in spring and fall 2024. ■ Detectable concentration of arsenic in fall 2024. ■ Detectable concentration of lead in spring 2024 (non-detect in fall).	Alkalinity, Ammonia, Barium, Boron, Chloride,, Hardness, Iron, Magnesium, Manganese, Sodium, TDS	■ Monitoring well BH10-2A is located east of the landfill and east of Bruce Street, hydrogeologically downgradient of the landfill, approximately 340 metres east of the east limits of the waste footprint. ■ While groundwater quality at BH10-2A could be interpreted to potentially be impacted by landfill leachate based on elevated concentrations of several of the same parameters observed as being elevated at BH11-01 in comparison to background, the screened interval of the monitoring well is located deeper than the potential leachate plumes identified by the geophysical analysis conducted in 2014 (Golder, 2015). It is considered that sources other than the landfill may be contributing to observed impacts at this location.
BH10-2B (20.12)	Iron, Manganese, TDS	■ Generally decreasing concentration of ammonia appears to be increasing slightly since 2019, with a historical high concentration of ammonia in spring 2023. Ammonia concentrations returned to within historical ranges in fall 2023 and 2024. ■ Generally increasing concentrations of chloride with historical high concentration of	Ammonia, Barium, Boron, Chloride, Hardness, Iron, Magnesium, Sodium, Sulphate (fall only), TDS	■ Monitoring well BH10-2B is located east of the landfill and east of Bruce Street, hydrogeologically downgradient of the landfill, approximately 340 metres east of the east limits of the waste footprint. ■ Groundwater quality at BH10-2B is interpreted to potentially be impacted by landfill leachate based on elevated

Monitoring Well (Depth (m))	Parameters Exceeding ODWQS in 2024***	Trend(s)	Parameters Exceeding Background Conditions* in 2024	Hydrogeological Interpretation
		chloride in spring 2022 continuing to increase to historical highs in spring and fall 2024. Chloride concentrations at this monitor are generally higher than at other monitoring locations, including the leachate well, BH11-01. ■ Slight increasing trend in field measured conductivity. Historical high conductivity was measured in the field in fall 2023. Field conductivity remained elevated in 2024. ■ Slight increasing trend in concentrations of sodium with historical high concentration of sodium reported in fall 2024. ■ Previously reported increasing trends of barium, TDS, manganese and sulphate appear to be stabilizing. ■ Historical low concentration of boron in fall 2021 increased slightly in 2022 and 2023 but remained low compared to historical ranges. Boron concentrations returned to typical historical concentrations in 2024. ■ Historical high detectable concentration of lead in fall 2021 and fall 2022. Lead returned to non-detect concentrations in 2023. New historical high lead concentration reported in spring 2024, but returned to non-detectable concentration in fall 2024. ■ Low pH measured in the field in spring 2023 returned to typical levels in 2024. ■ Concentrations of hardness (calcium and magnesium) slightly elevated in fall 2024.		concentrations of several of the same parameters observed as being elevated at BH11-01 in comparison to background. It is considered that sources other than the landfill may be contributing to observed impacts at this location.

Monitoring Well (Depth (m))	Parameters Exceeding ODWQS in 2024***	Trend(s)	Parameters Exceeding Background Conditions* in 2024	Hydrogeological Interpretation
BH11-01 (10.97)	Barium, Iron, Manganese, TDS (fall only)	■ Groundwater quality generally consistent to slightly decreasing in parameter concentrations over time. ■ Slight increasing trend in concentrations of sulphate and manganese. Sulphate concentrations appear to be stabilizing. Recent historic high concentration of manganese in fall 2024. ■ General decreasing trend in concentrations of barium and TKN appear to be stabilizing. ■ Historical low concentration of chloride in spring 2023 and spring 2024. ■ Historical low concentration of hardness (calcium and magnesium), barium, potassium and TDS in fall 2023. Potassium and calcium remained low in spring 2024. Hardness, magnesium, barium, and TDS returned to within historical concentrations in 2024. ■ Historically high concentration of nitrite in spring 2023. Nitrite concentrations decreased to within historical concentrations in 2024. Concentration of nitrate in the spring of 2023 was equal to the previously reported historical high concentration of nitrate in spring 2021; concentration of nitrate was non-detect in fall 2023 and spring 2024, and at the historic high concentration in fall 2024. ■ Low pH measured in the field in spring 2023 returned to typical field measured pH levels in 2024. ■ Detectable concentration of lead in spring 2024 (non-detect in fall).	Alkalinity, Ammonia, Arsenic, Barium, Boron, Calcium (fall only), COD (fall only), Chloride, DOC (fall only), Hardness, Iron, Magnesium, Manganese, Nitrite (spring only), Phosphorus (spring only), Potassium (fall only), Sodium, Sulphate (spring only), TDS, TKN	■ Monitoring well BH11-01 is located within the central portion of the waste footprint, immediately southeast of the active waste disposal area. ■ Groundwater quality at BH11-01 is interpreted to be impacted by landfill leachate.

Notes:

ODWQS - Ontario Drinking Water Quality Standards, Objectives and Guidelines (Ministry of the Environment, 2003).

* Background conditions are represented by maximum parameter concentrations from current and historical water quality at OMM 15.

** Depths for wells approximated from borehole log.

*** Health Related or Aesthetic Objectives only.

Prepared by: ETB/AH

Checked by: ETB/ALC

Table 5: Interpretation of 2024 Surface Water Quality Data

Surface Water Sampling Station (Description)	Parameters Exceeding or Outside PWQO in 2024	Trend(s)	Interpretation
S6 (sump area)	DO (fall only), Phosphorus (fall only), Iron, Silver (fall only)	- Variable concentrations of alkalinity, ammonia, DO, iron, manganese, sodium, TDS and TSS over time. - Seasonally variable concentrations of boron, however concentrations were below detection limits during both sampling sessions in 2024. - Surface water quality was historically characterized by generally lower concentrations of chloride, DOC, magnesium and sodium and occasionally higher concentrations of iron at S6 compared to historic concentrations at S4 and S5. Recent chloride, magnesium, and sodium concentrations at S6 are comparable to historic concentrations observed at S4 and S5. - In 2024 higher concentrations of alkalinity, COD, chloride, conductivity, hardness, TKN, phosphorous (fall only), sulphate, TDS, TSS, barium, calcium, copper (spring only), iron (spring only), lead, magnesium, manganese, potassium, and sodium were observed at S6 compared to concentrations at the Bonnechere River surface water monitoring locations. - Historical high concentration of nitrate in fall 2023 returned to within historic ranges in 2024. - Historical high concentration of TSS in fall 2023 and spring 2024. - Previously reported elevated concentration (near historical high) of chloride in spring 2022 decreased in 2023 followed by a new historical high concentration in spring 2024. - Historical high concentration of lead in spring 2022 and fall 2024. - Historical low concentrations of phosphorous in spring 2021 and fall 2023 were followed by a historical high concentration in fall 2024. - Historical low concentration of TKN reported in fall 2020 and fall 2021 returned to within historic ranges in 2022. A general decreasing trends appears to be forming. However, a historical high concentration was reported in fall 2024. - Historical high concentration of lead in fall 2024. - Historical high concentration of chloride, hardness (magnesium), sodium, and magnesium in spring 2024. Historic low pH in fall 2024 (within PWQO). - Elevated sodium concentrations in spring 2024 and BOD in fall 2024 (within historic concentrations).	Surface water quality at S6 is interpreted to be impacted by landfill leachate.

Surface Water Sampling Station (Description)	Parameters Exceeding or Outside PWQO in 2024	Trend(s)	Interpretation
S7D (Downstream of Dam)	Iron (fall only)	- Parameter concentrations in 2024 were generally consistent with historical data at this location. - Variable concentrations of ammonia, dissolved oxygen, and iron. - Historic high concentration of DOC in fall of 2024 (October). - The concentrations of iron and manganese (spring and fall) and DOC (fall only) were elevated compared to the water treatment data in 2024. The concentrations of iron, manganese and DOC were within the historic range of concentrations in the water treatment data. Concentrations of alkalinity were similar to the water treatment data in fall of 2024.	- Surface water monitor S7D is located in the Bonnechere River, upriver from the landfill and below the dam. - Surface water quality at S7D is interpreted to not be impacted by landfill leachate given its location relative to the Site. S7D is representative of background conditions in the Bonnechere River.
S8 (upstream of sewage outlet)	Iron (spring only)	- Parameter concentrations in 2024 were generally consistent with historical data at this location. - The concentration of iron and manganese (spring and fall 2024) and DOC (fall only) were above the concentrations reported at the water treatment plant around the same time as the respective monitoring session. Concentrations of alkalinity were similar to the water treatment data in fall of 2024. - In 2024, additional parameters were analyzed in samples from the Bonnechere River monitoring locations. While it is too early to evaluate trends, the concentration of leachate indicator parameters at S8 are generally similar to concentrations at the background monitor S7D.	- Surface water monitor S8 is located in the Bonnechere River, downriver from the landfill and just upriver from the sewage treatment plant. - The volume of data to assess whether S8 is impacted by the landfill is limited, however it does not appear that the Renfrew Landfill is having an observable impact on the water quality in the Bonnechere River.
S9 (adjacent to potential groundwater discharge from the Site)	None	- Parameter concentrations generally consistent with historical data at this location. Historical low concentration of alkalinity in fall 2023 returned to within historical ranges in 2024. - The concentration of iron and manganese (spring and fall) and DOC (fall only) were above the concentrations reported at the water treatment plant around the same time as the respective monitoring session. Concentrations of alkalinity were similar to the water treatment data in fall of 2024. - In 2024, additional parameters were analyzed in samples from the Bonnechere River monitoring locations. While it is too early to evaluate trends, the concentration of leachate indicator parameters at S8 are generally similar to concentrations at the background monitor S7D.	- Surface water monitor S9 is located in the Bonnechere River, adjacent to the area where groundwater downgradient of the landfill is understood to discharge to the Bonnechere River. - The volume of data to assess whether S9 is impacted by the landfill is limited, however it does not appear that the Renfrew Landfill is having an observable impact on the water quality in the Bonnechere River.

Entered by: ETB/AH
Checked by: ETB/ALC

Table 6: 2024 Groundwater Sample Descriptions

Monitoring Well	Spring Sampling Session April 25 th , 2024 Description	Fall Sampling Session October 22 nd and 23 rd , 2024 Description
OMM5	Clear, Colourless, Odorless, No sediment	Clear, Colourless, Odourless, No sediment
OMM6	Clear, Colourless, Odorless, No sediment	Clear, Colourless, Odourless, No sediment
OMM7	Clear, Colourless, Odorless, No sediment	Clear, Colourless, Odourless, No sediment
OMM8	Clear, Colourless, Odorless, No sediment	Clear, Colourless, Odourless, No sediment
OMM9	Clear, Colourless, Odorless, No sediment	Clear, Colourless, Odourless, No sediment
OMM14S	Clear, Colourless, Odorless, No sediment	Clear, Colourless, Odourless, No sediment
OMM14M	Clear, Colourless, Odorless, No sediment	Clear, Colourless, Odourless, No sediment
OMM14D	Clear, Colourless, Odorless, No sediment	Clear, Colourless, Odourless, No sediment
BH10-1	Clear, Colourless, Odorless, No sediment	Clear, Colourless, Odourless, No sediment
BH10-2A	Clear, Colourless, Odorless, Trace sediment	Clear, Colourless, Odourless, No sediment
BH10-2B	Clear, Colourless, Slight H ₂ S odour, No sediment	Clear, Colourless, Slight H ₂ S odour, No sediment
BH11-01	Slightly turbid, Light brown colour, Odorless, Trace Sediment	Cloudy, Light grey, Odour detected, Trace sediment
BH07-2	Water levels only	Water levels only
BH07-3	Water levels only	Water levels only
BH07-4	Water levels only	Water levels only
OMM2	Water levels only	Water levels only
OMM1	Water levels only	Water levels only
OW10	Water levels only	Water levels only

Entered by: BH
Checked by: ETB

Table 7: 2024 Surface Water Sample Descriptions

Monitoring Well	Spring Sampling Session April 25 th , 2024	Fall Sampling Session October 22 nd , 2024 Description	Fall Resampling Session December 5 th , 2024 Description
S6	Clear, Light orange-brown colour, Swampy odour detected, Little Sediment, iron staining in pond, no floating/settleable solids, film or foam observed	Clear, Colorless, Natural odour detected, orange staining observed, no floating/settleable solids, film or foam observed	Not resampled this date
S7D	Clear, Colourless, Odourless, No Sediment, no floating/settleable solids, staining, film or foam observed	Clear, Colourless, Odourless, no floating/settleable solids, no staining, film or foam observed	Clear, Colourless, Odourless, no sediment, staining, film or foam observed
S8	Clear, Colourless, Odourless, No Sediment, some white foam observed	Clear, Colourless, Odourless, No floating/settleable solids, no staining, film or foam observed	Clear, Colourless, Odourless, no floating/settleable solids, Small white clumps of foam observed, no staining or film observed
S9	Clear, Colourless, Odourless, No Sediment, some white foam observed	Clear, Colourless, Odourless, no floating/settleable solids, Foam present, no staining, or film observed	Clear, Colourless, Odourless, Small white clumps of foam observed, no floating/settleable solids, staining, film observed

Entered by: BH
Checked by: ETB

Table 8: Proposed 2025 Groundwater Monitoring Program**1.0 MONITORING SESSIONS**

Spring

Fall

2.0 GROUNDWATER SAMPLING LOCATIONS**2.1 Groundwater Monitors**

OMM 5, OMM 6, OMM 7, OMM 8, OMM 9, OMM 14S, OMM 14M, OMM 14D, OMM 15, BH10-1, BH10-2A, BH10-2B, BH11-01

3.0 FIELD MEASURED PARAMETERS

Groundwater levels in all functional observation wells

Temperature, Conductivity, pH

4.0 LABORATORY MEASURED PARAMETERS**4.1 Routine Groundwater Monitors**

Cations (Metals): arsenic, barium, boron, cadmium, chromium, calcium, copper, iron, lead, magnesium, manganese, mercury, potassium, sodium, zinc

Anions: chloride, nitrate, nitrite, total phosphorus

Additional Parameters: alkalinity, ammonia, hardness (calculated from calcium and magnesium concentrations), chemical oxygen demand (COD), dissolved organic carbon (DOC), sulphate, total dissolved solids (TDS), total Kjeldahl nitrogen (TKN), phenols

volatile organic compounds at monitors OMM 7, OMM 8, OMM 9, OMM 14D, OMM 15 and BH11-01 during the fall monitoring session only

bacterial analysis (E.coli, fecal coliforms, total coliforms) at monitors BH11-01, OMM6, OMM7, OMM14S, OMM14M, and BH10-2B only

4.2 Method Detection Limits

All laboratory analyses on groundwater samples should be performed by a private analytical laboratory and the method detection limits (MDLs) for the specific analyses would be commensurate with the standards established in the Ontario Drinking Water Quality Standards, Objectives and Guidelines (MOE, 2003) or the Provincial Water Quality Objectives (MOEE, 1994a) whichever is lower.

5.0 MONITORING SYSTEM MAINTENANCE**5.1 Inspection**

During each monitoring event, the monitoring network will be generally inspected. Changes in physical condition of each well will be noted and necessary repairs undertaken. Monitoring wells that are shown to be damaged beyond repair or whose integrity is in doubt for further monitoring will be abandoned in accordance with standard procedures and replaced if necessary.

Table 9: Proposed 2025 Surface Water Monitoring Program**1.0 MONITORING SESSIONS**

Spring

Fall (late October / early November)

2.0 SURFACE WATER SAMPLING STATIONS

Site Exit to Subsurface: S6

Bonnechere River: S7D, S8, S9

3.0 FIELD MEASURED PARAMETERS

Temperature, Conductivity, pH, Dissolved Oxygen, Flow

4.0 LABORATORY MEASURED PARAMETERS**4.1 Surface Water Monitors (S6, S7D, S8, S9)**

Cations (Metals): arsenic, barium, boron, cadmium, chromium, calcium, copper, iron, lead, magnesium, manganese, mercury, potassium, sodium, zinc

Anions: chloride, nitrate, nitrite, total phosphorus

Additional Parameters: alkalinity, ammonia, biochemical oxygen demand (BOD), chemical oxygen demand (COD), dissolved organic carbon (DOC), hardness (calculated from calcium and magnesium concentrations), phenols, total dissolved solids (TDS), total Kjeldahl nitrogen (TKN), total suspended solids (TSS)

4.2 Method Detection Limits

All laboratory analyses on surface water samples should be performed by a private analytical laboratory and the method detection limits (MDLs) for the specific analyses would be commensurate with the standards established in the Ontario Drinking Water Quality Standards, Objectives and Guidelines (MOE, 2003) or the Provincial Water Quality Objectives and Guidelines (MOEE, 1994a) whichever is lower.

Table 10: Proposed 2025 Landfill Gas Monitoring Program**1.0 MONITORING SESSIONS**

Indoor Monitors: Twice per year

Outdoor Monitors: Twice per year

2.0 GAS MONITORING LOCATIONS

Indoor Monitors: Inside building

Outdoor Monitors: GW1, GW2, GW3, GW4, BH07-05, GW09-1, GW11-01, GW14-01

3.0 FIELD MEASURED PARAMETERS

Methane (CH₄), Carbon Dioxide (CO₂), Oxygen (O₂), hydrogen sulphide (indoor locations only)

Figures

Last Edited By: wds, date: mcoy Date: 2025-03-25 Time: 3:57:47 PM | Printed By: wds, date: mcoy Date: 2025-03-31 Time: 12:00:45 PM
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LEGEND

--- SITE BOUNDARY

REFERENCE(S)

BASE MAP IMAGERY: © 2025 MICROSOFT CORPORATION © 2025 MAXAR © CNES (2025)
DISTRIBUTION AIRBUS DS.

CLIENT

TOWN OF RENFREW

CONSULTANT



YYYY-MM-DD 2025-02-27

DESIGNED ---

PREPARED DM

REVIEWED ETB

APPROVED AC

PROJECT

2024 ENVIRONMENTAL MONITORING AND OPERATIONS
RENFREW LANDFILL
TOWN OF RENFREW, ONTARIO

DATE

KEY PLAN

PROJECT NO. CA0047282.8803 CONTROL 0002

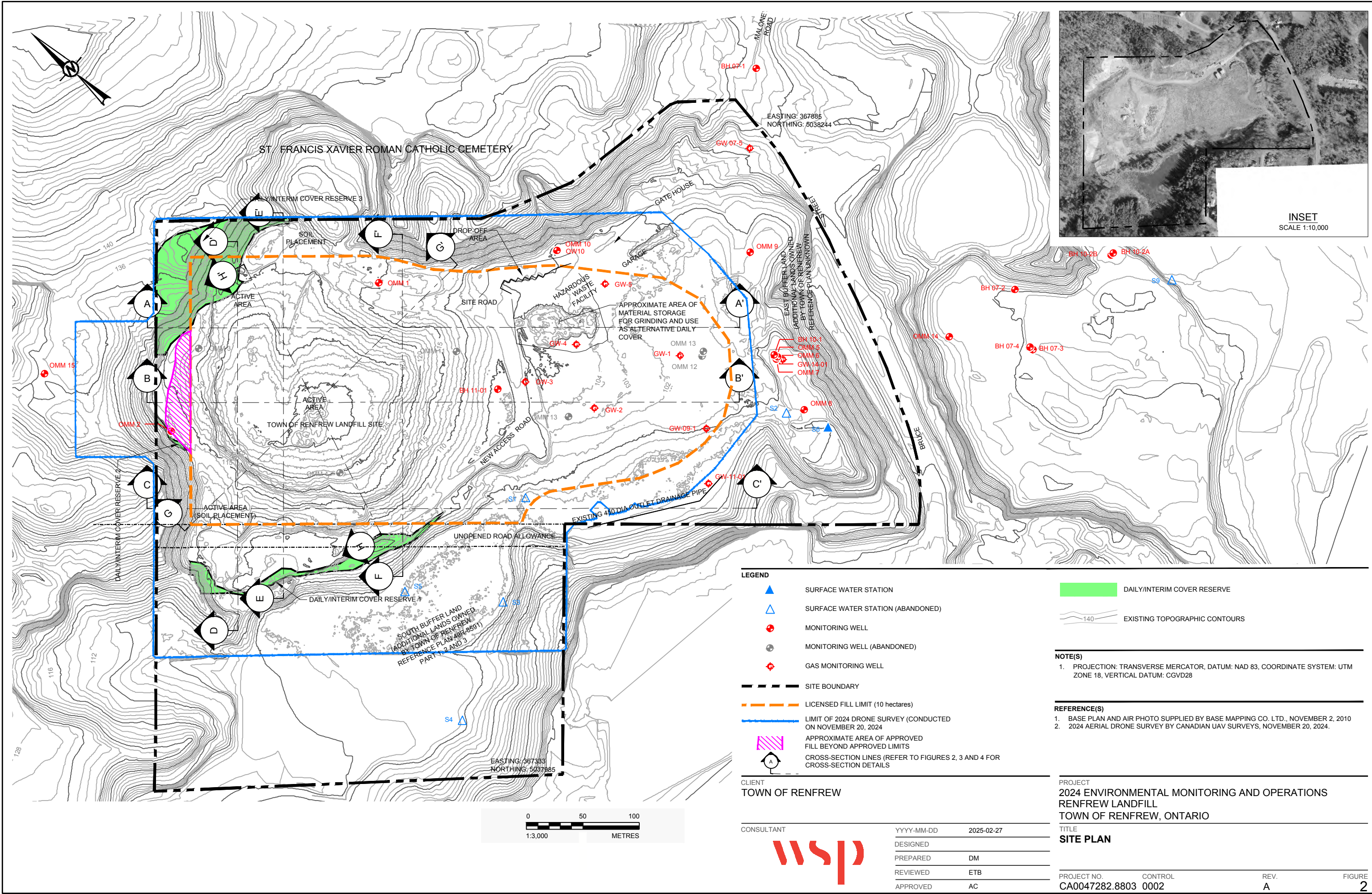
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FIGURE 1

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LEGEND

- SURFACE WATER STATION
- SURFACE WATER STATION (ABANDONED)
- MONITORING WELL
- MONITORING WELL (ABANDONED)
- GAS MONITORING WELL
- SITE BOUNDARY
- LICENSED FILL LIMIT (10 hectares)
- LIMIT OF 2024 DRONE SURVEY (CONDUCTED ON NOVEMBER 20, 2024)
- APPROXIMATE AREA OF APPROVED FILL BEYOND APPROVED LIMITS
- CROSS-SECTION LINES (REFER TO FIGURES 2, 3 AND 4 FOR CROSS-SECTION DETAILS)

CLIENT
TOWN OF RENFREW

CONSULTANT



YYYY-MM-DD	2025-02-27
DESIGNED	
PREPARED	DM
REVIEWED	ETB
APPROVED	AC

- DAILY/INTERIM COVER RESERVE
- EXISTING TOPOGRAPHIC CONTOURS

NOTE(S)

1. PROJECTION: TRANSVERSE MERCATOR, DATUM: NAD 83, COORDINATE SYSTEM: UTM ZONE 18, VERTICAL DATUM: CGVD28

REFERENCE(S)

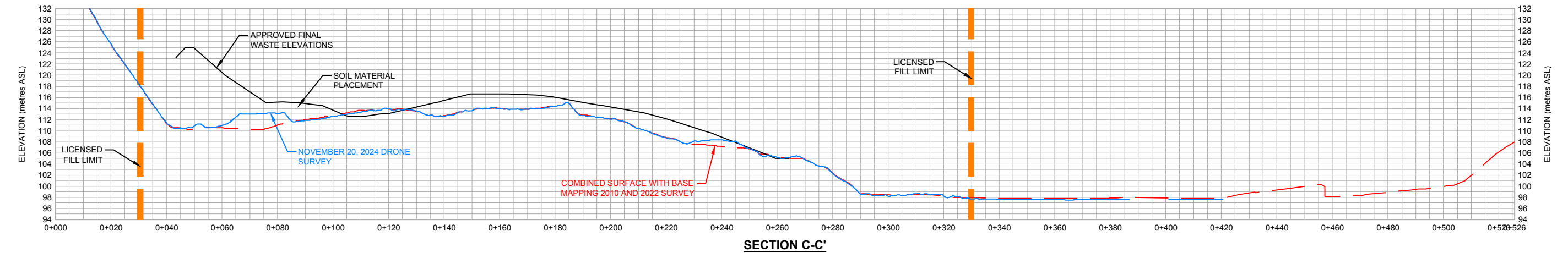
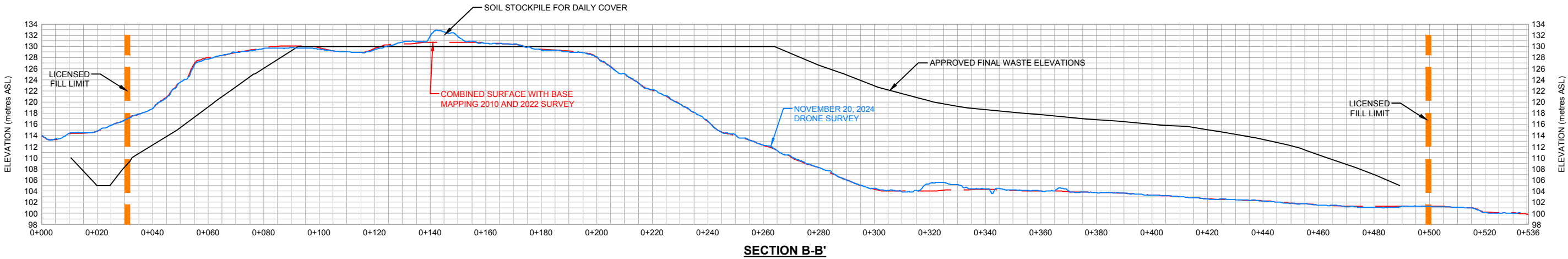
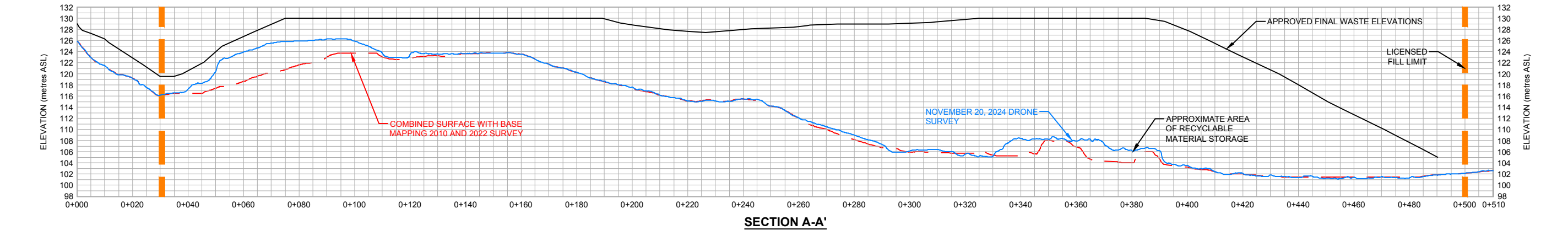
1. BASE PLAN AND AIR PHOTO SUPPLIED BY BASE MAPPING CO. LTD., NOVEMBER 2, 2010
2. 2024 AERIAL DRONE SURVEY BY CANADIAN UAV SURVEYS, NOVEMBER 20, 2024.

PROJECT
2024 ENVIRONMENTAL MONITORING AND OPERATIONS
RENFREW LANDFILL
TOWN OF RENFREW, ONTARIO
TITLE
SITE PLAN

PROJECT NO.	CONTROL	REV.	FIGURE
CA0047282.8803	0002	A	2

25 mm IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM A3/B

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TOWN OF RENFREW

CONSULTANT



YYYY-MM-DD 2025-02-27

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REVIEWED

APPROVED

DM

ETB

AC

PROJECT
2024 ENVIRONMENTAL MONITORING AND OPERATIONS
RENFREW LANDFILL
TOWN OF RENFREW, ONTARIO

TITLE
SECTION A-A', B-B' AND C-C'

PROJECT NO. CA0047282.8803

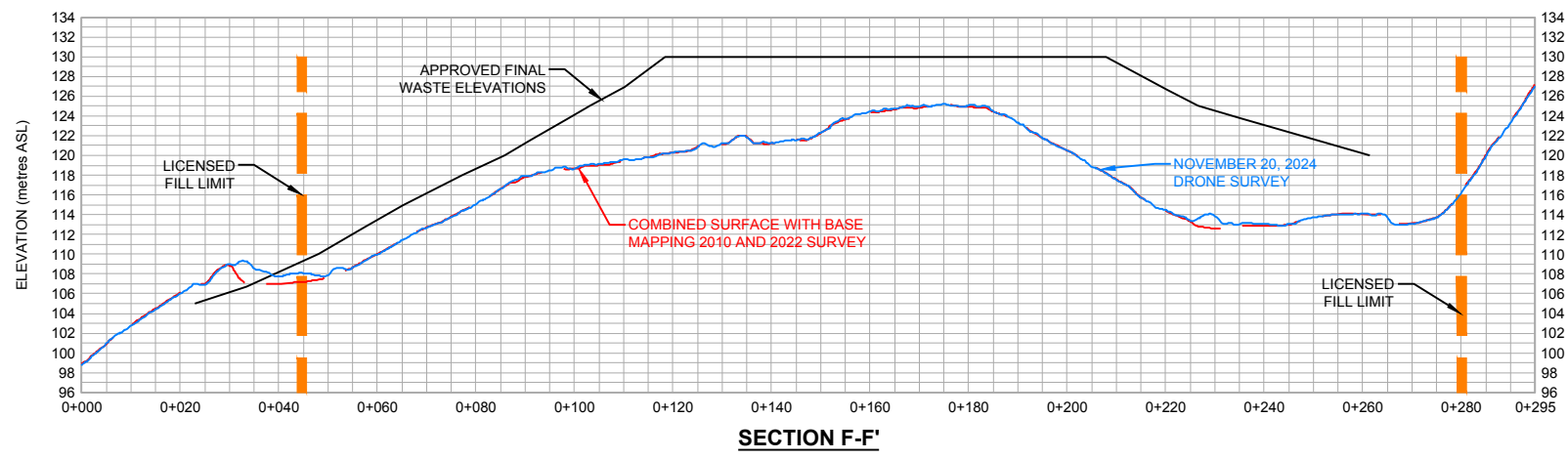
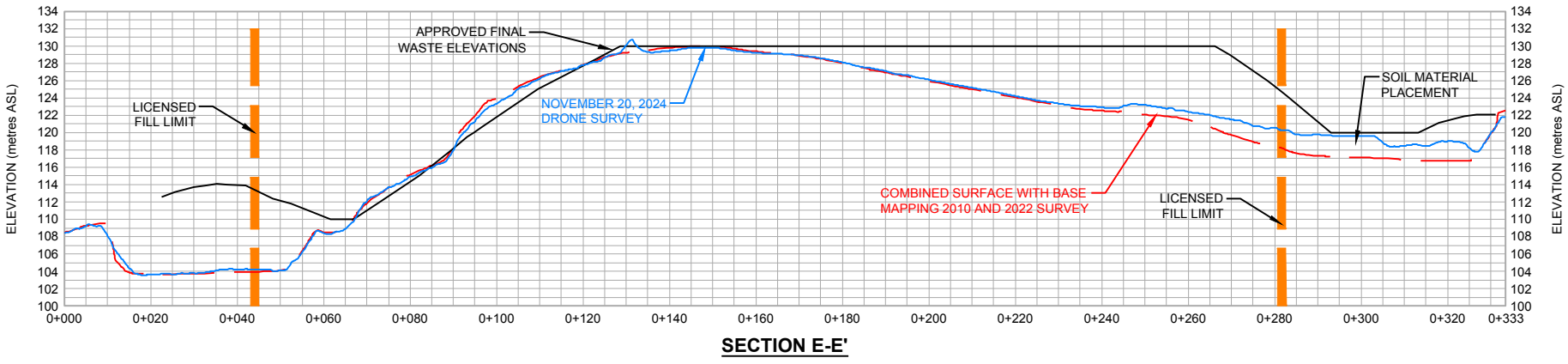
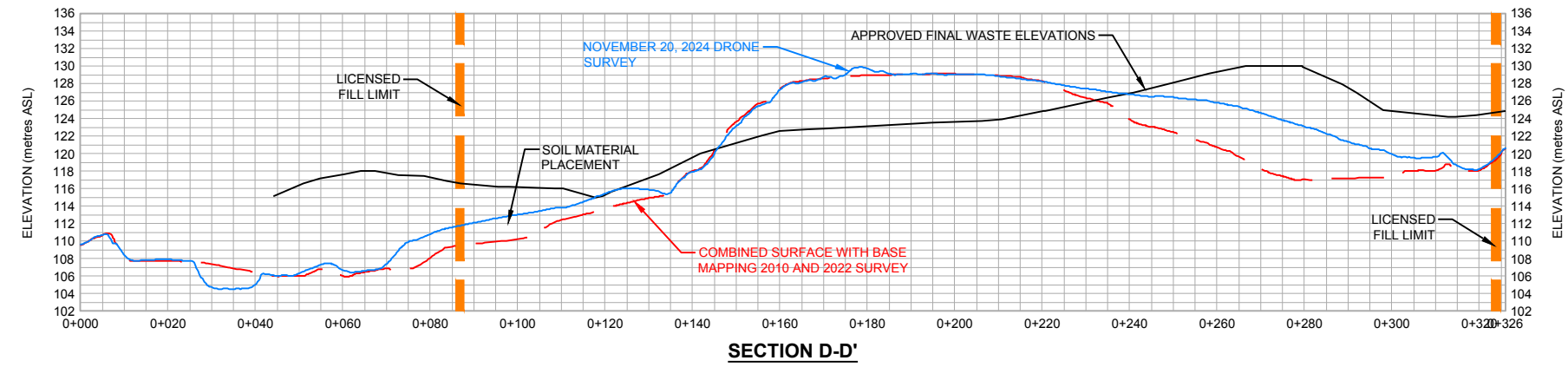
CONTROL 0002

REV. A

FIGURE 3

25 mm IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM A3/B

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REVIEWED	ETB
APPROVED	AC

PROJECT
2024 ENVIRONMENTAL MONITORING AND OPERATIONS
RENFREW LANDFILL
TOWN OF RENFREW, ONTARIO

TITLE
SECTIONS D-D', E-E' AND F-F'

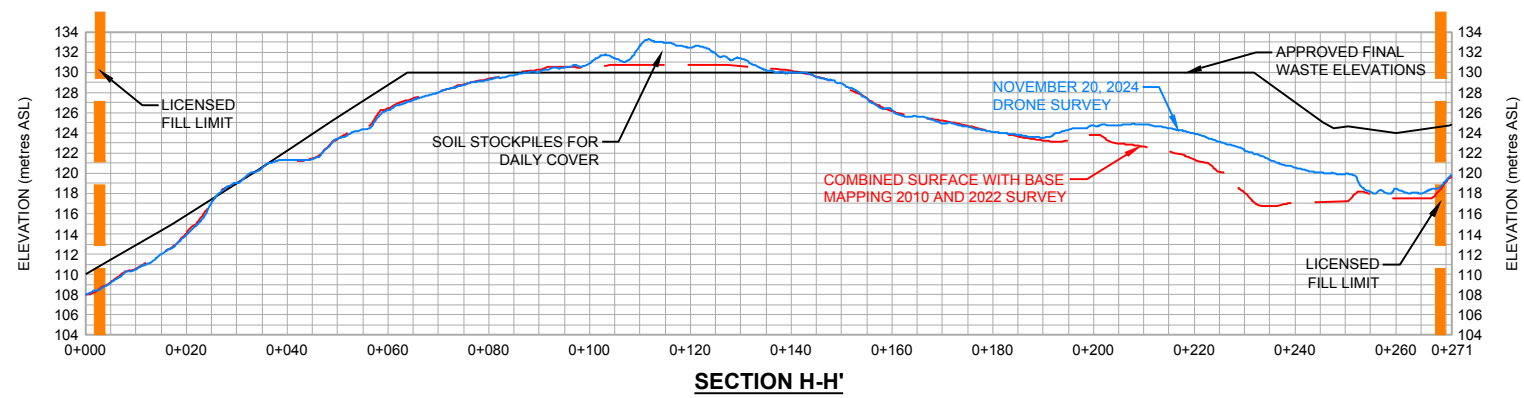
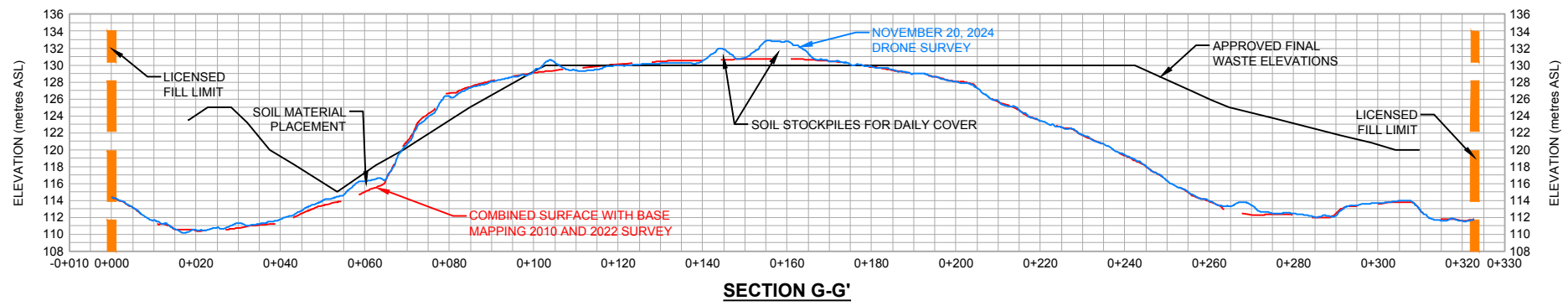
PROJECT NO. CA0047282.8803
CONTROL 0002

REV.
A

FIGURE
4

25 mm IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANSI B

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TOWN OF RENFREW

CONSULTANT



YYYY-MM-DD 2025-02-27

DESIGNED

PREPARED DM

REVIEWED ETB

APPROVED AC

PROJECT
2024 ENVIRONMENTAL MONITORING AND OPERATIONS
RENFREW LANDFILL
TOWN OF RENFREW, ONTARIO

TITLE
SECTIONS G-G' AND H-H'

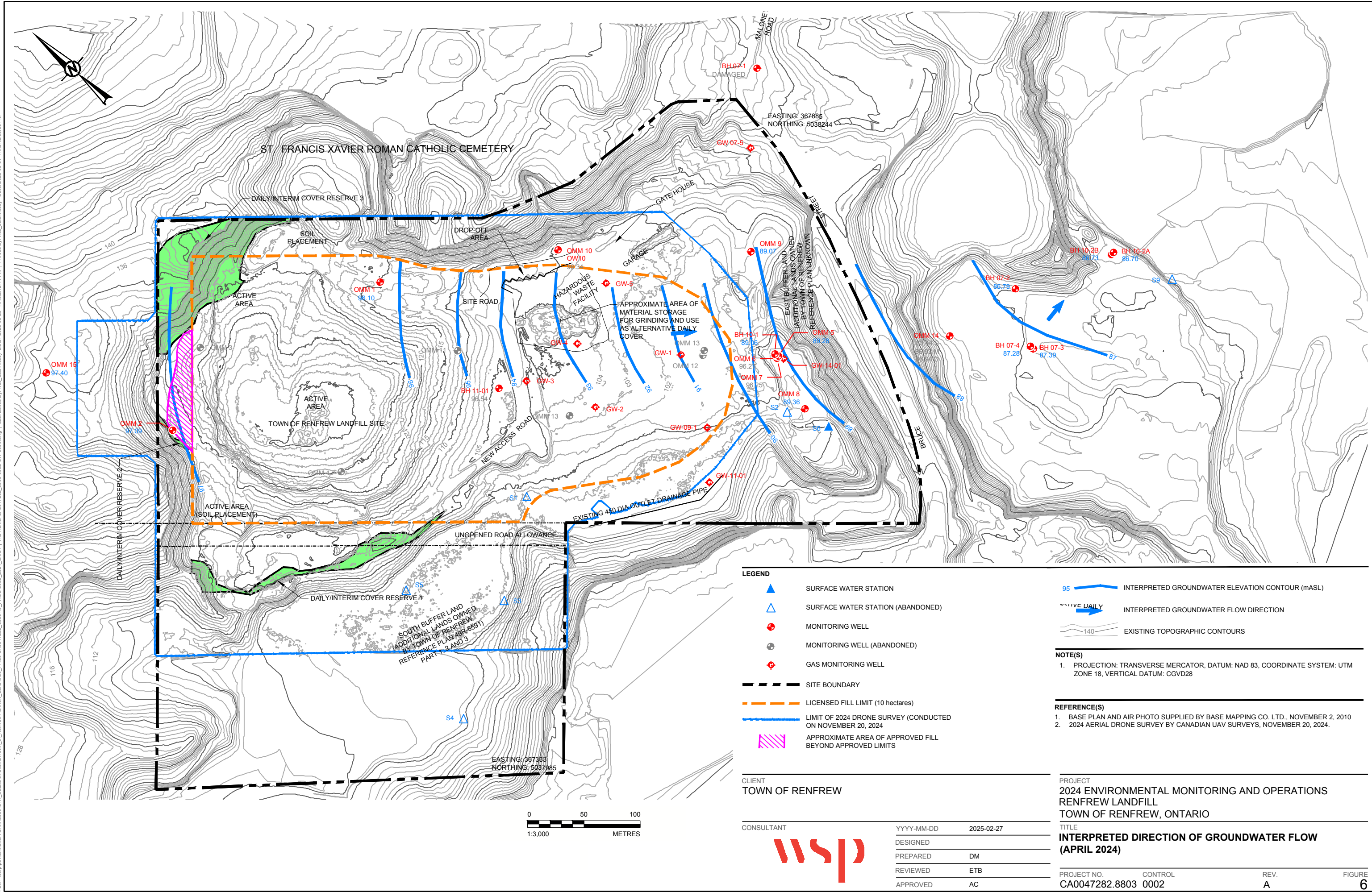
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REV. A

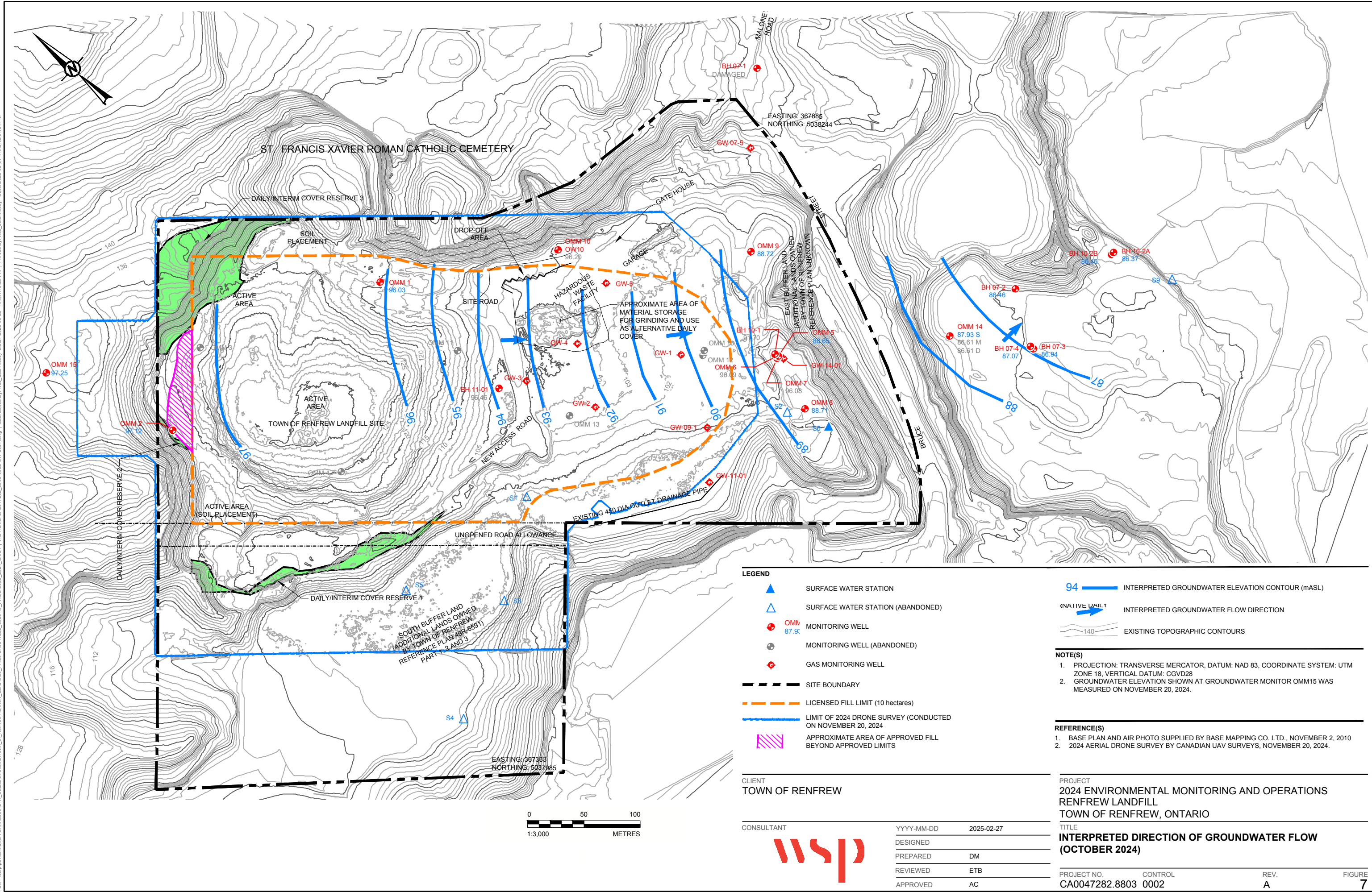
FIGURE 5

25 mm IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ANSI B

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25 mm IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM A3/B

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LEGEND

BONNECHERE RIVER SURFACE WATER STATION

BONNECHERE RIVER SURFACE WATER STATION (ABANDONED)

SITE BOUNDARY

LICENSED FILL LIMIT (10 hectares)

NOTE(S)

1. PROJECTION: TRANSVERSE MERCATOR, DATUM: NAD 83, COORDINATE SYSTEM: UTM ZONE 18.

2. VERTICAL DATUM: CGVD28.

REFERENCE(S)

BASE MAP IMAGERY: © 2025 MICROSOFT CORPORATION © 2025 MAXAR © CNES (2025) DISTRIBUTION AIRBUS DS.

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TOWN OF RENFREW

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PREPARED	DM
REVIEWED	ETB
APPROVED	AC

PROJECT
2024 ENVIRONMENTAL MONITORING AND OPERATIONS
RENFREW LANDFILL
TOWN OF RENFREW, ONTARIO

TITLE
**SURFACE WATER SAMPLING LOCATIONS IN THE
BONNECHERE RIVER**

PROJECT NO.	CONTROL	REV.	FIGURE
CA0047282.8803	0002	A	8

25 mm IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM A3/B

APPENDIX A

**Ministry of Environment, Conservation
and Parks Correspondence**

**Ministry of the
Environment,
Conservation and Parks**
Eastern Region
1259 Gardiners Road, Unit 3
Kingston ON K7P 3J6
Phone: 613.549.4000
or 1.800.267.0974

**Ministère de l'Environnement,
de la Protection de la nature
et des Parcs**
Région de l'Est
1259, rue Gardiners, unité 3
Kingston (Ontario) K7P 3J6
Tél: 613 549-4000
ou 1 800 267-0974



MEMORANDUM

January 17, 2025

TO: Thandeka Ponalo
Sr. Environmental Officer
Ottawa District Office
Eastern Region

FROM: Matthew DeGeer
Hydrogeologist
Technical Support Section
Eastern Region

RE: 2023 Renfrew Landfill Site
ECA No. A410401

Purpose

I have reviewed the hydrogeological aspects of the following documents:

1. Environmental Compliance Approval A410401 dated July 20, 2020.
2. “2023 Environmental Monitoring and Operation Report, Renfrew Landfill Site” (including appendices A through I) prepared by WSP Canada Inc. and dated May 2024.
3. MECP Memorandum “Renfrew Landfill Site ECA A410401, 2018 and 2019 Annual Monitoring Reports, Lot 14, Concession 2, Geographic Township of Horton, Town of Renfrew” prepared by Shawn Kinney, addressed to Thandeka Ponalo, and dated June 18, 2020.

Based on the information provided in the above documents, I offer the following review for consideration.

Background

The Renfrew Landfill Site is located on Part of Lot 14, Concession II, in the Town of Renfrew (hereinafter referred to as the “Site”). The Site currently operates as an open landfill with a remaining capacity of 714,507 m³ of the total approved capacity of 1,069,000 m³. The Site has operated as a landfill since 1955 (69 years) and accepts non-hazardous waste including domestic, industrial, commercial and institutional, tires, contaminated soil, wood waste, blue box materials, leaf and yard waste, and aerobically digested sewage sludge from the Renfrew Water Pollution Control Plant (WPCP).

Environmental Compliance

The Site operates under Environmental Compliance Approval A410401 amended July 20, 2020. The Site is licensed for the use and operation of a 10-hectare (ha) waste disposal and household hazardous waste transfer site within a total site area of 40.73 ha. The Site is

approved to receive solid non-hazardous municipal waste and operates as a natural attenuation landfill.

To comply with ECA A410401 Section 8-15, the township has until July 20, 2025, to establish a Contaminant Attenuation Zone (CAZ) in the form of groundwater easements or land acquisitions. To date, “the Town has amended the Official Plan to include a condition with the intent of facilitating the Town to obtain groundwater rights of any land in the Area of Potential Leachate Impact for which development is proposed” (WSP, 2024). It was noted in the report that an updated figure depicting the lands/easements acquired by the Town for the CAZ would be delivered to the ministry. The ministry has not yet received the updated figure.

Geology

Ontario Geological Survey (OGS) surficial geology maps the Site as being situated on coarse-textured glaciomarine deposits comprised of sand and gravel with minor silt and clay that were deposited in a foreshore or basinal setting. Within this formation are ice contact slopes some of which form mounds whereas others form depressions where organic deposits have developed. To the south and east of the Site, south of Bruce Street, fine textured, massive to well laminated, glaciomarine deposits comprised of silt and clay with minor sand and gravel are mapped. Soil descriptions for monitoring well and borehole logs provided in Appendix B of WSP’s report dated May 2024 generally verify the OGS surficial geology maps with some subtle differences in reported grain size from that which is mapped whereby fine grain sediments are logged in an area mapped as coarse grained.

The OGS maps bedrock at the Site Grenville Supergroup and Flinton Group carbonate metasedimentary rocks comprised of marble, calc-silicates, skarn, and tectonic breccias. There are no monitoring wells that are screened within bedrock at the Site.

Hydrogeological Conditions

Hydraulic conductivities were assessed at certain wells on August 13, 2009. The reported values ranged between 3.0×10^{-3} cm/s and 5.5×10^{-3} cm/s. These values are within the published range of hydraulic conductivities (Freeze and Cherry, 1979) for the encountered materials listed in borehole logs i.e., silt, silty sand, and sand.

Previous MECP memorandums (Kinney, June 18, 2020) and the 2023 annual monitoring report (AMR) prepared by WSP note the potential of a perched aquifer covering much of the Site and in which monitoring wells BH11-01, OMM6, OMM7, and OW10 are screened. Long term water levels within these monitoring wells are on average between 96 mASL and 98 mASL. Several other wells at the Site report water levels in the 96 mASL to 98 mASL range consistently and include OMM1, OMM2, and OMM15. These wells are located north of Bruce Street.

Background monitoring well OMM15 is screened in a sand and silt layer above a “grey, fine-grained, packed clay sand” at a depth of approximately 82.20 mASL. It is likely that the fine-grained packed clay sand noted at the base of OMM15 represents the upper surface of the fine-textured glaciomarine deposits mapped to the south and east of the Site. This evidence combined with the Law of Horizontality implies that the fine-textured glaciomarine deposits underly the coarse-textured glaciomarine deposits that cover much of the Site. As such, water levels recorded at the site are likely reflective of the geological

stratum within which they are screened. This theory is supported when comparing monitoring wells located south of Bruce Street to those located north of Bruce Street in relation to their screen depths, mapped geological units, and static groundwater elevations.

Monitoring wells likely screened within the coarse-textured glaciomarine deposits (i.e. OMM6, OMM7, OMM15, BH11-01) express water levels in the range of 96 mASL to 98 mASL whereas those that are likely screened within the deeper fine-textured glaciomarine deposits (i.e. BH10-1, BH10-2A, BH10-2B, OMM5, OMM8, OMM9, OMM14M, and OMM14D) express water levels in the range of 86 mASL to 89 mASL. It is therefore considered that the “perched groundwater condition” is a function of the superposition of the coarse-textured glaciomarine sediments and the difference in hydraulic conductivities of each unit. This may impede the ability to compare the chemical data of groundwater sourced from background monitor OMM15 to that of monitoring wells south of Bruce Street in terms of landfill derived contamination.

Groundwater Chemical Results

Leachate indicator parameters were identified through comparison of background monitoring well OMM15 and those of “maximum strength” leachate sourced from monitoring well BH11-01. **Table 1** summarizes leachate characterization during the 2023 monitoring program and are reported as the same indicators identified in the 2023 AMR prepared by WSP.

Table 1: Leachate indicator parameters identified in the 2024 AMR.

Parameter	ODWQS (mg/L)	OMM15 (mg/L)	BH11-01 (mg/L)
Alkalinity	30-500 ^{OG}	257 - 267	405 - 406
Ammonia	-	0.01 - 0.03	6.66 – 7.61
Barium	1.0 ^{MAC}	0.079 - 0.084	0.696 – 1.01
Boron	5.0 ^{MAC}	0.011	0.113 – 0.122
Chloride	250 ^{AO}	4	28 - 30
COD	-	<10 - 28	27 - 32
DOC	5.0 ^{AO}	1.0 – 1.1	3.9 – 5.0
Hardness	80-100 ^{OG}	249 – 256	346 - 359
Iron	0.3 ^{AO}	<0.1	3.81 – 5.69
Manganese	0.05 ^{AO}	<0.005	0.154 – 0.188
Potassium	-	0.25 – 0.50	0.91 – 1.49
Sodium	200 ^{AO}	3.82 – 4.05	23.3 – 24.8
TDS	500 ^{AO}	276 - 336	484 - 532
TKN	-	<0.1	6.6 – 7.5

Notes:

^{OG} – Operation guideline

^{AO} – Aesthetic Objective

^{MAC} – Maximum Acceptable Concentration

^{IMAC} – Interim Maximum Acceptable Concentration

123 – Value exceeds ODWQS standard

The list of leachate indicator parameters is sufficient for monitoring leachate migration, however, speculation as to the extent of leachate impacts is presented in the report with many wells being “interpreted” to be impacted. A definitive component of the leachate has not been established to isolate impacted groundwater from non-impacted groundwater.

Landfilling impacts to groundwater are monitored by 11 monitoring wells (excluding OMM15 and BH11-01). These monitoring wells are distributed downgradient from OMM15 and largely downgradient from BH11-01 apart from OMM2. The distribution of monitoring wells and depths in which they are installed is sufficient for monitoring the dispersal of landfill leachate in groundwater.

Reported concentrations of iron (Fe) and manganese (Mn) are consistently below the reportable detection limit (RDL) for samples collected from the background monitor (OMM15) and consistently above ODWQS for leachate monitor BH11-01. Nine (9) of the leachate impact groundwater monitors located downgradient from OMM15 report Fe and Mn concentrations in exceedance of ODWQS which includes monitoring wells that are screened below the interpreted depth of the leachate plume (OMM14D, BH10-2A). It is likely that detectable/elevated concentrations of Fe and Mn in groundwater are indicators of leachate impacts and that leachate in groundwater has reached the Bonnechere River.

WSP notes that concentrations of alkalinity, boron, and potassium are higher at BH10-2B and BH10-2A than upgradient monitor OMM14M and OMM14D, respectively. In review of the chemical data presented for BH10-2B, BH10-2A, OMM14D, OMM14M, and OMM14S I agree with WSP's interpretation of "different natural groundwater quality" or "source other than the landfill" for elevated concentrations of alkalinity, boron, and potassium at BH10-2B and similarly for Fe, TKN and K at BH10-2A.

OMM9 reported the highest concentrations of Na and Cl during the 2023 monitoring programs with respective values between 78 – 132 mg/L and 142 – 530 mg/L. WSP notes that OMM9 may be impacted by a combination of landfill leachate and road salting activities. Although Fe and Mn concentrations for OMM9 are consistently below the RDL, various other leachate indicator parameters i.e., alkalinity, barium, boron, DOC, hardness, potassium, and TDS are elevated with respect to background and BH11-01. I agree with WSP that road salt impacts are reflected in the analytical results for OMM9 in addition to landfill leachate impacts.

WSP recommends that future groundwater assessments compare groundwater quality to background conditions reflected in samples collected from OMM15 and historical results for BH07-1. I agree that results should continue to be compared with background monitor OMM15 and historical data from offsite monitor BH07-1. However, an increasing trend in concentrations of Cl are evident in the data collected for BH07-1 between 2007 and 2010 with no data collected since 2010 which warrants caution when comparing historical Na and Cl concentrations for BH07-1 to current data.

Guideline B-7

The Site is an active landfilling site and is therefore subject to Reasonable Use Guideline B-7. Guideline B-7 compliance for the Site is currently based on groundwater conditions at the property boundary by which monitoring well OMM14 has been used to assess compliance and is located 60 m south of the property boundary. Based on the analytical results for OMM14, the Site is not in compliance with Guideline B-7 and concentrations of barium, chloride, DOC, iron, and manganese exceeded the Reasonable Use Performance Objectives.

Groundwater at the site is interpreted to discharge into a surface water body located to the southeast, the Bonnechere River, and it is stated that there are no impacts to the

reasonable use of groundwater between the Site and its point of discharge and is therefore believed to comply with Guideline B-7. For this to be effective, an accepted CAZ needs to be established for the Site. It is understood that an updated CAZ will be in place later this year.

Conclusions and Recommendations

I offer the following recommendations and conclusions:

1. The previous MECP groundwater memorandum dated June 18, 2020, notes that landfill leachate extends beyond the property limits as far as the Bonnechere River. Based on review of the 2024 Annual Monitoring Report, I agree with this finding.
1. Although most of the monitoring wells downgradient from OMM15 are interpreted to be impacted by landfill leachate, there remains uncertainty. It is recommended that a Per- and Polyfluoroalkyl Substances “PFAS” in groundwater study be conducted to isolate leachate impacted groundwater from those interpreted to be impacted by a separate source and the vertical extent of the leachate plume. PFAS is commonly found in landfill leachate (and leachate impacted groundwater) originating from a number of discarded consumer products. PFAS are man-made and have no natural source. These compounds are also known to be mobile in groundwater and persistent in the environment. PFAS assessment has been used at a number of landfill sites in Eastern Region to provide additional information on leachate plume delineation and to differentiate landfill impacts from other sources. The study should include PFAS sampling at selected leachate characterization wells, downgradient wells known to be impacted by leachate, and downgradient wells where WSP has suggested impacts from other sources. PFAS analyses are available at private laboratories and samples should be analysed to the lowest available levels. Care must be taken to collect PFAS samples owing to the ubiquitous nature of these compounds. I recommend that a study should be developed and submitted to the ministry for review prior to implementation.
2. Municipal sewage sludge is accepted at the landfill. I recommend that bacterial analysis (E.coli, fecal coliforms, and total coliforms) be assessed for monitoring wells BH11-01, OMM6, OMM7, OMM14S, OMM14M, and BH10-2B.
3. Analytical results associated with the parameters listed as leachate indicators are recommended to be presented graphically as time-concentration plots for all monitoring wells.
4. It is recommended that biannual sampling (twice per annum) continue in accordance with ECA A410401.
5. The annual report should include a description of the purged waters describing colours, odours, and a subjective description of sediment quantity (i.e., none, trace, some, moderate, heavy).
6. An updated figure depicting lands/groundwater easements acquired by the Town as part of the Contaminant Attenuation Zone (CAZ) should be submitted to the ministry for review.
7. The leachate plume is interpreted to extend and discharge into a surface water body located to the southeast of the Site, the Bonnechere River. The Site is noncompliant

with Guideline B-7 because groundwater impacts are above reasonable use limits at the property boundary and an approved CAZ has not been established. The Township has until July 20, 2025, to provide the ministry with documents in support of an approved CAZ i.e., groundwater rights or acquired lands and to become compliant with Guideline B-7.

Should you have any questions regarding these comments, I would be happy to discuss them further.

Matthew DeGeer, M.Sc., P.Geo.

ec: Thandeka Ponalo
Kyle Stephenson
Victor Castro
Emily Tieu
Christina Klein

c: ECHO ref # 1-815564602

**Ministry of the
Environment,
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Eastern Region
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Kingston ON K7P 3J6
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**Ministère de l'Environnement,
de la Protection de la nature
et des Parcs**
Région de l'Est
1259, rue Gardiners, unité 3
Kingston (Ontario) K7P 3J6
Tél: 613 549-4000
ou 1 800 267-0974



MEMORANDUM

November 15, 2024

TO: Thandeka Ponalo
Sr. Environmental Officer
Eastern Region

FROM: Dana Cruikshank
Surface Water Specialist
Eastern Region

RE: 2023 Monitoring Report
Summary Letter Revised Trigger mechanism Renfrew WDS
Renfrew Landfill Site, CoA: A410401
Town of Renfrew
ECHO Ref #: 1-688112897

I have reviewed the above report dated May 2024 prepared by WSP Canada with respect to surface water concerns only.

Report Overview:

For 2023 GA reports:

- The total area of the Renfrew Site is 40.7 ha with a footprint of 10 ha. The site is bounded by a cemetery to the north, Bruce St on the east side, private property to the west and residential and open space to the south. The WDS also has a marshy area in the south buffer lands.
- The estimated remaining site life is 17 years.
- Groundwater flow across the site is from northwest to southeast toward Bruce Street and Bonnechere River located 220 m east of Bruce St.
- Leachate at Renfrew WDS is characterized by elevated concentrations of alkalinity, ammonia, arsenic, barium, boron, chloride, DOC, hardness, iron, manganese, nitrite, TP, sodium, TDS, TKN and sulphate.
- Groundwater monitors east of Bruce St have been evaluated for road salting activities. Based on this evaluation the Leachate Indicator short list has been reduced to alkalinity, ammonia, boron, DOC, iron, manganese, potassium and TKN.

- WSP concludes that the site may be operating according to MECP Guideline B-7.
- Overland drainage from the landfill area and the marsh area is directed to a natural depression “sump” (S6) near the southeast corner of the property, adjacent to the embankment on which Bruce Street is located. There is no natural surface water outlet from the landfill site and that water leaves the site by infiltrating into the groundwater regime and/or by evaporation and evapotranspiration processes.
- There is no available surface water sampling station at the Renfrew Landfill site for the purpose of monitoring ‘background’ surface water quality in the marshy area within the south buffer lands.
- The surface water quality at S3, S4 and S5 in the marshy area were interpreted to be impacted by landfill leachate but were removed from the sampling program in 2020. S6 is also considered to be impacted by landfill leachate.
- Bonnechere River stations were sampled for the short list of leachate indicator parameters only and there were no exceedances of PWQO with the exception of iron at S8 in the spring.
- In 2023, 3 locations were monitored in the Bonnechere River. S7D is located upriver of the site and S7D is downstream of the dam. S9 is adjacent to the site where groundwater is expected to discharge to the River and S8 is located downstream 400 m from S9 and upriver of the sewage treatment plant.



- Data from the Bonnechere River was also compared to concentrations at the water treatment plant. All were below WTP concentrations except for alkalinity, iron and manganese.
- WSP concludes that it does not appear that Renfrew Landfill is having an observable impact on water quality in the Bonnechere River.
- Recommends continued monitoring of the water quality stations in the Bonnechere River
- A new trigger mechanism has been proposed based on water quality data in the Bonnechere River.

July 2023 Proposed Revised Trigger Mechanism

- Water quality data for the short-list leachate indicators collected between 2018-2023 has afforded 12 samples representing background conditions at S7D.
- Bonnechere River is considered to be a Policy 1 water body as all parameters meet PWQO. A couple of exceedances for iron are potentially considered to be anomalous.
- There is no groundwater trigger mechanism being proposed at this time.
- The Compliance Evaluation Parameters (CEPs) are considered to be the Leachate Indicator Parameters (LIPs) with a PWQO, namely iron, boron and unionized ammonia (UIA).
- Compliance locations at S9 and S8.
- Trigger is an exceedance of the 75th percentile of the PWQO for Policy 1 parameters and for Policy 2 parameters an exceedance of background at S7D during the same monitoring event.
- Step 1
 - Assess if the exceedance of the trigger mechanism is likely due to discharge of leachate impacted groundwater to the river. Resample within 60 days if necessary to confirm a trigger exceedance.
- Step 2
 - If three consecutive sampling sessions exceed the trigger concentrations then the Town and MECP will meet to discuss results of the resampling in Step 1 to determine if additional investigation or implementation of the contingency plan is required.
- Step 3 Implement the investigation program or contingency plan.

- The trigger mechanism was applied to the 2023 data and no trigger was exceeded.

Reviewer's Comments

The reviewer averaged all the data for the three stations in the Bonnechere River from 2018-2023. Concentrations reported as < MDL were converted to the MDL using the precautionary approach e.g. (< 10 converts to 10). Differences in average concentrations were calculated. Where the downstream stations had average concentration differences greater than 25% (deemed significant) the cells were shaded yellow. The relative concentration column shows the relative concentrations for each parameter as you move upstream to downstream (S7D-S9-S8)

Table 1 presents the average concentrations and percentage differences in the Bonnechere Stations.

Table 1: Average Concentrations and Percentage Differences in the Bonnechere Stations.

Parameter	Unit	PWQO	Average Concentrations			Relative Conc	Percentage Diff		
			S7D	S9	S8		7D vs 8	7D vs 9	9 vs 8
Alkalinity (Total as CaCO ₃)	mg/l		69.1	67.8	69.5		-1	2	-2
Ammonia Nitrogen	ug/l		30	55	36.1538		-21	-83	34
Ammonia, unionized	ug/l	20	0.58	1.10	0.79		-37	-89	28
Conductivity (Field)	uS/cm		246	207	253		-3	16	-22
Dissolved Organic Carbon	ug/l		6169	7869	6138		0	-28	22
Dissolved Oxygen (Field)	mg/l		8.89	9.79	10.45		-18	-10	-7
Nitrogen, Total Kjeldahl	ug/l		415	400	354		15	4	12
pH (Field)	-	6.5 - 8.5	7.77	7.87	7.90		-2	-1	0
Temperature (Field)	deg c		10.15	10.12	10.23		-1	0	-1
Boron	ug/l	200	10.92	16.50	11.38		-4	-51	31
Iron	ug/l	300	514	388	386		25	24	1
Manganese	ug/l		46	75	43		7	-62	43
Potassium	ug/l		1473	1433	1572		-7	3	-10

S9, adjacent to the site had elevated average concentrations of ammonia, DOC, un-ionized ammonia, boron and manganese than upstream at S7D. S8 when compared to S7D also showed elevated concentrations of un-ionized ammonia at S9.

The 2018-2023 data suggests that there is a minor impact to water quality in the Bonnechere River as a result of leachate contaminated groundwater entering the River.

Recommendations

1. The reviewer agrees with the proposed trigger mechanism for surface water with the addition of manganese as a CEP.

If you have questions or comments regarding the above, please do not hesitate to ask me.

Dana Cruikshank

ec: Victor Castro (WRU Supervisor)
Christina Klein (TSS Manager)
Emily Tieu (A Ottawa District Supervisor)

July 20, 2021

Project No. 2047371/4000

Tracy Hart, District Manager

Ottawa District Office
Ministry of Environment, Conservation and Parks
2430 Don Reid Drive, Unit 103
K1H 1E1

**SUMMARY OF POSSIBLE SURFACE WATER CONTINGENCY MEASURES FOR THE
RENFREW WASTE DISPOSAL SITE (ECA NO. A410401)
RENFREW, ONTARIO**

Dear Ms. Hart,

The Town of Renfrew (Town) owns and operates the Renfrew Waste Disposal Site (Site) under Environmental Compliance Approval (ECA) No. A410401. A revision to ECA No. A410401 was issued for the Site on July 20, 2020. As per Condition 8(9) of this ECA, the Town is required to submit, within one year from the date of ECA No. A410401, a summary of possible contingency measures to be considered by the Town in the event of a confirmed exceedance of a site-specific trigger level relating to leachate-impacted groundwater discharge to surface water causing surface water impacts to the Bonnechere River.

It should be noted that presently, there is no trigger mechanism in place related to surface water impacts in the Bonnechere River; Condition 8(8) of ECA No. A410401 outlines the requirement to revise the trigger mechanism in consultation with the District Manager within three years of the date of this approval. This was to allow for additional data to be obtained from the new surface water monitoring locations in the Bonnechere River (established in 2018) prior to determining trigger concentrations.

1.0 BACKGROUND

1.1 Groundwater and Surface Water Conditions

Previous investigations by others have indicated that there is no natural surface water outlet from the landfill site and existing surface water on the landfill property has been interpreted to exit the site via the subsurface and/or by evaporation and evapotranspiration processes only. Stormwater runoff and drainage from the marshy area are directed to a natural depression or “sump” near the southeast corner of the property for infiltration into the sandy soils adjacent to Bruce Street (sampling station S6). Since surface water exits the site via the groundwater, compliance for the site has historically been based on groundwater quality.

It is interpreted that the groundwater downgradient of the landfill is ultimately discharging to the Bonnechere River. With the Town pursuing control of the groundwater use downgradient of the landfill, it has been recommended that site compliance can be assessed by evaluating impacts to surface water quality along the downgradient boundary of the contaminant attenuation zone (CAZ) (i.e., along the reach of the Bonnechere River in the area denoted as the “Area of Potential Leachate Impact” in the Town’s Official Plan).

1.2 Groundwater and Surface Water Compliance

Comments on the 2013, 2014, 2015 and 2016 Annual Monitoring reports were received from the Ministry of Environment, Conservation and Parks (MECP) by the Town on February 6, 2018. It was noted in these comments that the site was not in compliance with Guideline B-7 and that establishing a CAZ should be addressed. During a subsequent onsite meeting with the MECP on July 17, 2018, Golder addressed comments on the 2013-2016 Annual Monitoring Reports that the Town has taken steps to gain control of downgradient groundwater by establishing a CAZ area in the Town’s Official Plan, although the Town does not presently own all the downgradient land. Condition 8(15) of ECA No. A410401 requires that the Town establish the downgradient CAZ by 2025 (i.e., 5 years after the date of the issuance of the updated ECA No. A410401), and Conditions 8(16) to 8(19) of the ECA provide additional requirements for the CAZ.

It was also agreed during the 2018 on-site meeting that site compliance could be assessed by evaluating impacts to surface water quality along the downgradient boundary of the CAZ (i.e., along the reach of the Bonnechere River in the area denoted as the “Area of Potential Leachate Impact” in the Town’s Official Plan).

Surface water monitoring stations S7D, S8, and S9 were added to the monitoring program with the issuance of ECA No. A410401. S7D is located upriver from the Site, situated immediately downstream of the dam located approximately 600 metres from S9. S7D is meant to provide background surface water quality data prior to any potential impact from the landfill. S8 is located downstream in the Bonnechere River, approximately 400 metres from S9 and just upriver from the sewage treatment plant. S9 is located immediately adjacent to where groundwater downgradient of the landfill is expected to discharge to the Bonnechere River. Due to the limited amount of data, an interpretation regarding impacts from the landfill has not been made. Surface water quality data at S7D was compared to water quality results from the water treatment plant and concentrations of parameters were similar, however S7D was only monitored for a shortened list of parameters. Further monitoring has been recommended for these surface water stations.

1.3 Geophysical Survey of Leachate Plume

A downhole geophysical survey of boreholes OMM-5, OMM-8, OMM-9 and OMM-14D was conducted by Golder in 2014 to assess the extent and depth of the leachate plume at the Site. Two downhole geophysical probes were used for the testing: apparent conductivity and natural gamma. It was interpreted from this survey that the main part of a leachate plume is located within the overburden between elevation 84.5 and 90.5 metres above sea level (masl), and that a deeper leachate plume could be located between elevation 73 and 75 masl.

2.0 POSSIBLE CONTINGENCY MEASURES IN THE EVENT OF A CONFIRMED TRIGGER EXCEEDANCE

The following possible contingency options may be considered by the Town in the event of a confirmed exceedance of a site-specific trigger level relating to leachate-impacted groundwater discharge to surface water causing surface water impacts to the Bonnechere River:

- Purge Well System
- Purge Well System with Cut Off Wall
- Interceptor Trench

Each of these possible contingency measures would attempt to reduce impacts to surface water in the Bonnechere River by intercepting the leachate plume in groundwater that, based on the hydrogeological interpretation of the site, would migrate off-site in the direction of (and eventually discharging to) the Bonnechere River.

It should be noted that this is not a comprehensive list of possible contingency measures, and the following description of each measure is a summary only and is not a complete feasibility analysis. Alternative contingency measures may be presented and reviewed following a confirmed exceedance depending on the exceeding parameter and the site characteristics at that time. In the event of a confirmed exceedance, the possible contingency measure(s), listed within this letter or presented at the time of an exceedance, will need to be reviewed and evaluated in further detail and considering the context of the exceedance to determine the preferred solution to manage surface water impacts from leachate to the Bonnechere River.

2.1 Purge Well System

Purge wells are a relatively common method to remove impacted water from the ground before it leaves a site and then subsequently treat the impacted water. Purge wells are most commonly used in locations where the impact to groundwater is in the overburden soils and can be more easily captured and controlled. Based on the geophysical survey undertaken in 2014 and historical data, it is interpreted that the leachate plume is located within the overburden at the Renfrew Waste Disposal Site, and so generally could be potentially feasible from a hydrogeological perspective.

To design a purge well system, one or several test wells would need to be installed to identify the desired location of a purge well system, the expected groundwater capture area and thus understand the number and spacing of wells required. Further, the use of purge wells would also require determination of how the impacted groundwater would be treated.

2.2 Purge Well System with Cut-off Wall

Cut-off walls are a low permeability barrier, installed perpendicular or semi-perpendicular to the ground surface and roughly perpendicular to the direction of groundwater flow, to control the flow of groundwater and contaminants it may contain by creating a barrier to further downgradient migration of impacted groundwater. A cut-off wall could be installed in conjunction with the purge well system to impede groundwater discharge to the Bonnechere River while impacted groundwater is being collected by the purge wells for treatment; in this case a cut-off wall would be constructed downgradient of the influence of the purge wells. A cut-off wall installed alone

without the purge well system is not expected to fully mitigate the effects of leachate contaminated groundwater entering the Bonnechere River.

There are different types of cut-off walls which largely depend on the contaminants of concern, the hydrogeology and the required low-permeability that would need to be achieved to impede migration of the contaminants toward the Bonnechere River. Material for a cut-off wall could include a bentonite slurry or cement wall, or a wall that mixes the in-situ soil with cement grout or a binding agent. A permeable reactive barrier is another option that could be installed with a cut-off wall depending on the parameters of concern within the leachate-impacted water. A permeable reactive barrier would allow groundwater to flow through while capturing and treating contaminants prior to flowing past the reactive barrier.

2.3 Interceptor Trench

An interceptor trench is a deep depression constructed at ground surface to a sufficient depth to cause leachate-impacted groundwater to discharge into the trench for collection and treatment. The interceptor trench is installed downgradient of the landfill and roughly perpendicular to the direction of groundwater flow and would need to be deep enough or provide hydraulic control at an elevation to capture the leachate impacted groundwater plume prior to migrating to the Bonnechere River.

To design an interceptor trench, an evaluation to determine the optimal placement and depth as well as the mechanism for removal and treatment of impacted groundwater would be required based on the specific trigger exceedance. Based on the geophysical survey undertaken in 2014, it is understood that a leachate plume may exist between elevation 84.5 and 90.5 masl and between elevation 73 and 75 masl. Ground surface just outside the landfill northwest of Bruce Street is about 103 masl, and about 96 masl nearer to the Bonnechere River downgradient from the landfill, so an interceptor trench could be required to be 6 m to up to 19 m deep to intersect the upper plume, and 23 m to 30 m to intersect the deeper plume, depending on its location and hydrogeological properties.

3.0 CLOSURE

We trust that this meets your needs at this time. If you have any further questions, please don't hesitate to contact the undersigned.

Yours truly,

Golder Associates Ltd.

Emily Bacon, M.Eng., EIT
Environmental Consultant

Trish Edmond, M.E.Sc., P.Eng.
Principal / Geoenvironmental Engineer

ETB/ALC/PLE/sg

[https://golderassociates.sharepoint.com/sites/139028/project/files/5 technical work/phase 4000/20447371-4000-l-sw contingency options -july2021.docx](https://golderassociates.sharepoint.com/sites/139028/project/files/5%20technical%20work/phase%204000/20447371-4000-l-sw%20contingency%20options-july2021.docx)

CC: Tyler Armstrong, Town of Renfrew
Mike Asselin, Town of Renfrew
Thandeka Ponalo, MECP



December 2, 2024

Project No. 22573034/6000

Tracy Hart, District Manager

Ottawa District Office
Ministry of Environment, Conservation and Parks
2430 Don Reid Drive, Unit 103
K1H 1E1
Provided via e-mail

**SUMMARY OF REVISED TRIGGER MECHANISM FOR THE RENFREW WASTE DISPOSAL SITE
(ECA NO. A410401) – REVISION 1**

Dear Ms. Hart,

The Town of Renfrew (Town) owns and operates the Renfrew Waste Disposal Site (Site) under Environmental Compliance Approval (ECA) No. A410401. A revision to ECA No. A410401 was issued for the Site on July 20, 2020. As per Condition 8(8) of this ECA, the Town is required to submit a revised trigger mechanism within three years from the date of ECA No. A410401 in consultation with the District Manager. The revised trigger mechanism was originally submitted to the MECP on July 20, 2024. This letter provides a revision to the proposed revised trigger mechanism to include changes requested by the MECP Surface Water Reviewer dated November 15, 2024.

1.0 BACKGROUND GROUNDWATER AND SURFACE WATER CONDITIONS

Previous investigations by others have indicated that there is no natural surface water outlet from the landfill Site, and existing surface water on the landfill property has been interpreted to exit the Site via the subsurface and/or by evaporation and evapotranspiration processes only. Stormwater runoff and drainage from the marshy area south of the waste footprint are directed to a natural depression or “sump” near the southeast corner of the property for infiltration into the sandy soils adjacent to Bruce Street (surface water sampling station S6). Since surface water exits the Site via the groundwater, compliance for the Site has historically been based on groundwater quality.

Comments on the 2013, 2014, 2015 and 2016 Annual Monitoring reports were received from the Ministry of Environment, Conservation and Parks (MECP) by the Town on February 6, 2018. It was noted in these comments that the Site was not in compliance with Guideline B-7 and that a contaminant attenuation zone (CAZ) should be established. During a subsequent on-Site meeting with the MECP on July 17, 2018, Golder Associates Ltd. (Golder; now WSP Canada Inc.) addressed comments on the 2013-2016 Annual Monitoring Reports, indicating that the Town has taken steps to gain control of downgradient groundwater by establishing a CAZ area in the

Town's Official Plan, although the Town does not presently own all the downgradient land. Condition 8(15) of ECA No. A410401 requires that the Town establish the downgradient CAZ by 2025 (i.e., 5 years after the date of the issuance of the updated ECA No. A410401), and Conditions 8(16) to 8(19) of the ECA provide additional requirements for the CAZ.

It is interpreted that the groundwater downgradient of the landfill is ultimately discharging to the Bonnechere River. With the Town pursuing control of the groundwater use downgradient of the landfill, it was recommended during the 2018 on-Site meeting that Site compliance be assessed by evaluating impacts to surface water quality along the downgradient boundary of the contaminant attenuation zone (CAZ) (i.e., along the reach of the Bonnechere River in the area denoted as the "Area of Potential Leachate Impact" in the Town's Official Plan).

Surface water monitoring stations S7D, S8, and S9 are all located in the Bonnechere River and were added to the monitoring program with the amendment of ECA No. A410401 in 2020. For reference, Figure 8 from the 2022 Environmental Monitoring and Operations Report has been attached to this letter, denoting these surface water monitoring locations. S7D is located upriver from the Site, situated immediately downstream of the dam located approximately 600 metres from S9. S7D is meant to provide background surface water quality data prior to any potential impact from the landfill. S8 is located downstream in the Bonnechere River, approximately 400 metres from S9 and just upriver from the sewage treatment plant. S9 is located immediately adjacent to where groundwater downgradient of the landfill is expected to discharge to the Bonnechere River. Surface water quality data at S7D was compared to water quality results from the water treatment plant, which sources water from approximately 1 kilometer upriver from monitoring location S7D, and concentrations of parameters were similar; however, it is noted that S7D was only monitored for a shortened list of parameters that are the Leachate Indicator Parameters identified for the Renfrew Landfill.

Water quality data collected between October 2018 and May 2023 have afforded 12 samples representing background conditions at S7D. The water quality in the Bonnechere River is considered to be Policy 1 for all Leachate Indicator Parameters monitored with Provincial Water Quality Objectives (PWQO). It is noted that there were two measurements of iron exceeding PWQO at S7D in November 2020 and November 2022; however, these exceedances were quite high and potentially considered anomalous. All data collected for background surface water quality station S7D will continue to be scrutinized to assess whether the receiver water body is considered Policy 1 or Policy 2.

2.0 PROPOSED REVISED TRIGGER MECHANISM

Given that the Town is moving forward with gaining all groundwater rights downgradient of the landfill Site and groundwater discharges to the Bonnechere River, there is no proposed groundwater trigger mechanism and only a proposed surface water trigger mechanism. The following letter sub-sections pertain to surface water only.

The objective of the surface water trigger mechanism is to use results of the ongoing surface water monitoring program to monitor for consistent impacts resulting from the discharge of landfill leachate-impacted groundwater to surface water within the Bonnechere River and to trigger the implementation of a contingency plan if necessary to protect downstream surface water quality within the river.

2.1 Compliance Evaluation Parameters

The Leachate Indicator Parameters for the Renfrew Landfill are identified as alkalinity, ammonia, DOC, TKN, boron, iron, manganese and potassium. The Compliance Evaluation Parameters are considered to be the Leachate Indicator Parameters with PWQO: iron, boron, and unionized ammonia. At the request of the MECP

Surface Water Reviewer in comments provided on November 15, 2024, manganese will also be considered a Compliance Evaluation Parameter.

2.2 Compliance Evaluation Locations

Of the three surface water sampling locations in the Bonnechere River, the Compliance Evaluation Locations are proposed to be S9, which is located adjacent to the Site and S8, which is located further downstream of S9 and the landfill.

2.3 Proposed Surface Water Trigger Mechanism

The surface water Trigger Concentration is a concentration of a single Compliance Evaluation Parameter at a single Compliance Evaluation Location. For the Renfrew landfill the Trigger Concentration is 75% of the PWQO if the surface water Compliance Evaluation Parameter is a Policy 1 parameter. Alternatively, if the Compliance Parameter is a Policy 2 parameter, the surface water Trigger Concentration is the background surface water quality concentration at S7D collected during the same monitoring event. The Trigger Concentration for manganese will be the concentration provided by the Canadian Water Quality Guidelines (CWQGs) for the protection of aquatic life for dissolved manganese.

If the exceedance of a Trigger Concentration is confirmed, a three-step process will be initiated for the purpose of determining whether implementation of the contingency plan is warranted.

The three-step process will be as follows:

Step 1

Assess whether or not the exceedance of the Trigger Concentration is likely due to the discharge of leachate-impacted groundwater into the river or whether it is partially or wholly explicable by other factors. This can be achieved by immediately re-sampling all surface water locations in the monitoring program within 60 days of the exceedance of the Trigger Concentration if deemed necessary. If re-sampling confirms that the concentration is above the Trigger Concentration, this shall be considered one trigger exceedance.

Step 2

When three confirmed consecutive sampling sessions exceeding the Trigger Concentration occur representatives of the Town and the MECP will discuss the results of Step 1 to decide whether implementation of an additional investigation program and/or the contingency plan is warranted.

Step 3

If the conclusion of Step 3 is affirmative, then the additional investigation program and/or the contingency plan would be implemented.

A letter dated July 20, 2021, to the MECP addressed Condition 8(9) of ECA No. A410401, providing a summary of possible contingency measures to be considered by the Town in the event of a site-specific trigger level creating surface water impacts to the Bonnechere River.

3.0 CLOSURE

We trust that this meets your needs at this time. If you have any further questions, please don't hesitate to contact the undersigned.

Yours truly,

WSP Canada Inc.

Andria L. Caletti, P. Eng.
Environmental Engineer

Trish L. Edmond, M.E.Sc., P.Eng.
Principal, Geoenvironmental Engineer

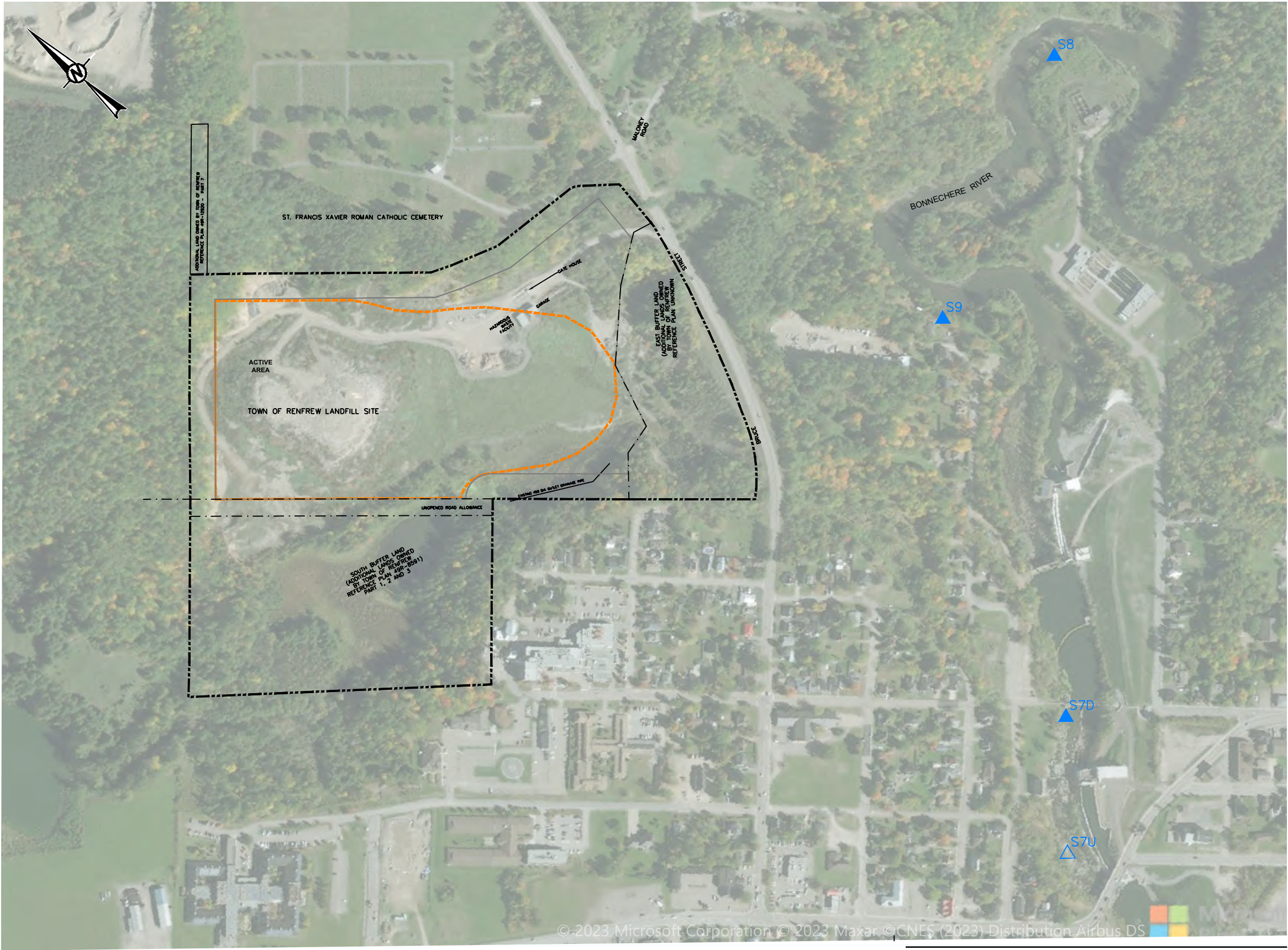
HA/ALC/PLE/kdv

[https://wsponline.sharepoint.com/sites/gld-169353/project files/5 technical work/surface water trigger update/rev 1/22573034-6000-l-sw-trigger mechanisms-20july2023.docx](https://wsponline.sharepoint.com/sites/gld-169353/project%20files/5%20technical%20work/surface%20water%20trigger%20update/rev%201/22573034-6000-l-sw-trigger%20mechanisms-20july2023.docx)

CC: Amanda Springer, Town of Renfrew
Eric Withers, Town of Renfrew
Thandeka Ponalo, MECP

Attachments: Figure 8 from the 2022 Environmental Monitoring and Operations Report

Path: \\golder-gds-complex\data\file\Ontario\Town of Renfrew\Renfrew_Landfill\99_PROJ\22573034_TOR_RenfrewLandfill\0_PROD\0002_2022_AMR | File Name: 22573034-0002-CW-0008.dwg | Last Edited By: aburnsveld-dewar Date: 2023-04-08 Time: 11:18:13 AM | Plotted By: Aburnsveld-dewar Date: 2023-04-08 Time: 11:19:15 AM



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CLIENT
TOWN OF RENFREW

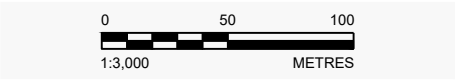
CONSULTANT



YYYY-MM-DD	2023-03-17
DESIGNED	HA
PREPARED	ABD
REVIEWED	HA
APPROVED	AC

LEGEND

- BONNECHERE RIVER SURFACE WATER STATION
- BONNECHERE RIVER SURFACE WATER STATION (ABANDONED)
- SITE BOUNDARY
- LICENSED FILL LIMIT (10 hectares)



REFERENCE(S)

1. BASE PLAN SUPPLIED BY BASE MAPPING CO. LTD., NOVEMBER 2, 2010
2. 2012, 2014, 2016, 2018, 2019,2020 TOPOGRAPHICAL SURVEYS BY GOLDER ASSOCIATES LTD., DATED NOVEMBER 27, 2012, OCTOBER 17, 2014, DECEMBER 14, 2016, MAY 18, 2018, AUGUST 8, 2018 , JANUARY 14, 2019 AND DECEMBER 10, 2020.
3. 2022 AERIAL DRONE SURVEY BY VOLATUS AEROSPACE, NOVEMBER 22, 2022.
4. PROJECTION: TRANSVERSE MERCATOR, DATUM: NAD 83, COORDINATE SYSTEM: UTM ZONE 18, VERTICAL DATUM: CGVD28

PROJECT

2022 ENVIRONMENTAL MONITORING AND OPERATIONS
RENFREW LANDFILL

TITLE
SURFACE WATER SAMPLING LOCATIONS IN THE BONNECHERE RIVER

PROJECT NO.	CONTROL	REV.	FIGURE
22573034	0002	A	8

25 mm IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM A3/B



FINAL

TECHNICAL MEMORANDUM

DATE March 11, 2025

Project No. CA0050242.5121

TO Thandeka Ponalo, Environmental Compliance Officer
Ministry of the Environment, Conservation and Parks

CC Amanda Springer, Manager of Environmental Services
Eric Withers, Director of Development,
Environment & Infrastructure

FROM Trish Edmond and Andria Caletti

EMAIL andria.caletti@wsp.com

PROPOSED GROUNDWATER AND SURFACE WATER MONITORING PROGRAM SUPPORTING REVISED WASTE FILL LIMIT AND FINAL CONTOURS ECA AMENDMENT APPLICATION, RENFREW LANDFILL SITE, RENFREW, ONTARIO

INTRODUCTION

This memo has been prepared to present the proposed updated groundwater and surface water monitoring programs for the Renfrew Landfill Site for review by the groundwater and surface water reviewers of the Ministry of the Environment, Conservation and Parks (MECP) Eastern Region Office. Concurrence from the groundwater and surface water reviewers is required in advance of submission of the application to amend Environmental Compliance Approval (ECA) No. A410401 dated December 4, 2024, to revise the waste fill limit and final contours, as well as hours of operation, at the Renfrew Landfill Site (the Site).

BACKGROUND

The Renfrew Landfill Site is owned and operated by the Town of Renfrew (Town) under ECA No. A410401. The Town is submitting an amendment to the ECA to revise the final contours of the landfill because the approved final contours from 2002 (provided in Item 9 of Schedule A to the ECA) are not considered constructable as designed at this time. The existing native topography surrounding the northwest edge of the landfill footprint has changed since the 2002 design due to aggregate (sand) extraction, resulting in a design that cannot be constructed as is without importing significant amounts of fill material. In addition, the changes to the topography surrounding the landfill footprint in the north portion of the Site since 2002 has resulted in steeper angles than what would be required to provide an adequate factor of safety against slope failure (sloughing). A geotechnical assessment provided by WSP dated January 2025 confirmed that the native sand slopes surrounding the landfill are potentially unstable in the areas where the slope is greater than 2 horizontal to 1 vertical (2H:1V). Further, the ability to place additional waste with adequate compaction and cover application to the approved top of waste elevations is significantly limited by the existing geometry (i.e., steep waste slopes). The amendment application will also include a change to the operating hours of the Site.

On January 11, 2024, a call was held between representatives of the Town, WSP Canada Inc. (WSP), MECP Ottawa District Office, groundwater and surface water reviewers from the MECP Eastern Region Office, and MECP Environmental Permissions Branch during which the above issues were identified. The summary e-mail of that call is provided for reference in Attachment 1 to this memo.

As part of the revision to the final contours, the Town is proposing a change in the waste fill limit. The proposed change would extend the waste fill limit toward the west (while not exceeding the approved capacity for the Site and respecting the required 30m buffer). The existing approved volumetric capacity of the Renfrew Landfill would remain the same and not be increased. A westward extension of the waste fill limit in this area would provide a relatively large and flat area for the Town to place and compact the waste in lifts from the bottom up, allowing the Town to realize the capacity on the west side of the Site that is currently inaccessible due to the steep waste slopes, and to achieve proper compaction and cover of the waste placed in this area. The approval of the revised final contours and waste limit is specifically a critical path item with respect to the remediation of the steep waste slopes, which is currently impeding the Town from safely being able to place cover material on the waste in place. Waste slope remediation cannot proceed in earnest until the ECA amendment to revise the final contours and waste limit is in place.

As discussed during the January 2024 call, an update to the Design and Operations Report for the Renfrew Landfill Site is required as part of the application to amend ECA No. A410401, including a revision to the groundwater and surface water monitoring programs for the Site. The following proposed revisions to the monitoring programs will be incorporated into the updated Design and Operations Report following receipt of concurrence from the groundwater and surface water technical support section of the MECP.

PROPOSED FINAL CONTOUR REVISIONS AND PROPOSED UPDATED MONITORING PROGRAMS

The envelop of the area to be considered in the change in waste fill limit and revised contours at the Renfrew Landfill is shown in attached Figure 1. As can be seen the waste fill limit is proposed to extend up to approximately 40 metres to the southwest of the current approved footprint, which would include a corridor for a future access road along the edge of the extension. Other changes to the final contours will include various vertical updates to accommodate fill above the current approved limits, or modifications to the final slopes within the current waste limit for operational reasons (efficiency in landfilling, minimizing adjacent earthworks or adjustments to accommodate required changes to the steep native sand slopes around the perimeter).

Existing surface water monitoring locations are presented on Figure 2, and include one on-site location (S6), and three off-site locations (S7D, S8 and S9) in the Bonnechere River. Previous investigations have indicated that there is no natural surface water outlet from the landfill site; surface water has been interpreted to exit the Site via the subsurface (including at a natural depression or “sump” near the existing surface water monitoring location S6 that receives drainage from the marshy area in the south bufferlands) and/or by evaporation and evapotranspiration processes only. It is interpreted that the groundwater downgradient of the landfill is ultimately discharging to the Bonnechere River located southeast of the Site, and as such (and as detailed in the revised trigger mechanism dated December 2, 2024, provided as Item 28 of the ECA), compliance is evaluated by assessing surface water quality in the Bonnechere River downgradient from the Site. From a surface water perspective, the existing monitoring program adequately captures potential impacts from the landfill and the proposed revisions to waste fill limit and final contours. During the January 11, 2024, call the surface water reviewer requested that the full suite of leachate indicator parameters be added to surface water monitoring stations in the Bonnechere River. This change in surface water quality analysis was made to surface water samples collected in 2024 although it is not yet captured in the Site's ECA. As such Table 1 provides the proposed details of the surface water monitoring program including the addition of leachate indicator parameters for surface water collected from the Bonnechere River.

Existing groundwater monitoring well locations are presented on Figure 1. Groundwater flow on the Site is interpreted to be southeasterly toward the Bonnechere River. The current monitoring program does not include monitoring wells located in the area interpreted to be downgradient from the proposed southwest extension to the waste fill limit. As such, it is recommended that two additional groundwater monitoring wells be installed and added to the monitoring program adjacent to and downgradient from the waste fill limit extension area as indicated on Figure 1. Installation of the new monitoring wells is proposed to occur as soon as practical following waste slope remediation activity by the Town, some of which will involve placement of waste in the southwest extension area. It is proposed that this installation occur after the waste slope remediation activity for reasons related to safe access by a drill rig and risk of damage to the newly installed wells during this activity. The exact location of the new monitoring wells may vary slightly as accessibility is assessed. Table 2 outlines the proposed groundwater sampling frequency and parameters to be evaluated at existing and proposed future monitoring wells. There are no changes proposed to existing groundwater monitoring wells, with the exception of the addition of bacterial analysis (i.e., E.coli, fecal coliforms and total coliforms) at BH11-01, OMM6, OMM7, OMM14S, OMM14M, and BH10-2B as requested by the MECP Technical Support Section groundwater reviewer in comments dated January 17, 2025 on the 2023 annual monitoring report for the Site. It is noted that the MECP Technical Support Section groundwater reviewer also recommended the undertaking of a study to analyze groundwater for Per and Polyfluoroalkyl Substances (PFAS) to isolate leachate impacted groundwater from those interpreted to be impacted by a separate source and to delineate the vertical extent of the leachate plume. It is understood that this recommendation is to conduct a study and that at this time sampling and analysis for PFAS in groundwater is not proposed to become a regular part of the monitoring program. As such PFAS monitoring is not included in the details in Table 2. All other recommendations from the MECP Technical Support Section groundwater reviewer will be discussed in the 2024 Annual Monitoring Report for the Site.

TRIGGERS AND CONTINGENCY PLANS

The proposed change in waste fill limit and revision to the final contours do not necessitate any update to the existing Site trigger mechanisms and contingency plans.

CLOSURE

We trust that this letter meets your current needs. If you have any questions, please do not hesitate to contact the undersigned.

WSP Canada Inc.

Andria Caletti, P.Eng.
Senior Environmental Engineer

Trish Edmond, M.E.Sc., P.Eng.
Senior Principal Environmental Engineer

ALC/PLE/kdv

Attachments: Table 1
Table 2
Figure 1
Figure 2
January 11, 2024, e-mail summarizing consultation call

[https://wsponlinecan.sharepoint.com/sites/ca-ca0050242.5121/shared documents/06. deliverables/1. revised monitoring programs/techmemo_renfrewmon_march 11 2025 - final.docx](https://wsponlinecan.sharepoint.com/sites/ca-ca0050242.5121/shared%20documents/06.%20deliverables/1.%20revised%20monitoring%20programs/techmemo_renfrewmon_march%2011%202025%20-%20final.docx)

Table 1: Proposed Surface Water Monitoring Program

Monitoring Sessions	Sampling Stations	Laboratory Parameters	Field Parameters
Spring and Fall	S6 (on-Site) S7D, S8 and S9 (Bonnechere River)	Arsenic, barium, boron, cadmium, chromium, calcium, copper, iron, lead, magnesium, manganese, mercury, potassium, sodium, zinc, chloride, nitrate, nitrite, total phosphorous, alkalinity, ammonia, biochemical oxygen demand (BOD), chemical oxygen demand (COD), dissolved organic carbon (DOC), hardness, phenols, total dissolved solids (TDS), total Kjeldahl nitrogen (TKN), total suspended solids (TSS)	Temperature, pH, conductivity, dissolved oxygen, and flow

Table 2: Proposed Groundwater Monitoring Program

Monitoring Sessions	Sampling Stations	Laboratory Parameters	Field Parameters
Spring and Fall	OMM5, OMM6, OMM7, OMM8, OMM9, OMM14S, OMM14M, OMM14D, OMM15, BH10-1, BH10-2A, BH10-2B, BH11-01 Two new monitoring wells near waste limit extension (see Figure 1)	Arsenic, barium, boron, cadmium, chromium, calcium, copper, iron, lead, magnesium, manganese, mercury, potassium, sodium, zinc, chloride, nitrate, nitrite, total phosphorous, alkalinity, ammonia, chemical oxygen demand (COD), dissolved organic carbon (DOC), hardness, sulphate, total dissolved solids (TDS), total Kjeldahl nitrogen (TKN), phenols	Temperature, pH, conductivity
Spring and Fall	OMM6, OMM7, OMM14S, OMM14M, BH10-2B, BH11-01	E.coli, fecal coliforms, total coliforms	
Fall	OMM7, OMM8, OMM9, OMM14D, OMM15, BH11-01	Volatile organic compounds (VOCs)	

Path: \\vorp.phwan.net\CAMIS\GIS\DOTX_Data\GIS\Clients\Town_of_Renfrew\Renfrew_Landfill\99_PROJ\CA0050242_5121\40_PROD\001_Revise_Monitoring_Prog_Memo | File Name: CA0050242_5121\40_PROD\001_Revise_Monitoring_Prog_Memo | Last Edited By: wds_dale.mccoy | Date: 2025-03-10 Time: 11:54:39 AM | Printed By: wds_dale.mccoy | Date: 2025-03-10 Time: 11:59:42 AM



LEGEND

- BONNECHERE RIVER SURFACE WATER STATION
- PROPOSED EXTENSION OF FILL LIMIT (INCLUDING FUTURE ACCESS ROAD)(APPROX.)
- SITE BOUNDARY
- LICENSED FILL LIMIT (10 hectares)

NOTE(S)

1. PROJECTION: TRANSVERSE MERCATOR, DATUM: NAD 83, COORDINATE SYSTEM: UTM ZONE 18.

2. VERTICAL DATUM: CGVD28.

NOT FOR CONSTRUCTION

CLIENT
TOWN OF RENFREW

CONSULTANT



YYYY-MM-DD	2025-03-06
DESIGNED	XXX
PREPARED	DM
REVIEWED	ALC
APPROVED	ALC

PROJECT
PROPOSED GROUNDWATER AND SURFACE WATER MONITORING PROGRAM
SUPPORTING REVISED WASTE FILL LIMIT AND FINAL CONTOURS ECA
AMENDMENT APPLICATION
RENFREW LANDFILL SITE, RENFREW, ONTARIO

TITLE
SURFACE WATER MONITORING LOCATIONS

PROJECT NO.	CONTROL	REV.	FIGURE
CA0050242.5121	0001	A	2

28 mm IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM A4S B

From: [Munasinghe, Ranjani \(MECP\)](#)
To: [Caletti, Andria](#); [Ponalo, Thandeka \(MECP\)](#); [Tieu, Emily \(She/Her\) \(MECP\)](#); [Martin, Eric \(He/Him\) \(MECP\)](#); [Cruikshank, Dana \(MECP\)](#); [Amanda Springer](#); [Eric Withers](#); [Edmond, Trish](#)
Subject: RE: Renfrew Landfill (ECA A410401) - Summary of Pre-Consultation January 2024
Date: January 23, 2024 7:34:41 AM
Attachments: [image001.png](#)

Good Morning,

Please see the highlighted section. We agreed you can use stage 5 area as long as 557,400 m³ is not exceeded by this action. But to change the design you still require an amendment to the ECA.

Kind Regards,

Ranjani Munasinghe, Ph.D., P.Eng. (She/Her)
Senior Waste Engineer | Waste Approvals
T: 437-776-5578

If you have any accommodation needs or require communication supports or alternate formats, please let me know.

Si vous avez des besoins en matière d'adaptation, ou si vous nécessitez des aides à la communication ou des médias substituts, veuillez me le faire savoir.

From: Caletti, Andria <andria.caletti@wsp.com>
Sent: Friday, January 19, 2024 10:35 AM
To: Ponalo, Thandeka (MECP) <Thandeka.Ponalo@ontario.ca>; Tieu, Emily (She/Her) (MECP) <Emily.Tieu@ontario.ca>; Munasinghe, Ranjani (MECP) <Ranjani.Munasinghe@ontario.ca>; Martin, Eric (He/Him) (MECP) <Eric.Martin2@ontario.ca>; Cruikshank, Dana (MECP) <Dana.Cruikshank@ontario.ca>; Amanda Springer <aspringer@renfrew.ca>; Eric Withers <ewithers@renfrew.ca>; Edmond, Trish <trish.edmond@wsp.com>
Subject: Renfrew Landfill (ECA A410401) - Summary of Pre-Consultation January 2024

CAUTION -- EXTERNAL E-MAIL - Do not click links or open attachments unless you recognize the sender.

Hi All,

The following is a summary of the call held on January 11, 2024 regarding the short-term landfilling and proposed final contour revision at the Renfrew Landfill Site (Site) (ECA No. A410401). Materials presented at the meeting are attached.

-

Attending:

Ministry of the Environment, Conservation and Parks (MECP): Thandeka Ponalo (District Office), Emily Tieu (District Office), Ranjani Munasinghe (Permissions), Eric Martin (GW TS), Dana Cruikshank (SW TS)

Town of Renfrew (Town): Amanda Springer, Eric Withers

WSP: Trish Edmond, Andria Caletti

WSP indicated that the purpose of the meeting was to confirm the regulatory requirements and approval process associated with some short and long term options that the Town is considering in order to address some existing conditions impacting landfill operations at the Site. WSP presented the agenda for the meeting, which included a discussion of the existing conditions having an impact on operations, proposed solutions (i.e., update to the final contours and/or waste fill limit), discussion of regulatory requirements and review/approval process, and discussion of plans for short term landfilling in the area of the site that has historically been understood to be “Stage 5”.

Overview of Existing Conditions

WSP described the following two issues that are impacting landfill operations at the Site:

1. **Steep Waste Slopes** along the north and west sides of the landfill that have been developed over time are too steep to adequately compact and provide soil cover. There is some fill above the approved contours that cannot safely be removed due to the steepness of the slopes, noting that the approved contours are irregular and not feasible or practical to landfill to in some areas of the landfill. Due to the height of the steep slopes and their extents along the west and north sides of the landfill, it was acknowledged that this could not be rapidly addressed by the Town, and an engineering solution is required to address the issue.
2. **Steep Native Sand Slopes** around the north and west sides of the landfill have been identified to be potentially unstable as they are in some cases much steeper than 2H:1V. For reasons related to safety, waste placement in close proximity to the toe of these sand slopes should not occur until the sand slopes are flattened. In particular in the north corner where there remains airspace based on the existing final contours, there is limited space between the edge of the waste and the toe of the native sand slope, so continued landfilling in this area to meet the approved contours would require building up the top of the waste mound; without the ability to fill near the toe of slope, there is a risk of repeating the development of steep waste slopes as occurred on the west side of the landfill.

Proposed Solution: Final Contour / Waste Limit Revision

Consistent with previous discussions with the MECP in 2023, the Town is planning to submit an ECA Amendment to revise the final contours for the Site. The revised final contours would capture the fill above approved contours, buttress the steep waste slopes, correct the irregularities in the current approved contours and would consider requirements to regrade or limit landfilling adjacent to the native sand slopes. The revised contours would be developed to respect the existing identified but unapproved capacity of the landfill of 1,069,000 m³ defined by Condition 7.4 of ECA No. A410401. It was clarified by the MECP that revised contours should also be provided showing the extent of proposed waste placement up to a volume of 557,400 m³, which is the volume that is currently approved for landfilling without submission and approval of documentation defined by Condition 7.6 of ECA No. A410401.

As part of the revision to the final contours, the Town is considering a change in the waste fill limit.

The proposed change would extend the waste fill limit toward the west (while not exceeding the approved capacity for the site, and respecting the required 30m buffer). The MECP confirmed that a hydrogeological study would not be required to support such a change to the waste limit, unless the revision resulted in a volume exceeding 557,400 m³ in which case a hydrogeological study would be required in accordance with Condition 7.6 of ECA No. A410401. GW TS and SW TS indicated that they had no issue with the westward extension of the waste limit as described.

The MECP clarified that a revision to the final contours (whether the waste limit is proposed to change or not) would require:

- A revision to the Design and Operations (D&O) Report for the Site, to be submitted as supporting documentation for the ECA Amendment Application for the final contour revision.
- Concurrence from Groundwater and Surface Water Technical Support with the monitoring programs proposed in the D&O Report.
 - Both the representatives from GW TS and SW TS agreed that the proposed monitoring programs could be provided separate from the D&O Report for review.
 - The representative from SW TS indicated that they would like for the proposed surface water monitoring program to include the full suite of leachate indicator parameters for the stations in the Bonnechere River.

Short-Term – Landfilling in Stage 5

WSP presented the existing figures from the D&O Report (1997) indicating a delineation between “Stage 4” (i.e., approved) and “Stage 5” (requiring approval). As discussed above, the Town is limited in their ability to continue to place waste in the west, north and east portions of the Site due to the steep waste slopes and / or steep native sand slopes, and as such the Town would like to undertake landfilling at the south toe of the existing landform (shown as Stage 2-4). Consistent with the discussion regarding the final contour re-design, it was agreed that the requirement for submissions in accordance with Condition 7.6 of ECA No. A410401 would be triggered by the intended placement of waste in excess of 557,400 m³ and not based on the specific location of waste placement relative to the delineation indicated in the D&O Report. It was agreed that provided that the 557,400 m³ is not exceeded by this action, the Town could undertake landfilling in this area as soon as needed without submission or approval requirements.

Change to Operating Hours

The Town indicated that they are considering a change to the operating hours for the Site. The MECP confirmed that this could be included in the ECA Amendment Application for the final contour revision, or as a separate application for an administrative amendment. The MECP (Permissions) indicated that neighbours within 500m of the site are required to be notified of proposed changes.

If you have any comments on this record, please don't hesitate to contact us.

Thank you,

Andria



Andria Caletti

Geo-Environmental Engineer, Waste Team Lead

P.Eng.

She/Her

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M+ 1 613-983-4654

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Renfrew Landfill Site

Waste Contour / Waste Fill Limit Modifications

ECA No. A410401

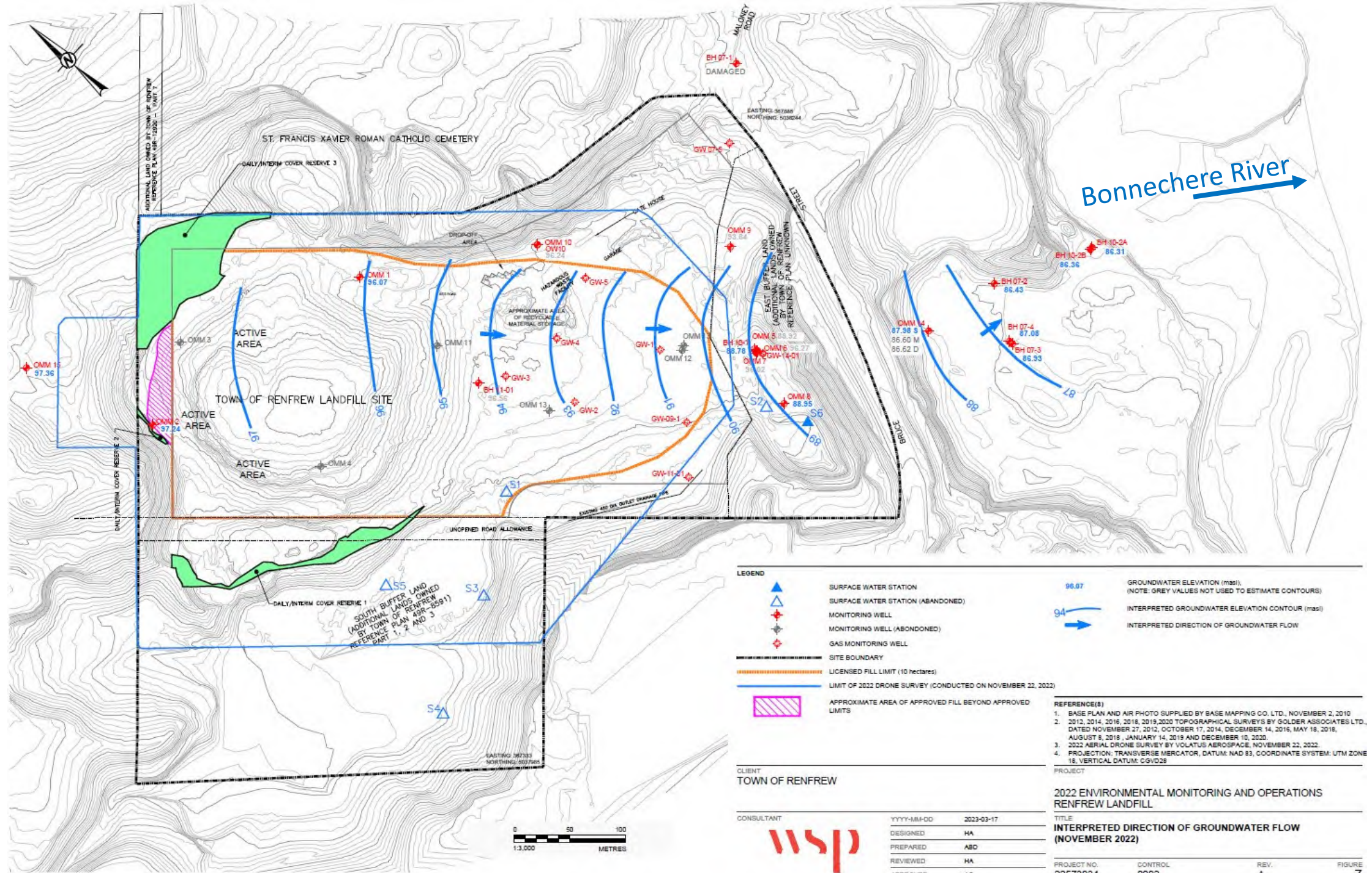
January 11, 2024

Purpose of Meeting:

Confirm the regulatory requirements and review process / timeline associated with some short- and long-term options to address existing conditions affecting landfilling operations at the Renfrew Landfill Site.

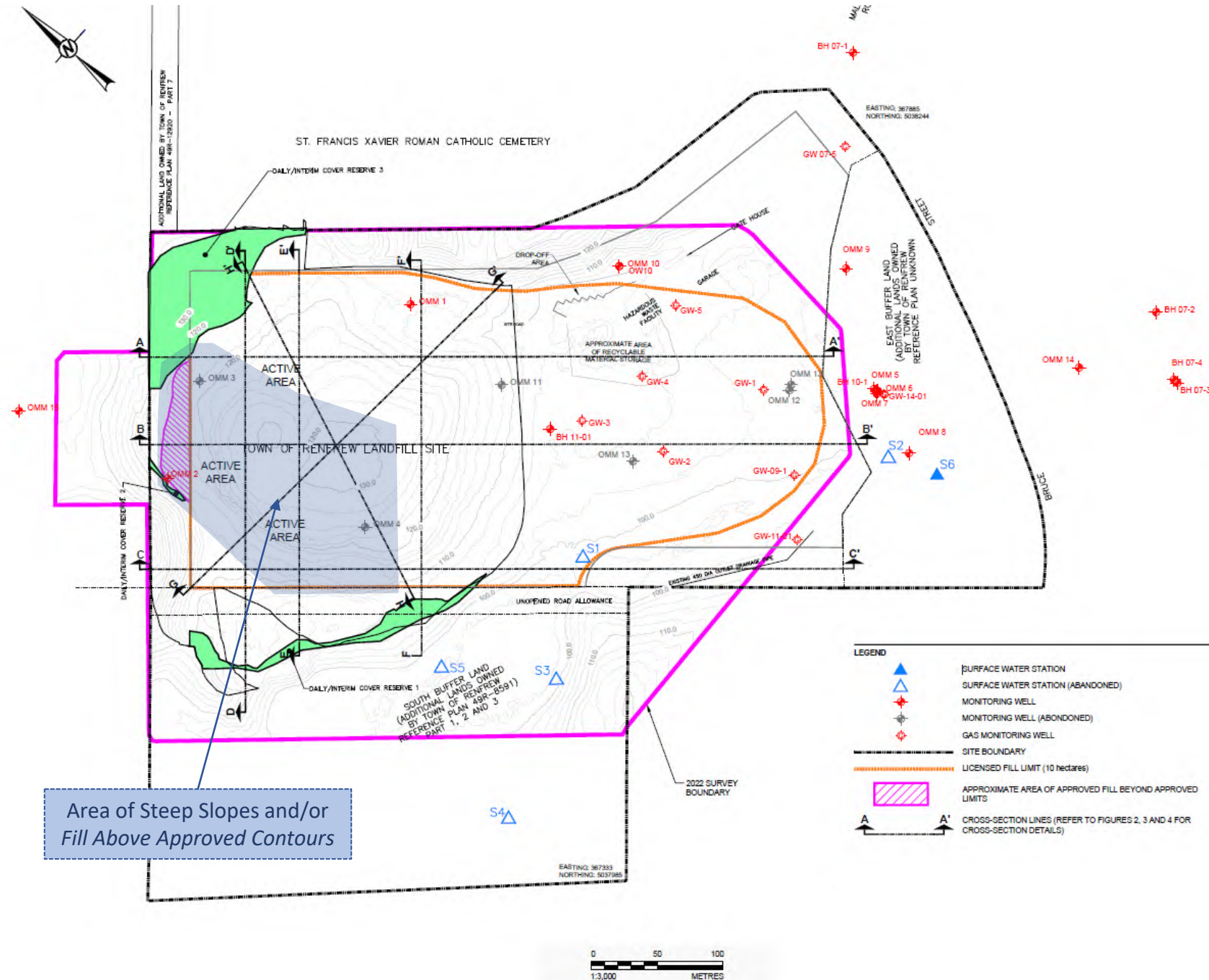
Agenda

- 1) Overview of Existing Conditions
- 2) Proposed Solution: Final Contour / Waste Fill Limit Revision
- 3) Regulatory Requirements and Review Process
- 4) Landfilling in Stage 5

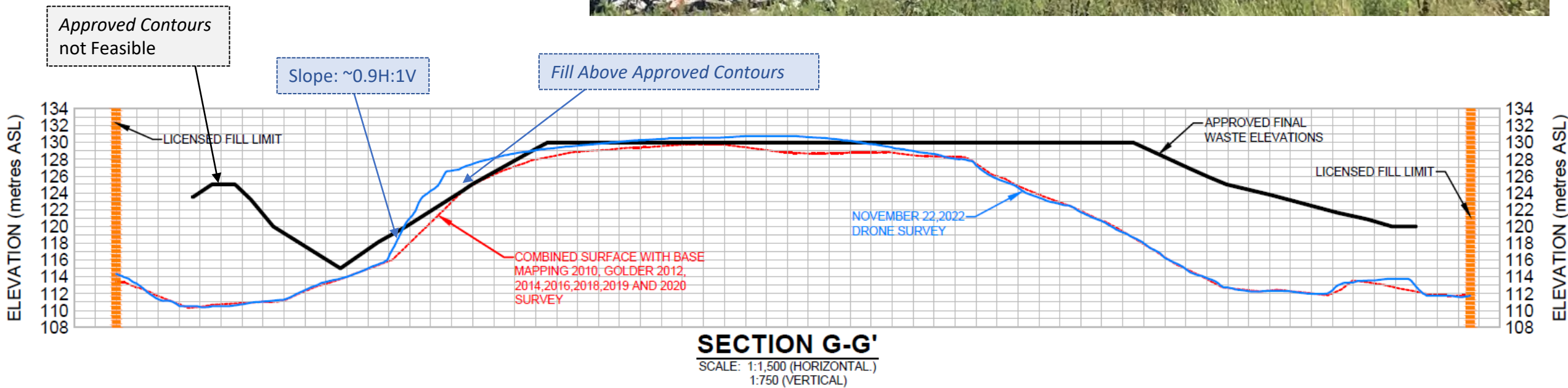
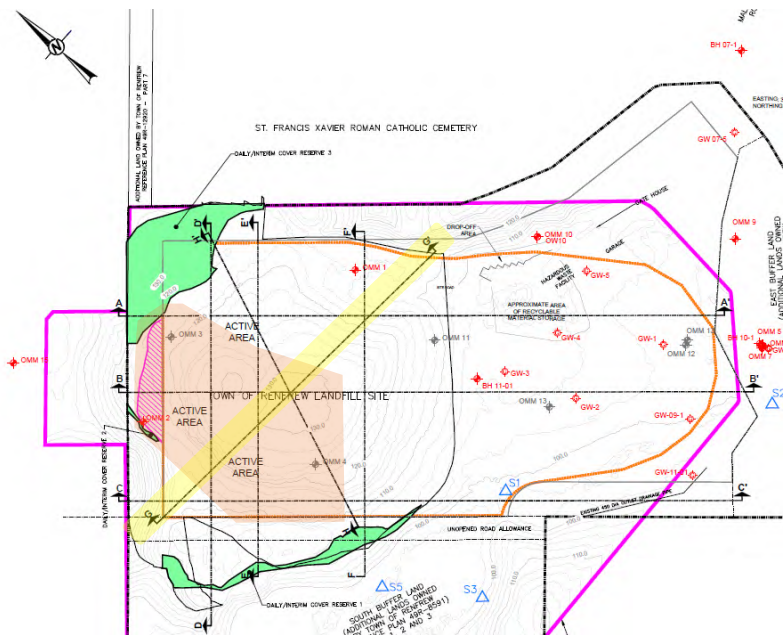


Issue 1: Steep Waste Slopes

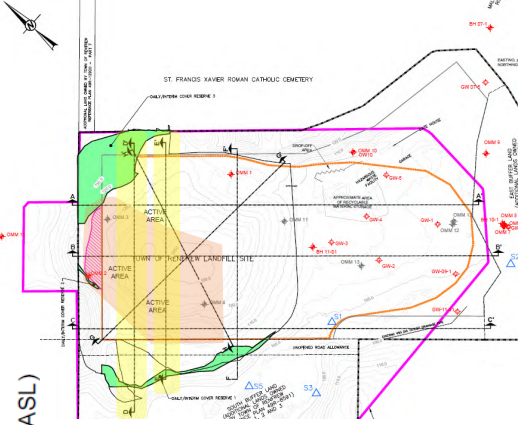
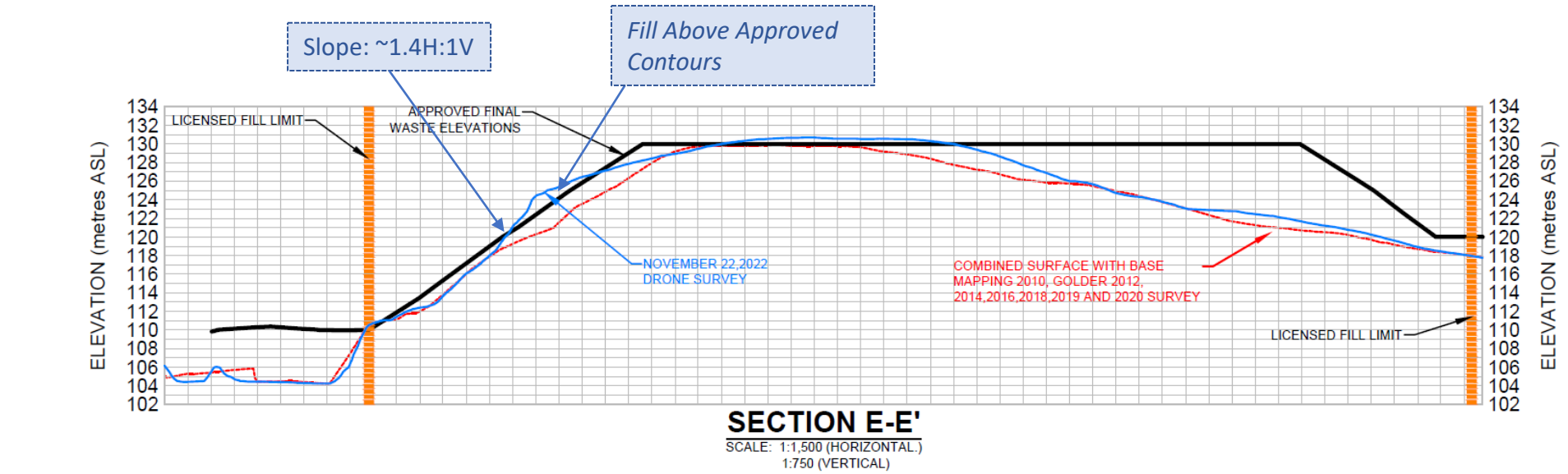
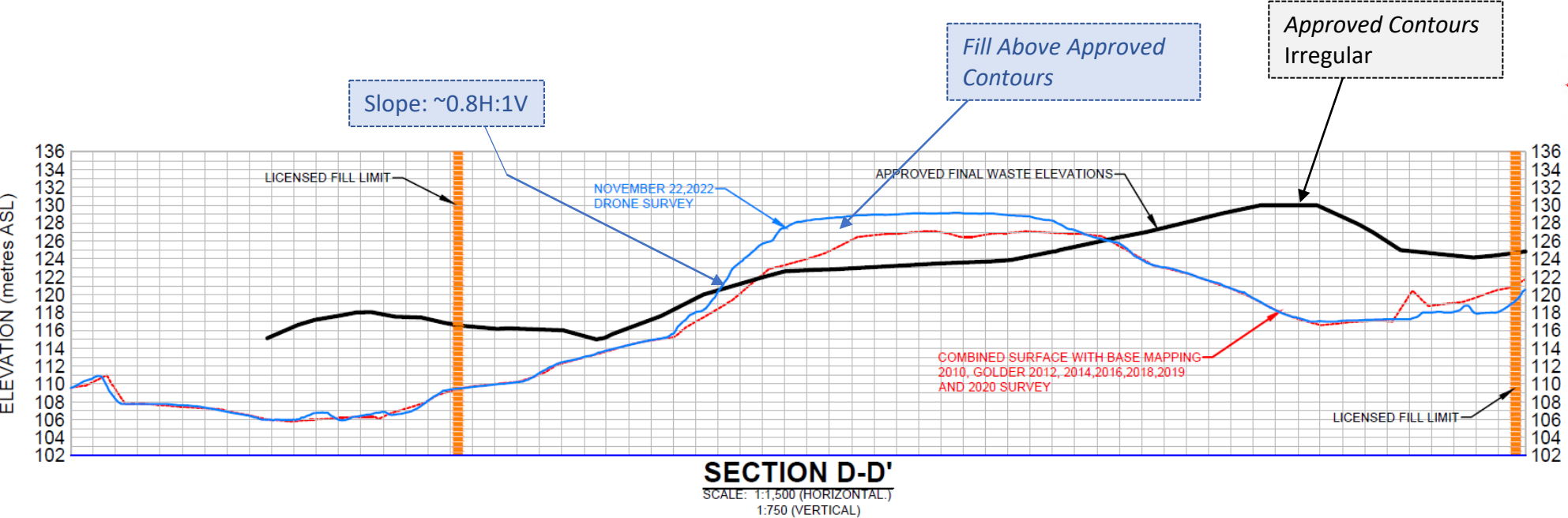
- Existing slopes are **too steep** to landfill (compaction and soil cover)
- There is existing *Fill Above Approved Contours*
 - Not feasible to remove and relocate the *Fill Above Approved Contours* due to steepness of existing slopes
- Approved Contours are irregular, and in some locations not feasible to achieve



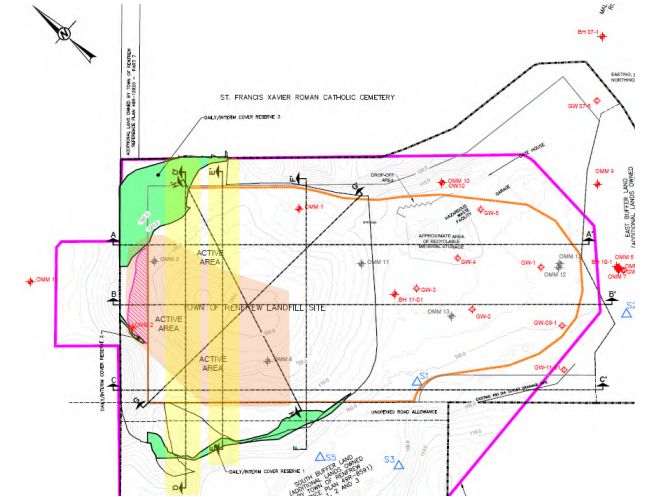
Section G-G'



Section D-D' and E-E'

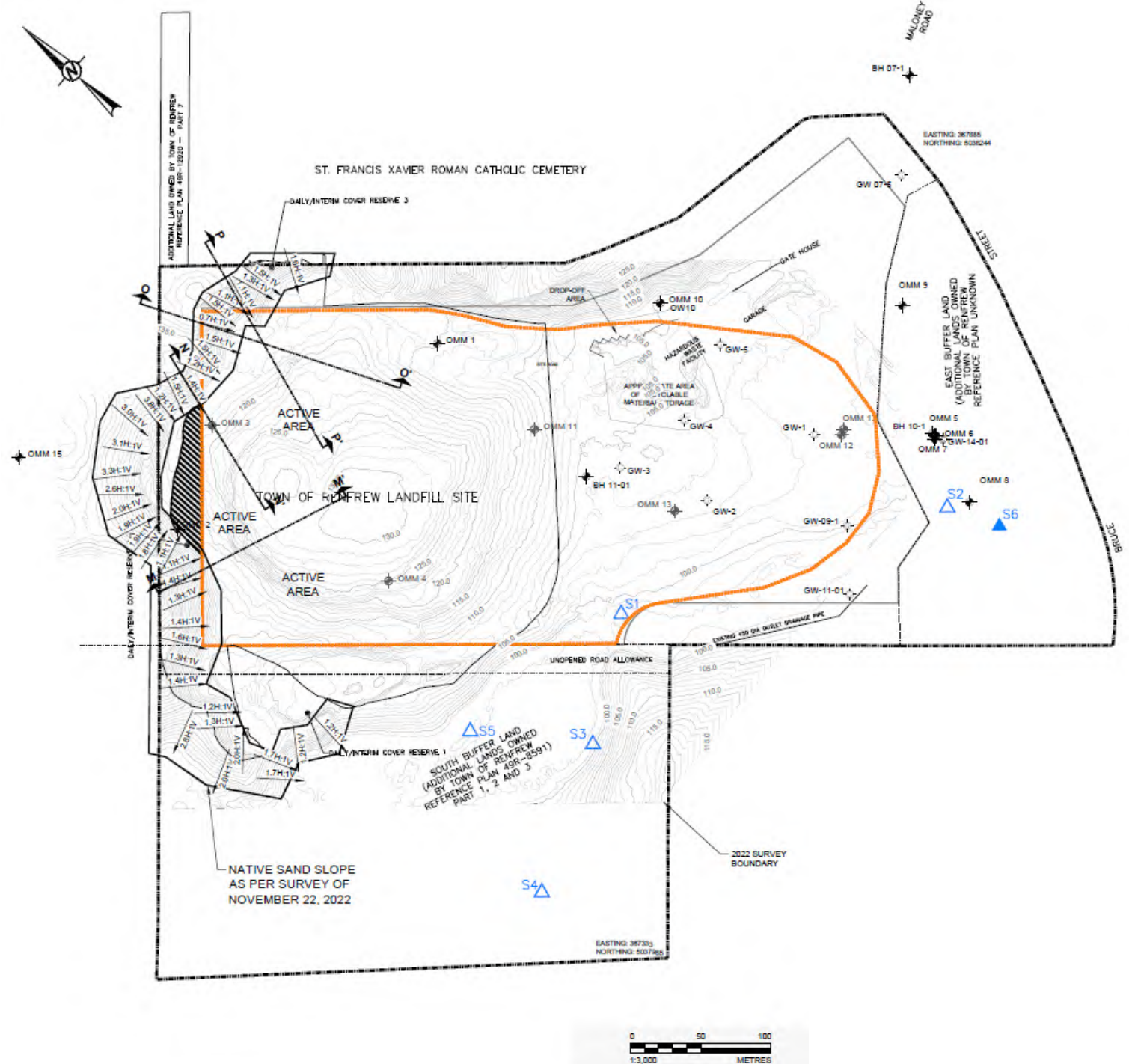


Section D-D' and E-E'



Issue 2: Steep Native Sand Slopes

- Steep native sand slopes around north and west sides of landfill are considered potentially unstable (>2H:1V)
- For reasons of safety, there is limited ability to place waste at the toe of slope
 - Continued waste placement at top of slope risks development of new steep waste slopes



Proposed Solution: Final Contour / Waste Fill Limit Revision

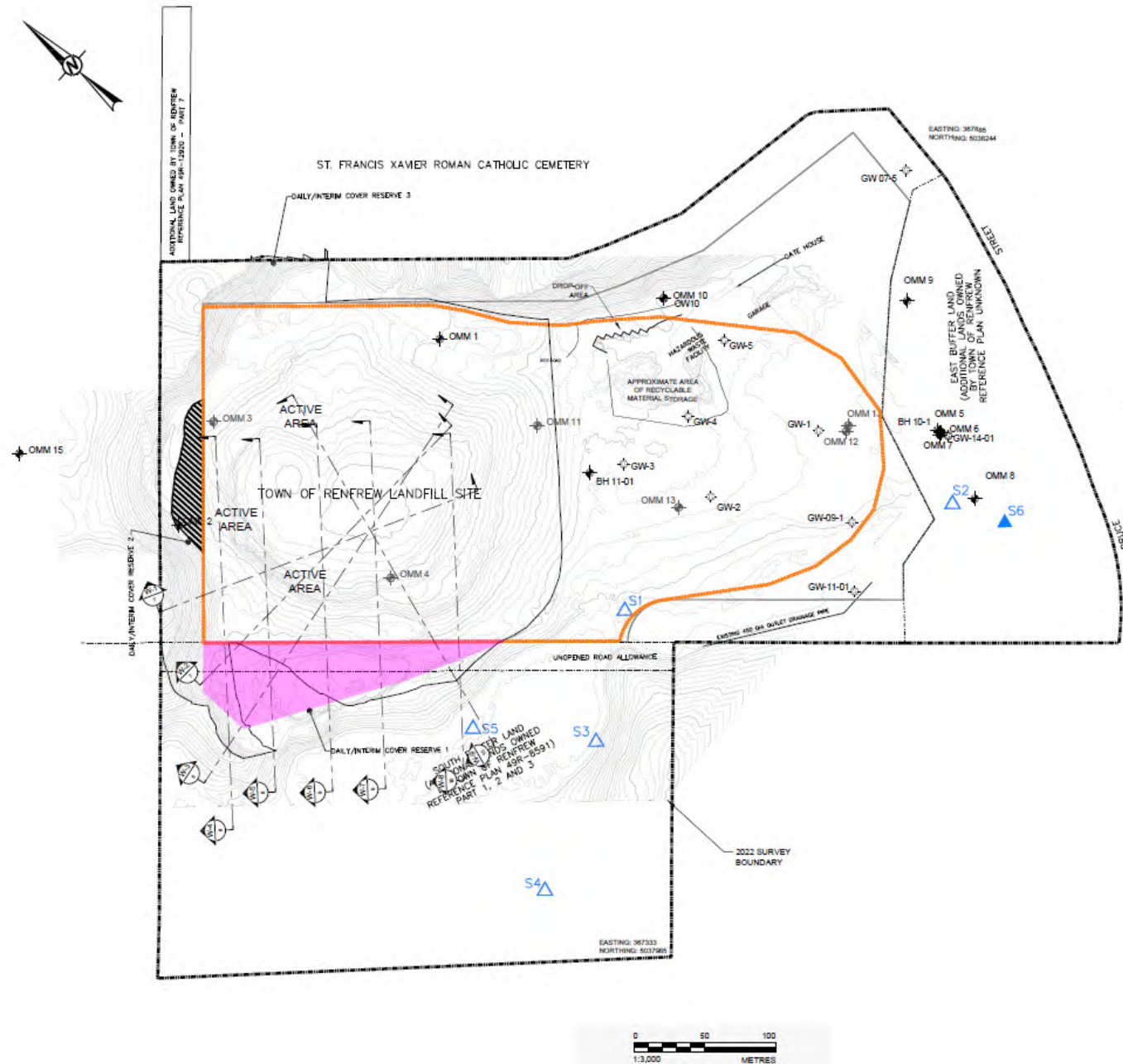
Submit for approval (ECA Amendment) Revised Final Contours to:

- Capture *Fill Above Approved Contours / Fill Beyond Approved Limits*
- Buttress steep waste slopes
- Correct irregularities in the *Approved Contours*
- Consider requirements to regrade and/or limit landfilling adjacent to native sand slopes

The *Revised Final Contours* would be developed to respect the existing capacity defined in **Condition 7.4 of ECA No. A410401**, which states:

The maximum volumetric capacity of the Site, consisting of the waste, daily cover and intermediate cover, but excluding the final cover is 1,069,000 cubic metres.

The *Fill Above Approved Contours / Fill Beyond Approved Limits* would be included in the approved volumetric capacity of 1,069,000 m³.

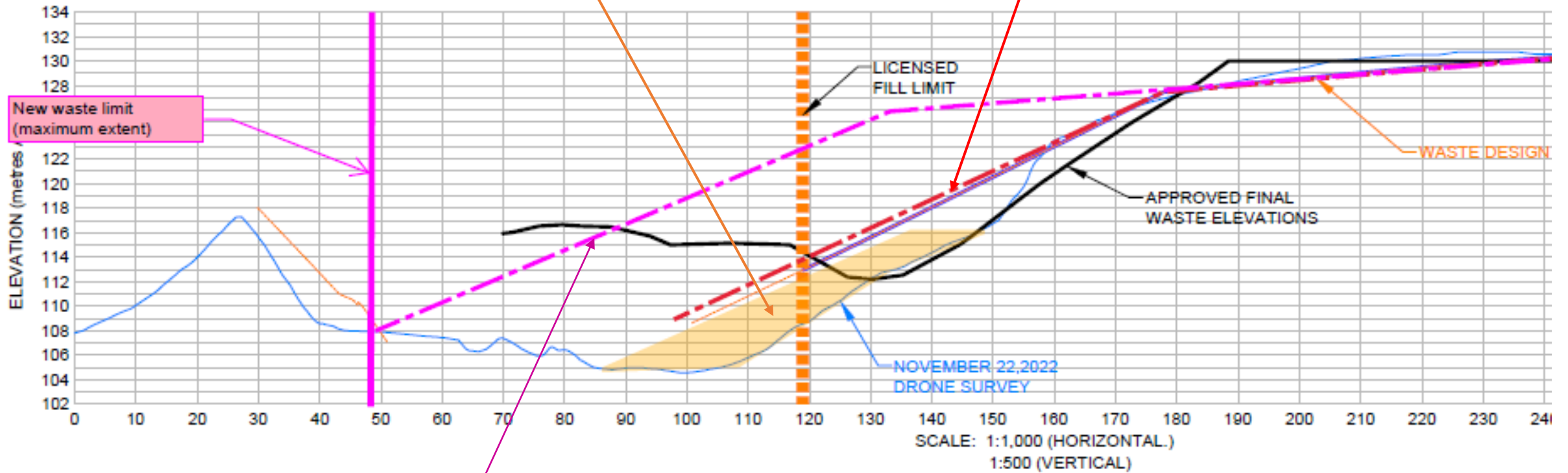


Option for Contour Revision: Extend Waste Fill Limit to the West

- Respect approved maximum capacity (1,069,000 m³)
- Maintain minimum 30m buffer with property boundary
- More efficient use of airspace (see next slide)
- Potential hydrogeological benefit (i.e., re-allocating available airspace to location that is further upgradient)

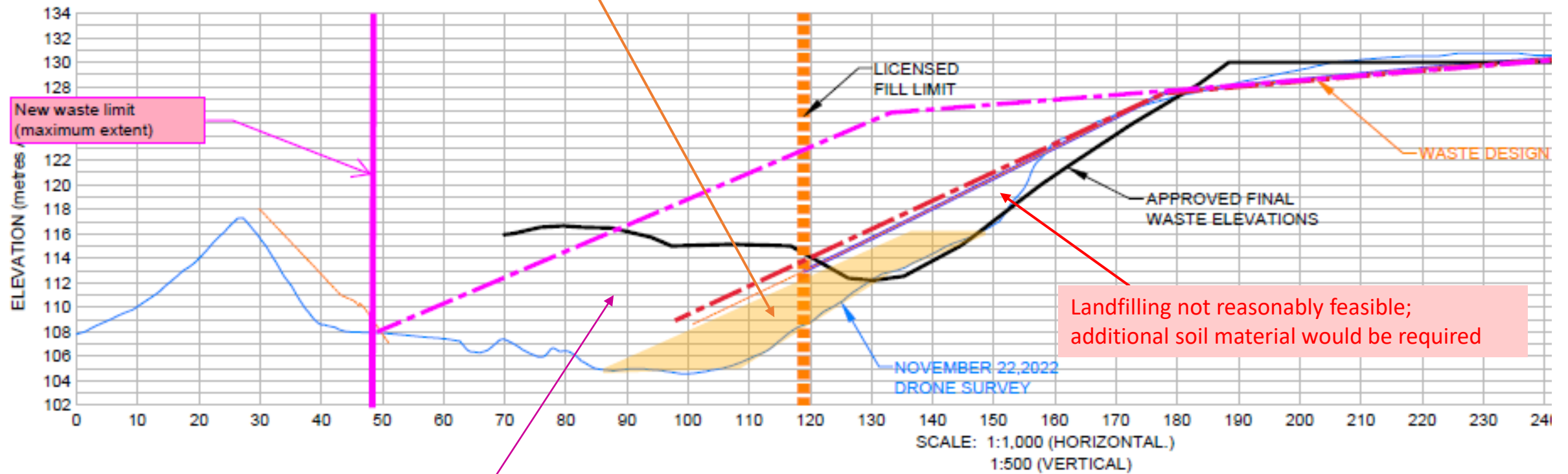
Soil Buttress required to facilitate waste slope regrading;
construction planned for 2024
(Note: uncontaminated soil outside of waste fill limit)

Revised Contours with no extension
(Conceptual Only)



Revised Contours with Extended Waste Fill Limit
(Conceptual Only)

Soil Buttress required to facilitate waste slope regrading;
construction planned for 2024
(Note: uncontaminated soil outside of waste fill limit)



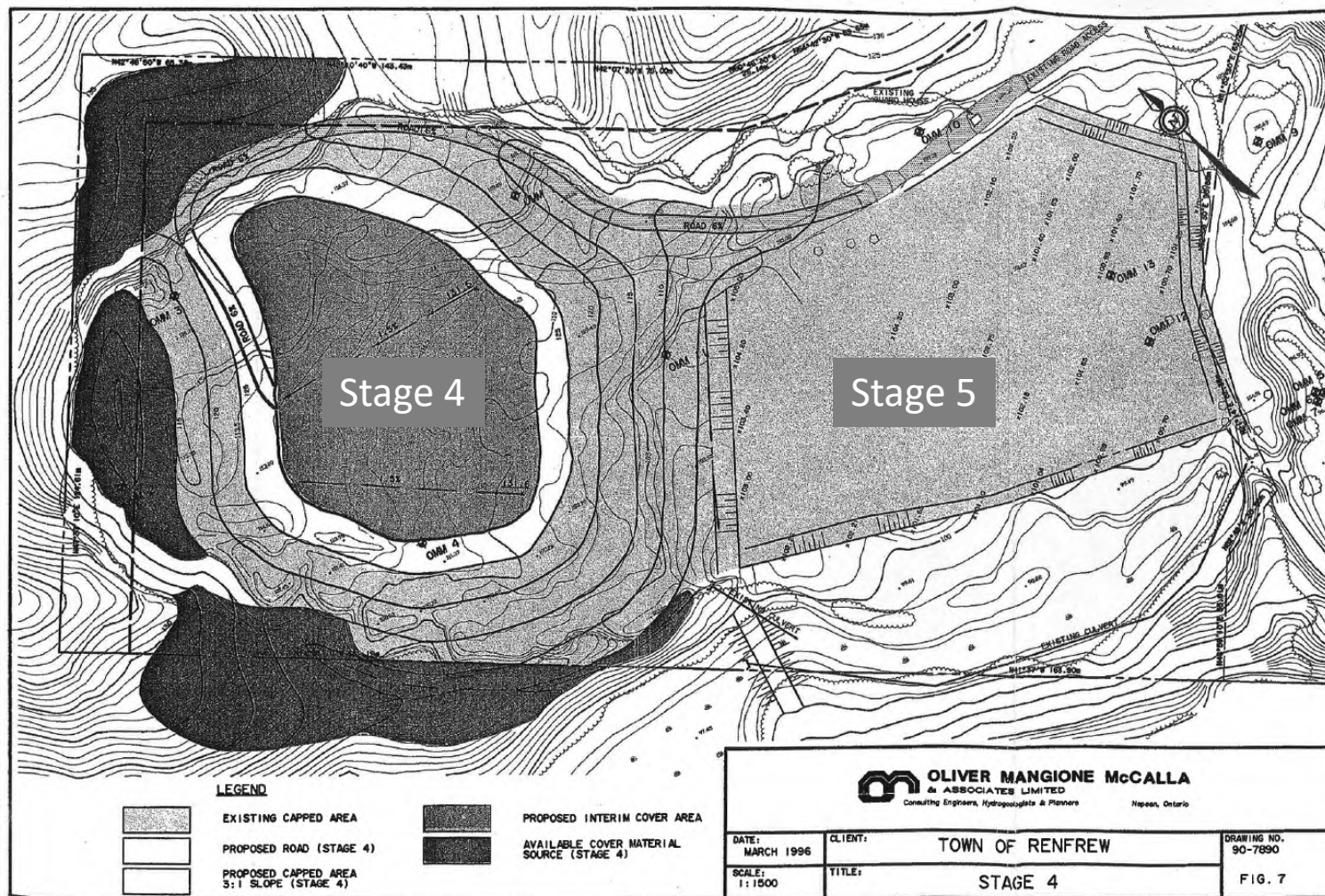
Landfilling not reasonably feasible;
additional soil material would be required

Extending footprint allows opportunity for new waste placement as
part of slope rehabilitation

Question: What would be required (i.e., assessments, reports, consultation, etc.) in order to revise the waste fill limit?

Note: no change to the total approved capacity proposed. Minimum 30m buffer with property boundary to remain.

Question: What would be the process for the approval (review by Technical Support, ECA Amendment, etc.)? What would be the timeline for review once submitted?



Temporary Landfilling in Stage 5

Due to issues with existing steep waste slopes and steep native sand slopes, there are limited areas in the short term for the Town to continue to landfill in Stage 4.

The Town is considering a request for permission for limited, short-term placement of waste in the northernmost portion Stage 5 (adjacent to Stage 4).

Condition 7.6 of ECA No. A410401 states:

*At least two (2) years prior to utilizing capacity in Stage 5 the Owner shall submit to the Director for approval, a **design and operation plan** with up to date engineering and environmental standards and a detailed **hydrogeological assessment** for proper and safe development of the remainder of the Site. If the Owner does not intend to use the remaining capacity the Owner shall submit a Closure Plan as per condition 9 of this Approval.*

The Town would be requesting permission for time and/or volume-limited placement of waste in Stage 5 prior to completion of the documentation required by Condition 7.6.

Question: What would be the process for the approval for interim limited landfilling in Stage 5?

APPENDIX B

Borehole Logs

LIST OF ABBREVIATIONS

The abbreviations commonly employed on Records of Boreholes, on figures, and in the text of the report are as follows:

I. SAMPLE TYPE		III. SOIL DESCRIPTION		
AS	Auger sample	(a) Cohesionless Soils		
BS	Block sample	Density Index (Relative Density)	N	
CS	Chunk sample		Blows/300 mm	
DO or DP	Seamless open-ended, driven or pushed tube samplers		Or Blows/ft.	
DS	Denison type sample		0 to 4	
FS	Foil sample		4 to 10	
RC	Rock core		10 to 30	
SC	Soil core		30 to 50	
SS	Split spoon sampler	(b) Cohesive Soils C _u or S _u	over 50	
ST	Slotted tube			
TO	Thin-walled, open			
TP	Thin-walled, piston			
WS	Wash sample			
DT	Dual tube sample			
DD	Diamond drilling			
II. PENETRATION RESISTANCE		Consistency		
Standard Penetration Resistance (SPT), N: The number of blows by a 63.5 kg. (140 lb.) hammer dropped 760 mm (30 in.) required to drive a 50 mm (2 in.) split spoon sampler for a distance of 300 mm (12 in.).			kPa	Psf
		Very soft	0 to 12	0 to 250
		Soft	12 to 25	250 to 500
		Firm	25 to 50	500 to 1,000
		Stiff	50 to 100	1,000 to 2,000
		Very stiff	100 to 200	2,000 to 4,000
		Hard	Over 200	Over 4,000
		IV. SOIL TESTS		
Dynamic Cone Penetration Resistance (DCPT); N _d : The number of blows by a 63.5 kg (140 lb.) hammer dropped 760 mm (30 in.) to drive an uncased 50 mm (2 in.) diameter, 60° cone attached to “A” size drill rods for a distance of 300 mm (12 in.).		w	Water content	
		w _p or PL	Plastic limited	
		w _l or LL	Liquid limit	
		C	Consolidaiton (oedometer) test	
		CHEM	Chemical analysis (refer to text)	
		CID	Consolidated isotropically drained triaxial test ¹	
		CIU	Consolidated isotropically undrained triaxial tes with porewater pressure measurement ¹	
PH:	Sampler advanced by hydraulic pressure	D _R	Relative density	
PM:	Sampler advanced by manual pressure	DS	Direct shear test	
WH:	Sampler advanced by static weight of hammer	Gs	Specific gravity	
WR:	Sampler advanced by weight of sampler and rod	M	Sieve analysis for particle size	
Cone Penetration Test (CPT): An electronic cone penetrometer with a 60° conical tip and a projected end area of 10 cm ² pushed through ground at a penetration rate of 2 cm/s. Measurements of tip resistance (q _t), porewater pressure (u) and friction along a sleeve are recorded electronically at 25 mm penetration intervals.		MH	Combined sieve and hydrometer (H) analysis	
		MPC	Modified Proctor compaction test	
		SPC	Standard Proctor compaction test	
		OC	Organic content test	
		SO ₄	Concentration of water-soluble sulphates	
		UC	Unconfined compression test	
		UU	Unconsolidated undrained triaxial test	
V	Field vane test (LV-laboratory vane test)			
γ		Unit weight		

Note: ¹ Tests which are anisotropically consolidated prior shear are shown as CAD, CAU.

LIST OF SYMBOLS

Unless otherwise stated, the symbols employed in the report are as follows:

I. GENERAL

π	3.1416
$\ln x$	natural logarithm of x
$\log_{10} x$ or $\log x$	logarithm of x to base 10
g	acceleration due to gravity
t	time
FOS	factor of safety
V	volume
W	weight

II. STRESS AND STRAIN

γ	shear strain
Δ	change in, e.g. in stress: $\Delta \sigma'$
ϵ	linear strain
ϵ_v	volumetric strain
η	coefficient of viscosity
ν	Poisson's ratio
σ	total stress
σ'	effective stress ($\sigma' = \sigma - u$)
σ'_{vo}	initial vertical effective overburden stress
$\sigma_1 \sigma_2 \sigma_3$	principal stresses (major, intermediate, minor)
σ_{oct}	mean stress or octahedral stress $= (\sigma_1 + \sigma_2 + \sigma_3) / 3$
τ	shear stress
u	porewater pressure
E	modulus of deformation
G	shear modulus of deformation
K	bulk modulus of compressibility

III. SOIL PROPERTIES

(a) Index Properties

$\rho(\gamma)$	bulk density (bulk unit weight)*
$\rho_d(\gamma_d)$	dry density (dry unit weight)
$\rho_w(\gamma_w)$	density (unit weight) of water
$\rho_s(\gamma_s)$	density (unit weight) of solid particles
γ'	unit weight of submerged soil ($\gamma' = \gamma - \gamma_w$)
D_R	relative density (specific gravity) of solid particles ($D_R = \rho_s / \rho_w$) formerly (G_s)
e	void ratio
n	porosity
S	degree of saturation
*	Density symbol is ρ . Unit weight symbol is γ where $\gamma = \rho g$ (i.e. mass density multiplied by acceleration due to gravity)

(a) Index Properties (continued)

w	water content
w_L or LL	liquid limit
w_p or PL	plastic limit
I_p or PI	plasticity Index $= (w_L - w_p)$
w_s	shrinkage limit
I_L	liquidity index $= (w - w_p) / I_p$
I_c	consistency index $= (w_L - w) / I_p$
e_{max}	void ratio in loosest state
e_{min}	void ratio in densest state
I_D	density index $= (e_{max} - e) / (e_{max} - e_{min})$ (formerly relative density)

(b) Hydraulic Properties

h	hydraulic head or potential
q	rate of flow
v	velocity of flow
i	hydraulic gradient
k	hydraulic conductivity (coefficient of permeability)
j	seepage force per unit volume

(c) Consolidation (one-dimensional)

C_c	compression index (normally consolidated range)
C_r	recompression index (overconsolidated range)
C_s	swelling index
C_α	coefficient of secondary consolidation
m_v	coefficient of volume change
c_v	coefficient of consolidation (vertical direction)
T_v	time factor (vertical direction)
U	degree of consolidation
σ'_p	pre-consolidation stress
OCR	overconsolidation ratio $= \sigma'_p / \sigma'_{vo}$

(d) Shear Strength

τ_p or τ_r	peak and residual shear strength
ϕ'	effective angle of internal friction
δ	angle of interface friction
μ	coefficient of friction $= \tan \delta$
c'	effective cohesion
c_u or s_u	undrained shear strength ($\phi = 0$ analysis)
p	mean total stress $(\sigma_1 + \sigma_3) / 2$
p'	mean effective stress $(\sigma'_1 + \sigma'_3) / 2$
q	$(\sigma_1 - \sigma_3) / 2$ or $(\sigma'_1 - \sigma'_3) / 2$
q_u	compressive strength $(\sigma_1 - \sigma_3)$
S_t	sensitivity

Notes:

$$^1 \tau = c' + \sigma' \tan \phi'$$

$$^2 \text{ shear strength} = (\text{compressive strength}) / 2$$

PROJECT: Geotechnical Investigation - Proposed New Scale Footings

WELL / BORING NO:

1

LOCATION: Bruce Street Landfill, Town of Renfrew

STARTED:

COMPLETED:

NORTHING:

EASTING:

DRILLING COMPANY:

G.S. ELEV: 0

T.P. ELEV:

DRILLING EQUIPMENT:

GW DEPTH:

TOTAL DEPTH: 6.7

DRILLING METHOD:

LOGGED BY:

CHECKED BY:

DEPTH	STRAT.	DESCRIPTION	Elev (m)	Number	Type	Recovery (%)	N Value	PID (ppm)	WELL CONSTRUCTION
		ASPHALTIC CONCRETE ~40 mm	-0.04						
		GRANULAR FILL ~ 150 mm	-0.19						
1		FILL Sand and gravel, trace asphalt pieces, fine to medium grained, well graded, brown, moist, (compact).			X				
2			-1.4		X				
3					X				
4					X				
5					X				
6					X				
7			-6.71						
8		Borehole terminated @ 6.7 m depth							
9									
10									
11									
12									

Trow Associates Inc.
 154 Colonnade Road South
 Ottawa, Ontario K2E 7J5
 Telephone: (613) 225-9940
 Facsimile: (613) 225-9947
 Website: www.trow.com

NOTES:

PROJECT NO. MC7890

Project No: MC7890A

Log of OMM15

Project: Renfrew Landfill Site

Client: Town of Renfrew

Location: Renfrew Landfill Site

Logged by: BC



SUBSURFACE PROFILE				SAMPLE			Volatile Organic Compounds	Well Data	Lab Analysis
Depth	Symbol	Description	Elev.	Number	Type	Recovery			
0	0	Ground Surface	0				25 75 125 175 ppmv		
5		Sand Dark brown, fine to medium grained sand with silt and stone. Layers of gravel.	-3.048						
10									
15	5	Gravel Boulders and coarse gravel.	-6.096						
20									
25									
30									
35	10	Sand Gravel Dark brown, coarse grained sand and gravel. Some stones.	-17.37						
40									
45									
50	15								
55									
60									
65	20	Sand Medium to fine grained sand becoming medium to coarse grained with cobbles at 18 metres.	-26.52						
70									
75									
80									
85	25								
90		Auger Refusal							
95									
100	30								

Drill Method: Hollow Stem Auger

Trow Consulting Engineers Ltd.

Datum:

Drill Date: June 20 & 21, 2001

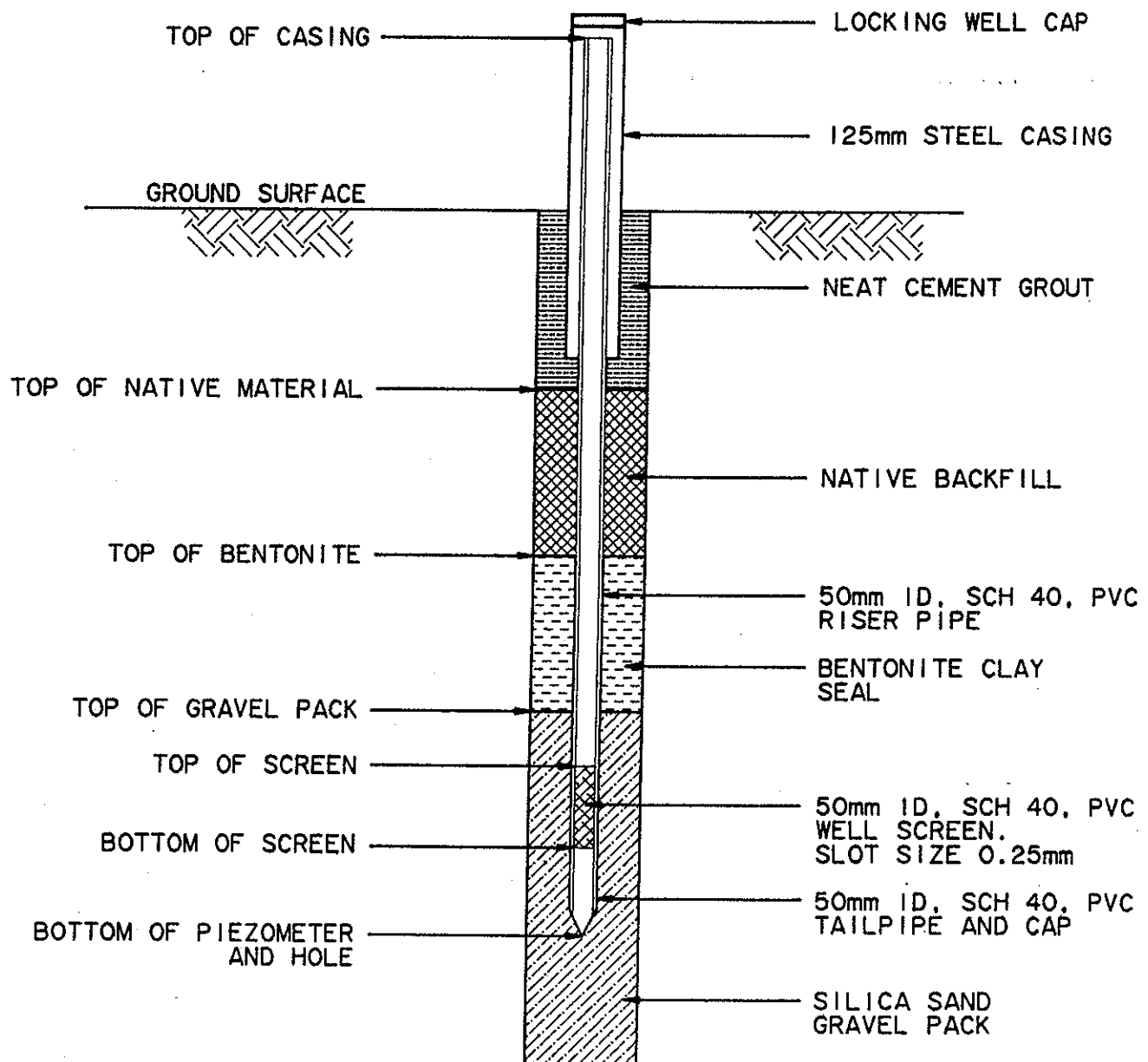
154 Colonnade Road South
Nepean, Ontario K2E 7J5

Checked by: JAM

Hole Size: 6"

Sheet: 1 of 1

OVERBURDEN MONITORING WELL INSTALLATION



OLIVER MANGIONE McCALLA
& ASSOCIATES LIMITED

Consulting Engineers

Nepean, Ontario

DATE:
FEB.. 1990

CLIENT:

TOWN OF RENFREW

DRAWING NO.

SCALE:
N.T.S.

TITLE:

MONITORING WELL DETAIL

FIGURE
4

TABLE 1
SUMMARY OF MONITORING WELL STATISTICS

MONITORING WELL NUMBER	GROUND ELEVATION (A.S.L.)	WELL DEPTH (M)	GRAVEL PACK INTERVAL (A.S.L.)	SCREENED INTERVAL (A.S.L.)	BENTONITE SEAL (A.S.L.)	CEMENT SEAL (A.S.L.)	STATIC LEVEL ELEVATION (A.S.L.)
OMM1	111.12	17.93	92.9 - 94.8	93.8 - 94.6	94.8 - 95.1	108.1 - 109.0	95.41
OMM2	113.85	25.05	88.9 - 91.2	89.8 - 90.5	91.2 - 91.5	110.7 - 111.7	96.42
OMM3	113.71	18.59	95.1 - 97.1	95.9 - 96.7		110.3 - 111.6	96.37
OMM4	104.82	12.06	92.8 - 95.1	93.6 - 94.38		101.6 - 102.7	96.14
OMM5	96.89	29.10	67.8 - 74.0	68.7 - 69.4	74.0 - 74.3	93.5 - 94.7	88.31
OMM6	96.89	4.45	92.4 - 94.1	93.1 - 93.8	94.1 - 94.3	93.6 - 94.5	95.78
OMM7	96.89	14.94	81.9 - 85.3	82.2 - 83.0	85.3 - 85.7	93.6 - 94.8	95.78
OMM8	96.29	16.91	79.4 - 83.5	80.2 - 81.0	83.5 - 83.8	94.8 - 95.2	88.30
OMM9	102.89	17.91	85.0 - 89.5	85.9 - 86.6		100.1 - 101.0	88.09
OMM10	103.84	10.28	93.7 - 96.8	94.6 - 95.3		99.6 - 100.8	95.79
OMM11	104.32	10.60	93.7 - 95.7	94.6 - 95.3		101.2 - 103.0	95.71
OMM12	100.55	5.00	95.6 - 97.5	96.4 - 97.2		97.3 - 98.2	97.85



BOREHOLE WELL LOG FOR TEST HOLE #1

ACTUAL ELEVATION (M)	SAMPLE INTERVAL (M)	DEPTH TO WATER (M)	SOIL DESCRIPTION
120.0	0.0		
118.5 - 118.0	1.5 - 2.0		Fine grained, homogeneous, light gray sand
117.0 - 116.5	3.0 - 3.5		Fine grained, light gray sand with local silty clay horizons
115.5 - 115.0	4.5 - 5.0		Fine grained sand with minor stones
114.0 - 113.5	6.0 - 6.5		Fine grained sand with minor stones
112.5 - 112.0	7.5 - 8.0		Fine to medium grained, light brown sand
111.0 - 110.5	9.0 - 9.5		Fine to medium grained, light brown sand
109.5 - 109.0	10.5 - 11.0		Fine grained, homogeneous, light brown sand
108.0 - 107.5	12.0 - 12.5		Fine grained, homogeneous, light brown sand
106.5 - 106.0	13.5 - 14.0		Fine grained, light brown, sand with minor pebbles
105.0 - 104.5	15.0 - 15.5		Fine grained, light brown, sand, with minor pebbles
103.5 - 103.0	16.5 - 17.0		Fine grained, light brown, sand, with minor pebbles
102.0 - 101.5	18.0 - 18.5		Fine grained, light brown, sand with minor pebbles and stones



BOREHOLE WELL LOG FOR TEST HOLE #1 (cont'd)

ACTUAL ELEVATION (M)	SAMPLE INTERVAL (M)	DEPTH TO WATER (M)	SOIL DESCRIPTION
100.5 - 100.0	19.5 - 20.0		Heterogeneous mixture of sand, pebbles and stones
99.0 - 98.5	21.0 - 21.5		Fine to medium grained, reddish/brown sand



BOREHOLE WELL LOG FOR OMM2

ACTUAL ELEVATION (M)	SAMPLE INTERVAL (M)	DEPTH TO WATER (M)	SOIL DESCRIPTION
115.0	0.0		
113.5 - 113.0	1.5 - 2.0		Fine grained, homogeneous, light brown sand
112.0 - 111.5	3.0 - 3.5		Fine grained, homogeneous, light brown sand
110.5 - 110.0	4.5 - 5.0		Fine to medium grained, light grown sand
109.0 - 108.5	6.0 - 6.5		Fine to medium grained, light grown sand
107.5 - 107.0	7.5 - 8.0		Fine to medium grained, light grown sand
106.0 - 105.5	9.0 - 9.5		Fine to medium grained, sand with lots of pebbles
104.5 - 104.0	10.5 - 11.0		Fine to medium grained, sand with minor pebbles
103.0 - 102.5	12.0 - 12.5		Fine grained, homogeneous, light-brown sand with no stones
101.5 - 101.0	13.5 - 14.0		Fine grained, homogeneous, light-brown sand with no stones
100.0 - 99.5	15.0 - 15.5		Fine grained, homogeneous, light-brown sand with no stones
98.5 - 98.0	16.5 - 17.0	17.0	Fined grained, homogeneous, light-brown sand with no stones
97.0 - 96.5	18.0 - 18.5		Fine grained, homogeneous, light-brown sand with no stones



BOREHOLE WELL LOG FOR OMM2 (cont'd)

ACTUAL ELEVATION (M)	SAMPLE INTERVAL (M)	DEPTH TO WATER (M)	SOIL DESCRIPTION
95.5 - 95.0	19.5 - 20.0		Fined grained, homogeneous, light-brown sand with no stones
94.0 - 93.5	21.0 - 21.5		Fined grained, homogeneous, light-brown sand with no stone

BOREHOLE WELL LOG FOR OMM3

ACTUAL ELEVATION (M)	SAMPLE INTERVAL (M)	DEPTH TO WATER (M)	SOIL DESCRIPTION
114.0	0.0		
112.5 - 112.0	1.5 - 2.0		Fine grained, homogeneous, orange/brown sand
111.0 - 110.5	3.0 - 3.5		Fine grained, homogeneous, orange/brown sand with evidence of cross bedding
109.5 - 109.0	4.5 - 5.0		Fine grained, homogeneous, orange/brown sand
108.0 - 107.5	6.0 - 6.5		Fine grained, homogeneous, orange/brown sand
106.5 - 106.0	7.5 - 8.0		Fine grained, homogeneous, orange/brown sand
105.0 - 104.5	9.0 - 9.5		Fine grained, homogeneous, orange/brown sand
103.5 - 103.0	10.5 - 11.0		Fine grained, homogeneous, orange/brown sand
102.0 - 101.5	12.0 - 12.5		Fine grained, homogeneous, orange/brown sand
100.5 - 100.0	13.5 - 14.0		Fine grained, homogeneous, orange/brown sand
99.0 - 98.5	15.0 - 15.5	15.3	Fine grained sand with minor stones
97.5 - 97.0	16.5 - 17.0		Fine to coarse grained sand with pebbles
96.0 - 95.5	18.0 - 18.5		Fine to coarse grained sand with pebbles



BOREHOLE WELL LOG FOR OMM4

ACTUAL ELEVATION (M)	SAMPLE INTERVAL (M)	DEPTH TO WATER (M)	SOIL DESCRIPTION
104.5	0.0		
103.0 - 102.5	1.2 - 2.0		Assorted garbage
101.5 - 101.0	3.0 - 3.5		Fine grained, homogeneous, gray-brown sand with minor clay
100.0 - 99.5	4.5 - 5.0		Fine grained, homogeneous, gray-brown sand
98.5 - 98.0	6.0 - 6.5		Fine grained, homogeneous, gray-brown sand with minor stones
97.0 - 96.5	7.5 - 8.0		Fine grained, homogeneous, gray-brown sand with minor stones
95.5 - 95.0	9.0 - 9.5	9.2	Fine grained, homogeneous, gray-brown sand with silt and clay
94.0 - 93.5	10.5 - 11.0		Silty clay with fine grained sand



BOREHOLE WELL LOG FOR OMM5

ACTUAL ELEVATION (M)	SAMPLE INTERVAL (M)	DEPTH TO WATER (M)	SOIL DESCRIPTION
98.0	0.0		
96.5 - 96.0	1.5 - 2.0		Fine to medium grained, grayish-brown sand with minor stones
95.0 - 94.5	3.0 - 3.5		Fine to medium grained, grayish-brown sand with minor stones
93.5 - 93.0	4.5 - 5.0		Medium grained, dark gray sand
92.0 - 91.5	6.0 - 6.5		Fine to medium grained sand with minor pebbles
90.5 - 90.0	7.5 - 8.0		Fine to medium grained sand with some pebbles
89.0 - 89.5	9.0 - 9.5		Fine to medium grained, dark gray sand
88.5 - 88.0	10.5 - 11.0	10.8	Fine grained, dark gray sand
87.0 - 86.5	12.0 - 12.5		Fine grained, dark gray sand

Note: Borehole was completed at a depth of 30 metres but running sand prevented the collection of soil samples beyond 12.5 metres.



BOREHOLE WELL LOG FOR OMM6

ACTUAL ELEVATION (M)	SAMPLE INTERVAL (M)	DEPTH TO WATER (M)	SOIL DESCRIPTION
98.0	0.0		
96.5 - 96.0	1.5 - 2.0	2.15	Fine to medium grained, grayish-brown sand with minor stones
95.0 - 94.5	3.0 - 3.5		Fine to medium grained, grayish-brown sand with minor stones
93.5 - 93.0	4.5 - 5.0		Medium grained, dark gray sand



BOREHOLE WELL LOG FOR OMM7

ACTUAL ELEVATION (M)	SAMPLE INTERVAL (M)	DEPTH TO WATER (M)	SOIL DESCRIPTION
98.0	0.0		
96.5 - 96.0	1.5 - 2.0		Fine to medium grained, grayish-brown sand with minor stones
95.0 - 94.5	3.0 - 3.5		Fine to medium grained, grayish-brown sand with minor stones
93.5 - 93.0	4.5 - 5.0		Medium grained, dark gray sand
92.0 - 91.5	6.0 - 6.5		Fine to medium grained sand with minor pebbles
90.5 - 90.0	7.5 - 8.0		Fine to medium grained sand with some pebbles
89.0 - 89.5	9.0 - 9.5		Fine to medium grained, dark gray sand
88.5 - 88.0	10.5 - 11.0	10.8	Fine grained, dark gray sand
87.0 - 86.5	12.0 - 12.5		Fine grained, dark gray sand

Note: Borehole was completed at 15.5 metres but running sand prevented the collection of soil samples beyond 12.5 metres.



BOREHOLE WELL LOG FOR OMM10

ACTUAL ELEVATION (M)	SAMPLE INTERVAL (M)	DEPTH TO WATER (M)	SOIL DESCRIPTION
103.5	0.0		
102.0 - 101.5	1.5 - 2.0		Fine grained, homogeneous, light brown sand
100.5 - 100.0	3.0 - 3.5		Fine grained, homogeneous, light brown
99.0 - 98.5	4.5 - 5.0		Fine grained, homogeneous, light brown sand with minor pebbles
97.5 - 97.0	6.0 - 6.5		Fine grained, homogeneous, light brown sand with minor pebbles
96.0 - 95.5	7.5 - 8.0	8.2	Fine to coarse grained, light brown sand
94.5 - 94.0	9.0 - 9.5		Fine to coarse grained, light brown sand



BOREHOLE WELL LOG FOR OMM9

ACTUAL ELEVATION (M)	SAMPLE INTERVAL (M)	DEPTH TO WATER (M)	SOIL DESCRIPTION
103.5	0.0		
102.0 - 101.5	1.5 - 2.0		Fine grained, homogeneous, light brown sand
100.5 - 100.0	3.0 - 3.5		Fine grained, homogeneous, light brown sand
98.5 - 98.0	4.5 - 5.0		Fine grained, homogeneous, light brown sand with minor clay
97.0 - 96.5	6.0 - 6.5		Fine grained sand with minor pebbles and stones
95.5 - 95.0	7.5 - 8.0		Fine grained, light brown sand
94.0 - 93.5	9.0 - 9.5		Fine to medium grained light brown sand with minor pebbles
92.5 - 92.0	10.5 - 11.0		Fine to medium grained light brown sand with minor pebbles
91.0 - 90.5	12.0 - 12.5		Silty clay horizon
89.5 - 89.0	13.5 - 14.0	14.6	Fine grained sand with minor pebbles
88.0 - 87.5	15.0 - 15.5		Fine to coarse grained sand with pebbles and stone



BOREHOLE WELL LOG FOR OMM11

ACTUAL ELEVATION (M)	SAMPLE INTERVAL (M)	DEPTH TO WATER (M)	SOIL DESCRIPTION
111.0	0.0		
109.5 - 109.0	1.5 - 2.0		Fine grained, homogeneous, grayish-brown sand
108.0 - 107.5	3.0 - 3.5		Fine to medium grained, reddish-brown sand
105.0 - 104.5 grayish-brown sand	4.5 - 5.0		Fine grained, homogeneous,
103.5 - 103.0	6.0 - 6.5		Fine grained, homogeneous, grayish-brown sand
102.0 - 101.5	7.5 - 8.0		Fine grained, grayish- brown sand with some stones (<3 cm)
100.5 - 100.0	9.0 - 9.5		Fine to medium grained grayish-brown sand with stones and minor silt and clay
99.0 - 98.5	10.5 - 11.0		Fine to medium grained grayish-brown sand with stones and minor silt and clay
97.5 - 97.0	12.0 - 12.5		Silty sand with lots of stones and boulders
96.0 - 95.5	13.5 - 14.0	15.7	Silty sand with lots of stones and boulders
94.5 - 94.0	15.0 - 15.5		Fine to medium grained orange-brown sand, no stones
93.0 - 92.5	16.5 - 17.0		Silty sand with lots of stones and minor clay



OLIVER, MANGIONE, McCALLA & ASSOCIATES LIMITED

CONSULTING ENGINEERS, HYDROGEOLOGISTS & PLANNERS

BOREHOLE WELL LOG FOR OMM8

ACTUAL ELEVATION (M)	SAMPLE INTERVAL (M)	DEPTH TO WATER (M)	SOIL DESCRIPTION
96.5	0.0		
95.0 - 94.5	1.5 - 2.0		Fine to medium grained, light brown sand with some stones
93.5 - 93.0	3.0 - 3.5		Fine grained sand, light brown and with some stones
92.0 - 91.5	4.5 - 5.0		Fine grained sand, light brown sand with some stones
90.5 - 90.0	6.0 - 6.5		Fine grained sand, light brown sand with some stones
89.0 - 89.5	7.5 - 8.0		Fine grained sand, light brown sand with some stones
87.5 - 87.0	9.0 - 9.5	9.5	Fine to coarse grained sand with some silt and clay
86.0 - 85.5	10.5 - 11.0		Fine to coarse grained sand with some silt and clay
84.5 - 84.0	12.0 - 12.5		Fine to coarse grained sand with some silt and clay
83.0 - 82.5	13.5 - 14.0		Heterogeneous sand with some stones
81.5 - 81.0	15.0 - 15.5		Fine to coarse grained sand, light brown



BOREHOLE WELL LOG FOR OMM11

ACTUAL ELEVATION (M)	SAMPLE INTERVAL (M)	DEPTH TO WATER (M)	SOIL DESCRIPTION
104.0 - 0.0			
101.0 - 100.5	3.0 - 3.5		Fine grained, dark gray sand with some silt
98.0 - 97.5	6.0 - 6.5		Fine to medium grained light brownish gray sand
96.5 - 96.0	7.5 - 8.0		Fine to medium grained light brown sand with minor pebbles
95.0 - 94.5	9.0 - 9.5	9.5	Fine to medium grained brown sand with silt, clay and stones (<10 cm)
93.5 - 93.0	10.5 - 11.0		Fine to medium grained dark gray sand, no pebbles or stones



BOREHOLE WELL LOG FOR OMM12

ACTUAL ELEVATION (M)	SAMPLE INTERVAL (M)	DEPTH TO WATER (M)	SOIL DESCRIPTION
100.5	0.0		
99.0 - 98.5	1.5 - 2.0	2.4	Fine grained, dark gray sand
96.0 - 95.5	4.5 - 5.0		Fine grained, dark gray sand with pebbles and stones (<10 cm)



APPENDIX "A"

WATER WELL RECORD OMM14

APPENDIX "B"

GEOPHYSICAL BOREHOLE LOG OMM14



Ministry
of the
Environment

Ontario

The Ontario Water Resources Act

WATER WELL RECORD

1. PRINT ONLY IN SPACES PROVIDED
2. CHECK ☒ CORRECT BOX WHERE APPLICABLE

COUNTY OR DISTRICT RENFREW	TOWNSHIP, BOROUGH, CITY, TOWN, VILLAGE RENFREW	CON. BLOCK, TRACT, SURVEY, ETC. 2	LOT 14
OWNER (SURNAME FIRST) JOHN L. MARQUARDT & SON LTD.	ADDRESS RENFREW ONT.	DATE COMPLETED DAY 13 MO 10 YR 94	

LOG OF OVERBURDEN AND BEDROCK MATERIALS (SEE INSTRUCTIONS)					
GENERAL COLOUR	MOST COMMON MATERIAL	OTHER MATERIALS	GENERAL DESCRIPTION	DEPTH - FEET	
				FROM	TO
BROWN GRAY	SAND	COBBLES		0	14
GRAY	BOULDER			14	15
GRAY, RED, WHITE	GRAVEL	COBBLES	ROUGH	15	65
" "	BOULDER			65	67
" "	COBBLES	SMALL BOULDER	SOLID STONE	67	72
" "	GRAVEL	COBBLES	COARSE	72	111
2" P.V.C. + 5' to 110' also + 5' to 82' also + 5' to 40' - 10' screen on each set FILTER SAND 95 to 111 also 67 to 85 also 14 to 43 Bentonite pellets. 85 to 95 also 43 to 67 also 9 to 14 6" I.D. CASING - 5' stick up, 6 1/2' in ground & cemented					

WATER RECORD		CASING & OPEN HOLE RECORD				SCREEN	
WATER FOUND AT - FEET	KIND OF WATER	INSIDE DIAM. INCHES	MATERIAL	WALL THICKNESS INCHES	DEPTH - FEET		SIZE OF OPENING (SLOT NO. 1)
					FROM	TO	
	☐ FRESH ☐ SALTY ☐ SULPHUR ☐ MINERALS ☐ GAS	8 1/2	☐ STEEL ☐ GALVANIZED ☐ CONCRETE ☐ OPEN HOLE ☐ PLASTIC		0	111	
	☐ FRESH ☐ SALTY ☐ SULPHUR ☐ MINERALS ☐ GAS						
	☐ FRESH ☐ SALTY ☐ SULPHUR ☐ MINERALS ☐ GAS						
	☐ FRESH ☐ SALTY ☐ SULPHUR ☐ MINERALS ☐ GAS						
	☐ FRESH ☐ SALTY ☐ SULPHUR ☐ MINERALS ☐ GAS						
	☐ FRESH ☐ SALTY ☐ SULPHUR ☐ MINERALS ☐ GAS						
	☐ FRESH ☐ SALTY ☐ SULPHUR ☐ MINERALS ☐ GAS						

PLUGGING & SEALING RECORD			
DEPTH SET AT - FEET	MATERIAL AND TYPE	CEMENT GROUT LEAD PACKER, ETC.	LENGTH
FROM	TO		

PUMPING TEST METHOD		PUMPING RATE		DURATION OF PUMPING	
☐ PUMP ☐ RAILER					
STATIC LEVEL	WATER LEVEL END OF PUMPING	WATER LEVELS DURING			
		15 MINUTES	30 MINUTES	45 MINUTES	60 MINUTES
FEET	FEET	FEET	FEET	FEET	FEET
IF FLOWING, GIVE RATE		PUMP INTAKE SET AT		WATER AT END OF TEST	
GPM		FEET		FEET	
RECOMMENDED PUMP TYPE		RECOMMENDED PUMP SETTING		RECOMMENDED PUMPING RATE	
☐ SHALLOW ☐ DEEP		FEET		GPM	

FINAL STATUS OF WELL	☐ WATER SUPPLY ☐ OBSERVATION WELL ☐ TEST HOLE ☐ RECHARGE WELL	☐ ABANDONED, INSUFFICIENT SUPPLY ☐ ABANDONED, POOR QUALITY ☐ UNFINISHED ☐ DEWATERING
	☐ DOMESTIC ☐ STOCK ☐ IRRIGATION ☐ INDUSTRIAL ☐ OTHER Machinery	☐ COMMERCIAL ☐ MUNICIPAL ☐ PUBLIC SUPPLY ☐ COOLING OR AIR CONDITIONING ☐ NOT USED
WATER USE		
METHOD OF CONSTRUCTION	☐ CABLE TOOL ☐ ROTARY (CONVENTIONAL) ☐ ROTARY (REVERSE) ☐ ROTARY (AIR) ☐ AIR PERCUSSION	☐ BORING ☐ DIAMOND ☐ JETTING ☐ DRIVING ☐ DIGGING ☐ OTHER

LOCATION OF WELL	
IN DIAGRAM BELOW SHOW DISTANCES OF WELL FROM ROAD AND LOT LINE. INDICATE NORTH BY ARROW.	
well cement block plant 4m 4m gate Dead end.	
DRILLERS REMARKS	

CONTRACTOR	NAME OF WELL CONTRACTOR EARLY MARQUARDT & SON INC.	WELL CONTRACTOR'S LICENCE NUMBER 3611
	ADDRESS RR1 Box 86 Palmer Rapids Ont	K0J 2E0
	NAME OF WELL TECHNICIAN TERRY MARQUARDT	WELL TECHNICIAN'S LICENCE NUMBER 70062
	SIGNATURE OF TECHNICIAN/CONTRACTOR <i>Terry Marquardt</i>	SUBMISSION DATE DAY 17 MO 10 YR 94

OWNER'S COPY



OLIVER, MANGIONE, McCALLA
& ASSOCIATES LIMITED
Consulting Engineers Nepean, Ontario

PROJECT No. 90-7890
PROJECT NAME RENFREW LANDFILL
BOREHOLE No. OMM
DATE OCTOBER 1994

DEPTH (M)	ELEV. (M)	TOTAL ORGANIC VAPOR (PPM)	SAMPLE	WATER LEVEL	SOIL DESCRIPTION	LITH- OLOGY	WELL DATA
0	103.147				GRADE		
10				SHALLOW PIEZOMETER DEEP PIEZOMETER	SAND, GRAVEL, COBBLES		BENTONITE FILTER SAND
20					BOULDERS		BENTONITE
30					COARSE GRAVEL AND COBBLES		FILTER SAND BENTONITE
					EOH - TERMINATED IN OVERBURDEN		FILTER SAND

Project No: MC7890A

Log of GW1

Project: Town of Renfrew Landfill Site

Client: Town of Renfrew

Location: Renfrew, Ontario

Logged by: B. Coons



SUBSURFACE PROFILE				SAMPLE			Volatile Organic Compounds	Well Data	Lab Analysis
Depth	Symbol	Description	Elev.	Number	Type	Recovery			
ft m							25 75 125 175 ppmv		
0 0		Ground Surface	0						
1 1		clay Silty clay cap material	-1.524	1					
2 2		Fill Waste material. Moist at approximately 4m	-4.572	2					
3 3				3					
4 4				4					
5 5				5					
6 6									
7 7		End of Borehole							
8 8									
9 9									
10 10									
11 11									
12 12									
13 13									
14 14									
15 15									
16 16									
17 17									
18 18									
19 19									
20 20									

Drill Method: Hollow Stem Auger

Trow Consulting Engineers Ltd.

Datum:

Drill Date: June 18, 2001

154 Colonnade Road South
Nepean, Ontario K2E 7J5

Checked by: JAM

Hole Size: 150mm

Sheet: 1 of 1

Project No: MC7890A

Log of GW2

Project: Town of Renfrew Landfill Site

Client: Town of Renfrew

Location: Renfrew, Ontario

Logged by: B. Coons



SUBSURFACE PROFILE				SAMPLE			Volatile Organic Compounds	Well Data	Lab Analysis
Depth	Symbol	Description	Elev.	Number	Type	Recovery			
0 ft 0 m		Ground Surface	0				25 75 125 175 ppmv		
1		clay Silty clay cap material	-1.524	1					
2									
3									
4									
5		Fill Waste material. Moist at approximately 4m	-4.572	2					
6									
7									
8				3					
9									
10									
11				4					
12									
13				5					
14									
15		End of Borehole							
16									
17									
18									
19									
20									

Drill Method: Hollow Stem Auger

Trow Consulting Engineers Ltd.

Datum:

Drill Date: June 18, 2001

154 Colonnade Road South
Nepean, Ontario K2E 7J5

Checked by: JAM

Hole Size: 150mm

Sheet: 1 of 1

Project No: MC7890A

Log of GW3

Project: Town of Renfrew Landfill Site

Client: Town of Renfrew

Location: Renfrew, Ontario

Logged by: B. Coons



SUBSURFACE PROFILE				SAMPLE			Volatile Organic Compounds ppmv 25 75 125 175	Well Data	Lab Analysis
Depth	Symbol	Description	Elev.	Number	Type	Recovery			
0 ft m		Ground Surface	0						
1		Fill Municipal waste. High methane levels at 4.5m. Tire at 0.7m		1					
2				2					
3				3					
4				4					
5				5					
6				6					
7				7					
8		Sand With cobbles	-6.096	8					
9									
10		End of Borehole	-7.01						
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									

Drill Method: Hollow Stem Auger

Trow Consulting Engineers Ltd.

Datum:

Drill Date: June 18, 2001

154 Colonnade Road South
Nepean, Ontario K2E 7J5

Checked by: JAM

Hole Size: 150mm

Sheet: 1 of 1

Project No: MC 7890

Log of GW4

Project: Town of Renfrew Landfill Site

Client: Town of Renfrew

Ontario

Location: Renfrew

Logged by: B. Coons



SUBSURFACE PROFILE				SAMPLE			Volatile Organic Compounds	Well Data	Lab Analysis
Depth	Symbol	Description	Elev.	Number	Type	Recovery			
0 ft m 0		Ground Surface	0				25 ppmv 75 125 175		
1		Clay Capping clay	-1.219	1					
2									
3		Fill Municipal waste. Methane levels 100% LEL.	-6.096	2					
4									
5				3					
6									
7				4					
8									
9				5					
10									
11				6					
12									
13		Sand Moist	-6.706	7					
14									
15		End of Borehole		8					
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									

Drill Method: Hollow Stem Auger

Trow Consulting Engineers Ltd.

Datum:

Drill Date: June 18, 2001

154 Colonnade Road South
Nepean, Ontario K2E 7J5

Checked by:

Hole Size: 150mm

Sheet: 1 of 1

Project No: MC7890A

Log of OMM15

Project: Renfrew Landfill Site

Client: Town of Renfrew

Location: Renfrew Landfill Site

Logged by: KLG



SUBSURFACE PROFILE				SAMPLE			Volatile Organic Compounds	Well Data	Lab Analysis
Depth	Symbol	Description	Elev.	Number	Type	Recovery			
ft m							25 75 ppmv 125 175		
0 0		Ground Surface	0						
10 10		Sand Dark brown, fine to medium grained sand with silt and stone. Layers of gravel.							
20 20									
30 30									
40 40									
50 50									
60 60									
70 70									
80 80									
90 90			-26.52						
100 100		Sand Brown, grey sand with clay, silt and cobbles.							
110 110									
120 120									
130 130									
140 140									
150 150			-45.11						
160 160		Sand, Silt Grey sand, silt and clay.							
170 170									
180 180									
190 190			-53.34						
200 200			-54.86						
		Clay, Sand Grey, fine-grained, packed clay sand.							
		End of Borehole							

Drill Method: Hollow Stem Auger

Trow Consulting Engineers Ltd.

Datum:

Drill Date: August 22, 2001

154 Colonnade Road South
Nepean, Ontario K2E 7J5

Checked by: JAM

Hole Size: 6"

Sheet: 1 of 1

Figure #1

Well: OMM 2

Hyd-Eng
GEOPHYSICS INC.

Site: Renfrew Landfill
Renfrew, Ontario

Reference: casing
Casing Height: .83m

date: 27/09/94
scale: 1:200

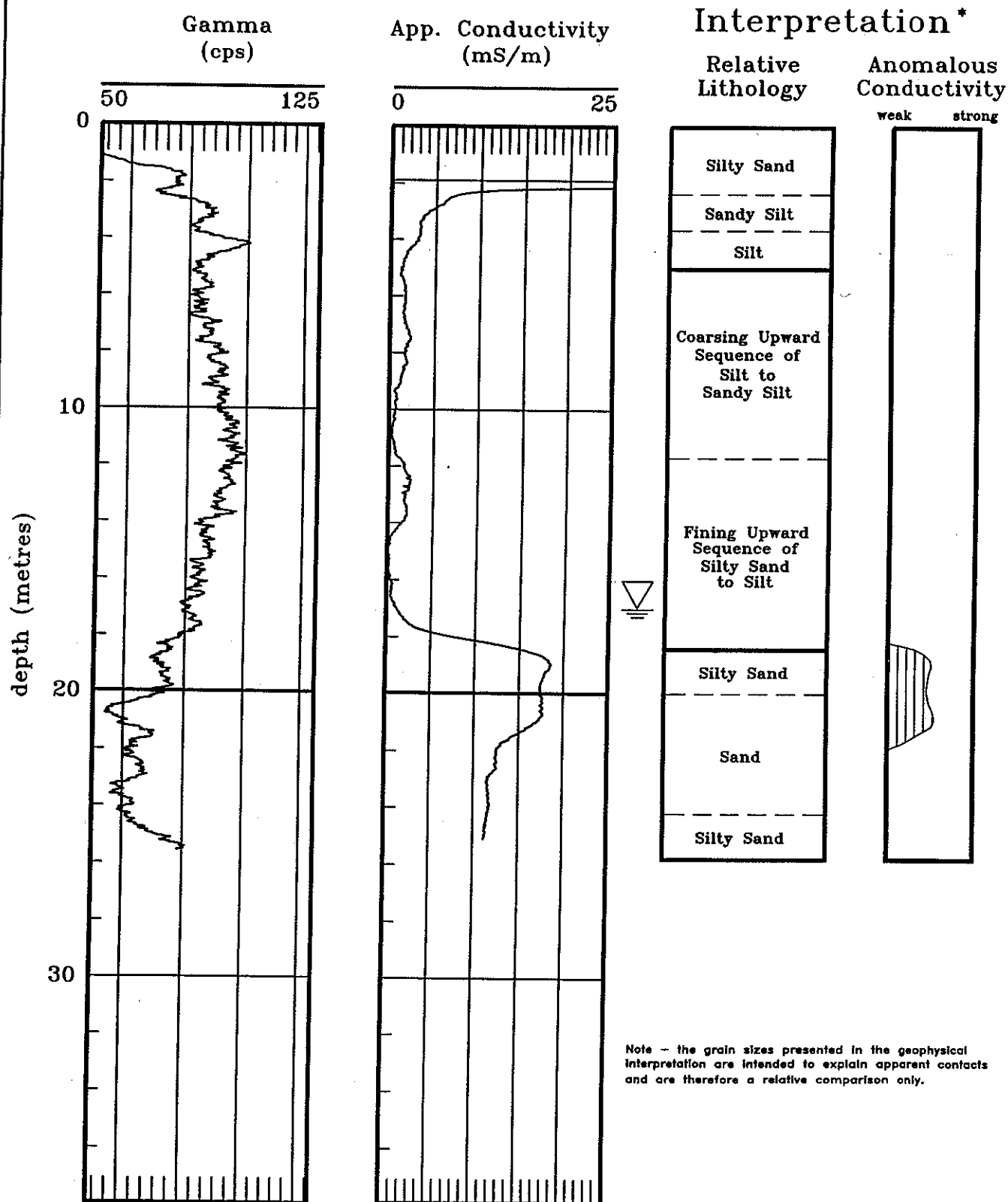


Figure #2

Well: OMM 5

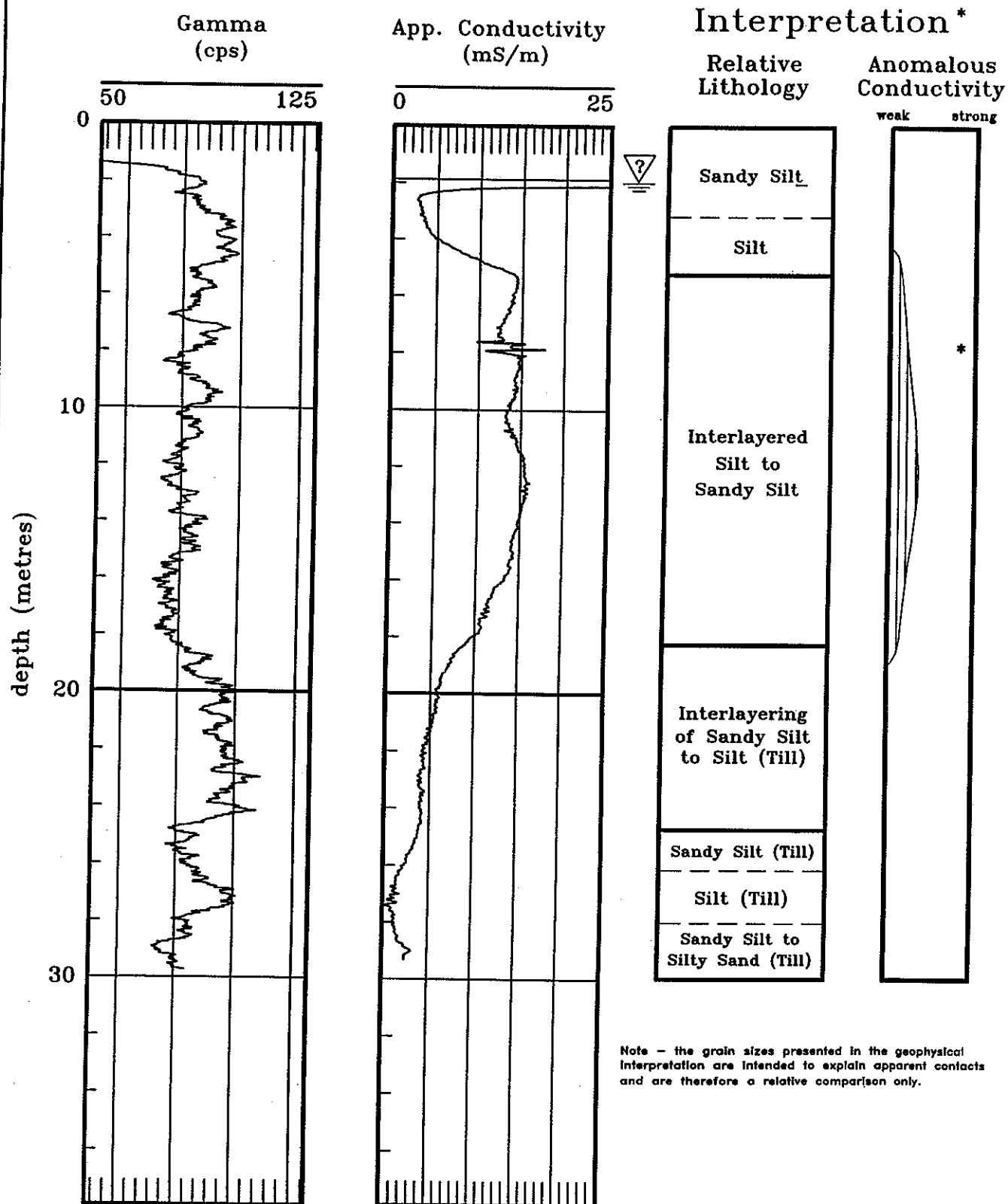
Hyd-Eng
GEOPHYSICS INC.Site: Renfrew Landfill
Renfrew, OntarioReference: casing
Casing Height: 1.06mdate: 27/09/94
scale: 1:200

Figure #3

Well: OMM 8

Hyd-Eng
GEOPHYSICS INC.

Site: Renfrew Landfill
Renfrew, Ontario

Reference: casing
Casing Height: .90m

date: 27/09/94
scale: 1:200

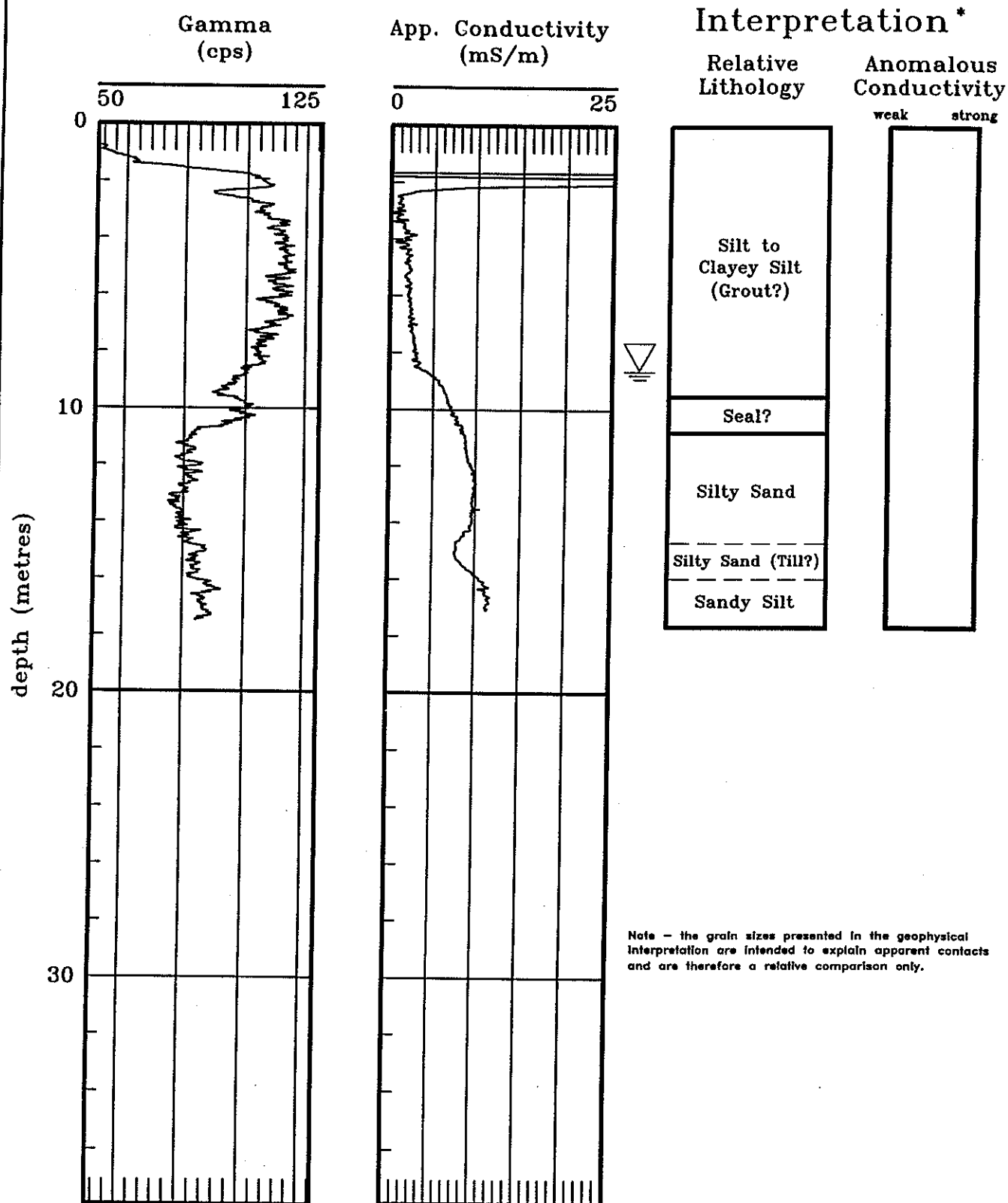


Figure #4

Well: OMM 9

Hyd-Eng
GEOPHYSICS INC.

Site: Renfrew Landfill
Renfrew, Ontario

Reference: casing
Casing Height: .91m

date: 27/09/94
scale: 1:200

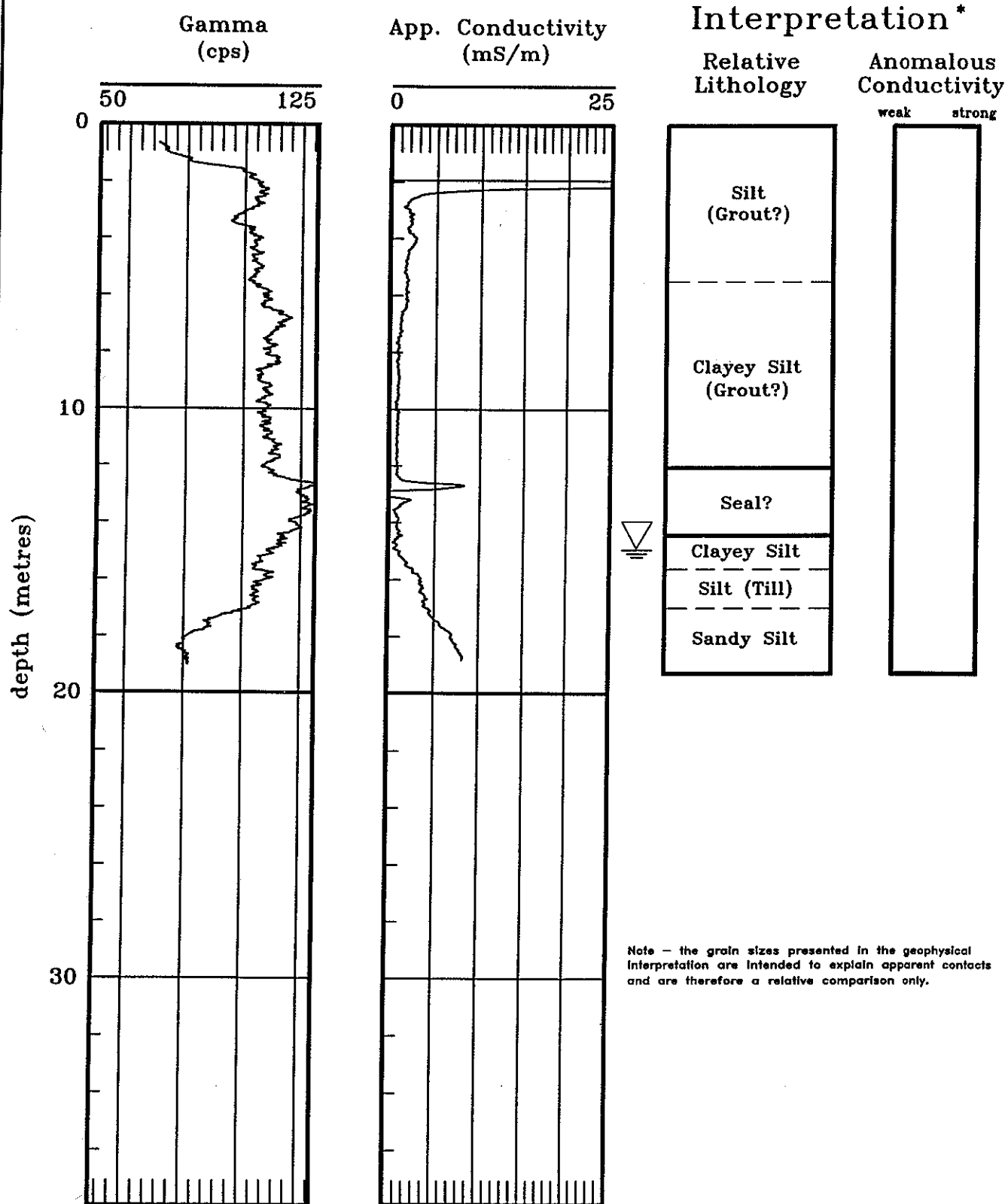


Figure #5

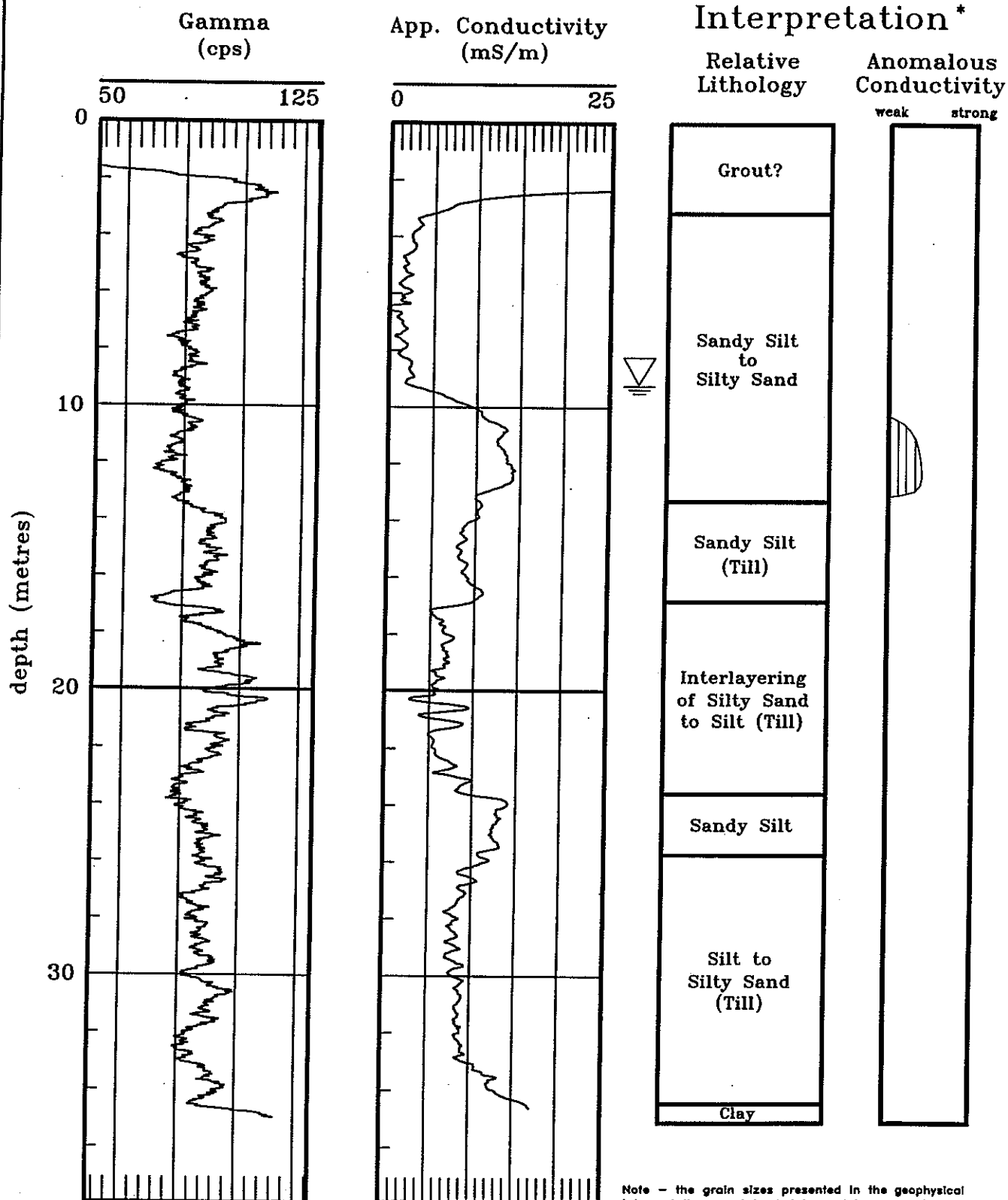
Well: OMM 13

Hyd-Eng
GEOPHYSICS INC.

Site: Renfrew Landfill
Renfrew, Ontario

Reference: casing
Casing Height: 1.47m

date: 27/09/94
scale: 1:200



Note - the grain sizes presented in the geophysical interpretation are intended to explain apparent contacts and are therefore a relative comparison only.

SHEET 1 OF 3

DATUM: Local

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

[illegible]

DEPTH SCALE

1 : 75



LOGGED: D.J.S.

CHECKED: M.K.F.

PROJECT: 07-1122-0164

RECORD OF MONITORING WELL: BH 07-1

SHEET 2 OF 3

LOCATION: See Site Plan

BORING DATE: July 18, 2007

DATUM: Local

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION											
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.30m	SHEAR STRENGTH Cu, kPa		nat V. + Q - ● rem V. ⊕ U - ○		WATER CONTENT PERCENT Wp I — W — WI														
								20	40	60	80	10 ⁻⁶	10 ⁻⁵			10 ⁻⁴	10 ⁻³									
15	Power Auger 200mm Diam. (Hollow Stem)	--- CONTINUED FROM PREVIOUS PAGE --- Compact to dense brown fine SAND with silt, clay and fine sand layers																								
5																50 DO	22									
16																										
17																										
18																										
19																										
20																										
21																										
22																										
23																										
24																										
25																										
26																										
27																										
28																										
29																										
30																										

CONTINUED NEXT PAGE

DEPTH SCALE

1 : 75



LOGGED: D.J.S.

CHECKED: M.K.F.

MIS-BHS 001 07-1122-0164.GPJ GAL-MIS.GDT 02/14/14 NBHS

PROJECT: 07-1122-0164

RECORD OF MONITORING WELL: BH 07-1

SHEET 3 OF 3

LOCATION: See Site Plan

BORING DATE: July 18, 2007

DATUM: Local

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION															
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.30m	SHEAR STRENGTH Cu, kPa		nat V. + Q - rem V. ⊕ U - ○		WATER CONTENT PERCENT Wp — W — Wi																		
								20	40	60	80	10 ⁻⁶	10 ⁻⁵			10 ⁻⁴	10 ⁻³													
30	Power Auger 200mm Diam. (Hollow Stem)	--- CONTINUED FROM PREVIOUS PAGE --- Compact to dense brown fine SAND with silt, clay and fine sand layers																												
31																10	50 DO	31												
32																														
33																														
34																11	50 DO	41												
35																														
36																														
37																														
38																														
38		End of Borehole		84.11 38.10																										
39																														
40																														
41																														
42																														
43																														
44																														
45																														

DEPTH SCALE

1 : 75



LOGGED: D.J.S.

CHECKED: M.K.F.

MIS-BHS 001 07-1122-0164.GPJ GAL-MIS.GDT 02/14/14 NBHS

PROJECT: 07-1122-0164

RECORD OF MONITORING WELL: BH 07-2

SHEET 1 OF 1

LOCATION: See Site Plan

BORING DATE: July 12 & 13, 2007

DATUM: Local

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION									
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.30m	SHEAR STRENGTH				WATER CONTENT PERCENT													
								20		40		60		80			10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³		
								SHEAR STRENGTH Cu, kPa		nat V. + rem V. ⊕		Q - ● U - ○		Wp ———— W ———— WI											
							20	40	60	80		20	40	60	80										
0		GROUND SURFACE																							
	Power Auger 200mm Diam (Hollow Stem)	Brown sand, gravel and cobbles (FILL)		0.00													Casing Set in Bentonite Seal								
		Yellow brown SILTY SAND, some gravel		0.61													Bentonite Seal								
1																									
		Compact brown fine SAND, trace silt		1.37	1	50 DO	12																		
2																									
		Compact brown fine to medium SAND, trace gravel		2.59	2	50 DO	13											Native Backfill							
3																									
		Brown fine to coarse SAND, some gravel, occasional cobbles		3.96	3	50 DO	43																		
4																									
5																									
6																									
7																									
8																									
9		Brown fine to coarse SAND and GRAVEL, numerous cobbles, trace silt		8.53	6	50 DO	21																		
10																									
11																									
12																									
13		End of Borehole		12.19													38mm Diam PVC #10 Slot Screen								
14																									
15																									

DEPTH SCALE

1 : 75



LOGGED: D.J.S.

CHECKED: M.K.F.

MIS-BHS 001 07-1122-0164.GPJ GAL-MIS.GDT 02/14/14 NBHS

PROJECT: 07-1122-0164

RECORD OF MONITORING WELL: BH 07-3

SHEET 2 OF 2

LOCATION: See Site Plan

BORING DATE: July 9 & 10, 2007

DATUM: Local

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION									
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.30m	SHEAR STRENGTH				WATER CONTENT PERCENT													
								20		40		60		80			10 ⁻⁶		10 ⁻⁵		10 ⁻⁴		10 ⁻³		
								SHEAR STRENGTH Cu, kPa		nat V. rem V.		+ ⊕		Q - U			● - ○		Wp		W		Wi		
								20	40	60	80			20	40	60	80								
15	Power Auger 200mm Diam (Hollow Stem)	--- CONTINUED FROM PREVIOUS PAGE --- Compact brown fine to coarse SAND, trace to some gravel																							
16		Dense to very dense brown SAND and GRAVEL, some cobbles		16.15	10	50 DO	15																		
17																									
18																									
19																									
20																									
21																									
22																									
23																									
24																									
25		Grey fine to coarse SAND and GRAVEL and cobbles		24.38																					
26																									
27																									
28		End of Borehole		27.43																					
29																									
30																									

DEPTH SCALE

1 : 75



LOGGED: D.J.S.

CHECKED: M.K.F.

MIS-BHS 001 07-1122-0164.GPJ GAL-MIS.GDT 02/14/14 NBHS

PROJECT: 07-1122-0164

RECORD OF MONITORING WELL: BH 07-4

SHEET 1 OF 1

LOCATION: See Site Plan

BORING DATE: July 11, 2007

DATUM: Local

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES			DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION		
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.30m												
								SHEAR STRENGTH Cu, kPa		nat V. + rem V. ⊕		Q - ● U - ○		WATER CONTENT PERCENT					
								20	40	60	80	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴	10 ⁻³			Wp ———— W ———— WI	
								20	40	60	80	20	40	60	80				
0	Power Auger 200mm Diam (Hollow Stem)	GROUND SURFACE																	
		TOPSOIL		0.00													Casing Set in Bentonite Seal		
		Grey brown SILTY CLAY (Weathered Crust)		0.24													Bentonite Seal		
1		Brown SAND and GRAVEL, trace silt		0.85															
2																			
		Loose to compact brown fine SAND, trace silt		2.13															
3																			
4																			
5																			
6																			
7																			
8																			
9		Compact brown fine to coarse SAND, trace to come gravel		8.53													Bentonite Seal		
10																			
11		End of Borehole		10.97													38mm Diam. PVC #10 Slot Screen		
12																			
13																			
14																			
15																			

DEPTH SCALE

1 : 75



LOGGED: D.J.S.

CHECKED: M.K.F.

MIS-BHS 001 07-1122-0164.GPJ GAL-MIS.GDT 02/14/14 NBHS

SHEET 1 OF 2

DATUM: Local

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

[illegible]

DEPTH SCALE

1 : 75



LOGGED: D.J.S.

CHECKED: M.K.F.

MIS-BHS 001 07-1122-0164.GPJ GAL-MIS.GDT 02/14/14 NBHS

PROJECT: 07-1122-0164

RECORD OF GAS WELL: GW 07-5

SHEET 2 OF 2

LOCATION: See Site Plan

BORING DATE: July 13, 16 & 17, 2007

DATUM: Local

SAMPLER HAMMER, 64kg; DROP, 760mm

PENETRATION TEST HAMMER, 64kg; DROP, 760mm

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION			
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.30m												
								SHEAR STRENGTH Cu, kPa				WATER CONTENT PERCENT							
								20	40	60	80			10 ⁻⁶	10 ⁻⁵	10 ⁻⁴	10 ⁻³		
								nat V. + Q - ● rem V. ⊕ U - ○				Wp ———— W ———— WI							
								20	40	60	80	20	40	60	80				
15	Power Auger 200mm Diam. (Hollow Stem)	--- CONTINUED FROM PREVIOUS PAGE ---																	
		Compact to dense brown fine SAND, trace silt, occasional fine to medium sand layers			10	50 DO	26												
16																			
17					11	50 DO	37												
18																			
19					12	50 DO	45												
20																			
21					13	50 DO	39												
22					14	50 DO	38												
23		Dense to compact fine SAND, some silt with occasional silty sand and silty clay seams and layers		93.67 22.56															
					15	50 DO	39												
24																			
25					16	50 DO	41												
26																			
27					17	50 DO	37												
28				88.19 28.04	18	50 DO	27												
	End of Borehole																		
29																			
30																			

32mm Diam PVC
#10 Slot Screen

DEPTH SCALE

1 : 75



LOGGED: D.J.S.

CHECKED: M.K.F.

MIS-BHS 001 07-1122-0164.GPJ GAL-MIS.GDT 02/14/14 NBHS

PROJECT: 10-1125-0036

RECORD OF BOREHOLE: 10-1

SHEET 1 OF 3

LOCATION: See Site Plan

BORING DATE: Sept. 3, 2010

DATUM: Local

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.30m	SHEAR STRENGTH Cu, kPa		nat V. + Q - rem V. U -		WATER CONTENT PERCENT Wp — W — Wi			
								20	40	60	80	10 ⁻⁶	10 ⁻⁵		
0		GROUND SURFACE		97.23											
		Brown fine sand, some gravel, occasional wire (FILL)		0.00											Bentonite Seal
1															
		Brown fine to medium SAND		96.01	1	A.S.									
				1.22											
2															
3															
4															
5															
6															
7	Rotary Drill/Cable Tool														
8															
9															
10															
11															
12															
13															
14				83.51											
		Brown fine to coarse SAND, trace to some cobbles		13.72	2	A.S.									
15															
		CONTINUED NEXT PAGE													

DEPTH SCALE

1 : 75



LOGGED: HEC

CHECKED: PASB

MIS-BHS 001 1011250036-1000.GPJ GAL-MIS.GDT 03/19/14 JM

PROJECT: 10-1125-0036

RECORD OF BOREHOLE: 10-1

SHEET 2 OF 3

LOCATION: See Site Plan

BORING DATE: Sept. 3, 2010

DATUM: Local

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		DESCRIPTION	STRATA PLOT ELEV. DEPTH (m)	NUMBER	TYPE	SHEAR STRENGTH Cu, kPa		nat V. + Q - rem V. ⊕ U - ○		WATER CONTENT PERCENT Wp ——— W ——— WI					
						20	40	60	80	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴	10 ⁻³		
		--- CONTINUED FROM PREVIOUS PAGE ---													
15		Brown to grey brown fine SAND, siltier at depth	81.99												
			15.24												
16															
17															
18															
19															
20		Brown to grey fine SAND, trace to some gravel	77.42												
			19.81												
21															
22	Rotary Drill/Cable Tool														
23															
24															
25															
26		Brown fine SAND, some gravel, occasional cobble	71.32												
			25.91	3	A.S.										
27															
28															
29															
30		CONTINUED NEXT PAGE													

DEPTH SCALE

1 : 75



LOGGED: HEC

CHECKED: PASB

MIS-BHS 001 1011250036-1000.GPJ GAL-MIS.GDT 03/19/14 JM

PROJECT: 10-1125-0036

RECORD OF BOREHOLE: 10-1

SHEET 3 OF 3

LOCATION: See Site Plan

BORING DATE: Sept. 3, 2010

DATUM: Local

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES			DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.30m											
								SHEAR STRENGTH		nat V. + Q - ● Cu, kPa rem V. ⊕ U - ○		WATER CONTENT PERCENT						
								20	40	60	80	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴	10 ⁻³			
30	Rotary Drill/Cable Tool	--- CONTINUED FROM PREVIOUS PAGE ---																
31		Brown fine SAND, some gravel, occasional cobble																
32																		
33																		
34		Brown fine SAND, some gravel and cobbles, occasional boulder			64.62 32.61	4	A.S.											
35																		
36		Brown fine SAND, some gravel and cobbles, some boulders			62.18 35.05	5	A.S.											
37																		
38																		
39		Brown fine SAND and GRAVEL, COBBLES and BOULDERS			59.13 38.10													
40																		
41	COBBLES and BOULDERS (Possible Bedrock)			57.45 39.78														
42																		
43																		
44																		
45																		
	End of Borehole			56.69 40.54														

DEPTH SCALE

1 : 75



LOGGED: HEC

CHECKED: PASB

MIS-BHS 001 1011250036-1000.GPJ GAL-MIS.GDT 03/19/14 JM

PROJECT: 10-1125-0036

RECORD OF BOREHOLE: 10-2A

SHEET 1 OF 3

LOCATION: See Site Plan

BORING DATE: Sept. 3, 2010

DATUM: Local

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	SHEAR STRENGTH Cu, kPa		nat V. + Q - rem V. ⊕ U - ⊙		WATER CONTENT PERCENT Wp ——— W ——— WI					
							20	40	60	80	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴			10 ⁻³
0		GROUND SURFACE		92.70												
		Grey brown fine SAND, some gravel and cobbles		0.00											Bentonite Seal	
1																
2																
		Grey fine SAND, some gravel, occasional cobble		90.57												
				2.13												
3																
4																
5																
6																
7	Rotary Drill/Cable Tool															
8																
9																
		Grey fine to coarse SAND and GRAVEL, some cobbles		83.56												
				9.14												
10		Brown fine to medium SAND, some gravel, trace cobbles		82.95												
				9.75												
11																
12																
13																
14																
15																
		CONTINUED NEXT PAGE														

DEPTH SCALE

1 : 75



LOGGED: HEC

CHECKED: PASB

MIS-BHS 001 1011250036-1000.GPJ GAL-MIS.GDT 03/19/14 JM

PROJECT: 10-1125-0036

RECORD OF BOREHOLE: 10-2A

SHEET 2 OF 3

LOCATION: See Site Plan

BORING DATE: Sept. 3, 2010

DATUM: Local

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION	
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	SHEAR STRENGTH Cu, kPa		nat V. + Q - rem V. ⊕ U - ○		WATER CONTENT PERCENT Wp — W — Wi					
							20	40	60	80	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴			10 ⁻³
15	Rotary Drill/Cable Tool	--- CONTINUED FROM PREVIOUS PAGE ---														
16		Brown fine to medium SAND, some gravel, trace cobbles														
17		Brown to grey brown fine SAND, trace gravel and cobbles		75.94 16.76	2	A.S.										
18																
19					3	A.S.										
20																
21																
22																
23																
24																
25																
26																
27																
28	Brown fine SAND		65.27 27.43	4	A.S.											
29	Brown fine to medium SAND and GRAVEL, occasional to some cobbles		64.35 28.35	5	A.S.											
30	CONTINUED NEXT PAGE															

DEPTH SCALE

1 : 75



LOGGED: HEC

CHECKED: PASB

MIS-BHS 001 1011250036-1000.GPJ GAL-MIS.GDT 03/19/14 JM

PROJECT: 10-1125-0036

RECORD OF BOREHOLE: 10-2A

SHEET 3 OF 3

LOCATION: See Site Plan

BORING DATE: Sept. 3, 2010

DATUM: Local

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION			
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.30m												
								SHEAR STRENGTH Cu, kPa		nat V. + rem V. ⊕		Q - ● U - ○		WATER CONTENT PERCENT					
								20	40	60	80	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴			10 ⁻³	Wp — W — Wl	
								20	40	60	80	20	40	60	80				
30	Rotary Drill/Cable Tool	--- CONTINUED FROM PREVIOUS PAGE --- Brown fine to medium SAND and GRAVEL, occasional to some cobbles																	
31		Grey brown to brown SILTY fine SAND to SANDY SILT		61.31	6	A.S.										Silica Sand and Bentonite			
32				31.39															
33																			
34																			
35	Grey brown SILTY fine SAND to fine SAND, trace to some gravel		59.17	7	A.S.											Bentonite Seal			
36			33.53																
37																			
38																			
39	Grey fine to medium SAND, trace to some gravel, occasional cobble		57.65	8	A.S.											Silica Sand			
40			35.05																
41																			
42																			
43	End of Borehole		53.69													51 mm Diam. PVC #10 Slot Screen			
44			39.01																
45																			
46																			
47																			
48																			
49																			
50																			
51																			
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176																			
177																			
178																			
179																			
180																			

DEPTH SCALE

1 : 75



LOGGED: HEC

CHECKED: PASB

MIS-BHS 001 1011250036-1000.GPJ GAL-MIS.GDT 03/19/14 JM

PROJECT: 10-1125-0036

RECORD OF BOREHOLE: 10-2B

SHEET 1 OF 2

LOCATION: See Site Plan

BORING DATE: Sept. 3, 2010

DATUM: Local

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION		
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.30m	SHEAR STRENGTH Cu, kPa		nat V. + Q - rem V. ⊕ U - ○		WATER CONTENT PERCENT Wp ——— W ——— WI					
								20	40	60	80	10 ⁻⁶	10 ⁻⁵			10 ⁻⁴	10 ⁻³
0		GROUND SURFACE		92.69													
		Grey brown fine SAND, some gravel and cobbles		0.00											Bentonite Seal		
1																	
2																	
		Grey fine SAND, some gravel, occasional cobble		90.56													
				2.13													
3																	
4																	
5																	
6																	
7	Rotary Drill/Cable Tool														Silica Sand and Bentonite		
8																	
9																	
		Grey fine to coarse SAND and GRAVEL, some cobbles		83.55													
				9.14													
10		Brown fine to medium SAND, some gravel, trace cobbles		82.94													
				9.75													
11																	
12																	
13																	
14															Bentonite Seal		
15																	
		CONTINUED NEXT PAGE															

DEPTH SCALE

1 : 75



LOGGED: HEC

CHECKED: PASB

MIS-BHS 001 1011250036-1000.GPJ GAL-MIS.GDT 03/19/14 JM

PROJECT: 10-1125-0036

RECORD OF BOREHOLE: 10-2B

SHEET 2 OF 2

LOCATION: See Site Plan

BORING DATE: Sept. 3, 2010

DATUM: Local

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.30m	SHEAR STRENGTH		WATER CONTENT PERCENT					
								Cu, kPa	nat V. + rem V. ⊕	Q - U -	Wp	W	WI		
15	Rotary Drill/Cable Tool	--- CONTINUED FROM PREVIOUS PAGE ---													
16		Brown fine to medium SAND, some gravel, trace cobbles													
17		Brown to grey brown fine SAND, trace gravel and cobbles		75.93 16.76											
18															
19															
20		End of Borehole		72.27 20.42											
21															
22															
23															
24															
25															
26															
27															
28															
29															
30															

DEPTH SCALE

1 : 75



LOGGED: HEC

CHECKED: PASB

MIS-BHS 001 1011250036-1000.GPJ GAL-MIS.GDT 03/19/14 JM

PROJECT: 10-1125-0036

RECORD OF BOREHOLE: 11-01

SHEET 1 OF 1

LOCATION: See Site Plan

BORING DATE: February 1, 2011

DATUM: Local

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE			SAMPLES			DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION			
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.30m	RESISTANCE, BLOWS/0.3m				k, cm/s								
								SHEAR STRENGTH Cu, kPa		nat V. + rem V. ⊕		Q - ● U - ○		WATER CONTENT PERCENT						
								20	40	60	80	10 ⁻⁶	10 ⁻⁵	10 ⁻⁴	10 ⁻³					
0		GROUND SURFACE		104.55																
	Power Auger 200 mm Diam. (Hollow Stem)	Silty clay SAND, plastic and debris		0.00													Flush Mount Protective Casing Set in Bentonite Bentonite Seal			
1																				
2																	Native Backfill and Bentonite Mix			
3																				
4																	Bentonite Seal			
5																				
6			-wet at 6.10 m depth																	
7																				
8			Brown to black fine SAND		96.93 7.62													Silica Sand		
9																				
10																	51 mm Diam. PVC #10 Slot Screen			
11		End of Borehole		93.88 10.67																
12																				
13																				
14																				
15																				

DEPTH SCALE

1 : 75



LOGGED: DG

CHECKED: PASB

MIS-BHS 001_1011250036-1000.GPJ GAL-MIS.GDT 03/19/14 JM

LOCATION: See Site Plan

BORING DATE: March 4, 2011

DATUM: Local

W.L. in Screen at
1.8 m depth at time
of drilling

1 : 75



MIS-BHS 001 1011250036-1000.GPJ GAL-MIS.GDT 03/19/14 JM

PROJECT: 10-1125-0036

RECORD OF BOREHOLE: GW11-01

SHEET 1 OF 1

LOCATION: See Site Plan

BORING DATE: March 4, 2011

DATUM: Local

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.3m	SHEAR STRENGTH Cu, kPa		nat V. + Q - rem V. ⊕ U - ⊙		WATER CONTENT PERCENT Wp — W — Wi			
								20	40	60	80	10 ⁻⁶	10 ⁻⁵		
0	Power Auger 200 mm Diam. (Hollow Stem)	GROUND SURFACE													
		Black sandy ORGANICS		0.03											
		Brown medium SAND													
1					1	50 DO	-								
2				2	50 DO	12									
3		End of Borehole		2.29											
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															

Bentonite Seal

51 mm Diam. PVC
#10 Slot ScreenW.L. in Screen at
1.8 m depth at time
of drilling

DEPTH SCALE

1 : 75



LOGGED: CA

CHECKED: PASB

MIS-BHS 001 1011250036-1000.GPJ GAL-MIS.GDT 3/28/11 JM

PROJECT: 14-1125-0002

RECORD OF BOREHOLE: 14-01

SHEET 1 OF 1

LOCATION: See Site Plan

BORING DATE: October 2, 2014

DATUM: Geodetic

DEPTH SCALE METRES	BORING METHOD	SOIL PROFILE		SAMPLES		DYNAMIC PENETRATION RESISTANCE, BLOWS/0.3m				HYDRAULIC CONDUCTIVITY, k, cm/s				ADDITIONAL LAB. TESTING	PIEZOMETER OR STANDPIPE INSTALLATION
		DESCRIPTION	STRATA PLOT	ELEV. DEPTH (m)	NUMBER	TYPE	BLOWS/0.30m	SHEAR STRENGTH Cu, kPa		nat V. + Q - rem V. ⊕ U -		WATER CONTENT PERCENT			
								20	40	60	80	10 ⁻⁶	10 ⁻⁵		
0	Excavator	GROUND SURFACE		0.00											
1															
2		End of Borehole		1.37											
3															
4															
5															

Bentonite Seal

25 mm Diam. PVC
#10 Slot Screen

DEPTH SCALE

1 : 25



LOGGED: DWM

CHECKED: MKF

MIS-BHS 001 1411250002.GPJ GAL-MIS.GDT 03/30/15 JM

APPENDIX C

Certificates of Analyses Paracel Laboratories Ltd.

Certificate of Analysis

WSP Canada Inc. (Ottawa)

1931 Robertson Rd.
Ottawa, ON K2H 5B7
Attn: Andrea Caletti

Client PO:
Project: CA0026246.5107

Custody: 72802, 72801, 72799

Report Date: 1-May-2024

Order Date: 25-Apr-2024

Order #: 2417436

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID	Paracel ID	Client ID
2417436-01	OMM - 5		
2417436-02	OMM - 6		
2417436-03	OMM - 7		
2417436-04	OMM - 8		
2417436-05	OMM - 9		
2417436-06	OMM - 15		
2417436-07	BH10-1		
2417436-08	BH11-1		
2417436-09	Dup-1		
2417436-10	OMM14 S		
2417436-11	OMM14 M		
2417436-12	OMM14 D		
2417436-13	BH10-2A		
2417436-14	BH10-2B		
2417436-15	Dup-2		

Approved By:

Dale Robertson, BSc

Laboratory Director

Certificate of Analysis

Report Date: 01-May-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 25-Apr-2024

Client PO:

Project Description: CA0026246.5107

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Alkalinity, total to pH 4.5	EPA 310.1 - Titration to pH 4.5	29-Apr-24	29-Apr-24
Ammonia, as N	EPA 351.2 - Auto Colour	29-Apr-24	29-Apr-24
Anions	EPA 300.1 - IC	29-Apr-24	29-Apr-24
Chemical Oxygen Demand	EPA 410.1 - Digestion, Colourimetric	29-Apr-24	29-Apr-24
Dissolved Organic Carbon	MOE 3247B - Combustion IR	26-Apr-24	29-Apr-24
Hardness	Hardness as CaCO ₃	29-Apr-24	29-Apr-24
Mercury by CVAA	EPA 245.2 - Cold Vapour AA	29-Apr-24	29-Apr-24
Metals, ICP-MS	EPA 200.8 - ICP-MS	29-Apr-24	29-Apr-24
Phenolics	EPA 420.2 - Auto Colour, 4AAP	29-Apr-24	29-Apr-24
Phosphorus, total, water	EPA 365.4 - Auto Colour, digestion	29-Apr-24	29-Apr-24
Total Dissolved Solids	SM 2540C - gravimetric, filtration	26-Apr-24	29-Apr-24
Total Kjeldahl Nitrogen	EPA 351.2 - Auto Colour, digestion	29-Apr-24	29-Apr-24

Certificate of Analysis

Report Date: 01-May-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 25-Apr-2024

Client PO:

Project Description: CA0026246.5107

Client ID:	OMM - 5	OMM - 6	OMM - 7	OMM - 8	-	-
Sample Date:	25-Apr-24 11:30	25-Apr-24 11:50	25-Apr-24 12:10	25-Apr-24 13:10	-	-
Sample ID:	2417436-01	2417436-02	2417436-03	2417436-04	-	-
Matrix:	Ground Water	Ground Water	Ground Water	Ground Water	-	-
MDL/Units						

General Inorganics

Alkalinity, total	5 mg/L	352	523	468	176	-	-
Ammonia as N	0.01 mg/L	1.31	0.72	3.80	0.01	-	-
Chemical Oxygen Demand	10 mg/L	15	17	17	<10	-	-
Dissolved Organic Carbon	0.5 mg/L	3.8	7.6	5.3	2.8	-	-
Hardness	1 mg/L	316	480	425	206	-	-
Phenolics	0.001 mg/L	<0.001	<0.001	<0.001	<0.001	-	-
Phosphorus, total	0.01 mg/L	0.13	<0.01	0.04	<0.01	-	-
Total Dissolved Solids	10 mg/L	418	676	538	316	-	-
Total Kjeldahl Nitrogen	0.1 mg/L	1.5	1.6	4.1	0.2	-	-

Anions

Bromide	0.1 mg/L	<0.1	0.1	0.1	<0.1	-	-
Chloride	1 mg/L	49	97	45	78	-	-
Fluoride	0.1 mg/L	<0.1	<0.1	0.1	0.1	-	-
Nitrate as N	0.1 mg/L	<0.1	0.2	<0.1	<0.1	-	-
Nitrite as N	0.05 mg/L	<0.05	<0.05	<0.05	<0.05	-	-
Phosphate as P	0.5 mg/L	<0.5	<0.5	<0.5	<0.5	-	-
Sulphate	1 mg/L	17	19	12	24	-	-

Metals

Mercury	0.1 ug/L	<0.1	<0.1	<0.1	<0.1	-	-
Aluminum	1 ug/L	3	<1	4	1	-	-
Antimony	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Arsenic	1 ug/L	<1	<1	<1	<1	-	-
Barium	1 ug/L	365	232	211	163	-	-
Beryllium	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Boron	10 ug/L	109	230	143	14	-	-

Certificate of Analysis

Report Date: 01-May-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 25-Apr-2024

Client PO:

Project Description: CA0026246.5107

Client ID:	OMM - 5	OMM - 6	OMM - 7	OMM - 8	-	-
Sample Date:	25-Apr-24 11:30	25-Apr-24 11:50	25-Apr-24 12:10	25-Apr-24 13:10	-	-
Sample ID:	2417436-01	2417436-02	2417436-03	2417436-04	-	-
Matrix:	Ground Water	Ground Water	Ground Water	Ground Water	-	-
MDL/Units						

Metals

Cadmium	0.1 ug/L	<0.1	<0.1	<0.1	<0.1	-	-
Calcium	100 ug/L	90300	147000	113000	58500	-	-
Chromium	1 ug/L	<1	<1	<1	<1	-	-
Cobalt	0.5 ug/L	<0.5	2.7	<0.5	<0.5	-	-
Copper	0.5 ug/L	<0.5	0.8	<0.5	<0.5	-	-
Iron	100 ug/L	10100	2410	18900	<100	-	-
Lead	0.1 ug/L	0.3	0.2	0.3	0.2	-	-
Magnesium	200 ug/L	21900	27300	34400	14600	-	-
Manganese	5 ug/L	534	798	783	39	-	-
Molybdenum	0.5 ug/L	0.6	<0.5	<0.5	0.9	-	-
Nickel	1 ug/L	<1	3	<1	<1	-	-
Potassium	100 ug/L	9240	11700	12000	5690	-	-
Selenium	1 ug/L	<1	<1	<1	<1	-	-
Silver	0.1 ug/L	<0.1	<0.1	<0.1	<0.1	-	-
Sodium	200 ug/L	36100	69100	27500	33500	-	-
Strontium	10 ug/L	262	432	439	153	-	-
Thallium	0.1 ug/L	<0.1	<0.1	<0.1	<0.1	-	-
Tin	5 ug/L	<5	<5	<5	<5	-	-
Titanium	5 ug/L	<5	<5	<5	<5	-	-
Tungsten	10 ug/L	<10	<10	<10	<10	-	-
Uranium	0.1 ug/L	<0.1	1.2	0.3	1.0	-	-
Vanadium	0.5 ug/L	0.6	<0.5	1.5	<0.5	-	-
Zinc	5 ug/L	<5	<5	<5	<5	-	-

Certificate of Analysis

Report Date: 01-May-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 25-Apr-2024

Client PO:

Project Description: CA0026246.5107

Client ID:	OMM - 9	OMM - 15	BH10-1	BH11-1	-	-
Sample Date:	25-Apr-24 13:30	25-Apr-24 11:00	25-Apr-24 12:40	25-Apr-24 14:00	-	-
Sample ID:	2417436-05	2417436-06	2417436-07	2417436-08	-	-
Matrix:	Ground Water	Ground Water	Ground Water	Ground Water	-	-
MDL/Units						

General Inorganics

Alkalinity, total	5 mg/L	499	257	297	384	-	-
Ammonia as N	0.01 mg/L	0.03	<0.01	0.99	6.24	-	-
Chemical Oxygen Demand	10 mg/L	<10	<10	21	34	-	-
Dissolved Organic Carbon	0.5 mg/L	2.2	0.6	3.0	3.7	-	-
Hardness	1 mg/L	451	265	278	355	-	-
Phenolics	0.001 mg/L	<0.001	<0.001	<0.001	<0.001	-	-
Phosphorus, total	0.01 mg/L	0.05	0.27	0.02	1.29	-	-
Total Dissolved Solids	10 mg/L	636	298	410	498	-	-
Total Kjeldahl Nitrogen	0.1 mg/L	0.3	<0.1	1.1	6.2	-	-

Anions

Bromide	0.1 mg/L	0.1	<0.1	<0.1	0.1	-	-
Chloride	1 mg/L	75	4	64	28	-	-
Fluoride	0.1 mg/L	<0.1	0.2	0.2	0.2	-	-
Nitrate as N	0.1 mg/L	1.8	<0.1	<0.1	<0.1	-	-
Nitrite as N	0.05 mg/L	<0.05	<0.05	<0.05	0.26	-	-
Phosphate as P	0.5 mg/L	<0.5	<0.5	<0.5	<0.5	-	-
Sulphate	1 mg/L	19	37	21	53	-	-

Metals

Mercury	0.1 ug/L	<0.1	<0.1	<0.1	<0.1	-	-
Aluminum	1 ug/L	<1	1	4	2	-	-
Antimony	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Arsenic	1 ug/L	<1	<1	<1	3	-	-
Barium	1 ug/L	161	91	355	1050	-	-
Beryllium	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Boron	10 ug/L	317	14	83	109	-	-

Certificate of Analysis

Report Date: 01-May-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 25-Apr-2024

Client PO:

Project Description: CA0026246.5107

Client ID:	OMM - 9	OMM - 15	BH10-1	BH11-1	-	-
Sample Date:	25-Apr-24 13:30	25-Apr-24 11:00	25-Apr-24 12:40	25-Apr-24 14:00	-	-
Sample ID:	2417436-05	2417436-06	2417436-07	2417436-08	-	-
Matrix:	Ground Water	Ground Water	Ground Water	Ground Water	-	-
MDL/Units						

Metals

Cadmium	0.1 ug/L	<0.1	<0.1	<0.1	<0.1	-	-
Calcium	100 ug/L	131000	67200	80600	93000	-	-
Chromium	1 ug/L	<1	<1	<1	<1	-	-
Cobalt	0.5 ug/L	<0.5	<0.5	<0.5	1.1	-	-
Copper	0.5 ug/L	1.8	0.5	<0.5	0.7	-	-
Iron	100 ug/L	<100	<100	6190	6320	-	-
Lead	0.1 ug/L	0.2	<0.1	0.3	0.3	-	-
Magnesium	200 ug/L	30300	23700	18700	29700	-	-
Manganese	5 ug/L	<5	<5	384	170	-	-
Molybdenum	0.5 ug/L	<0.5	2.3	0.8	6.7	-	-
Nickel	1 ug/L	2	<1	<1	1	-	-
Potassium	100 ug/L	7720	4000	7450	11200	-	-
Selenium	1 ug/L	<1	<1	<1	<1	-	-
Silver	0.1 ug/L	<0.1	<0.1	<0.1	<0.1	-	-
Sodium	200 ug/L	76700	4220	41500	22800	-	-
Strontium	10 ug/L	477	146	255	270	-	-
Thallium	0.1 ug/L	<0.1	<0.1	<0.1	<0.1	-	-
Tin	5 ug/L	<5	<5	<5	<5	-	-
Titanium	5 ug/L	<5	<5	<5	<5	-	-
Tungsten	10 ug/L	<10	<10	<10	<10	-	-
Uranium	0.1 ug/L	0.9	6.9	0.3	0.9	-	-
Vanadium	0.5 ug/L	0.6	<0.5	0.5	<0.5	-	-
Zinc	5 ug/L	<5	<5	<5	<5	-	-

Certificate of Analysis

Report Date: 01-May-2024

Client: **WSP Canada Inc. (Ottawa)**

Order Date: 25-Apr-2024

Client PO:

Project Description: CA0026246.5107

Client ID:	Dup-1	OMM14 S	OMM14 M	OMM14 D	-	-
Sample Date:	25-Apr-24 10:00	25-Apr-24 12:05	25-Apr-24 11:40	25-Apr-24 11:05	-	-
Sample ID:	2417436-09	2417436-10	2417436-11	2417436-12	-	-
Matrix:	Ground Water	Ground Water	Ground Water	Ground Water	-	-
MDL/Units						

General Inorganics

Alkalinity, total	5 mg/L	466	187	190	214	-	-
Ammonia as N	0.01 mg/L	3.81	0.08	0.25	0.37	-	-
Chemical Oxygen Demand	10 mg/L	17	<10	<10	<10	-	-
Dissolved Organic Carbon	0.5 mg/L	5.1	2.4	2.3	2.8	-	-
Hardness	1 mg/L	421	237	272	253	-	-
Phenolics	0.001 mg/L	<0.001	<0.001	<0.001	<0.001	-	-
Phosphorus, total	0.01 mg/L	0.05	<0.01	<0.01	<0.01	-	-
Total Dissolved Solids	10 mg/L	518	358	482	410	-	-
Total Kjeldahl Nitrogen	0.1 mg/L	4.1	0.2	0.4	0.4	-	-

Anions

Bromide	0.1 mg/L	0.1	<0.1	<0.1	<0.1	-	-
Chloride	1 mg/L	46	93	158	110	-	-
Fluoride	0.1 mg/L	0.1	0.2	0.2	0.2	-	-
Nitrate as N	0.1 mg/L	<0.1	<0.1	<0.1	<0.1	-	-
Nitrite as N	0.05 mg/L	<0.05	<0.05	<0.05	<0.05	-	-
Phosphate as P	0.5 mg/L	<0.5	<0.5	<0.5	<0.5	-	-
Sulphate	1 mg/L	12	19	22	23	-	-

Metals

Mercury	0.1 ug/L	<0.1	<0.1	<0.1	<0.1	-	-
Aluminum	1 ug/L	4	<1	<1	1	-	-
Antimony	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Arsenic	1 ug/L	<1	<1	<1	<1	-	-
Barium	1 ug/L	202	355	419	373	-	-
Beryllium	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Boron	10 ug/L	144	47	43	53	-	-

Certificate of Analysis

Report Date: 01-May-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 25-Apr-2024

Client PO:

Project Description: CA0026246.5107

Client ID:	Dup-1	OMM14 S	OMM14 M	OMM14 D	-	-
Sample Date:	25-Apr-24 10:00	25-Apr-24 12:05	25-Apr-24 11:40	25-Apr-24 11:05	-	-
Sample ID:	2417436-09	2417436-10	2417436-11	2417436-12	-	-
Matrix:	Ground Water	Ground Water	Ground Water	Ground Water	-	-
MDL/Units						

Metals

Cadmium	0.1 ug/L	<0.1	<0.1	<0.1	<0.1	-	-
Calcium	100 ug/L	112000	65900	74600	71200	-	-
Chromium	1 ug/L	<1	<1	<1	<1	-	-
Cobalt	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Copper	0.5 ug/L	<0.5	0.8	0.6	<0.5	-	-
Iron	100 ug/L	18600	<100	345	732	-	-
Lead	0.1 ug/L	0.3	0.2	0.2	0.2	-	-
Magnesium	200 ug/L	34400	17500	20800	18400	-	-
Manganese	5 ug/L	766	78	126	222	-	-
Molybdenum	0.5 ug/L	<0.5	0.9	1.5	1.0	-	-
Nickel	1 ug/L	<1	<1	<1	<1	-	-
Potassium	100 ug/L	12200	5520	6830	6070	-	-
Selenium	1 ug/L	<1	<1	<1	<1	-	-
Silver	0.1 ug/L	<0.1	<0.1	<0.1	<0.1	-	-
Sodium	200 ug/L	27100	30100	54300	45400	-	-
Strontium	10 ug/L	437	206	237	264	-	-
Thallium	0.1 ug/L	<0.1	<0.1	<0.1	<0.1	-	-
Tin	5 ug/L	<5	<5	<5	<5	-	-
Titanium	5 ug/L	<5	<5	<5	<5	-	-
Tungsten	10 ug/L	<10	<10	<10	<10	-	-
Uranium	0.1 ug/L	0.3	0.8	0.9	0.3	-	-
Vanadium	0.5 ug/L	1.4	<0.5	<0.5	<0.5	-	-
Zinc	5 ug/L	<5	<5	<5	<5	-	-

Certificate of Analysis

Report Date: 01-May-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 25-Apr-2024

Client PO:

Project Description: CA0026246.5107

Client ID:	BH10-2A	BH10-2B	Dup-2		
Sample Date:	25-Apr-24 13:10	25-Apr-24 13:40	25-Apr-24 00:00		
Sample ID:	2417436-13	2417436-14	2417436-15		
Matrix:	Ground Water	Ground Water	Ground Water		
MDL/Units					

General Inorganics

Alkalinity, total	5 mg/L	378	276	216	-	-	-
Ammonia as N	0.01 mg/L	0.45	0.19	0.37	-	-	-
Chemical Oxygen Demand	10 mg/L	12	<10	<10	-	-	-
Dissolved Organic Carbon	0.5 mg/L	3.3	1.1	2.6	-	-	-
Hardness	1 mg/L	349	385	252	-	-	-
Phenolics	0.001 mg/L	<0.001	<0.001	<0.001	-	-	-
Phosphorus, total	0.01 mg/L	0.09	<0.01	<0.01	-	-	-
Total Dissolved Solids	10 mg/L	528	644	400	-	-	-
Total Kjeldahl Nitrogen	0.1 mg/L	0.6	0.2	0.5	-	-	-

Anions

Bromide	0.1 mg/L	0.3	<0.1	<0.1	-	-	-
Chloride	1 mg/L	84	202	112	-	-	-
Fluoride	0.1 mg/L	0.4	0.4	0.3	-	-	-
Nitrate as N	0.1 mg/L	<0.1	<0.1	<0.1	-	-	-
Nitrite as N	0.05 mg/L	<0.05	<0.05	<0.05	-	-	-
Phosphate as P	0.5 mg/L	<0.5	<0.5	<0.5	-	-	-
Sulphate	1 mg/L	32	50	24	-	-	-

Metals

Mercury	0.1 ug/L	<0.1	<0.1	<0.1	-	-	-
Aluminum	1 ug/L	1	1	1	-	-	-
Antimony	0.5 ug/L	<0.5	<0.5	<0.5	-	-	-
Arsenic	1 ug/L	<1	<1	<1	-	-	-
Barium	1 ug/L	1000	338	371	-	-	-
Beryllium	0.5 ug/L	<0.5	<0.5	<0.5	-	-	-
Boron	10 ug/L	153	79	52	-	-	-

Certificate of Analysis

Report Date: 01-May-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 25-Apr-2024

Client PO:

Project Description: CA0026246.5107

Client ID:	BH10-2A	BH10-2B	Dup-2		
Sample Date:	25-Apr-24 13:10	25-Apr-24 13:40	25-Apr-24 00:00		
Sample ID:	2417436-13	2417436-14	2417436-15		
Matrix:	Ground Water	Ground Water	Ground Water		
MDL/Units					

Metals

Cadmium	0.1 ug/L	<0.1	<0.1	<0.1	-	-
Calcium	100 ug/L	87500	94500	70800	-	-
Chromium	1 ug/L	<1	<1	<1	-	-
Cobalt	0.5 ug/L	<0.5	<0.5	<0.5	-	-
Copper	0.5 ug/L	<0.5	<0.5	<0.5	-	-
Iron	100 ug/L	3870	340	735	-	-
Lead	0.1 ug/L	0.2	0.3	0.2	-	-
Magnesium	200 ug/L	31700	36200	18300	-	-
Manganese	5 ug/L	178	93	225	-	-
Molybdenum	0.5 ug/L	0.6	1.8	1.0	-	-
Nickel	1 ug/L	<1	<1	<1	-	-
Potassium	100 ug/L	8340	8470	6030	-	-
Selenium	1 ug/L	<1	<1	<1	-	-
Silver	0.1 ug/L	<0.1	<0.1	<0.1	-	-
Sodium	200 ug/L	58500	73800	45000	-	-
Strontium	10 ug/L	783	696	263	-	-
Thallium	0.1 ug/L	<0.1	<0.1	<0.1	-	-
Tin	5 ug/L	<5	<5	<5	-	-
Titanium	5 ug/L	<5	<5	<5	-	-
Tungsten	10 ug/L	<10	<10	<10	-	-
Uranium	0.1 ug/L	0.2	3.0	0.4	-	-
Vanadium	0.5 ug/L	<0.5	<0.5	<0.5	-	-
Zinc	5 ug/L	<5	<5	<5	-	-

Certificate of Analysis

Report Date: 01-May-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 25-Apr-2024

Client PO:

Project Description: CA0026246.5107

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Anions								
Bromide	ND	0.1	mg/L					
Chloride	ND	1	mg/L					
Fluoride	ND	0.1	mg/L					
Nitrate as N	ND	0.1	mg/L					
Nitrite as N	ND	0.05	mg/L					
Phosphate as P	ND	0.5	mg/L					
Sulphate	ND	1	mg/L					
General Inorganics								
Alkalinity, total	ND	5	mg/L					
Ammonia as N	ND	0.01	mg/L					
Chemical Oxygen Demand	ND	10	mg/L					
Dissolved Organic Carbon	ND	0.5	mg/L					
Phenolics	ND	0.001	mg/L					
Phosphorus, total	ND	0.01	mg/L					
Total Dissolved Solids	ND	10	mg/L					
Total Kjeldahl Nitrogen	ND	0.1	mg/L					
Metals								
Mercury	ND	0.1	ug/L					
Aluminum	ND	1	ug/L					
Antimony	ND	0.5	ug/L					
Arsenic	ND	1	ug/L					
Barium	ND	1	ug/L					
Beryllium	ND	0.5	ug/L					
Boron	ND	10	ug/L					
Cadmium	ND	0.1	ug/L					
Calcium	ND	100	ug/L					
Chromium	ND	1	ug/L					
Cobalt	ND	0.5	ug/L					
Copper	ND	0.5	ug/L					
Iron	ND	100	ug/L					
Lead	ND	0.1	ug/L					
Magnesium	ND	200	ug/L					

Certificate of Analysis

Report Date: 01-May-2024

Client: **WSP Canada Inc. (Ottawa)**

Order Date: 25-Apr-2024

Client PO:

Project Description: CA0026246.5107

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Manganese	ND	5	ug/L					
Molybdenum	ND	0.5	ug/L					
Nickel	ND	1	ug/L					
Potassium	ND	100	ug/L					
Selenium	ND	1	ug/L					
Silver	ND	0.1	ug/L					
Sodium	ND	200	ug/L					
Strontium	ND	10	ug/L					
Thallium	ND	0.1	ug/L					
Tin	ND	5	ug/L					
Titanium	ND	5	ug/L					
Tungsten	ND	10	ug/L					
Uranium	ND	0.1	ug/L					
Vanadium	ND	0.5	ug/L					
Zinc	ND	5	ug/L					

Certificate of Analysis

Report Date: 01-May-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 25-Apr-2024

Client PO:

Project Description: CA0026246.5107

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Anions									
Bromide	ND	0.1	mg/L	ND			NC	20	
Chloride	ND	1	mg/L	ND			NC	20	
Fluoride	0.36	0.1	mg/L	0.35			1.3	20	
Nitrate as N	0.22	0.1	mg/L	0.23			1.7	20	
Nitrite as N	ND	0.05	mg/L	ND			NC	20	
Phosphate as P	ND	0.5	mg/L	ND			NC	20	
Sulphate	1330	5	mg/L	1330			0.1	10	
General Inorganics									
Alkalinity, total	200	5	mg/L	203			1.3	14	
Ammonia as N	0.011	0.01	mg/L	0.010			7.4	18	
Chemical Oxygen Demand	15	10	mg/L	15			0.0	12	
Dissolved Organic Carbon	2.3	0.5	mg/L	2.4			3.0	37	
Phenolics	ND	0.001	mg/L	ND			NC	10	
Phosphorus, total	0.035	0.01	mg/L	0.034			2.9	15	
Total Dissolved Solids	94.0	10	mg/L	94.0			0.0	10	
Total Kjeldahl Nitrogen	0.56	0.1	mg/L	0.59			4.9	16	
Metals									
Mercury	ND	0.1	ug/L	ND			NC	20	
Aluminum	2.7	1	ug/L	2.5			7.4	20	
Antimony	ND	0.5	ug/L	ND			NC	20	
Arsenic	ND	1	ug/L	ND			NC	20	
Barium	358	1	ug/L	365			1.9	20	
Beryllium	ND	0.5	ug/L	ND			NC	20	
Boron	107	10	ug/L	109			2.5	20	
Cadmium	ND	0.1	ug/L	ND			NC	20	
Calcium	91000	100	ug/L	90300			0.7	20	
Chromium	ND	1	ug/L	ND			NC	20	
Cobalt	ND	0.5	ug/L	ND			NC	20	
Copper	ND	0.5	ug/L	ND			NC	20	
Iron	10100	100	ug/L	10100			0.4	20	

Certificate of Analysis

Report Date: 01-May-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 25-Apr-2024

Client PO:

Project Description: CA0026246.5107

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Lead	0.30	0.1	ug/L	0.25			18.1	20	
Magnesium	21300	200	ug/L	21900			2.9	20	
Manganese	537	5	ug/L	534			0.5	20	
Molybdenum	0.60	0.5	ug/L	0.60			0.5	20	
Nickel	ND	1	ug/L	ND			NC	20	
Potassium	9210	100	ug/L	9240			0.4	20	
Selenium	ND	1	ug/L	ND			NC	20	
Silver	ND	0.1	ug/L	ND			NC	20	
Sodium	34300	200	ug/L	36100			5.1	20	
Strontium	267	10	ug/L	262			1.9	20	
Thallium	ND	0.1	ug/L	ND			NC	20	
Tin	ND	5	ug/L	ND			NC	20	
Titanium	ND	5	ug/L	ND			NC	20	
Tungsten	ND	10	ug/L	ND			NC	20	
Uranium	ND	0.1	ug/L	ND			NC	20	
Vanadium	0.63	0.5	ug/L	0.62			1.3	20	
Zinc	ND	5	ug/L	ND			NC	20	

Certificate of Analysis

Report Date: 01-May-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 25-Apr-2024

Client PO:

Project Description: CA0026246.5107

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Anions									
Bromide	1.01	0.1	mg/L	ND	101	85-117			
Chloride	10.5	1	mg/L	ND	105	70-124			
Fluoride	1.25	0.1	mg/L	0.35	89.6	70-130			
Nitrate as N	1.29	0.1	mg/L	0.23	107	77-126			
Nitrite as N	1.01	0.05	mg/L	ND	101	82-115			
Phosphate as P	4.71	0.5	mg/L	ND	94.1	76-130			
Sulphate	28.6	1	mg/L	19.1	95.0	74-126			
General Inorganics									
Ammonia as N	0.989	0.01	mg/L	0.010	97.9	81-124			
Chemical Oxygen Demand	214	10	mg/L	15	99.5	85-111			
Dissolved Organic Carbon	13.4	0.5	mg/L	2.3	111	60-133			
Phenolics	0.027	0.001	mg/L	ND	106	67-133			
Phosphorus, total	1.01	0.01	mg/L	0.034	98.0	80-120			
Total Dissolved Solids	98.0	10	mg/L	ND	98.0	75-125			
Total Kjeldahl Nitrogen	1.55	0.1	mg/L	0.59	95.8	81-126			
Metals									
Mercury	2.34	0.1	ug/L	ND	78.2	70-130			
Aluminum	47.6	1	ug/L	2.5	90.1	80-120			
Arsenic	48.2	1	ug/L	ND	96.2	80-120			
Barium	49.1	1	ug/L	ND	98.3	80-120			
Beryllium	48.4	0.5	ug/L	ND	96.8	80-120			
Boron	143	10	ug/L	109	67.0	80-120			QM-07
Cadmium	47.3	0.1	ug/L	ND	94.6	80-120			
Calcium	9690	100	ug/L	ND	96.9	80-120			
Chromium	52.3	1	ug/L	ND	104	80-120			
Cobalt	49.7	0.5	ug/L	ND	99.1	80-120			
Copper	45.2	0.5	ug/L	ND	90.3	80-120			
Iron	11800	100	ug/L	10100	71.8	80-120			QM-07
Lead	40.4	0.1	ug/L	0.25	80.2	80-120			
Magnesium	28900	200	ug/L	21900	69.6	80-120			QM-07

Certificate of Analysis

Report Date: 01-May-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 25-Apr-2024

Client PO:

Project Description: CA0026246.5107

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Manganese	566	5	ug/L	534	64.2	80-120			QM-07
Molybdenum	44.4	0.5	ug/L	0.60	87.6	80-120			
Nickel	48.7	1	ug/L	ND	96.5	80-120			
Potassium	18400	100	ug/L	9240	91.8	80-120			
Selenium	44.3	1	ug/L	ND	88.6	80-120			
Silver	42.0	0.1	ug/L	ND	84.0	80-120			
Sodium	42500	200	ug/L	36100	64.7	80-120			QM-07
Strontium	302	10	ug/L	262	80.0	80-120			
Thallium	44.2	0.1	ug/L	ND	88.3	80-120			
Tin	45.7	5	ug/L	ND	91.4	80-120			
Titanium	55.9	5	ug/L	ND	111	80-120			
Tungsten	39.4	10	ug/L	ND	78.3	80-120			QM-07
Uranium	45.1	0.1	ug/L	ND	89.9	80-120			
Vanadium	54.0	0.5	ug/L	0.62	107	80-120			
Zinc	45	5	ug/L	ND	88.2	80-120			

Certificate of Analysis

Report Date: 01-May-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 25-Apr-2024

Client PO:

Project Description: CA0026246.5107

Qualifier Notes:**Login Qualifiers :**

Sample - Bottle received empty - COD and Phenols. Sub-sampled in lab from another container.

Applies to Samples: OMM - 15

QC Qualifiers:

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on other acceptable QC.

Sample Data Revisions:

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

Any use of these results implies your agreement that our total liability in connection with this work, however arising, shall be limited to the amount paid by you for this work, and that our employees or agents shall not under any circumstances be liable to you in connection with this work.

Paracel ID: 2417436



www.paracellabs.com

Paracel Order Number
(Lab Use Only)

2417436

Chain Of Custody
(Lab Use Only)
No 72799

Client Name: WSP CANADA INC
Contact Name: ANDREA CALOTTI
Address: 1931 ROBERTSON RD
OTTAWA ON

Project Ref: CA0026246.5107

Quote #: 24-0002

PO #:

E-mail:

andrea.calotti@wsp-com

Page 3 of 3

Turnaround Time

☐ 1 day ☐ 3 day
☐ 2 day ☒ Regular

Date Required:

☐ REG 153/04 ☐ REG 406/19

Other Regulation

☐ Table 1 ☐ Res/Park ☐ Med/Fine

☐ Table 2 ☐ Ind/Comm ☐ Coarse

☐ Table 3 ☐ Agri/Other

☐ Table

For RSC: ☐ Yes ☐ No

☐ REG 558

☐ PWQO

☐ CCME

☐ MISA

☐ SU - Sani

☐ SU - Storm

Mun:

☐ Other:

Matrix Type: S (Soil/Sed.) GW (Ground Water)
SW (Surface Water) SS (Storm/Sanitary Sewer)
P (Paint) A (Air) O (Other)

Required Analysis

Sample ID/Location Name

1 OMH 145

2 OMH 14M

3 OMH 14 D

4 BH 10-2A

5 BH 10-2B

6 DUP-2

7

8

9

10

GW

8

04/25/24

Date

12:05 PM

11:40 AM

11:05 AM

1:10 PM

1:40 PM

Comments:

HG + METALS FIELD FILTERED

NO VOC SPRING MONITORING

Method of Delivery:

WALK IN

Relinquished By (Sign):

Received at Depot:

Received at Lab:

Verified by:

Relinquished By (Print): P. AMHILAGU

Date/Time:

Date/Time:

Date/Time:

Date/Time: 04/25/24

Temperature:

°C

Temperature:

6.7 6.1 10.5

pH Verified: ☐

By:

SS

Chain of Custody (Blank) xlsx

Revision 5.0

Certificate of Analysis

WSP Canada Inc. (Ottawa)

1931 Robertson Rd.
Ottawa, ON K2H 5B7
Attn: Andrea Caletti

Client PO:
Project: CA0026246.5107
Custody: 72801

Report Date: 1-May-2024

Order Date: 25-Apr-2024

Order #: 2417440

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
2417440-01	S7D
2417440-02	S8
2417440-03	S9
2417440-04	Dup-3
2417440-05	S-6

Approved By:

Dale Robertson, BSc

Laboratory Director

Certificate of Analysis

Report Date: 01-May-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 25-Apr-2024

Client PO:

Project Description: CA0026246.5107

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Alkalinity, total to pH 4.5	EPA 310.1 - Titration to pH 4.5	29-Apr-24	29-Apr-24
Ammonia, as N	EPA 351.2 - Auto Colour	29-Apr-24	29-Apr-24
Anions	EPA 300.1 - IC	29-Apr-24	29-Apr-24
Biochemical Oxygen Demand	SM 5210B - DO Probe	26-Apr-24	1-May-24
Chemical Oxygen Demand	EPA 410.1 - Digestion, Colourimetric	29-Apr-24	29-Apr-24
Dissolved Organic Carbon	MOE 3247B - Combustion IR	26-Apr-24	29-Apr-24
Hardness	Hardness as CaCO ₃	26-Apr-24	26-Apr-24
Mercury, dissolved	EPA 245.2 - Cold Vapour AA	29-Apr-24	29-Apr-24
Metals, ICP-MS	EPA 200.8 - ICP-MS	26-Apr-24	26-Apr-24
Phenolics	EPA 420.2 - Auto Colour, 4AAP	29-Apr-24	29-Apr-24
Phosphorus, total, water	EPA 365.4 - Auto Colour, digestion	29-Apr-24	29-Apr-24
Total Dissolved Solids	SM 2540C - gravimetric, filtration	26-Apr-24	29-Apr-24
Total Kjeldahl Nitrogen	EPA 351.2 - Auto Colour, digestion	29-Apr-24	29-Apr-24
Total Suspended Solids	SM 2540D - Gravimetric	26-Apr-24	29-Apr-24

Certificate of Analysis

Report Date: 01-May-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 25-Apr-2024

Client PO:

Project Description: CA0026246.5107

Client ID:	S7D	S8	S9	Dup-3		
Sample Date:	25-Apr-24 08:15	25-Apr-24 08:35	25-Apr-24 08:40	25-Apr-24 10:00	-	-
Sample ID:	2417440-01	2417440-02	2417440-03	2417440-04		
Matrix:	Surface Water	Surface Water	Surface Water	Surface Water		
MDL/Units						

General Inorganics

Alkalinity, total	5 mg/L	73	72	72	150	-	-
Ammonia as N	0.01 mg/L	0.03	0.02	0.04	0.03	-	-
BOD	2 mg/L	<2	<2	<2	3	-	-
Chemical Oxygen Demand	10 mg/L	18	17	18	19	-	-
Dissolved Organic Carbon	0.5 mg/L	5.6	5.5	5.6	5.6	-	-
Hardness	1 mg/L	88.7	87.9	87.6	244	-	-
Phenolics	0.001 mg/L	<0.001	<0.001	<0.001	<0.001	-	-
Phosphorus, total	0.01 mg/L	<0.01	<0.01	0.01	0.03	-	-
Total Dissolved Solids	10 mg/L	94	80	80	364	-	-
Total Suspended Solids	2 mg/L	3	4	3	92	-	-
Total Kjeldahl Nitrogen	0.1 mg/L	0.3	0.3	0.4	0.4	-	-

Anions

Bromide	0.1 mg/L	<0.1	<0.1	<0.1	<0.1	-	-
Chloride	1 mg/L	11	10	10	101	-	-
Fluoride	0.1 mg/L	<0.1	<0.1	<0.1	0.3	-	-
Nitrate as N	0.1 mg/L	<0.1	<0.1	0.1	<0.1	-	-
Nitrite as N	0.05 mg/L	<0.05	<0.05	<0.05	<0.05	-	-
Phosphate as P	0.5 mg/L	<0.5	<0.5	<0.5	<0.5	-	-
Sulphate	1 mg/L	7	6	6	22	-	-

Metals

Mercury, dissolved	0.1 ug/L	<0.1	<0.1	<0.1	<0.1	-	-
Barium	1 ug/L	33	33	32	43	-	-
Calcium	100 ug/L	24400	24200	24300	64300	-	-
Magnesium	200 ug/L	6740	6690	6550	20200	-	-
Manganese	5 ug/L	19	21	20	48	-	-

Certificate of Analysis

Report Date: 01-May-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 25-Apr-2024

Client PO:

Project Description: CA0026246.5107

Client ID:	S7D	S8	S9	Dup-3		
Sample Date:	25-Apr-24 08:15	25-Apr-24 08:35	25-Apr-24 08:40	25-Apr-24 10:00	-	-
Sample ID:	2417440-01	2417440-02	2417440-03	2417440-04		
Matrix:	Surface Water	Surface Water	Surface Water	Surface Water		
MDL/Units						

Metals

Potassium	100 ug/L	1380	1360	1400	3720	-	-
Sodium	200 ug/L	10100	9230	8970	55100	-	-

Metals - Total

Antimony	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Arsenic	1 ug/L	<1	<1	<1	<1	-	-
Beryllium	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Boron	50 ug/L	<50	<50	<50	<50	-	-
Cadmium	0.1 ug/L	<0.1	<0.1	<0.1	<0.1	-	-
Chromium	5 ug/L	<5	<5	<5	<5	-	-
Cobalt	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Copper	0.5 ug/L	0.7	0.7	0.6	0.7	-	-
Iron	100 ug/L	184	233	184	1120	-	-
Lead	0.1 ug/L	0.3	0.3	0.3	0.6	-	-
Molybdenum	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Nickel	1 ug/L	<1	<1	<1	<1	-	-
Selenium	1 ug/L	<1	<1	<1	<1	-	-
Silver	0.1 ug/L	<0.1	<0.1	<0.1	<0.1	-	-
Thallium	0.1 ug/L	0.1	0.1	0.1	<0.1	-	-
Tungsten	10 ug/L	<10	<10	<10	<10	-	-
Uranium	0.1 ug/L	0.2	0.2	0.2	0.4	-	-
Vanadium	0.5 ug/L	0.6	0.6	0.5	<0.5	-	-
Zinc	5 ug/L	<5	<5	<5	<5	-	-
Zirconium	1 ug/L	<1	<1	<1	<1	-	-

Certificate of Analysis

Report Date: 01-May-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 25-Apr-2024

Client PO:

Project Description: CA0026246.5107

Client ID:	S-6					
Sample Date:	25-Apr-24 13:30					
Sample ID:	2417440-05					
Matrix:	Surface Water					
MDL/Units						

General Inorganics

Alkalinity, total	5 mg/L	151	-	-	-	-
Ammonia as N	0.01 mg/L	0.03	-	-	-	-
BOD	2 mg/L	<2	-	-	-	-
Chemical Oxygen Demand	10 mg/L	21	-	-	-	-
Dissolved Organic Carbon	0.5 mg/L	5.5	-	-	-	-
Hardness	1 mg/L	242	-	-	-	-
Phenolics	0.001 mg/L	<0.001	-	-	-	-
Phosphorus, total	0.01 mg/L	0.03	-	-	-	-
Total Dissolved Solids	10 mg/L	338	-	-	-	-
Total Suspended Solids	2 mg/L	120	-	-	-	-
Total Kjeldahl Nitrogen	0.1 mg/L	0.5	-	-	-	-

Anions

Bromide	0.1 mg/L	<0.1	-	-	-	-
Chloride	1 mg/L	100	-	-	-	-
Fluoride	0.1 mg/L	0.3	-	-	-	-
Nitrate as N	0.1 mg/L	<0.1	-	-	-	-
Nitrite as N	0.05 mg/L	<0.05	-	-	-	-
Phosphate as P	0.5 mg/L	<0.5	-	-	-	-
Sulphate	1 mg/L	15	-	-	-	-

Metals

Mercury, dissolved	0.1 ug/L	<0.1	-	-	-	-
Barium	1 ug/L	45	-	-	-	-
Calcium	100 ug/L	64000	-	-	-	-
Magnesium	200 ug/L	20000	-	-	-	-
Manganese	5 ug/L	85	-	-	-	-

Certificate of Analysis

Report Date: 01-May-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 25-Apr-2024

Client PO:

Project Description: CA0026246.5107

Client ID:	S-6					
Sample Date:	25-Apr-24 13:30					
Sample ID:	2417440-05					
Matrix:	Surface Water					
MDL/Units						

Metals

Potassium	100 ug/L	3830	-	-	-	-
Sodium	200 ug/L	54700	-	-	-	-

Metals - Total

Antimony	0.5 ug/L	<0.5	-	-	-	-
Arsenic	1 ug/L	<1	-	-	-	-
Beryllium	0.5 ug/L	<0.5	-	-	-	-
Boron	50 ug/L	<50	-	-	-	-
Cadmium	0.1 ug/L	<0.1	-	-	-	-
Chromium	5 ug/L	<5	-	-	-	-
Cobalt	0.5 ug/L	<0.5	-	-	-	-
Copper	0.5 ug/L	1.0	-	-	-	-
Iron	100 ug/L	1970	-	-	-	-
Lead	0.1 ug/L	0.6	-	-	-	-
Molybdenum	0.5 ug/L	<0.5	-	-	-	-
Nickel	1 ug/L	<1	-	-	-	-
Selenium	1 ug/L	<1	-	-	-	-
Silver	0.1 ug/L	<0.1	-	-	-	-
Thallium	0.1 ug/L	0.1	-	-	-	-
Tungsten	10 ug/L	<10	-	-	-	-
Uranium	0.1 ug/L	0.4	-	-	-	-
Vanadium	0.5 ug/L	0.9	-	-	-	-
Zinc	5 ug/L	<5	-	-	-	-
Zirconium	1 ug/L	<1	-	-	-	-

Certificate of Analysis

Report Date: 01-May-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 25-Apr-2024

Client PO:

Project Description: CA0026246.5107

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Anions								
Bromide	ND	0.1	mg/L					
Chloride	ND	1	mg/L					
Fluoride	ND	0.1	mg/L					
Nitrate as N	ND	0.1	mg/L					
Nitrite as N	ND	0.05	mg/L					
Phosphate as P	ND	0.5	mg/L					
Sulphate	ND	1	mg/L					
General Inorganics								
Alkalinity, total	ND	5	mg/L					
Ammonia as N	ND	0.01	mg/L					
BOD	ND	2	mg/L					
Chemical Oxygen Demand	ND	10	mg/L					
Dissolved Organic Carbon	ND	0.5	mg/L					
Phenolics	ND	0.001	mg/L					
Phosphorus, total	ND	0.01	mg/L					
Total Dissolved Solids	ND	10	mg/L					
Total Suspended Solids	ND	2	mg/L					
Total Kjeldahl Nitrogen	ND	0.1	mg/L					
Metals								
Mercury, dissolved	ND	0.1	ug/L					
Barium	ND	1	ug/L					
Calcium	ND	100	ug/L					
Magnesium	ND	200	ug/L					
Manganese	ND	5	ug/L					
Potassium	ND	100	ug/L					
Sodium	ND	200	ug/L					
Metals - Total								
Antimony	ND	0.5	ug/L					
Arsenic	ND	1	ug/L					
Beryllium	ND	0.5	ug/L					
Boron	ND	50	ug/L					
Cadmium	ND	0.1	ug/L					

Certificate of Analysis

Report Date: 01-May-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 25-Apr-2024

Client PO:

Project Description: CA0026246.5107

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Chromium	ND	5	ug/L					
Cobalt	ND	0.5	ug/L					
Copper	ND	0.5	ug/L					
Iron	ND	100	ug/L					
Lead	ND	0.1	ug/L					
Molybdenum	ND	0.5	ug/L					
Nickel	ND	1	ug/L					
Selenium	ND	1	ug/L					
Silver	ND	0.1	ug/L					
Thallium	ND	0.1	ug/L					
Tungsten	ND	10	ug/L					
Uranium	ND	0.1	ug/L					
Vanadium	ND	0.5	ug/L					
Zinc	ND	5	ug/L					
Zirconium	ND	1	ug/L					

Certificate of Analysis

Report Date: 01-May-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 25-Apr-2024

Client PO:

Project Description: CA0026246.5107

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Anions									
Bromide	ND	0.1	mg/L	ND			NC	20	
Chloride	ND	1	mg/L	ND			NC	20	
Fluoride	0.36	0.1	mg/L	0.35			1.3	20	
Nitrate as N	0.22	0.1	mg/L	0.23			1.7	20	
Nitrite as N	ND	0.05	mg/L	ND			NC	20	
Phosphate as P	ND	0.5	mg/L	ND			NC	20	
Sulphate	1330	5	mg/L	1330			0.1	10	
General Inorganics									
Alkalinity, total	200	5	mg/L	203			1.3	14	
Ammonia as N	0.011	0.01	mg/L	0.010			7.4	18	
BOD	432	2	mg/L	463			6.9	20	
Chemical Oxygen Demand	15	10	mg/L	15			0.0	12	
Dissolved Organic Carbon	2.3	0.5	mg/L	2.4			3.0	37	
Phenolics	ND	0.001	mg/L	ND			NC	10	
Phosphorus, total	0.035	0.01	mg/L	0.034			2.9	15	
Total Dissolved Solids	94.0	10	mg/L	94.0			0.0	10	
Total Suspended Solids	3.0	2	mg/L	3.0			0.0	10	
Total Kjeldahl Nitrogen	0.56	0.1	mg/L	0.59			4.9	16	
Metals									
Mercury, dissolved	ND	0.1	ug/L	ND			NC	20	
Barium	ND	1	ug/L	ND			NC	20	
Calcium	ND	100	ug/L	ND			NC	20	
Magnesium	ND	200	ug/L	ND			NC	20	
Manganese	ND	5	ug/L	ND			NC	20	
Potassium	ND	100	ug/L	ND			NC	20	
Sodium	ND	200	ug/L	ND			NC	20	
Metals - Total									
Antimony	0.59	0.5	ug/L	ND			NC	20	
Arsenic	ND	1	ug/L	ND			NC	20	
Beryllium	ND	0.5	ug/L	ND			NC	20	

Certificate of Analysis

Report Date: 01-May-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 25-Apr-2024

Client PO:

Project Description: CA0026246.5107

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Boron	ND	50	ug/L	ND			NC	20	
Cadmium	ND	0.1	ug/L	ND			NC	20	
Chromium	ND	5	ug/L	ND			NC	20	
Cobalt	ND	0.5	ug/L	ND			NC	20	
Copper	0.72	0.5	ug/L	0.72			0.9	20	
Iron	189	100	ug/L	184			2.5	20	
Lead	0.34	0.1	ug/L	0.31			8.4	20	
Molybdenum	ND	0.5	ug/L	ND			NC	20	
Nickel	ND	1	ug/L	ND			NC	20	
Selenium	ND	1	ug/L	ND			NC	20	
Silver	ND	0.1	ug/L	ND			NC	20	
Thallium	0.10	0.1	ug/L	0.12			NC	20	
Tungsten	ND	10	ug/L	ND			NC	20	
Uranium	0.2	0.1	ug/L	0.2			2.1	20	
Vanadium	0.55	0.5	ug/L	0.56			2.9	20	
Zinc	ND	5	ug/L	ND			NC	20	
Zirconium	ND	1	ug/L	ND			NC	20	

Certificate of Analysis

Report Date: 01-May-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 25-Apr-2024

Client PO:

Project Description: CA0026246.5107

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Anions									
Bromide	1.01	0.1	mg/L	ND	101	85-117			
Chloride	10.5	1	mg/L	ND	105	70-124			
Fluoride	1.25	0.1	mg/L	0.35	89.6	70-130			
Nitrate as N	1.29	0.1	mg/L	0.23	107	77-126			
Nitrite as N	1.01	0.05	mg/L	ND	101	82-115			
Phosphate as P	4.71	0.5	mg/L	ND	94.1	76-130			
Sulphate	28.6	1	mg/L	19.1	95.0	74-126			
General Inorganics									
Ammonia as N	0.989	0.01	mg/L	0.010	97.9	81-124			
BOD	203	2	mg/L	ND	102	71-121			
Chemical Oxygen Demand	214	10	mg/L	15	99.5	85-111			
Dissolved Organic Carbon	13.4	0.5	mg/L	2.3	111	60-133			
Phenolics	0.027	0.001	mg/L	ND	106	67-133			
Phosphorus, total	1.01	0.01	mg/L	0.034	98.0	80-120			
Total Dissolved Solids	98.0	10	mg/L	ND	98.0	75-125			
Total Suspended Solids	20.0	2	mg/L	ND	93.0	75-125			
Total Kjeldahl Nitrogen	1.55	0.1	mg/L	0.59	95.8	81-126			
Metals									
Mercury, dissolved	2.4	0.1	ug/L	ND	79.5	70-130			
Barium	48.8	1	ug/L	ND	97.5	80-120			
Calcium	10000	100	ug/L	ND	100	80-120			
Magnesium	9890	200	ug/L	ND	98.8	80-120			
Manganese	49.5	5	ug/L	ND	98.8	80-120			
Potassium	9740	100	ug/L	ND	97.2	80-120			
Sodium	9670	200	ug/L	ND	96.3	80-120			
Metals - Total									
Arsenic	45.3	1	ug/L	ND	90.7	80-120			
Beryllium	49.0	0.5	ug/L	ND	98.0	80-120			
Boron	47	50	ug/L	ND	93.1	80-120			
Cadmium	46.5	0.1	ug/L	ND	93.0	80-120			

Certificate of Analysis

Report Date: 01-May-2024

Client: **WSP Canada Inc. (Ottawa)**

Order Date: 25-Apr-2024

Client PO:

Project Description: CA0026246.5107

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Chromium	58.9	5	ug/L	ND	118	80-120			
Cobalt	58.3	0.5	ug/L	ND	117	80-120			
Copper	54.9	0.5	ug/L	ND	110	80-120			
Iron	2800	100	ug/L	ND	112	80-120			
Lead	45.7	0.1	ug/L	ND	91.4	80-120			
Molybdenum	55.2	0.5	ug/L	ND	110	80-120			
Nickel	57.5	1	ug/L	ND	115	80-120			
Selenium	35.5	1	ug/L	ND	71.1	80-120			QS-02
Silver	49.6	0.1	ug/L	ND	99.3	80-120			
Thallium	47.0	0.1	ug/L	ND	93.9	80-120			
Tungsten	52.3	10	ug/L	ND	105	80-120			
Uranium	48.5	0.1	ug/L	ND	97.1	80-120			
Vanadium	59.8	0.5	ug/L	ND	120	80-120			
Zinc	43	5	ug/L	ND	86.0	80-120			
Zirconium	55.7	1	ug/L	ND	111	80-120			

Certificate of Analysis

Report Date: 01-May-2024

Client: **WSP Canada Inc. (Ottawa)**

Order Date: 25-Apr-2024

Client PO:

Project Description: CA0026246.5107

Qualifier Notes:

QC Qualifiers:

QS-02 Spike level outside of control limits. Analysis batch accepted based on other QC included in the batch.

Sample Data Revisions:

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

Any use of these results implies your agreement that our total liability in connection with this work, however arising, shall be limited to the amount paid by you for this work, and that our employees or agents shall not under any circumstances be liable to you in connection with this work.



Certificate of Analysis

WSP Canada Inc. (Ottawa)

1931 Robertson Rd.
Ottawa, ON K2H 5B7
Attn: Andrea Caletti

Client PO:
Project: CA0026246.5107-City of Renfrew Landfill
Custody: 74999

Report Date: 29-Oct-2024

Order Date: 24-Oct-2024

Order #: 2443312

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
2443312-01	S7D
2443312-02	S8
2443312-03	S9

Approved By:

Mark Foto, M.Sc.

Lab Supervisor

Certificate of Analysis

Report Date: 29-Oct-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 24-Oct-2024

Client PO:

Project Description: CA0026246.5107-City of Renfrew Landfill

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Alkalinity, total to pH 4.5	EPA 310.1 - Titration to pH 4.5	28-Oct-24	28-Oct-24
Ammonia, as N	EPA 351.2 - Auto Colour	25-Oct-24	25-Oct-24
Dissolved Organic Carbon	MOE 3247B - Combustion IR	25-Oct-24	25-Oct-24
Metals, ICP-MS	EPA 200.8 - ICP-MS	24-Oct-24	25-Oct-24
Total Kjeldahl Nitrogen	EPA 351.2 - Auto Colour, digestion	28-Oct-24	28-Oct-24

Certificate of Analysis

Report Date: 29-Oct-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 24-Oct-2024

Client PO:

Project Description: CA0026246.5107-City of Renfrew Landfill

Client ID:	S7D	S8	S9	-	
Sample Date:	22-Oct-24 08:55	22-Oct-24 09:11	22-Oct-24 09:42	-	-
Sample ID:	2443312-01	2443312-02	2443312-03	-	
Matrix:	Surface Water	Surface Water	Surface Water	-	
MDL/Units					

General Inorganics

Alkalinity, total	5 mg/L	59	55	58	-	-
Ammonia as N	0.01 mg/L	0.01	<0.01	<0.01	-	-
Dissolved Organic Carbon	0.5 mg/L	7.3	7.3	7.6	-	-
Total Kjeldahl Nitrogen	0.1 mg/L	0.4	0.3	0.4	-	-

Metals

Boron	10 ug/L	<10	<10	<10	-	-
Iron	100 ug/L	116	446	113	-	-
Manganese	5 ug/L	27	36	14	-	-
Potassium	100 ug/L	1380	1370	1290	-	-

Certificate of Analysis

Report Date: 29-Oct-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 24-Oct-2024

Client PO:

Project Description: CA0026246.5107-City of Renfrew Landfill

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics								
Alkalinity, total	ND	5	mg/L					
Ammonia as N	ND	0.01	mg/L					
Dissolved Organic Carbon	ND	0.5	mg/L					
Total Kjeldahl Nitrogen	ND	0.1	mg/L					
Metals								
Boron	ND	10	ug/L					
Iron	ND	100	ug/L					
Manganese	ND	5	ug/L					
Potassium	ND	100	ug/L					

Certificate of Analysis

Report Date: 29-Oct-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 24-Oct-2024

Client PO:

Project Description: CA0026246.5107-City of Renfrew Landfill

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics									
Alkalinity, total	59.1	5	mg/L	59.2			0.3	14	
Ammonia as N	0.034	0.01	mg/L	0.011			NC	18	
Dissolved Organic Carbon	6.2	0.5	mg/L	7.6			19.9	37	
Total Kjeldahl Nitrogen	0.32	0.1	mg/L	0.31			2.1	16	
Metals									
Boron	155	10	ug/L	149			3.7	20	
Iron	12400	100	ug/L	12600			1.4	20	
Manganese	615	5	ug/L	607			1.2	20	
Potassium	10500	100	ug/L	10700			1.9	20	

Certificate of Analysis

Report Date: 29-Oct-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 24-Oct-2024

Client PO:

Project Description: CA0026246.5107-City of Renfrew Landfill

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
General Inorganics									
Ammonia as N	1.03	0.01	mg/L	0.011	102	81-124			
Dissolved Organic Carbon	16.7	0.5	mg/L	7.3	93.6	60-133			
Total Kjeldahl Nitrogen	1.24	0.1	mg/L	0.31	93.4	81-126			
Metals									
Boron	50	10	ug/L	ND	99.9	80-120			
Iron	2570	100	ug/L	ND	103	80-120			
Manganese	55.1	5	ug/L	ND	110	80-120			
Potassium	20000	100	ug/L	10700	92.2	80-120			

Certificate of Analysis

Report Date: 29-Oct-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 24-Oct-2024

Client PO:

Project Description: CA0026246.5107-City of Renfrew Landfill

Qualifier Notes:

Login Qualifiers :

Samples received submerged in water, possibly melted ice. This condition can compromise sample integrity. Directed by client to proceed with analysis.

Applies to Samples: S7D, S8, S9

QC Qualifiers:

Sample Data Revisions:

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

Any use of these results implies your agreement that our total liability in connection with this work, however arising, shall be limited to the amount paid by you for this work, and that our employees or agents shall not under any circumstances be liable to you in connection with this work.

Parcel ID: 2443312



Blvd.
4JB
bs.com
n

Parcel Order Number
(Lab Use Only)
2443312(24-004)
2443315 (24-003)

Chain Of Custody

(Lab Use Only)
No 74999

Client Name: WSP
Contact Name: Andria Caletti
Address: 1931 Robertson Rd.
Telephone: 613-592-9600
Project Ref: CA0026246-75107-City of Kent
Quote #: 24-004 (SW Special) + 24-003 (SW)
PO #:
Email: Andria.Caletti@wsp.com
Mikaela.RaePeete@wsp.com

Page ___ of ___
Turnaround Time
☐ 1 day ☐ 3 day
☐ 2 day ☒ Regular
Date Required: _____

☐ REG 153/04 ☐ REG 406/19
☐ Table 1 ☐ Res/Park ☐ Med/Fine
☐ Table 2 ☐ Ind/Comm ☐ Coarse
☐ Table 3 ☐ Agri/Other
☐ Table _____
For RSC: ☐ Yes ☐ No
Other Regulation
☐ REG 558 ☐ PWQO
☐ CCME ☐ MISA
☐ SU-Sani ☐ SU-Storm
Mun: _____
☐ Other: _____

Matrix Type: S (Soil/Sed.) GW (Ground Water)
SW (Surface Water) SS (Storm/Sanitary Sewer)
P (Paint) A (Air) O (Other)

Required Analysis

Sample ID/Location Name		Matrix	Air Volume	# of Containers	Sample Taken													
					Date	Time												
1	S7D	SW		5	Oct 22/24	8:55	X											
2	S8			5	Oct 22/24	9:11	X											
3	S9			5	Oct 22/24	9:42	X											
4	S6			9	Oct 23/24	9:15		X										
5	SW DUP	✓		9	Oct 23/24	—		X										
6																		
7																		
8																		
9																		
10																		

Comments: Doc filtered w/ the exception of 1 of the vials in S7D+S8 that are unfilled
↳ filtered ones are marked

Method of Delivery:

Relinquished By (Sign): Brittany Holland
Relinquished By (Print): Brittany Holland
Date/Time: Oct 23/24

Received at Depot:
Date/Time:
Temperature: °C

Received at Lab: [Signature]
Date/Time: Oct 24 8:05
Temperature: 0.5, 3.7 °C

Verified By: [Signature]
Date/Time: Oct 24 2024 8:45am
pH Verified: ☒ By: SO

Chain of Custody (Blank) xlsx

Certificate of Analysis

WSP Canada Inc. (Ottawa)

1931 Robertson Rd.
Ottawa, ON K2H 5B7
Attn: Andrea Caletti

Client PO:
Project: CA0026246.5107-City of Renfrew Landfill
Custody: 74999

Report Date: 30-Oct-2024

Order Date: 24-Oct-2024

Order #: 2443315

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
2443315-01	S6
2443315-02	SW DUP

Approved By:

Mark Foto, M.Sc.

Lab Supervisor

Certificate of Analysis

Report Date: 30-Oct-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 24-Oct-2024

Client PO:

Project Description: CA0026246.5107-City of Renfrew Landfill

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Alkalinity, total to pH 4.5	EPA 310.1 - Titration to pH 4.5	28-Oct-24	28-Oct-24
Ammonia, as N	EPA 351.2 - Auto Colour	25-Oct-24	25-Oct-24
Anions	EPA 300.1 - IC	28-Oct-24	28-Oct-24
Biochemical Oxygen Demand	SM 5210B - DO Probe	25-Oct-24	30-Oct-24
Chemical Oxygen Demand	EPA 410.1 - Digestion, Colourimetric	25-Oct-24	26-Oct-24
Dissolved Organic Carbon	MOE 3247B - Combustion IR	25-Oct-24	25-Oct-24
Hardness	Hardness as CaCO ₃	24-Oct-24	25-Oct-24
Mercury, dissolved	EPA 245.2 - Cold Vapour AA	24-Oct-24	24-Oct-24
Metals, ICP-MS	EPA 200.8 - ICP-MS	24-Oct-24	25-Oct-24
Phenolics	EPA 420.2 - Auto Colour, 4AAP	28-Oct-24	28-Oct-24
Phosphorus, total, water	EPA 365.4 - Auto Colour, digestion	28-Oct-24	28-Oct-24
Total Dissolved Solids	SM 2540C - gravimetric, filtration	28-Oct-24	28-Oct-24
Total Kjeldahl Nitrogen	EPA 351.2 - Auto Colour, digestion	28-Oct-24	28-Oct-24
Total Suspended Solids	SM 2540D - Gravimetric	28-Oct-24	28-Oct-24

Certificate of Analysis

Report Date: 30-Oct-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 24-Oct-2024

Client PO:

Project Description: CA0026246.5107-City of Renfrew Landfill

Client ID:	S6	SW DUP	-	-	
Sample Date:	23-Oct-24 09:15	23-Oct-24 00:00	-	-	-
Sample ID:	2443315-01	2443315-02	-	-	
Matrix:	Surface Water	Surface Water	-	-	
MDL/Units					

General Inorganics

Alkalinity, total	5 mg/L	75	76	-	-	-
Ammonia as N	0.01 mg/L	0.02	0.03	-	-	-
BOD	2 mg/L	7	7	-	-	-
Chemical Oxygen Demand	10 mg/L	26	25	-	-	-
Dissolved Organic Carbon	0.5 mg/L	4.7	4.5	-	-	-
Hardness	1 mg/L	105	107	-	-	-
Phenolics	0.001 mg/L	<0.001	<0.001	-	-	-
Phosphorus, total	0.01 mg/L	0.15	0.17	-	-	-
Total Dissolved Solids	10 mg/L	150	160	-	-	-
Total Suspended Solids	2 mg/L	11	26	-	-	-
Total Kjeldahl Nitrogen	0.1 mg/L	1.3	1.4	-	-	-

Anions

Bromide	0.1 mg/L	<0.1	<0.1	-	-	-
Chloride	1 mg/L	20	20	-	-	-
Fluoride	0.1 mg/L	0.5	0.5	-	-	-
Nitrate as N	0.1 mg/L	<0.1	<0.1	-	-	-
Nitrite as N	0.05 mg/L	<0.05	<0.05	-	-	-
Phosphate as P	0.5 mg/L	<0.5	<0.5	-	-	-
Sulphate	1 mg/L	19	19	-	-	-

Metals

Mercury, dissolved	0.1 ug/L	<0.1	<0.1	-	-	-

Metals - Total

Antimony	0.5 ug/L	<0.5	<0.5	-	-	-
Arsenic	1 ug/L	<1	<1	-	-	-
Barium	1 ug/L	37	39	-	-	-

Certificate of Analysis

Report Date: 30-Oct-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 24-Oct-2024

Client PO:

Project Description: CA0026246.5107-City of Renfrew Landfill

Client ID:	S6	SW DUP	-	-	
Sample Date:	23-Oct-24 09:15	23-Oct-24 00:00	-	-	-
Sample ID:	2443315-01	2443315-02	-	-	
Matrix:	Surface Water	Surface Water	-	-	
MDL/Units					

Metals - Total

Beryllium	0.5 ug/L	<0.5	<0.5	-	-	-	-
Boron	50 ug/L	<50	<50	-	-	-	-
Cadmium	0.1 ug/L	<0.1	<0.1	-	-	-	-
Calcium	100 ug/L	31800	33000	-	-	-	-
Chromium	5 ug/L	<5	<5	-	-	-	-
Cobalt	0.5 ug/L	<0.5	<0.5	-	-	-	-
Copper	0.5 ug/L	<0.5	0.6	-	-	-	-
Iron	100 ug/L	352	393	-	-	-	-
Lead	0.1 ug/L	2.1	0.2	-	-	-	-
Magnesium	200 ug/L	6190	5880	-	-	-	-
Manganese	5 ug/L	55	37	-	-	-	-
Molybdenum	0.5 ug/L	<0.5	<0.5	-	-	-	-
Nickel	1 ug/L	<1	<1	-	-	-	-
Potassium	100 ug/L	2670	2600	-	-	-	-
Selenium	1 ug/L	<1	<1	-	-	-	-
Silver	0.1 ug/L	0.3	0.2	-	-	-	-
Sodium	200 ug/L	9790	9990	-	-	-	-
Thallium	0.1 ug/L	<0.1	<0.1	-	-	-	-
Tungsten	10 ug/L	<10	<10	-	-	-	-
Uranium	0.1 ug/L	<0.1	<0.1	-	-	-	-
Vanadium	0.5 ug/L	<0.5	<0.5	-	-	-	-
Zinc	5 ug/L	<5	<5	-	-	-	-
Zirconium	1 ug/L	<1	<1	-	-	-	-

Certificate of Analysis

Report Date: 30-Oct-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 24-Oct-2024

Client PO:

Project Description: CA0026246.5107-City of Renfrew Landfill

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Anions								
Bromide	ND	0.1	mg/L					
Chloride	ND	1	mg/L					
Fluoride	ND	0.1	mg/L					
Nitrate as N	ND	0.1	mg/L					
Nitrite as N	ND	0.05	mg/L					
Phosphate as P	ND	0.5	mg/L					
Sulphate	ND	1	mg/L					
General Inorganics								
Alkalinity, total	ND	5	mg/L					
Ammonia as N	ND	0.01	mg/L					
BOD	ND	2	mg/L					
Chemical Oxygen Demand	ND	10	mg/L					
Dissolved Organic Carbon	ND	0.5	mg/L					
Phenolics	ND	0.001	mg/L					
Phosphorus, total	ND	0.01	mg/L					
Total Dissolved Solids	ND	10	mg/L					
Total Suspended Solids	ND	2	mg/L					
Total Kjeldahl Nitrogen	ND	0.1	mg/L					
Metals								
Mercury, dissolved	ND	0.1	ug/L					
Metals - Total								
Antimony	ND	0.5	ug/L					
Arsenic	ND	1	ug/L					
Barium	ND	1	ug/L					
Beryllium	ND	0.5	ug/L					
Boron	ND	50	ug/L					
Cadmium	ND	0.1	ug/L					
Calcium	ND	100	ug/L					
Chromium	ND	5	ug/L					
Cobalt	ND	0.5	ug/L					
Copper	ND	0.5	ug/L					
Iron	ND	100	ug/L					

Certificate of Analysis

Report Date: 30-Oct-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 24-Oct-2024

Client PO:

Project Description: CA0026246.5107-City of Renfrew Landfill

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Lead	ND	0.1	ug/L					
Magnesium	ND	200	ug/L					
Manganese	ND	5	ug/L					
Molybdenum	ND	0.5	ug/L					
Nickel	ND	1	ug/L					
Potassium	ND	100	ug/L					
Selenium	ND	1	ug/L					
Silver	ND	0.1	ug/L					
Sodium	ND	200	ug/L					
Thallium	ND	0.1	ug/L					
Tungsten	ND	10	ug/L					
Uranium	ND	0.1	ug/L					
Vanadium	ND	0.5	ug/L					
Zinc	ND	5	ug/L					
Zirconium	ND	1	ug/L					

Certificate of Analysis

Report Date: 30-Oct-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 24-Oct-2024

Client PO:

Project Description: CA0026246.5107-City of Renfrew Landfill

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Anions									
Bromide	0.16	0.1	mg/L	0.19			19.0	20	
Chloride	83.8	1	mg/L	82.7			1.4	20	
Fluoride	0.37	0.1	mg/L	0.38			2.1	20	
Nitrate as N	1.35	0.1	mg/L	1.37			1.4	20	
Nitrite as N	ND	0.05	mg/L	ND			NC	20	
Phosphate as P	ND	0.5	mg/L	ND			NC	20	
Sulphate	67.7	1	mg/L	67.5			0.2	10	
General Inorganics									
Alkalinity, total	59.1	5	mg/L	59.2			0.3	14	
Ammonia as N	0.034	0.01	mg/L	0.011			NC	18	
Chemical Oxygen Demand	26	10	mg/L	26			0.0	12	
Dissolved Organic Carbon	6.2	0.5	mg/L	7.6			19.9	37	
Phenolics	ND	0.001	mg/L	ND			NC	10	
Phosphorus, total	0.026	0.01	mg/L	0.028			7.1	15	
Total Dissolved Solids	154	10	mg/L	150			2.6	10	
Total Suspended Solids	ND	2	mg/L	ND			NC	10	
Total Kjeldahl Nitrogen	0.32	0.1	mg/L	0.31			2.1	16	
Metals									
Mercury, dissolved	ND	0.1	ug/L	ND			NC	20	
Metals - Total									
Antimony	ND	0.5	ug/L	ND			NC	20	
Arsenic	ND	1	ug/L	ND			NC	20	
Barium	36.2	1	ug/L	36.9			2.1	20	
Beryllium	ND	0.5	ug/L	ND			NC	20	
Boron	ND	50	ug/L	ND			NC	20	
Cadmium	ND	0.1	ug/L	ND			NC	20	
Calcium	31500	100	ug/L	31800			0.7	20	
Chromium	ND	5	ug/L	ND			NC	20	
Cobalt	ND	0.5	ug/L	ND			NC	20	
Copper	ND	0.5	ug/L	ND			NC	20	

Certificate of Analysis

Report Date: 30-Oct-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 24-Oct-2024

Client PO:

Project Description: CA0026246.5107-City of Renfrew Landfill

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Iron	363	100	ug/L	352			3.2	20	
Lead	1.96	0.1	ug/L	2.08			5.9	20	
Magnesium	6260	200	ug/L	6190			1.0	20	
Manganese	56.1	5	ug/L	54.9			2.3	20	
Molybdenum	ND	0.5	ug/L	ND			NC	20	
Nickel	ND	1	ug/L	ND			NC	20	
Potassium	2700	100	ug/L	2670			1.1	20	
Selenium	ND	1	ug/L	ND			NC	20	
Silver	0.16	0.1	ug/L	0.30			NC	20	
Sodium	9910	200	ug/L	9790			1.3	20	
Thallium	ND	0.1	ug/L	ND			NC	20	
Tungsten	ND	10	ug/L	ND			NC	20	
Uranium	ND	0.1	ug/L	ND			NC	20	
Vanadium	ND	0.5	ug/L	ND			NC	20	
Zinc	ND	5	ug/L	ND			NC	20	
Zirconium	ND	1	ug/L	ND			NC	20	

Certificate of Analysis

Report Date: 30-Oct-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 24-Oct-2024

Client PO:

Project Description: CA0026246.5107-City of Renfrew Landfill

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Anions									
Bromide	1.20	0.1	mg/L	0.19	101	85-117			
Chloride	91.9	1	mg/L	82.7	92.0	70-124			
Fluoride	1.21	0.1	mg/L	0.38	83.3	70-130			
Nitrate as N	2.33	0.1	mg/L	1.37	96.5	77-126			
Nitrite as N	0.885	0.05	mg/L	ND	88.5	82-115			
Phosphate as P	5.05	0.5	mg/L	ND	101	76-130			
Sulphate	75.0	1	mg/L	67.5	75.1	74-126			
General Inorganics									
Ammonia as N	1.03	0.01	mg/L	0.011	102	81-124			
BOD	154	2	mg/L	ND	77.1	71-121			
Chemical Oxygen Demand	221	10	mg/L	26	97.5	85-111			
Dissolved Organic Carbon	16.7	0.5	mg/L	7.3	93.6	60-133			
Phenolics	0.024	0.001	mg/L	ND	97.0	67-133			
Phosphorus, total	0.913	0.01	mg/L	0.028	88.6	80-120			
Total Dissolved Solids	94.0	10	mg/L	ND	94.0	75-125			
Total Suspended Solids	23.0	2	mg/L	ND	107	75-125			
Total Kjeldahl Nitrogen	1.24	0.1	mg/L	0.31	93.4	81-126			
Metals									
Mercury, dissolved	2.8	0.1	ug/L	ND	94.3	70-130			
Metals - Total									
Arsenic	42.7	1	ug/L	ND	85.4	80-120			
Barium	55.2	1	ug/L	ND	110	80-120			
Beryllium	44.5	0.5	ug/L	ND	89.0	80-120			
Boron	41	50	ug/L	ND	81.7	80-120			
Cadmium	47.0	0.1	ug/L	ND	93.9	80-120			
Calcium	10600	100	ug/L	ND	106	80-120			
Chromium	52.0	5	ug/L	ND	104	80-120			
Cobalt	48.2	0.5	ug/L	ND	96.4	80-120			
Copper	48.7	0.5	ug/L	ND	97.4	80-120			
Iron	2330	100	ug/L	ND	93.3	80-120			

Certificate of Analysis

Report Date: 30-Oct-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 24-Oct-2024

Client PO:

Project Description: CA0026246.5107-City of Renfrew Landfill

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Lead	51.9	0.1	ug/L	ND	104	80-120			
Magnesium	9250	200	ug/L	ND	92.5	80-120			
Manganese	52.1	5	ug/L	ND	104	80-120			
Molybdenum	51.9	0.5	ug/L	ND	104	80-120			
Nickel	50.5	1	ug/L	ND	101	80-120			
Potassium	9460	100	ug/L	ND	94.6	80-120			
Selenium	37.4	1	ug/L	ND	74.9	80-120			QS-02
Silver	41.8	0.1	ug/L	ND	83.5	80-120			
Sodium	9160	200	ug/L	ND	91.6	80-120			
Thallium	47.6	0.1	ug/L	ND	95.2	80-120			
Tungsten	50.9	10	ug/L	ND	102	80-120			
Uranium	53.2	0.1	ug/L	ND	106	80-120			
Vanadium	51.9	0.5	ug/L	ND	104	80-120			
Zinc	38	5	ug/L	ND	76.3	80-120			QS-02
Zirconium	49.7	1	ug/L	ND	99.3	80-120			

Certificate of Analysis

Report Date: 30-Oct-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 24-Oct-2024

Client PO:

Project Description: CA0026246.5107-City of Renfrew Landfill

Qualifier Notes:**Login Qualifiers :**

Samples received submerged in water, possibly melted ice. This condition can compromise sample integrity. Directed by client to proceed with analysis.

Applies to Samples: S6, SW DUP

QC Qualifiers:

QS-02 Spike level outside of control limits. Analysis batch accepted based on other QC included in the batch.

Sample Data Revisions:

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

Any use of these results implies your agreement that our total liability in connection with this work, however arising, shall be limited to the amount paid by you for this work, and that our employees or agents shall not under any circumstances be liable to you in connection with this work.



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Parcel Order Number (Lab Use Only) 2443315(24-003) 2443312(24-004)	Chain Of Custody (Lab Use Only) No 74999

Client Name: WSP	Project Ref: CA0026246-75107-City of Kent new landfill	Page ___ of ___
Contact Name: Andria Caleth	Quote #: 24-004 (sw special) + 24-003 (sw)	Turnaround Time ☐ 1 day ☐ 3 day ☐ 2 day ☒ Regular Date Required: _____
Address: 1931 Robertson Rd.	PO #:	
Telephone: 613-592-9600	E-mail: Andria.Caleth@wsp.com Mikaela.RaePeete@wsp.com	

☐ REG 153/04 ☐ REG 406/19 ☐ Table 1 ☐ Res/Park ☐ Med/Fine ☐ Table 2 ☐ Ind/Comm ☐ Coarse ☐ Table 3 ☐ Agri/Other ☐ Table _____ For RSC: ☐ Yes ☐ No		Other Regulation ☐ REG 558 ☐ PWQO ☐ CCME ☐ MISA ☐ SU - Sani ☐ SU - Storm Mun: _____ ☐ Other: _____	Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)	Required Analysis																			
Sample ID/Location Name		Matrix	Air Volume	# of Containers	Sample Taken		Quote # 24-004 (sw special) Quote # 24-003 (sw) (sw)																
1	S7D	SW		5	Oct 22/24	8:55		X															
2	S8			5	Oct 22/24	9:11		X															
3	S9			5	Oct 22/24	9:42		X															
4	S6			9	Oct 23/24	9:15			X														
5	SW DUP	√		9	Oct 23/24	—			X														
6																							
7																							
8																							
9																							
10																							

Comments: DOC filtered w/ the exception of 1 of the vials in S7D+S8 that one unfiltred ↳ filtered ones are marked			Method of Delivery: DOP Box	
Relinquished By (Sign): Brittany Holland	Received at Depot:	Received at Lab: [Signature]	Verified By: SO	
Relinquished By (Print): Brittany Holland	Date/Time: Oct 23/24	Date/Time: Oct 24 8:55	Date/Time: Oct 24 2024 8:55am	
Date/Time: Oct 23/24	Temperature: °C	Temperature: 0.9, 3.7 °C	pH Verified: [X]	By: SO

Certificate of Analysis

WSP Canada Inc. (Ottawa)

1931 Robertson Rd.
Ottawa, ON K2H 5B7
Attn: Andria Caletti

Client PO:
Project: CA0026246.5107- City of Renfrew Landfill
Custody: 71290, 71289

Report Date: 7-Nov-2024

Order Date: 24-Oct-2024

Order #: 2443317

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID	Paracel ID	Client ID
2443317-01	OMM5		
2443317-02	OMM9		
2443317-03	OMM6		
2443317-04	OMM7		
2443317-05	OMM8		
2443317-06	BH10-1		
2443317-07	BH11-1		
2443317-08	OMM14S		
2443317-09	OMM14M		
2443317-10	OMM14D		
2443317-11	BH10-2A		
2443317-12	BH10-2B		
2443317-13	DUP-M-1		
2443317-14	DUP-M-2		
2443317-15	Trip Blank		
2443317-16	Field Blank		

Approved By:

Mark Foto, M.Sc.

Lab Supervisor

Certificate of Analysis

Report Date: 07-Nov-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 24-Oct-2024

Client PO:

Project Description: CA0026246.5107- City of Renfrew Landfill

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Alkalinity, total to pH 4.5	EPA 310.1 - Titration to pH 4.5	28-Oct-24	28-Oct-24
Ammonia, as N	EPA 351.2 - Auto Colour	25-Oct-24	25-Oct-24
Anions	EPA 300.1 - IC	24-Oct-24	25-Oct-24
Chemical Oxygen Demand	EPA 410.1 - Digestion, Colourimetric	25-Oct-24	26-Oct-24
Dissolved Organic Carbon	MOE 3247B - Combustion IR	25-Oct-24	28-Oct-24
Hardness	Hardness as CaCO ₃	24-Oct-24	25-Oct-24
Mercury by CVAA	EPA 245.2 - Cold Vapour AA	24-Oct-24	24-Oct-24
Metals, ICP-MS	EPA 200.8 - ICP-MS	24-Oct-24	25-Oct-24
Phenolics	EPA 420.2 - Auto Colour, 4AAP	28-Oct-24	28-Oct-24
Phosphorus, total, water	EPA 365.4 - Auto Colour, digestion	1-Nov-24	5-Nov-24
Total Dissolved Solids	SM 2540C - gravimetric, filtration	28-Oct-24	28-Oct-24
Total Kjeldahl Nitrogen	EPA 351.2 - Auto Colour, digestion	1-Nov-24	5-Nov-24
VOCs by P&T GC-MS	EPA 624 - P&T GC-MS	25-Oct-24	25-Oct-24

Certificate of Analysis

Report Date: 07-Nov-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 24-Oct-2024

Client PO:

Project Description: CA0026246.5107- City of Renfrew Landfill

Client ID:	OMM5	OMM9	OMM6	OMM7	-	-
Sample Date:	22-Oct-24 15:00	22-Oct-24 14:05	23-Oct-24 09:25	23-Oct-24 09:45	-	-
Sample ID:	2443317-01	2443317-02	2443317-03	2443317-04	-	-
Matrix:	Ground Water	Ground Water	Ground Water	Ground Water	-	-
MDL/Units						

General Inorganics

Alkalinity, total	5 mg/L	393	486	553	539	-	-
Ammonia as N	0.01 mg/L	1.36	0.02	1.23	3.94	-	-
Chemical Oxygen Demand	10 mg/L	13	<10	29	23	-	-
Dissolved Organic Carbon	0.5 mg/L	4.3	3.0	6.9	4.4	-	-
Hardness	1 mg/L	387	435	476	491	-	-
Phenolics	0.001 mg/L	<0.001	<0.001	<0.001	<0.001	-	-
Phosphorus, total	0.01 mg/L	<0.01	0.01	<0.01	<0.01	-	-
Total Dissolved Solids	10 mg/L	506	656	638	596	-	-
Total Kjeldahl Nitrogen	0.1 mg/L	1.5	0.2	1.7	3.9	-	-

Anions

Bromide	0.1 mg/L	0.1	0.1	0.1	0.1	-	-
Chloride	1 mg/L	55	84	55	48	-	-
Fluoride	0.1 mg/L	<0.1	<0.1	<0.1	0.1	-	-
Nitrate as N	0.1 mg/L	<0.1	1.6	<0.1	<0.1	-	-
Nitrite as N	0.05 mg/L	<0.05	<0.05	<0.05	<0.05	-	-
Phosphate as P	0.5 mg/L	<0.5	<0.5	<0.5	<0.5	-	-
Sulphate	1 mg/L	15	18	4	3	-	-

Metals

Mercury	0.1 ug/L	<0.1	<0.1	<0.1	<0.1	-	-
Aluminum	1 ug/L	3	<1	3	5	-	-
Antimony	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Arsenic	1 ug/L	2	1	2	<1	-	-
Barium	1 ug/L	441	171	262	243	-	-
Beryllium	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Boron	10 ug/L	149	306	292	167	-	-

Certificate of Analysis

Report Date: 07-Nov-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 24-Oct-2024

Client PO:

Project Description: CA0026246.5107- City of Renfrew Landfill

Client ID:	OMM5	OMM9	OMM6	OMM7	-	-
Sample Date:	22-Oct-24 15:00	22-Oct-24 14:05	23-Oct-24 09:25	23-Oct-24 09:45	-	-
Sample ID:	2443317-01	2443317-02	2443317-03	2443317-04	-	-
Matrix:	Ground Water	Ground Water	Ground Water	Ground Water	-	-
MDL/Units						

Metals

Cadmium	0.1 ug/L	<0.1	<0.1	0.2	<0.1	-	-
Calcium	100 ug/L	112000	128000	146000	133000	-	-
Chromium	1 ug/L	<1	<1	<1	<1	-	-
Cobalt	0.5 ug/L	<0.5	<0.5	3.4	<0.5	-	-
Copper	0.5 ug/L	<0.5	2.3	<0.5	<0.5	-	-
Iron	100 ug/L	12600	<100	15400	21700	-	-
Lead	0.1 ug/L	<0.1	<0.1	<0.1	<0.1	-	-
Magnesium	200 ug/L	25900	27900	27200	38600	-	-
Manganese	5 ug/L	607	<5	1090	900	-	-
Molybdenum	0.5 ug/L	0.7	<0.5	<0.5	<0.5	-	-
Nickel	1 ug/L	<1	2	2	<1	-	-
Potassium	100 ug/L	10700	7540	10600	12500	-	-
Selenium	1 ug/L	24	15	9	9	-	-
Silver	0.1 ug/L	<0.1	<0.1	<0.1	0.1	-	-
Sodium	200 ug/L	36000	75900	51500	29900	-	-
Strontium	10 ug/L	328	462	424	523	-	-
Thallium	0.1 ug/L	<0.1	<0.1	<0.1	<0.1	-	-
Tin	5 ug/L	<5	<5	<5	<5	-	-
Titanium	5 ug/L	12	<5	<5	<5	-	-
Tungsten	10 ug/L	<10	<10	<10	<10	-	-
Uranium	0.1 ug/L	0.1	1.0	1.2	0.3	-	-
Vanadium	0.5 ug/L	1.1	0.7	1.2	1.6	-	-
Zinc	5 ug/L	<5	<5	<5	<5	-	-

Volatiles

Acetone	5.0 ug/L	<5.0	<5.0	<5.0	<5.0	-	-

Certificate of Analysis

Report Date: 07-Nov-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 24-Oct-2024

Client PO:

Project Description: CA0026246.5107- City of Renfrew Landfill

Client ID:	OMM5	OMM9	OMM6	OMM7	-	-
Sample Date:	22-Oct-24 15:00	22-Oct-24 14:05	23-Oct-24 09:25	23-Oct-24 09:45	-	-
Sample ID:	2443317-01	2443317-02	2443317-03	2443317-04	-	-
Matrix:	Ground Water	Ground Water	Ground Water	Ground Water	-	-
MDL/Units						

Volatiles

Benzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Bromodichloromethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Bromoform	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Bromomethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Carbon Tetrachloride	0.2 ug/L	<0.2	<0.2	<0.2	<0.2	-	-
Chlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Chloroethane	1.0 ug/L	<1.0	<1.0	<1.0	<1.0	-	-
Chloroform	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Chloromethane	3.0 ug/L	<3.0	<3.0	<3.0	<3.0	-	-
Dibromochloromethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Dichlorodifluoromethane	1.0 ug/L	<1.0	<1.0	<1.0	<1.0	-	-
1,2-Dibromoethane	0.2 ug/L	<0.2	<0.2	<0.2	<0.2	-	-
1,2-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,3-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,4-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,1-Dichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,2-Dichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,1-Dichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
cis-1,2-Dichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
trans-1,2-Dichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,2-Dichloroethylene, total	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,2-Dichloropropane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
cis-1,3-Dichloropropylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
trans-1,3-Dichloropropylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,3-Dichloropropene, total	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-

Certificate of Analysis

Report Date: 07-Nov-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 24-Oct-2024

Client PO:

Project Description: CA0026246.5107- City of Renfrew Landfill

Client ID:	OMM5	OMM9	OMM6	OMM7	-	-
Sample Date:	22-Oct-24 15:00	22-Oct-24 14:05	23-Oct-24 09:25	23-Oct-24 09:45	-	-
Sample ID:	2443317-01	2443317-02	2443317-03	2443317-04	-	-
Matrix:	Ground Water	Ground Water	Ground Water	Ground Water	-	-
MDL/Units						

Volatiles

Ethylbenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Hexane	1.0 ug/L	<1.0	<1.0	<1.0	<1.0	-	-
Methyl Ethyl Ketone (2-Butanone)	5.0 ug/L	<5.0	<5.0	<5.0	<5.0	-	-
Methyl Butyl Ketone (2-Hexanone)	10.0 ug/L	<10.0	<10.0	<10.0	<10.0	-	-
Methyl Isobutyl Ketone	5.0 ug/L	<5.0	<5.0	<5.0	<5.0	-	-
Methyl tert-butyl ether	2.0 ug/L	<2.0	<2.0	<2.0	<2.0	-	-
Methylene Chloride	5.0 ug/L	<5.0	<5.0	<5.0	<5.0	-	-
Styrene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,1,1,2-Tetrachloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,1,2,2-Tetrachloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Tetrachloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Toluene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,1,1-Trichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,1,2-Trichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Trichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Trichlorofluoromethane	1.0 ug/L	<1.0	<1.0	<1.0	<1.0	-	-
1,3,5-Trimethylbenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Vinyl chloride	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
m,p-Xylenes	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
o-Xylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Xylenes, total	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Dibromofluoromethane	Surrogate	95.8%	93.5%	93.2%	93.6%	-	-
4-Bromofluorobenzene	Surrogate	109%	112%	111%	110%	-	-
Toluene-d8	Surrogate	115%	112%	113%	115%	-	-

Certificate of Analysis

Report Date: 07-Nov-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 24-Oct-2024

Client PO:

Project Description: CA0026246.5107- City of Renfrew Landfill

Client ID:	OMM8	BH10-1	BH11-1	OMM14S		
Sample Date:	23-Oct-24 11:20	23-Oct-24 10:15	23-Oct-24 12:42	22-Oct-24 00:00	-	-
Sample ID:	2443317-05	2443317-06	2443317-07	2443317-08		
Matrix:	Ground Water	Ground Water	Ground Water	Ground Water		
MDL/Units						

General Inorganics

Alkalinity, total	5 mg/L	191	332	457	185	-	-
Ammonia as N	0.01 mg/L	0.02	1.67	6.93	<0.01	-	-
Chemical Oxygen Demand	10 mg/L	12	13	40	10	-	-
Dissolved Organic Carbon	0.5 mg/L	2.9	2.9	4.7	2.2	-	-
Hardness	1 mg/L	183	338	432	262	-	-
Phenolics	0.001 mg/L	<0.001	<0.001	<0.001	<0.001	-	-
Phosphorus, total	0.01 mg/L	<0.01	<0.01	0.23	<0.01	-	-
Total Dissolved Solids	10 mg/L	292	460	598	490	-	-
Total Kjeldahl Nitrogen	0.1 mg/L	0.2	1.9	7.0	<0.1	-	-

Anions

Bromide	0.1 mg/L	<0.1	0.2	0.1	<0.1	-	-
Chloride	1 mg/L	33	56	31	159	-	-
Fluoride	0.1 mg/L	0.4	0.2	0.2	0.2	-	-
Nitrate as N	0.1 mg/L	<0.1	<0.1	0.2	0.1	-	-
Nitrite as N	0.05 mg/L	<0.05	<0.05	<0.05	<0.05	-	-
Phosphate as P	0.5 mg/L	<0.5	<0.5	<0.5	<0.5	-	-
Sulphate	1 mg/L	13	38	50	22	-	-

Metals

Mercury	0.1 ug/L	<0.1	<0.1	<0.1	<0.1	-	-
Aluminum	1 ug/L	7	15	2	<1	-	-
Antimony	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Arsenic	1 ug/L	<1	<1	3	<1	-	-
Barium	1 ug/L	137	471	1280	468	-	-
Beryllium	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Boron	10 ug/L	28	170	139	42	-	-

Certificate of Analysis

Report Date: 07-Nov-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 24-Oct-2024

Client PO:

Project Description: CA0026246.5107- City of Renfrew Landfill

Client ID:	OMM8	BH10-1	BH11-1	OMM14S	-	-
Sample Date:	23-Oct-24 11:20	23-Oct-24 10:15	23-Oct-24 12:42	22-Oct-24 00:00	-	-
Sample ID:	2443317-05	2443317-06	2443317-07	2443317-08	-	-
Matrix:	Ground Water	Ground Water	Ground Water	Ground Water	-	-
MDL/Units						

Metals

Cadmium	0.1 ug/L	<0.1	<0.1	<0.1	<0.1	-	-
Calcium	100 ug/L	54300	97200	115000	73500	-	-
Chromium	1 ug/L	<1	<1	<1	<1	-	-
Cobalt	0.5 ug/L	<0.5	<0.5	1.2	<0.5	-	-
Copper	0.5 ug/L	<0.5	<0.5	<0.5	2.1	-	-
Iron	100 ug/L	<100	9450	8030	<100	-	-
Lead	0.1 ug/L	<0.1	<0.1	<0.1	<0.1	-	-
Magnesium	200 ug/L	11500	23000	35400	19000	-	-
Manganese	5 ug/L	50	466	220	35	-	-
Molybdenum	0.5 ug/L	0.9	0.7	5.8	1.8	-	-
Nickel	1 ug/L	<1	<1	2	<1	-	-
Potassium	100 ug/L	4600	10600	12200	6550	-	-
Selenium	1 ug/L	4	2	3	2	-	-
Silver	0.1 ug/L	<0.1	<0.1	<0.1	<0.1	-	-
Sodium	200 ug/L	21500	33600	25600	55600	-	-
Strontium	10 ug/L	156	328	335	215	-	-
Thallium	0.1 ug/L	<0.1	<0.1	<0.1	<0.1	-	-
Tin	5 ug/L	<5	<5	<5	<5	-	-
Titanium	5 ug/L	<5	<5	<5	<5	-	-
Tungsten	10 ug/L	<10	<10	<10	<10	-	-
Uranium	0.1 ug/L	0.9	0.3	0.7	1.8	-	-
Vanadium	0.5 ug/L	0.6	1.0	0.7	<0.5	-	-
Zinc	5 ug/L	<5	<5	<5	<5	-	-

Volatiles

Acetone	5.0 ug/L	<5.0	<5.0	<5.0	<5.0	-	-

Certificate of Analysis

Report Date: 07-Nov-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 24-Oct-2024

Client PO:

Project Description: CA0026246.5107- City of Renfrew Landfill

Client ID:	OMM8	BH10-1	BH11-1	OMM14S	-	-
Sample Date:	23-Oct-24 11:20	23-Oct-24 10:15	23-Oct-24 12:42	22-Oct-24 00:00	-	-
Sample ID:	2443317-05	2443317-06	2443317-07	2443317-08	-	-
Matrix:	Ground Water	Ground Water	Ground Water	Ground Water	-	-
MDL/Units						

Volatiles

Benzene	0.5 ug/L	<0.5	<0.5	0.5	<0.5	-	-
Bromodichloromethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Bromoform	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Bromomethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Carbon Tetrachloride	0.2 ug/L	<0.2	<0.2	<0.2	<0.2	-	-
Chlorobenzene	0.5 ug/L	<0.5	<0.5	1.0	<0.5	-	-
Chloroethane	1.0 ug/L	<1.0	<1.0	<1.0	<1.0	-	-
Chloroform	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Chloromethane	3.0 ug/L	<3.0	<3.0	<3.0	<3.0	-	-
Dibromochloromethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Dichlorodifluoromethane	1.0 ug/L	<1.0	<1.0	<1.0	<1.0	-	-
1,2-Dibromoethane	0.2 ug/L	<0.2	<0.2	<0.2	<0.2	-	-
1,2-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,3-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,4-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	0.9	<0.5	-	-
1,1-Dichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,2-Dichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,1-Dichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
cis-1,2-Dichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
trans-1,2-Dichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,2-Dichloroethylene, total	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,2-Dichloropropane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
cis-1,3-Dichloropropylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
trans-1,3-Dichloropropylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,3-Dichloropropene, total	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-

Certificate of Analysis

Report Date: 07-Nov-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 24-Oct-2024

Client PO:

Project Description: CA0026246.5107- City of Renfrew Landfill

Client ID:	OMM8	BH10-1	BH11-1	OMM14S	-	-
Sample Date:	23-Oct-24 11:20	23-Oct-24 10:15	23-Oct-24 12:42	22-Oct-24 00:00	-	-
Sample ID:	2443317-05	2443317-06	2443317-07	2443317-08	-	-
Matrix:	Ground Water	Ground Water	Ground Water	Ground Water	-	-
MDL/Units						

Volatiles

Ethylbenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Hexane	1.0 ug/L	<1.0	<1.0	<1.0	<1.0	-	-
Methyl Ethyl Ketone (2-Butanone)	5.0 ug/L	<5.0	<5.0	<5.0	<5.0	-	-
Methyl Butyl Ketone (2-Hexanone)	10.0 ug/L	<10.0	<10.0	<10.0	<10.0	-	-
Methyl Isobutyl Ketone	5.0 ug/L	<5.0	<5.0	<5.0	<5.0	-	-
Methyl tert-butyl ether	2.0 ug/L	<2.0	<2.0	<2.0	<2.0	-	-
Methylene Chloride	5.0 ug/L	<5.0	<5.0	<5.0	<5.0	-	-
Styrene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,1,1,2-Tetrachloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,1,2,2-Tetrachloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Tetrachloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Toluene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,1,1-Trichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,1,2-Trichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Trichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Trichlorofluoromethane	1.0 ug/L	<1.0	<1.0	<1.0	<1.0	-	-
1,3,5-Trimethylbenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Vinyl chloride	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
m,p-Xylenes	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
o-Xylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Xylenes, total	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Dibromofluoromethane	Surrogate	93.0%	94.1%	93.6%	94.8%	-	-
Toluene-d8	Surrogate	112%	115%	112%	111%	-	-
4-Bromofluorobenzene	Surrogate	113%	111%	113%	112%	-	-

Certificate of Analysis

Report Date: 07-Nov-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 24-Oct-2024

Client PO:

Project Description: CA0026246.5107- City of Renfrew Landfill

Client ID:	OMM14M	OMM14D	BH10-2A	BH10-2B		
Sample Date:	22-Oct-24 00:00	22-Oct-24 00:00	22-Oct-24 00:00	22-Oct-24 00:00	-	-
Sample ID:	2443317-09	2443317-10	2443317-11	2443317-12		
Matrix:	Ground Water	Ground Water	Ground Water	Ground Water		
MDL/Units						

General Inorganics

Alkalinity, total	5 mg/L	192	226	387	281	-	-
Ammonia as N	0.01 mg/L	0.23	0.36	0.46	0.15	-	-
Chemical Oxygen Demand	10 mg/L	10	12	15	12	-	-
Dissolved Organic Carbon	0.5 mg/L	2.2	2.9	3.2	0.9	-	-
Hardness	1 mg/L	260	267	377	416	-	-
Phenolics	0.001 mg/L	<0.001	<0.001	<0.001	<0.001	-	-
Phosphorus, total	0.01 mg/L	<0.01	<0.01	0.01	<0.01	-	-
Total Dissolved Solids	10 mg/L	480	440	564	660	-	-
Total Kjeldahl Nitrogen	0.1 mg/L	0.3	0.5	0.6	0.2	-	-

Anions

Bromide	0.1 mg/L	<0.1	<0.1	0.2	<0.1	-	-
Chloride	1 mg/L	143	115	85	216	-	-
Fluoride	0.1 mg/L	0.3	0.2	0.4	0.4	-	-
Nitrate as N	0.1 mg/L	<0.1	<0.1	<0.1	<0.1	-	-
Nitrite as N	0.05 mg/L	<0.05	<0.05	<0.05	<0.05	-	-
Phosphate as P	0.5 mg/L	<0.5	<0.5	<0.5	<0.5	-	-
Sulphate	1 mg/L	21	24	31	52	-	-

Metals

Mercury	0.1 ug/L	<0.1	<0.1	<0.1	<0.1	-	-
Aluminum	1 ug/L	<1	1	<1	1	-	-
Antimony	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Arsenic	1 ug/L	<1	<1	1	<1	-	-
Barium	1 ug/L	475	456	1040	387	-	-
Beryllium	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Boron	10 ug/L	46	52	165	89	-	-

Certificate of Analysis

Report Date: 07-Nov-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 24-Oct-2024

Client PO:

Project Description: CA0026246.5107- City of Renfrew Landfill

Client ID:	OMM14M	OMM14D	BH10-2A	BH10-2B	-	-
Sample Date:	22-Oct-24 00:00	22-Oct-24 00:00	22-Oct-24 00:00	22-Oct-24 00:00	-	-
Sample ID:	2443317-09	2443317-10	2443317-11	2443317-12	-	-
Matrix:	Ground Water	Ground Water	Ground Water	Ground Water	-	-
MDL/Units						

Metals

Cadmium	0.1 ug/L	<0.1	0.2	<0.1	<0.1	-	-
Calcium	100 ug/L	71600	74800	94200	104000	-	-
Chromium	1 ug/L	<1	<1	<1	<1	-	-
Cobalt	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Copper	0.5 ug/L	1.2	1.0	<0.5	<0.5	-	-
Iron	100 ug/L	271	477	4200	338	-	-
Lead	0.1 ug/L	<0.1	<0.1	<0.1	<0.1	-	-
Magnesium	200 ug/L	19600	19500	34400	37800	-	-
Manganese	5 ug/L	125	250	185	101	-	-
Molybdenum	0.5 ug/L	1.6	1.3	0.9	1.9	-	-
Nickel	1 ug/L	<1	<1	1	<1	-	-
Potassium	100 ug/L	7030	6360	9040	9410	-	-
Selenium	1 ug/L	<1	9	13	3	-	-
Silver	0.1 ug/L	<0.1	<0.1	<0.1	<0.1	-	-
Sodium	200 ug/L	54200	50100	61000	77400	-	-
Strontium	10 ug/L	241	276	795	774	-	-
Thallium	0.1 ug/L	<0.1	<0.1	<0.1	<0.1	-	-
Tin	5 ug/L	<5	<5	<5	<5	-	-
Titanium	5 ug/L	<5	<5	<5	<5	-	-
Tungsten	10 ug/L	<10	<10	<10	<10	-	-
Uranium	0.1 ug/L	1.0	0.4	0.2	3.6	-	-
Vanadium	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Zinc	5 ug/L	<5	<5	<5	<5	-	-

Volatiles

Acetone	5.0 ug/L	<5.0	<5.0	<5.0	<5.0	-	-

Certificate of Analysis

Report Date: 07-Nov-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 24-Oct-2024

Client PO:

Project Description: CA0026246.5107- City of Renfrew Landfill

Client ID:	OMM14M	OMM14D	BH10-2A	BH10-2B	-	-
Sample Date:	22-Oct-24 00:00	22-Oct-24 00:00	22-Oct-24 00:00	22-Oct-24 00:00	-	-
Sample ID:	2443317-09	2443317-10	2443317-11	2443317-12	-	-
Matrix:	Ground Water	Ground Water	Ground Water	Ground Water	-	-
MDL/Units						

Volatiles

Benzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Bromodichloromethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Bromoform	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Bromomethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Carbon Tetrachloride	0.2 ug/L	<0.2	<0.2	<0.2	<0.2	-	-
Chlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Chloroethane	1.0 ug/L	<1.0	<1.0	<1.0	<1.0	-	-
Chloroform	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Chloromethane	3.0 ug/L	<3.0	<3.0	<3.0	<3.0	-	-
Dibromochloromethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Dichlorodifluoromethane	1.0 ug/L	<1.0	<1.0	<1.0	<1.0	-	-
1,2-Dibromoethane	0.2 ug/L	<0.2	<0.2	<0.2	<0.2	-	-
1,2-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,3-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,4-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,1-Dichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,2-Dichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,1-Dichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
cis-1,2-Dichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
trans-1,2-Dichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,2-Dichloroethylene, total	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,2-Dichloropropane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
cis-1,3-Dichloropropylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
trans-1,3-Dichloropropylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,3-Dichloropropene, total	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-

Certificate of Analysis

Report Date: 07-Nov-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 24-Oct-2024

Client PO:

Project Description: CA0026246.5107- City of Renfrew Landfill

Client ID:	OMM14M	OMM14D	BH10-2A	BH10-2B	-	-
Sample Date:	22-Oct-24 00:00	22-Oct-24 00:00	22-Oct-24 00:00	22-Oct-24 00:00	-	-
Sample ID:	2443317-09	2443317-10	2443317-11	2443317-12	-	-
Matrix:	Ground Water	Ground Water	Ground Water	Ground Water	-	-
MDL/Units						

Volatiles

Ethylbenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Hexane	1.0 ug/L	<1.0	<1.0	<1.0	<1.0	-	-
Methyl Ethyl Ketone (2-Butanone)	5.0 ug/L	<5.0	<5.0	<5.0	<5.0	-	-
Methyl Butyl Ketone (2-Hexanone)	10.0 ug/L	<10.0	<10.0	<10.0	<10.0	-	-
Methyl Isobutyl Ketone	5.0 ug/L	<5.0	<5.0	<5.0	<5.0	-	-
Methyl tert-butyl ether	2.0 ug/L	<2.0	<2.0	<2.0	<2.0	-	-
Methylene Chloride	5.0 ug/L	<5.0	<5.0	<5.0	<5.0	-	-
Styrene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,1,1,2-Tetrachloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,1,2,2-Tetrachloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Tetrachloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Toluene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,1,1-Trichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,1,2-Trichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Trichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Trichlorofluoromethane	1.0 ug/L	<1.0	<1.0	<1.0	<1.0	-	-
1,3,5-Trimethylbenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Vinyl chloride	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
m,p-Xylenes	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
o-Xylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Xylenes, total	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
4-Bromofluorobenzene	Surrogate	115%	114%	113%	111%	-	-
Toluene-d8	Surrogate	110%	110%	112%	113%	-	-
Dibromofluoromethane	Surrogate	94.7%	94.5%	93.3%	94.6%	-	-

Certificate of Analysis

Report Date: 07-Nov-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 24-Oct-2024

Client PO:

Project Description: CA0026246.5107- City of Renfrew Landfill

Client ID:	DUP-M-1	DUP-M-2	Trip Blank	Field Blank		
Sample Date:	22-Oct-24 00:00	22-Oct-24 00:00	21-Oct-24 00:00	22-Oct-24 00:00	-	-
Sample ID:	2443317-13	2443317-14	2443317-15	2443317-16		
Matrix:	Ground Water	Ground Water	Water	Water		
MDL/Units						

General Inorganics

Alkalinity, total	5 mg/L	186	390	-	-	-	-
Ammonia as N	0.01 mg/L	<0.01	0.44	-	-	-	-
Chemical Oxygen Demand	10 mg/L	11	14	-	-	-	-
Dissolved Organic Carbon	0.5 mg/L	2.2	3.2	-	-	-	-
Hardness	1 mg/L	260	374	-	-	-	-
Phenolics	0.001 mg/L	<0.001	<0.001	-	-	-	-
Phosphorus, total	0.01 mg/L	<0.01	0.01	-	-	-	-
Total Dissolved Solids	10 mg/L	504	500	-	-	-	-
Total Kjeldahl Nitrogen	0.1 mg/L	0.2	0.6	-	-	-	-

Anions

Bromide	0.1 mg/L	<0.1	0.2	-	-	-	-
Chloride	1 mg/L	160	85	-	-	-	-
Fluoride	0.1 mg/L	0.2	0.4	-	-	-	-
Nitrate as N	0.1 mg/L	0.1	<0.1	-	-	-	-
Nitrite as N	0.05 mg/L	<0.05	<0.05	-	-	-	-
Phosphate as P	0.5 mg/L	<0.5	<0.5	-	-	-	-
Sulphate	1 mg/L	22	31	-	-	-	-

Metals

Mercury	0.1 ug/L	<0.1	<0.1	-	-	-	-
Aluminum	1 ug/L	<1	<1	-	-	-	-
Antimony	0.5 ug/L	<0.5	<0.5	-	-	-	-
Arsenic	1 ug/L	<1	<1	-	-	-	-
Barium	1 ug/L	420	1000	-	-	-	-
Beryllium	0.5 ug/L	<0.5	<0.5	-	-	-	-
Boron	10 ug/L	44	159	-	-	-	-

Certificate of Analysis

Report Date: 07-Nov-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 24-Oct-2024

Client PO:

Project Description: CA0026246.5107- City of Renfrew Landfill

Client ID:	DUP-M-1	DUP-M-2	Trip Blank	Field Blank		
Sample Date:	22-Oct-24 00:00	22-Oct-24 00:00	21-Oct-24 00:00	22-Oct-24 00:00	-	-
Sample ID:	2443317-13	2443317-14	2443317-15	2443317-16		
Matrix:	Ground Water	Ground Water	Water	Water		
MDL/Units						

Metals

Cadmium	0.1 ug/L	<0.1	<0.1	-	-	-	-
Calcium	100 ug/L	71800	94700	-	-	-	-
Chromium	1 ug/L	<1	<1	-	-	-	-
Cobalt	0.5 ug/L	<0.5	<0.5	-	-	-	-
Copper	0.5 ug/L	1.5	<0.5	-	-	-	-
Iron	100 ug/L	<100	4340	-	-	-	-
Lead	0.1 ug/L	<0.1	<0.1	-	-	-	-
Magnesium	200 ug/L	19700	33400	-	-	-	-
Manganese	5 ug/L	37	187	-	-	-	-
Molybdenum	0.5 ug/L	1.8	0.8	-	-	-	-
Nickel	1 ug/L	<1	<1	-	-	-	-
Potassium	100 ug/L	6830	8800	-	-	-	-
Selenium	1 ug/L	2	1	-	-	-	-
Silver	0.1 ug/L	<0.1	<0.1	-	-	-	-
Sodium	200 ug/L	54200	60700	-	-	-	-
Strontium	10 ug/L	223	823	-	-	-	-
Thallium	0.1 ug/L	<0.1	<0.1	-	-	-	-
Tin	5 ug/L	<5	<5	-	-	-	-
Titanium	5 ug/L	<5	<5	-	-	-	-
Tungsten	10 ug/L	<10	<10	-	-	-	-
Uranium	0.1 ug/L	1.7	0.2	-	-	-	-
Vanadium	0.5 ug/L	<0.5	<0.5	-	-	-	-
Zinc	5 ug/L	<5	<5	-	-	-	-

Volatiles

Acetone	5.0 ug/L	<5.0	<5.0	<5.0	<5.0	-	-

Certificate of Analysis

Report Date: 07-Nov-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 24-Oct-2024

Client PO:

Project Description: CA0026246.5107- City of Renfrew Landfill

Client ID:	DUP-M-1	DUP-M-2	Trip Blank	Field Blank		
Sample Date:	22-Oct-24 00:00	22-Oct-24 00:00	21-Oct-24 00:00	22-Oct-24 00:00	-	-
Sample ID:	2443317-13	2443317-14	2443317-15	2443317-16		
Matrix:	Ground Water	Ground Water	Water	Water		
MDL/Units						

Volatiles

Benzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Bromodichloromethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Bromoform	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Bromomethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Carbon Tetrachloride	0.2 ug/L	<0.2	<0.2	<0.2	<0.2	-	-
Chlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Chloroethane	1.0 ug/L	<1.0	<1.0	<1.0	<1.0	-	-
Chloroform	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Chloromethane	3.0 ug/L	<3.0	<3.0	<3.0	<3.0	-	-
Dibromochloromethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Dichlorodifluoromethane	1.0 ug/L	<1.0	<1.0	<1.0	<1.0	-	-
1,2-Dibromoethane	0.2 ug/L	<0.2	<0.2	<0.2	<0.2	-	-
1,2-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,3-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,4-Dichlorobenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,1-Dichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,2-Dichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,1-Dichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
cis-1,2-Dichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
trans-1,2-Dichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,2-Dichloroethylene, total	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,2-Dichloropropane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
cis-1,3-Dichloropropylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
trans-1,3-Dichloropropylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,3-Dichloropropene, total	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-

Certificate of Analysis

Report Date: 07-Nov-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 24-Oct-2024

Client PO:

Project Description: CA0026246.5107- City of Renfrew Landfill

Client ID:	DUP-M-1	DUP-M-2	Trip Blank	Field Blank		
Sample Date:	22-Oct-24 00:00	22-Oct-24 00:00	21-Oct-24 00:00	22-Oct-24 00:00	-	-
Sample ID:	2443317-13	2443317-14	2443317-15	2443317-16		
Matrix:	Ground Water	Ground Water	Water	Water		
MDL/Units						

Volatiles

Ethylbenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Hexane	1.0 ug/L	<1.0	<1.0	<1.0	<1.0	-	-
Methyl Ethyl Ketone (2-Butanone)	5.0 ug/L	<5.0	<5.0	<5.0	<5.0	-	-
Methyl Butyl Ketone (2-Hexanone)	10.0 ug/L	<10.0	<10.0	<10.0	<10.0	-	-
Methyl Isobutyl Ketone	5.0 ug/L	<5.0	<5.0	<5.0	<5.0	-	-
Methyl tert-butyl ether	2.0 ug/L	<2.0	<2.0	<2.0	<2.0	-	-
Methylene Chloride	5.0 ug/L	<5.0	<5.0	<5.0	<5.0	-	-
Styrene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,1,1,2-Tetrachloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,1,2,2-Tetrachloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Tetrachloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Toluene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,1,1-Trichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
1,1,2-Trichloroethane	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Trichloroethylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Trichlorofluoromethane	1.0 ug/L	<1.0	<1.0	<1.0	<1.0	-	-
1,3,5-Trimethylbenzene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Vinyl chloride	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
m,p-Xylenes	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
o-Xylene	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Xylenes, total	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Toluene-d8	Surrogate	111%	110%	116%	111%	-	-
4-Bromofluorobenzene	Surrogate	113%	114%	110%	111%	-	-
Dibromofluoromethane	Surrogate	94.8%	94.3%	93.8%	96.0%	-	-

Certificate of Analysis

Report Date: 07-Nov-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 24-Oct-2024

Client PO:

Project Description: CA0026246.5107- City of Renfrew Landfill

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Anions								
Bromide	ND	0.1	mg/L					
Chloride	ND	1	mg/L					
Fluoride	ND	0.1	mg/L					
Nitrate as N	ND	0.1	mg/L					
Nitrite as N	ND	0.05	mg/L					
Phosphate as P	ND	0.5	mg/L					
Sulphate	ND	1	mg/L					
General Inorganics								
Alkalinity, total	ND	5	mg/L					
Ammonia as N	ND	0.01	mg/L					
Chemical Oxygen Demand	ND	10	mg/L					
Dissolved Organic Carbon	ND	0.5	mg/L					
Phenolics	ND	0.001	mg/L					
Phosphorus, total	ND	0.01	mg/L					
Total Dissolved Solids	ND	10	mg/L					
Total Kjeldahl Nitrogen	ND	0.1	mg/L					
Metals								
Mercury	ND	0.1	ug/L					
Aluminum	ND	1	ug/L					
Antimony	ND	0.5	ug/L					
Arsenic	ND	1	ug/L					
Barium	ND	1	ug/L					
Beryllium	ND	0.5	ug/L					
Boron	ND	10	ug/L					
Cadmium	ND	0.1	ug/L					
Calcium	ND	100	ug/L					
Chromium	ND	1	ug/L					
Cobalt	ND	0.5	ug/L					
Copper	ND	0.5	ug/L					
Iron	ND	100	ug/L					
Lead	ND	0.1	ug/L					
Magnesium	ND	200	ug/L					

Certificate of Analysis

Report Date: 07-Nov-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 24-Oct-2024

Client PO:

Project Description: CA0026246.5107- City of Renfrew Landfill

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Manganese	ND	5	ug/L					
Molybdenum	ND	0.5	ug/L					
Nickel	ND	1	ug/L					
Potassium	ND	100	ug/L					
Selenium	ND	1	ug/L					
Silver	ND	0.1	ug/L					
Sodium	ND	200	ug/L					
Strontium	ND	10	ug/L					
Thallium	ND	0.1	ug/L					
Tin	ND	5	ug/L					
Titanium	ND	5	ug/L					
Tungsten	ND	10	ug/L					
Uranium	ND	0.1	ug/L					
Vanadium	ND	0.5	ug/L					
Zinc	ND	5	ug/L					
Volatiles								
Acetone	ND	5.0	ug/L					
Benzene	ND	0.5	ug/L					
Bromodichloromethane	ND	0.5	ug/L					
Bromoform	ND	0.5	ug/L					
Bromomethane	ND	0.5	ug/L					
Carbon Tetrachloride	ND	0.2	ug/L					
Chlorobenzene	ND	0.5	ug/L					
Chloroethane	ND	1.0	ug/L					
Chloroform	ND	0.5	ug/L					
Chloromethane	ND	3.0	ug/L					
Dibromochloromethane	ND	0.5	ug/L					
Dichlorodifluoromethane	ND	1.0	ug/L					
1,2-Dibromoethane	ND	0.2	ug/L					
1,2-Dichlorobenzene	ND	0.5	ug/L					
1,3-Dichlorobenzene	ND	0.5	ug/L					
1,4-Dichlorobenzene	ND	0.5	ug/L					
1,1-Dichloroethane	ND	0.5	ug/L					

Certificate of Analysis

Report Date: 07-Nov-2024

Client: **WSP Canada Inc. (Ottawa)**

Order Date: 24-Oct-2024

Client PO:

Project Description: **CA0026246.5107- City of Renfrew Landfill**

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
1,2-Dichloroethane	ND	0.5	ug/L					
1,1-Dichloroethylene	ND	0.5	ug/L					
cis-1,2-Dichloroethylene	ND	0.5	ug/L					
trans-1,2-Dichloroethylene	ND	0.5	ug/L					
1,2-Dichloroethylene, total	ND	0.5	ug/L					
1,2-Dichloropropane	ND	0.5	ug/L					
cis-1,3-Dichloropropylene	ND	0.5	ug/L					
trans-1,3-Dichloropropylene	ND	0.5	ug/L					
1,3-Dichloropropene, total	ND	0.5	ug/L					
Ethylbenzene	ND	0.5	ug/L					
Hexane	ND	1.0	ug/L					
Methyl Ethyl Ketone (2-Butanone)	ND	5.0	ug/L					
Methyl Butyl Ketone (2-Hexanone)	ND	10.0	ug/L					
Methyl Isobutyl Ketone	ND	5.0	ug/L					
Methyl tert-butyl ether	ND	2.0	ug/L					
Methylene Chloride	ND	5.0	ug/L					
Styrene	ND	0.5	ug/L					
1,1,1,2-Tetrachloroethane	ND	0.5	ug/L					
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L					
Tetrachloroethylene	ND	0.5	ug/L					
Toluene	ND	0.5	ug/L					
1,1,1-Trichloroethane	ND	0.5	ug/L					
1,1,2-Trichloroethane	ND	0.5	ug/L					
Trichloroethylene	ND	0.5	ug/L					
Trichlorofluoromethane	ND	1.0	ug/L					
1,3,5-Trimethylbenzene	ND	0.5	ug/L					
Vinyl chloride	ND	0.5	ug/L					
m,p-Xylenes	ND	0.5	ug/L					
o-Xylene	ND	0.5	ug/L					
Xylenes, total	ND	0.5	ug/L					
Surrogate: 4-Bromofluorobenzene	90.5		%	113	50-140			
Surrogate: Dibromofluoromethane	74.9		%	93.7	50-140			

Certificate of Analysis

Report Date: 07-Nov-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 24-Oct-2024

Client PO:

Project Description: CA0026246.5107- City of Renfrew Landfill

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Surrogate: Toluene-d8	87.5		%	109	50-140			

Certificate of Analysis

Report Date: 07-Nov-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 24-Oct-2024

Client PO:

Project Description: CA0026246.5107- City of Renfrew Landfill

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Anions									
Bromide	0.11	0.1	mg/L	0.12			9.8	20	
Chloride	54.8	1	mg/L	55.0			0.5	20	
Fluoride	ND	0.1	mg/L	ND			NC	20	
Nitrate as N	ND	0.1	mg/L	ND			NC	20	
Nitrite as N	ND	0.05	mg/L	ND			NC	20	
Phosphate as P	ND	0.5	mg/L	ND			NC	20	
Sulphate	14.9	1	mg/L	15.1			1.4	10	
General Inorganics									
Alkalinity, total	59.1	5	mg/L	59.2			0.3	14	
Ammonia as N	0.034	0.01	mg/L	0.011			NC	18	
Chemical Oxygen Demand	26	10	mg/L	26			0.0	12	
Dissolved Organic Carbon	2.8	0.5	mg/L	2.9			1.6	37	
Phenolics	ND	0.001	mg/L	ND			NC	10	
Phosphorus, total	0.013	0.01	mg/L	0.012			5.2	15	
Total Dissolved Solids	154	10	mg/L	150			2.6	10	
Total Kjeldahl Nitrogen	0.65	0.1	mg/L	0.62			5.1	16	
Metals									
Mercury	ND	0.1	ug/L	ND			NC	20	
Aluminum	2.6	1	ug/L	2.6			1.5	20	
Antimony	ND	0.5	ug/L	ND			NC	20	
Arsenic	ND	1	ug/L	1.9			NC	20	
Barium	478	1	ug/L	441			8.0	20	
Beryllium	ND	0.5	ug/L	ND			NC	20	
Boron	155	10	ug/L	149			3.7	20	
Cadmium	ND	0.1	ug/L	ND			NC	20	
Calcium	115000	100	ug/L	112000			2.6	20	
Chromium	ND	1	ug/L	ND			NC	20	
Cobalt	ND	0.5	ug/L	ND			NC	20	
Copper	ND	0.5	ug/L	ND			NC	20	
Iron	12400	100	ug/L	12600			1.4	20	

Certificate of Analysis

Report Date: 07-Nov-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 24-Oct-2024

Client PO:

Project Description: CA0026246.5107- City of Renfrew Landfill

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Lead	ND	0.1	ug/L	ND			NC	20	
Magnesium	24400	200	ug/L	25900			6.2	20	
Manganese	615	5	ug/L	607			1.2	20	
Molybdenum	ND	0.5	ug/L	0.74			NC	20	
Nickel	ND	1	ug/L	ND			NC	20	
Potassium	10500	100	ug/L	10700			1.9	20	
Selenium	ND	1	ug/L	24.4			NC	20	
Silver	ND	0.1	ug/L	ND			NC	20	
Sodium	34500	200	ug/L	36000			4.0	20	
Strontium	341	10	ug/L	328			4.0	20	
Thallium	ND	0.1	ug/L	ND			NC	20	
Tin	ND	5	ug/L	ND			NC	20	
Titanium	ND	5	ug/L	11.6			NC	20	
Tungsten	ND	10	ug/L	ND			NC	20	
Uranium	ND	0.1	ug/L	0.1			NC	20	
Vanadium	0.85	0.5	ug/L	1.10			NC	20	
Zinc	ND	5	ug/L	ND			NC	20	
Volatiles									
Acetone	ND	5.0	ug/L	ND			NC	30	
Benzene	ND	0.5	ug/L	ND			NC	30	
Bromodichloromethane	ND	0.5	ug/L	ND			NC	30	
Bromoform	ND	0.5	ug/L	ND			NC	30	
Bromomethane	ND	0.5	ug/L	ND			NC	30	
Carbon Tetrachloride	ND	0.2	ug/L	ND			NC	30	
Chlorobenzene	ND	0.5	ug/L	ND			NC	30	
Chloroethane	ND	1.0	ug/L	ND			NC	30	
Chloroform	ND	0.5	ug/L	ND			NC	30	
Chloromethane	ND	3.0	ug/L	ND			NC	30	
Dibromochloromethane	ND	0.5	ug/L	ND			NC	30	
Dichlorodifluoromethane	ND	1.0	ug/L	ND			NC	30	
1,2-Dibromoethane	ND	0.2	ug/L	ND			NC	30	

Certificate of Analysis

Report Date: 07-Nov-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 24-Oct-2024

Client PO:

Project Description: CA0026246.5107- City of Renfrew Landfill

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
1,2-Dichlorobenzene	ND	0.5	ug/L	ND			NC	30	
1,3-Dichlorobenzene	ND	0.5	ug/L	ND			NC	30	
1,4-Dichlorobenzene	ND	0.5	ug/L	ND			NC	30	
1,1-Dichloroethane	ND	0.5	ug/L	ND			NC	30	
1,2-Dichloroethane	ND	0.5	ug/L	ND			NC	30	
1,1-Dichloroethylene	ND	0.5	ug/L	ND			NC	30	
cis-1,2-Dichloroethylene	ND	0.5	ug/L	ND			NC	30	
trans-1,2-Dichloroethylene	ND	0.5	ug/L	ND			NC	30	
1,2-Dichloropropane	ND	0.5	ug/L	ND			NC	30	
cis-1,3-Dichloropropylene	ND	0.5	ug/L	ND			NC	30	
trans-1,3-Dichloropropylene	ND	0.5	ug/L	ND			NC	30	
Ethylbenzene	ND	0.5	ug/L	ND			NC	30	
Hexane	ND	1.0	ug/L	ND			NC	30	
Methyl Ethyl Ketone (2-Butanone)	ND	5.0	ug/L	ND			NC	30	
Methyl Butyl Ketone (2-Hexanone)	ND	10.0	ug/L	ND			NC	30	
Methyl Isobutyl Ketone	ND	5.0	ug/L	ND			NC	30	
Methyl tert-butyl ether	ND	2.0	ug/L	ND			NC	30	
Methylene Chloride	ND	5.0	ug/L	ND			NC	30	
Styrene	ND	0.5	ug/L	ND			NC	30	
1,1,1,2-Tetrachloroethane	ND	0.5	ug/L	ND			NC	30	
1,1,2,2-Tetrachloroethane	ND	0.5	ug/L	ND			NC	30	
Tetrachloroethylene	ND	0.5	ug/L	ND			NC	30	
Toluene	ND	0.5	ug/L	ND			NC	30	
1,1,1-Trichloroethane	ND	0.5	ug/L	ND			NC	30	
1,1,2-Trichloroethane	ND	0.5	ug/L	ND			NC	30	
Trichloroethylene	ND	0.5	ug/L	ND			NC	30	
Trichlorofluoromethane	ND	1.0	ug/L	ND			NC	30	
1,3,5-Trimethylbenzene	ND	0.5	ug/L	ND			NC	30	
Vinyl chloride	ND	0.5	ug/L	ND			NC	30	
m,p-Xylenes	ND	0.5	ug/L	ND			NC	30	
o-Xylene	ND	0.5	ug/L	ND			NC	30	

Certificate of Analysis

Report Date: 07-Nov-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 24-Oct-2024

Client PO:

Project Description: CA0026246.5107- City of Renfrew Landfill

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Surrogate: 4-Bromofluorobenzene	90.0		%		112	50-140			
Surrogate: Dibromofluoromethane	75.1		%		93.9	50-140			
Surrogate: Toluene-d8	90.2		%		113	50-140			

Certificate of Analysis

Report Date: 07-Nov-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 24-Oct-2024

Client PO:

Project Description: CA0026246.5107- City of Renfrew Landfill

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Anions									
Bromide	1.00	0.1	mg/L	0.12	87.9	85-117			
Chloride	63.2	1	mg/L	55.0	81.7	70-124			
Fluoride	1.00	0.1	mg/L	ND	100	70-130			
Nitrate as N	0.96	0.1	mg/L	ND	95.8	77-126			
Nitrite as N	0.907	0.05	mg/L	ND	90.7	82-115			
Phosphate as P	4.11	0.5	mg/L	ND	82.2	76-130			
Sulphate	24.5	1	mg/L	15.1	94.3	74-126			
General Inorganics									
Ammonia as N	1.03	0.01	mg/L	0.011	102	81-124			
Chemical Oxygen Demand	221	10	mg/L	26	97.5	85-111			
Dissolved Organic Carbon	15.5	0.5	mg/L	4.7	108	60-133			
Phenolics	0.024	0.001	mg/L	ND	97.0	67-133			
Phosphorus, total	0.985	0.01	mg/L	0.012	97.3	80-120			
Total Dissolved Solids	94.0	10	mg/L	ND	94.0	75-125			
Total Kjeldahl Nitrogen	1.61	0.1	mg/L	0.62	98.9	81-126			
Metals									
Mercury	2.68	0.1	ug/L	ND	89.5	70-130			
Aluminum	45.7	1	ug/L	2.6	86.3	80-120			
Arsenic	51.7	1	ug/L	1.9	99.6	80-120			
Barium	485	1	ug/L	441	87.0	80-120			
Beryllium	48.9	0.5	ug/L	ND	97.1	80-120			
Boron	50	10	ug/L	ND	99.9	80-120			
Cadmium	51.6	0.1	ug/L	ND	103	80-120			
Calcium	11300	100	ug/L	ND	113	80-120			
Chromium	54.6	1	ug/L	ND	108	80-120			
Cobalt	50.2	0.5	ug/L	ND	99.7	80-120			
Copper	46.6	0.5	ug/L	ND	92.8	80-120			
Iron	2570	100	ug/L	ND	103	80-120			
Lead	50.0	0.1	ug/L	ND	100	80-120			
Magnesium	32100	200	ug/L	25900	62.0	80-120			QM-07

Certificate of Analysis

Report Date: 07-Nov-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 24-Oct-2024

Client PO:

Project Description: CA0026246.5107- City of Renfrew Landfill

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Manganese	55.1	5	ug/L	ND	110	80-120			
Molybdenum	44.6	0.5	ug/L	0.74	87.8	80-120			
Nickel	48.8	1	ug/L	ND	96.2	80-120			
Potassium	20000	100	ug/L	10700	92.2	80-120			
Selenium	50.0	1	ug/L	ND	100	80-120			
Silver	35.2	0.1	ug/L	ND	70.3	80-120			QM-07
Sodium	10200	200	ug/L	ND	102	80-120			
Strontium	56	10	ug/L	ND	112	80-120			
Thallium	45.8	0.1	ug/L	ND	91.6	80-120			
Tin	50.2	5	ug/L	ND	99.6	80-120			
Titanium	54.9	5	ug/L	11.6	86.6	80-120			
Tungsten	44.0	10	ug/L	ND	87.2	80-120			
Uranium	49.9	0.1	ug/L	0.1	99.6	80-120			
Vanadium	56.3	0.5	ug/L	1.10	110	80-120			
Zinc	44	5	ug/L	ND	85.1	80-120			
Volatiles									
Acetone	73.2	5.0	ug/L	ND	73.2	50-140			
Benzene	41.6	0.5	ug/L	ND	104	60-130			
Bromodichloromethane	37.6	0.5	ug/L	ND	94.1	60-130			
Bromoform	37.1	0.5	ug/L	ND	92.8	60-130			
Bromomethane	48.1	0.5	ug/L	ND	120	50-140			
Carbon Tetrachloride	46.4	0.2	ug/L	ND	116	60-130			
Chlorobenzene	45.8	0.5	ug/L	ND	115	60-130			
Chloroethane	40.2	1.0	ug/L	ND	100	50-140			
Chloroform	42.5	0.5	ug/L	ND	106	60-130			
Chloromethane	39.4	3.0	ug/L	ND	98.6	50-140			
Dibromochloromethane	41.2	0.5	ug/L	ND	103	60-130			
Dichlorodifluoromethane	37.1	1.0	ug/L	ND	92.6	50-140			
1,2-Dibromoethane	41.0	0.2	ug/L	ND	103	60-130			
1,2-Dichlorobenzene	42.1	0.5	ug/L	ND	105	60-130			
1,3-Dichlorobenzene	39.0	0.5	ug/L	ND	97.5	60-130			

Certificate of Analysis

Report Date: 07-Nov-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 24-Oct-2024

Client PO:

Project Description: CA0026246.5107- City of Renfrew Landfill

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
1,4-Dichlorobenzene	44.4	0.5	ug/L	ND	111	60-130			
1,1-Dichloroethane	32.8	0.5	ug/L	ND	82.1	60-130			
1,2-Dichloroethane	44.2	0.5	ug/L	ND	111	60-130			
1,1-Dichloroethylene	36.4	0.5	ug/L	ND	91.1	60-130			
cis-1,2-Dichloroethylene	41.4	0.5	ug/L	ND	103	60-130			
trans-1,2-Dichloroethylene	37.9	0.5	ug/L	ND	94.8	60-130			
1,2-Dichloropropane	42.9	0.5	ug/L	ND	107	60-130			
cis-1,3-Dichloropropylene	39.7	0.5	ug/L	ND	99.3	60-130			
trans-1,3-Dichloropropylene	38.4	0.5	ug/L	ND	96.0	60-130			
Ethylbenzene	34.8	0.5	ug/L	ND	87.0	60-130			
Hexane	37.6	1.0	ug/L	ND	94.0	60-130			
Methyl Ethyl Ketone (2-Butanone)	82.8	5.0	ug/L	ND	82.8	50-140			
Methyl Butyl Ketone (2-Hexanone)	91.2	10.0	ug/L	ND	91.2	50-140			
Methyl Isobutyl Ketone	96.6	5.0	ug/L	ND	96.6	50-140			
Methyl tert-butyl ether	57.9	2.0	ug/L	ND	57.9	50-140			
Methylene Chloride	46.2	5.0	ug/L	ND	115	60-130			
Styrene	34.2	0.5	ug/L	ND	85.5	60-130			
1,1,1,2-Tetrachloroethane	49.4	0.5	ug/L	ND	123	60-130			
1,1,2,2-Tetrachloroethane	46.5	0.5	ug/L	ND	116	60-130			
Tetrachloroethylene	43.5	0.5	ug/L	ND	109	60-130			
Toluene	41.4	0.5	ug/L	ND	104	60-130			
1,1,1-Trichloroethane	41.4	0.5	ug/L	ND	104	60-130			
1,1,2-Trichloroethane	37.2	0.5	ug/L	ND	93.1	60-130			
Trichloroethylene	34.8	0.5	ug/L	ND	87.1	60-130			
Trichlorofluoromethane	40.4	1.0	ug/L	ND	101	60-130			
1,3,5-Trimethylbenzene	47.8	0.5	ug/L	ND	120	60-130			
Vinyl chloride	32.0	0.5	ug/L	ND	80.0	50-140			
m,p-Xylenes	78.9	0.5	ug/L	ND	98.6	60-130			
o-Xylene	41.1	0.5	ug/L	ND	103	60-130			
Surrogate: 4-Bromofluorobenzene	74.2		%		92.8	50-140			
Surrogate: Dibromofluoromethane	79.6		%		99.5	50-140			

Certificate of Analysis

Report Date: 07-Nov-2024

Client: **WSP Canada Inc. (Ottawa)**

Order Date: 24-Oct-2024

Client PO:

Project Description: **CA0026246.5107- City of Renfrew Landfill**

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Surrogate: Toluene-d8	85.0		%		106	50-140			

Certificate of Analysis

Report Date: 07-Nov-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 24-Oct-2024

Client PO:

Project Description: CA0026246.5107- City of Renfrew Landfill

Qualifier Notes:**Login Qualifiers :**

Container(s) - Labeled improperly/insufficient information - General chemistry container labelled as Oct 23rd.

Applies to Samples: BH10-2B

Container(s) - Labeled improperly/insufficient information - Nutrients bottle labelled as OMM6.

Applies to Samples: OMM5

Sample - Not submitted in the correct container - Sub-sampled for phenols from the general chemistry bottle.

Applies to Samples: OMM5

Samples received submerged in water, possibly melted ice. This condition can compromise sample integrity. Directed by client to proceed with analysis.

Applies to Samples: Trip Blank, Field Blank

Sample(s) received and not indicated on the COC. Proceed with analyses as directed by client

Applies to Samples: Trip Blank, Field Blank

QC Qualifiers:

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on other acceptable QC.

Sample Data Revisions:

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

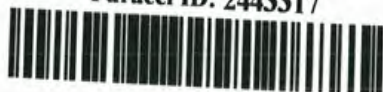
Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

Any use of these results implies your agreement that our total liability in connection with this work, however arising, shall be limited to the amount paid by you for this work, and that our employees or agents shall not under any circumstances be liable to you in connection with this work.



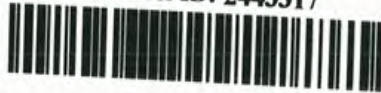
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Parcel Order Number
(Lab Use Only)
2443317

Chain Of Custody
(Lab Use Only)
No 71290

Client Name: WSP	Project Ref: CA0026246-5107 - City of Renton and fill	Page 1 of 2
Contact Name: Andria Caleth	Quote #: 24-002 (GW)	Turnaround Time ☐ 1 day ☐ 3 day ☐ 2 day ☒ Regular Date Required: _____
Address: 1931 Robertson Rd	PO #:	
Telephone:	E-mail: Andria.Caleth@wsp.com Mikaela.Raelect@wsp.com	

☐ REG 153/04 ☐ REG 406/19 ☐ Table 1 ☐ Res/Park ☐ Med/Fine ☐ Table 2 ☐ Ind/Comm ☐ Coarse ☐ Table 3 ☐ Agri/Other ☐ Table _____ For RSC: ☐ Yes ☐ No		Other Regulation ☐ REG 558 ☐ PWQO ☐ CCME ☐ MISA ☐ SU - Sani ☐ SU - Storm Mun: _____ ☐ Other: _____	Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)	Required Analysis																
Sample ID/Location Name			Matrix Air Volume # of Containers	Sample Taken Date Time		quote # 24-002 (GW)														
1	OMM5		GW	10	10	Oct 22/24	15:00	X												
2	OMM9				10	Oct 22/24	19:05	X												
3	OMM6					Oct 23/24	9:25	X												
4	OMM7					Oct 23/24	9:45	X												
5	OMM8					Oct 23/24	11:20	X												
6	BH10-1				11	Oct 23	10:15	X												
7	BH11-1		↓		10	Oct 23	12:42	X												
8	OMM4S					Oct 22	N/A	X												
9	OMM14M					Oct 22	N/A	X												
10	OMM14D		↓			Oct 22	N/A	X												
Comments: Doc, metals and mercury filtered						Method of Delivery: Drop Box														
Relinquished By (Sign): Brittany Holland			Received By (Driver/Depot):			Received By (Sign): SO			Verified By: SO											
Relinquished By (Print): Brittany Holland			Date/Time: Oct 23/24			Date/Time: Oct 24, 2024 9:07am			Date/Time: Oct 24, 2024 9:07am											
Date/Time: Oct 23/24			Temperature: _____ °C			Temperature: 21.8, 22.8 °C			pH Verified: 7 By: SO											



Client Name: WSP	Project Ref: CA0026246-5107 - City of Rensselaer landfill	Page 2 of 2
Contact Name: Andria Caletti	Quote #: 24-002 (GW)	Turnaround Time ☐ 1 day ☐ 3 day ☐ 2 day ☒ Regular Date Required: _____
Address: 1931 Robertson Rd.	PO #: _____	
Telephone: _____	E-mail: Andria.Caletti@wsp.com Mikaela.Raclet@wsp.com	

☐ REG 153/04 ☐ REG 406/19 Other Regulation: _____		Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)		Required Analysis														
☐ Table 1 ☐ Res/Park ☐ Med/Fine ☐ Table 2 ☐ Ind/Comm ☐ Coarse ☐ Table 3 ☐ Agri/Other ☐ Table _____ For RSC: ☐ Yes ☐ No	☐ REG 558 ☐ PWQO ☐ CCME ☐ MISA ☐ SU - Sani ☐ SU - Storm Mun: _____ ☐ Other: _____	Matrix Air Volume # of Containers Sample Taken Date Time quote #: 24-002 (GW)																
Sample ID/Location Name																		
1	BH10-2A		GW	10	Oct 22/24	N/A												
2	BH10-2B		↓	↓	Oct 22/24	↓												
3	DUP - M-1		↓	↓	Oct 22/24	↓												
4	DUP - M-2		↓	↓	Oct 22/24	↓												
5																		
6																		
7																		
8																		
9																		
10																		

Comments: DOC, metals and mercury filtered				Method of Delivery: Drop Box	
Relinquished By (Sign): Brittany Holland	Received By Driver/Depot: _____	Received By Lab: SO	Verified By: SO		
Relinquished By (Print): Brittany Holland	Date/Time: _____	Date/Time: Oct 24 2024 8:55	Date/Time: Oct 24 2024 9:07am		
Date/Time: Oct 23/24	Temperature: _____ °C	Temperature: 2.81 2nd °C	pH Verified: 7 By: SO		

Certificate of Analysis

WSP Canada Inc. (Ottawa)

1931 Robertson Rd.
Ottawa, ON K2H 5B7
Attn: Andria Caletti

Client PO:
Project: CA0026246.5107
Custody: 76069

Report Date: 13-Dec-2024
Order Date: 5-Dec-2024

Order #: 2449409

This Certificate of Analysis contains analytical data applicable to the following samples as submitted:

Paracel ID	Client ID
2449409-01	S7D
2449409-02	S-9
2449409-03	S-8
2449409-04	DUPE

Approved By:

Mark Foto, M.Sc.

Lab Supervisor

Certificate of Analysis

Report Date: 13-Dec-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 5-Dec-2024

Client PO:

Project Description: CA0026246.5107

Analysis Summary Table

Analysis	Method Reference/Description	Extraction Date	Analysis Date
Alkalinity, total to pH 4.5	EPA 310.1 - Titration to pH 4.5	10-Dec-24	10-Dec-24
Ammonia, as N	EPA 351.2 - Auto Colour	9-Dec-24	9-Dec-24
Anions	EPA 300.1 - IC	6-Dec-24	6-Dec-24
Biochemical Oxygen Demand	SM 5210B - DO Probe	6-Dec-24	11-Dec-24
Chemical Oxygen Demand	EPA 410.1 - Digestion, Colourimetric	6-Dec-24	6-Dec-24
Dissolved Organic Carbon	MOE 3247B - Combustion IR	10-Dec-24	10-Dec-24
Hardness	Hardness as CaCO ₃	6-Dec-24	9-Dec-24
Mercury, dissolved	EPA 245.2 - Cold Vapour AA	9-Dec-24	9-Dec-24
Metals, ICP-MS	EPA 200.8 - ICP-MS	6-Dec-24	9-Dec-24
Phenolics	EPA 420.2 - Auto Colour, 4AAP	6-Dec-24	6-Dec-24
Phosphorus, total, water	EPA 365.4 - Auto Colour, digestion	9-Dec-24	10-Dec-24
Total Dissolved Solids	SM 2540C - gravimetric, filtration	6-Dec-24	10-Dec-24
Total Kjeldahl Nitrogen	EPA 351.2 - Auto Colour, digestion	9-Dec-24	10-Dec-24
Total Suspended Solids	SM 2540D - Gravimetric	6-Dec-24	10-Dec-24

Certificate of Analysis

Report Date: 13-Dec-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 5-Dec-2024

Client PO:

Project Description: CA0026246.5107

Client ID:	S7D	S-9	S-8	DUPE		
Sample Date:	05-Dec-24 10:50	05-Dec-24 11:25	05-Dec-24 12:15	05-Dec-24 00:00	-	-
Sample ID:	2449409-01	2449409-02	2449409-03	2449409-04		
Matrix:	Surface Water	Surface Water	Surface Water	Surface Water		
MDL/Units						

General Inorganics

Alkalinity, total	5 mg/L	63	62	63	63	-	-
Ammonia as N	0.01 mg/L	<0.01	0.02	0.02	0.01	-	-
BOD	2 mg/L	<2	<2	<2	<2	-	-
Chemical Oxygen Demand	10 mg/L	17	14	16	15	-	-
Dissolved Organic Carbon	0.5 mg/L	6.0	5.7	6.2	7.2	-	-
Hardness	1 mg/L	70.6	64.8	62.4	63.0	-	-
Phenolics	0.001 mg/L	<0.001	<0.001	<0.001	<0.001	-	-
Phosphorus, total	0.01 mg/L	0.03	0.01	0.01	0.01	-	-
Total Dissolved Solids	10 mg/L	110	104	102	106	-	-
Total Suspended Solids	2 mg/L	<2	<2	<2	<2	-	-
Total Kjeldahl Nitrogen	0.1 mg/L	0.3	0.3	0.3	0.3	-	-

Anions

Bromide	0.1 mg/L	<0.1	<0.1	<0.1	<0.1	-	-
Chloride	1 mg/L	11	12	12	12	-	-
Fluoride	0.1 mg/L	<0.1	<0.1	<0.1	<0.1	-	-
Nitrate as N	0.1 mg/L	<0.1	<0.1	<0.1	<0.1	-	-
Nitrite as N	0.05 mg/L	<0.05	<0.05	<0.05	<0.05	-	-
Phosphate as P	0.5 mg/L	<0.5	<0.5	<0.5	<0.5	-	-
Sulphate	1 mg/L	5	5	5	5	-	-

Metals

Mercury, dissolved	0.1 ug/L	<0.1	<0.1	<0.1	<0.1	-	-

Metals - Total

Antimony	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Arsenic	1 ug/L	<1	<1	<1	<1	-	-
Barium	1 ug/L	32	29	28	26	-	-

Certificate of Analysis

Report Date: 13-Dec-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 5-Dec-2024

Client PO:

Project Description: CA0026246.5107

Client ID:	S7D	S-9	S-8	DUPE		
Sample Date:	05-Dec-24 10:50	05-Dec-24 11:25	05-Dec-24 12:15	05-Dec-24 00:00	-	-
Sample ID:	2449409-01	2449409-02	2449409-03	2449409-04		
Matrix:	Surface Water	Surface Water	Surface Water	Surface Water		
MDL/Units						

Metals - Total

Beryllium	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Boron	50 ug/L	<50	<50	<50	<50	-	-
Cadmium	0.1 ug/L	<0.1	<0.1	<0.1	<0.1	-	-
Calcium	100 ug/L	18700	16900	16300	16200	-	-
Chromium	5 ug/L	<5	<5	<5	<5	-	-
Cobalt	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Copper	0.5 ug/L	1.8	<0.5	<0.5	0.6	-	-
Iron	100 ug/L	579	124	163	121	-	-
Lead	0.1 ug/L	1.0	<0.1	<0.1	<0.1	-	-
Magnesium	200 ug/L	5820	5480	5280	5470	-	-
Manganese	5 ug/L	30	8	10	8	-	-
Molybdenum	0.5 ug/L	<0.5	<0.5	<0.5	<0.5	-	-
Nickel	1 ug/L	<1	<1	<1	<1	-	-
Potassium	100 ug/L	1290	1160	1140	1140	-	-
Selenium	1 ug/L	<1	<1	<1	<1	-	-
Silver	0.1 ug/L	<0.1	<0.1	<0.1	<0.1	-	-
Sodium	200 ug/L	8160	8050	7700	8130	-	-
Thallium	0.1 ug/L	<0.1	<0.1	<0.1	<0.1	-	-
Tungsten	10 ug/L	<10	<10	<10	<10	-	-
Uranium	0.1 ug/L	0.2	0.1	0.1	0.1	-	-
Vanadium	0.5 ug/L	1.1	<0.5	<0.5	<0.5	-	-
Zinc	5 ug/L	10	<5	<5	<5	-	-
Zirconium	1 ug/L	<1	<1	<1	<1	-	-

Certificate of Analysis

Report Date: 13-Dec-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 5-Dec-2024

Client PO:

Project Description: CA0026246.5107

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Anions								
Bromide	ND	0.1	mg/L					
Chloride	ND	1	mg/L					
Fluoride	ND	0.1	mg/L					
Nitrate as N	ND	0.1	mg/L					
Nitrite as N	ND	0.05	mg/L					
Phosphate as P	ND	0.5	mg/L					
Sulphate	ND	1	mg/L					
General Inorganics								
Alkalinity, total	ND	5	mg/L					
Ammonia as N	ND	0.01	mg/L					
BOD	ND	2	mg/L					
Chemical Oxygen Demand	ND	10	mg/L					
Dissolved Organic Carbon	ND	0.5	mg/L					
Phenolics	ND	0.001	mg/L					
Phosphorus, total	ND	0.01	mg/L					
Total Dissolved Solids	ND	10	mg/L					
Total Suspended Solids	ND	2	mg/L					
Total Kjeldahl Nitrogen	ND	0.1	mg/L					
Metals								
Mercury, dissolved	ND	0.1	ug/L					
Metals - Total								
Antimony	ND	0.5	ug/L					
Arsenic	ND	1	ug/L					
Barium	ND	1	ug/L					
Beryllium	ND	0.5	ug/L					
Boron	ND	50	ug/L					
Cadmium	ND	0.1	ug/L					
Calcium	ND	100	ug/L					
Chromium	ND	5	ug/L					
Cobalt	ND	0.5	ug/L					
Copper	ND	0.5	ug/L					
Iron	ND	100	ug/L					

Certificate of Analysis

Report Date: 13-Dec-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 5-Dec-2024

Client PO:

Project Description: CA0026246.5107

Method Quality Control: Blank

Analyte	Result	Reporting Limit	Units	%REC	%REC Limit	RPD	RPD Limit	Notes
Lead	ND	0.1	ug/L					
Magnesium	ND	200	ug/L					
Manganese	ND	5	ug/L					
Molybdenum	ND	0.5	ug/L					
Nickel	ND	1	ug/L					
Potassium	ND	100	ug/L					
Selenium	ND	1	ug/L					
Silver	ND	0.1	ug/L					
Sodium	ND	200	ug/L					
Thallium	ND	0.1	ug/L					
Tungsten	ND	10	ug/L					
Uranium	ND	0.1	ug/L					
Vanadium	ND	0.5	ug/L					
Zinc	ND	5	ug/L					
Zirconium	ND	1	ug/L					

Certificate of Analysis

Report Date: 13-Dec-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 5-Dec-2024

Client PO:

Project Description: CA0026246.5107

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Anions									
Bromide	ND	0.1	mg/L	ND			NC	20	
Chloride	11.5	1	mg/L	11.5			0.1	20	
Fluoride	ND	0.1	mg/L	ND			NC	20	
Nitrate as N	ND	0.1	mg/L	ND			NC	20	
Nitrite as N	ND	0.05	mg/L	ND			NC	20	
Phosphate as P	ND	0.5	mg/L	ND			NC	20	
Sulphate	5.41	1	mg/L	5.39			0.4	10	
General Inorganics									
Alkalinity, total	65.4	5	mg/L	63.4			3.2	14	
Ammonia as N	0.010	0.01	mg/L	0.012			NC	18	
Chemical Oxygen Demand	16	10	mg/L	17			6.1	12	
Dissolved Organic Carbon	6.3	0.5	mg/L	6.9			9.0	37	
Phenolics	ND	0.001	mg/L	ND			NC	10	
Phosphorus, total	0.024	0.01	mg/L	0.026			7.7	15	
Total Dissolved Solids	110	10	mg/L	110			0.0	10	
Total Suspended Solids	1350	4	mg/L	1340			0.7	10	
Total Kjeldahl Nitrogen	0.37	0.1	mg/L	0.34			7.6	16	
Metals									
Mercury, dissolved	ND	0.1	ug/L	ND			NC	20	
Metals - Total									
Antimony	0.53	0.5	ug/L	ND			NC	20	
Arsenic	ND	1	ug/L	ND			NC	20	
Barium	32.3	1	ug/L	32.1			0.3	20	
Beryllium	ND	0.5	ug/L	ND			NC	20	
Boron	ND	50	ug/L	ND			NC	20	
Cadmium	ND	0.1	ug/L	ND			NC	20	
Calcium	18300	100	ug/L	18700			1.9	20	
Chromium	ND	5	ug/L	ND			NC	20	
Cobalt	ND	0.5	ug/L	ND			NC	20	
Copper	1.60	0.5	ug/L	1.81			12.6	20	

Certificate of Analysis

Report Date: 13-Dec-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 5-Dec-2024

Client PO:

Project Description: CA0026246.5107

Method Quality Control: Duplicate

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Iron	595	100	ug/L	579			2.7	20	
Lead	1.09	0.1	ug/L	1.00			9.0	20	
Magnesium	5740	200	ug/L	5820			1.4	20	
Manganese	29.0	5	ug/L	29.5			1.7	20	
Molybdenum	ND	0.5	ug/L	ND			NC	20	
Nickel	ND	1	ug/L	ND			NC	20	
Potassium	1230	100	ug/L	1290			4.6	20	
Selenium	ND	1	ug/L	ND			NC	20	
Silver	ND	0.1	ug/L	ND			NC	20	
Sodium	7990	200	ug/L	8160			2.0	20	
Thallium	ND	0.1	ug/L	ND			NC	20	
Tungsten	ND	10	ug/L	ND			NC	20	
Uranium	0.2	0.1	ug/L	0.2			8.5	20	
Vanadium	1.10	0.5	ug/L	1.10			0.2	20	
Zinc	10	5	ug/L	10			1.6	20	
Zirconium	ND	1	ug/L	ND			NC	20	

Certificate of Analysis

Report Date: 13-Dec-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 5-Dec-2024

Client PO:

Project Description: CA0026246.5107

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Anions									
Bromide	1.00	0.1	mg/L	ND	99.6	85-117			
Chloride	21.5	1	mg/L	11.5	100	70-124			
Fluoride	1.02	0.1	mg/L	ND	102	70-130			
Nitrate as N	1.08	0.1	mg/L	ND	108	77-126			
Nitrite as N	1.00	0.05	mg/L	ND	100	82-115			
Phosphate as P	5.15	0.5	mg/L	ND	103	76-130			
Sulphate	15.7	1	mg/L	5.39	103	74-126			
General Inorganics									
Ammonia as N	0.995	0.01	mg/L	0.012	98.3	81-124			
BOD	172	2	mg/L	ND	86.0	71-121			
Chemical Oxygen Demand	210	10	mg/L	17	96.5	85-111			
Dissolved Organic Carbon	14.5	0.5	mg/L	6.9	75.8	60-133			
Phenolics	0.025	0.001	mg/L	ND	98.1	67-133			
Phosphorus, total	0.972	0.01	mg/L	0.026	94.6	80-120			
Total Dissolved Solids	88.0	10	mg/L	ND	88.0	75-125			
Total Suspended Solids	21.0	2	mg/L	ND	97.7	75-125			
Total Kjeldahl Nitrogen	1.31	0.1	mg/L	0.34	96.8	81-126			
Metals									
Mercury, dissolved	2.7	0.1	ug/L	ND	88.6	70-130			
Metals - Total									
Arsenic	40.8	1	ug/L	ND	81.2	80-120			
Barium	80.6	1	ug/L	32.1	96.9	80-120			
Beryllium	41.0	0.5	ug/L	ND	82.0	80-120			
Boron	47	50	ug/L	ND	81.4	80-120			
Cadmium	41.1	0.1	ug/L	ND	82.3	80-120			
Calcium	26000	100	ug/L	18700	72.9	80-120			QM-07
Chromium	48.0	5	ug/L	ND	93.3	80-120			
Cobalt	44.2	0.5	ug/L	ND	87.8	80-120			
Copper	42.9	0.5	ug/L	1.81	82.3	80-120			
Iron	2870	100	ug/L	579	91.8	80-120			

Certificate of Analysis

Report Date: 13-Dec-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 5-Dec-2024

Client PO:

Project Description: CA0026246.5107

Method Quality Control: Spike

Analyte	Result	Reporting Limit	Units	Source Result	%REC	%REC Limit	RPD	RPD Limit	Notes
Lead	45.6	0.1	ug/L	1.00	89.3	80-120			
Magnesium	15000	200	ug/L	5820	91.8	80-120			
Manganese	73.9	5	ug/L	29.5	88.9	80-120			
Molybdenum	44.5	0.5	ug/L	ND	88.3	80-120			
Nickel	42.6	1	ug/L	ND	83.6	80-120			
Potassium	11100	100	ug/L	1290	98.3	80-120			
Silver	44.4	0.1	ug/L	ND	88.7	80-120			
Sodium	17100	200	ug/L	8160	89.2	80-120			
Thallium	45.9	0.1	ug/L	ND	91.8	80-120			
Tungsten	48.8	10	ug/L	ND	97.0	80-120			
Uranium	52.2	0.1	ug/L	0.2	104	80-120			
Vanadium	47.5	0.5	ug/L	1.10	92.8	80-120			
Zinc	42	5	ug/L	10	64.3	80-120			QM-07
Zirconium	43.9	1	ug/L	ND	87.4	80-120			

Certificate of Analysis

Report Date: 13-Dec-2024

Client: WSP Canada Inc. (Ottawa)

Order Date: 5-Dec-2024

Client PO:

Project Description: CA0026246.5107

Qualifier Notes:**QC Qualifiers:**

QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on other acceptable QC.

Sample Data Revisions:

None

Work Order Revisions / Comments:

None

Other Report Notes:

n/a: not applicable

ND: Not Detected

MDL: Method Detection Limit

Source Result: Data used as source for matrix and duplicate samples

%REC: Percent recovery.

RPD: Relative percent difference.

NC: Not Calculated

Any use of these results implies your agreement that our total liability in connection with this work, however arising, shall be limited to the amount paid by you for this work, and that our employees or agents shall not under any circumstances be liable to you in connection with this work.



Client Name: WSP CANADA	Project Ref: CA0026246.5102	Page 1 of 1
Contact Name: ANDRIA CALETTI	Quote #: 24-003 (SW)	Turnaround Time ☐ 1 day ☐ 3 day ☐ 2 day ☒ Regular
Address: 1931 ROBERTSON RD OTTAWA ON	PO #:	
Telephone: 613 592 9600	E-mail: andria.caletti@wsp.com	
Date Required:		

☐ REG 153/04 ☐ REG 406/19		Other Regulation		Matrix Type: S (Soil/Sed.) GW (Ground Water) SW (Surface Water) SS (Storm/Sanitary Sewer) P (Paint) A (Air) O (Other)		Required Analysis												
☐ Table 1 ☐ Agri/Other ☐ Med/Fine ☐ Table 2 ☐ Res/Park ☐ Coarse ☐ Table 3 ☐ Ind/Comm ☐ Table _____ For RSC: ☐ Yes ☐ No	☐ REG 558 ☐ PWQO ☐ CCME ☐ MISA ☐ SU - Sani ☐ SU - Storm Mun: _____ ☐ Other: _____	Matrix	Air Volume	# of Containers	Field Filtered	Sample Taken												
Sample ID/Location Name						Date	Time											
1 S7D		SW		9		12/05/24	10:50 AM	✓										
2 S-9		↓		↓			11:25 AM	✓										
3 S-8		↓		↓			12:15 PM	✓										
4 DUPES		↓		↓			/	✓										
5																		
6																		
7																		
8																		
9																		
10																		

Comments:				Method of Delivery: Walk-In	
Relinquished By (Sign):	Received at Depot:	Received at Lab:	Verified By: SO		
Relinquished By (Print): M. ARMITAGE	Date/Time:	Date/Time: Dec 5 1920	Date/Time: Dec 5, 2024 3:05 PM		
Date/Time: 12/05/24	Temperature: _____ °C	Temperature: 0.0 °C	pH Verified: ☒ By: J2		

APPENDIX D

**Results of Field and Laboratory Chemical and
Physical Analyses Historical Groundwater and
Surface Water Quality Data**

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	10-1	10-1	10-1	10-1	10-1	10-1	10-1	10-1	10-1
				03-Dec-2010	13-Jun-2011	24-Nov-2011	22-Jun-2012	10-Nov-2012	25-Jun-2013	20-Nov-2013	27-May-2014	25-Nov-2014
				R - 13	S-5	BH10-1	S-6	S-8	S-1	S-1	A-1	R-4
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	346	261	292	280	280	290	280	300	340
Ammonia Nitrogen	mg/l	--	--	0.88	0.85	1.19	0.97	1.1	1.1	1.2 ⁽⁵⁾	1.1	1.4 ⁽⁵⁾
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	20	20	<5	20	6.9	19	8.8	6.4	5.6
Chloride	mg/l	--	250	41	53	64	47	63	47	64	46	49
Conductivity	uS/cm	--	--	787	663	817	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	740	--	822	760	745	730	720	794	705
Dissolved Organic Carbon	mg/l	--	5	4.1	3.6	2.2	3.1	2.2	3.7	1.8	2.7	2.9
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	340	266	291	280	220	240	260	310	290
Nitrate as N	mg/l	10.0	--	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Nitrite as N	mg/l	1.0	--	<0.10	<0.10	<0.10	<0.010	<0.010	<0.010	<0.010	<0.010	0.016
Nitrogen, Total Kjeldahl	mg/l	--	--	1.07	0.81	1.17	1.1	1.4	1.4	1.2 ⁽⁵⁾	1.3	1.4 ⁽⁵⁾
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
pH (Field)	-	--	--	7.5	--	7.04	7.5	7.6	7.5	7.7	7.14	7.6
Phosphorus	mg/l	--	--	0.19	0.09	0.02	0.061	0.017	0.018	0.006	0.008	0.016
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	24	21	47	22	32	17	43	27	31
Temperature (Field)	deg c	--	15	8.8	--	7.4	10	6	9	6	12.3	7
Total Dissolved Solids	mg/l	--	500	512	431	531	382	404	360	450	414	418
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.0010	<0.0010	<0.001	<0.001	<0.0010	<0.001
Barium, dissolved	mg/l	1	--	0.43	0.32	0.41	0.38	0.33	0.29	0.38	0.41	0.44
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.16	0.11	0.13	0.14	0.14	0.13	0.15	0.13	0.16
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.00010	<0.00010	<0.0001	<0.0001	<0.00010	<0.0001
Calcium, dissolved	mg/l	--	--	105	80	87	84	67	69	77	92	87
Chromium, dissolved	mg/l	0.05	--	0.001	<0.001	<0.001	<0.0050	<0.0050	<0.005	<0.005	<0.0050	<0.005
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.001	<0.001	<0.001	<0.0010	<0.0010	<0.001	<0.001	<0.0010	<0.001
Iron, dissolved	mg/l	--	0.3	8.35	6.64	6.41	8.7	4.5	4.1	6.2	7.4	8.1
Lead, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.00050	<0.00050	<0.0005	<0.0005	<0.00050	<0.0005
Magnesium, dissolved	mg/l	--	--	19	16	18	17	14	16	16	19	18
Manganese, dissolved	mg/l	--	0.05	0.43	0.34	0.36	0.39	0.28	0.26	0.33	0.38	0.38
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	9	8	9	8.4	8.2	7.7	8.7	8.8	9.6
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	30	25	61	36	63	47	71	43	63
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.01	<0.01	<0.01	<0.0050	<0.0050	<0.005	<0.005	<0.0050	<0.005
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	--	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	10-1	10-1	10-1	10-1	10-1	10-1	10-1	10-1	10-1
				26-May-2015	30-Nov-2015	14-Jun-2016	29-Nov-2016	01-Jun-2017	22-Nov-2017	28-Jun-2018	26-Nov-2018	18-Jun-2019
				BH10-1	10-1	BH10-1	10-01	BH10-1	10-01	BH10-1	10-1	10-1
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	354	332	277	134	221	222	284	418	283
Ammonia Nitrogen	mg/l	--	--	2.52 ⁽⁶⁾	1.73	1.59	1.58 ⁽⁶⁾	0.80	0.65	0.92	1.05	1.08
Bromide	mg/l	--	--	--	--	<0.1	--	--	--	--	--	<0.1
Chemical Oxygen Demand	mg/l	--	--	25	<10	11	12	<10	10	19	12	21
Chloride	mg/l	--	250	53	63	68	69	52	45	47	62	86
Conductivity	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	821	800	648	695	665	536	665	899	936
Dissolved Organic Carbon	mg/l	--	5	2.6	2.2	3.5	3.3	3.7	5.1	4.4	4.7	2.3
Fluoride	mg/l	1.5	--	--	--	0.3	--	--	--	--	--	<0.1
Hardness, Calcium Carbonate	mg/l	--	--	455	304	290	229	218	195	230	350	319
Nitrate as N	mg/l	10.0	--	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite as N	mg/l	1.0	--	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrogen, Total Kjeldahl	mg/l	--	--	1.6	1.8	1.7	1.4	1.0	0.7	0.9	1.2	1.3
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.10	7.1	7.37	7.21	7.3	7.65	7.36	7.68	7.97
Phosphorus	mg/l	--	--	0.01	0.01	0.03	0.05	<0.01	0.03	<0.01	0.05	0.04
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	<0.2	--	--	--	--	--	<0.2
Sulphate	mg/l	--	500 ⁽³⁾	16	42	19	1	18	16	14	31	16
Temperature (Field)	deg c	--	15	11.9	7	10.5	8.3	11	6.3	10.8	6.2	10.9
Total Dissolved Solids	mg/l	--	500	458	452	392	220	318	322	290	496	450
Metals												
Aluminum, dissolved	mg/l	--	--	<0.01	--	0.001	--	--	--	--	--	0.043
Antimony, dissolved	mg/l	0.006	--	<0.001	--	<0.0005	--	--	--	--	--	<0.0005
Arsenic, dissolved	mg/l	0.01	--	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.493	0.459	0.405	0.372	0.255	0.239	0.344	0.451	0.399
Beryllium, dissolved	mg/l	--	--	<0.001	--	--	--	--	--	--	--	<0.0005
Boron, dissolved	mg/l	5	--	0.172	0.166	0.104	0.157	0.076	0.053	0.085	0.146	0.11
Cadmium, dissolved	mg/l	0.005	--	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	144	94.2	86.9	65.5	63.4	57.4	67.8	102	93
Chromium, dissolved	mg/l	0.05	--	<0.05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	<0.001	--	--	--	--	--	--	--	<0.0005
Copper, dissolved	mg/l	--	1	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Iron, dissolved	mg/l	--	0.3	10.6	7.3	7.35	5.53	4.79	3.21	5.78	10.7	9.06
Lead, dissolved	mg/l	0.01	--	<0.001	<0.0001	<0.0001	<0.0001	0.0002	<0.0001	<0.0001	0.0002	<0.0001
Magnesium, dissolved	mg/l	--	--	23.4	16.6	17.8	16	14.6	12.5	14.7	23.2	21.1
Manganese, dissolved	mg/l	--	0.05	0.54	0.379	0.367	0.313	0.267	0.235	0.323	0.506	0.443
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	<0.005	--	--	--	--	--	--	--	0.0007
Nickel, dissolved	mg/l	--	--	<0.005	--	--	--	--	--	--	--	<0.001
Potassium, dissolved	mg/l	--	--	12.6	9.8	9.85	9.01	6.89	5.79	6.97	9.99	8.83
Selenium, dissolved	mg/l	0.05	--	<0.005	--	<0.001	--	--	--	--	--	<0.001
Silver, dissolved	mg/l	--	--	<0.001	--	--	--	--	--	--	--	<0.0001
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	45.2	79.3	38.8	60	22.4	28.5	24	49.2	32.7
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	0.297
Thallium, dissolved	mg/l	--	--	<0.001	--	--	--	--	--	--	--	<0.0001
Tin, dissolved	mg/l	--	--	<0.01	--	--	--	--	--	--	--	<0.005
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	<0.005
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	<0.01
Uranium, dissolved	mg/l	0.02	--	--	--	0.0004	--	--	--	--	--	0.0003
Vanadium, dissolved	mg/l	--	--	0.006	--	--	--	--	--	--	--	0.0007
Zinc, dissolved	mg/l	--	5	<0.02	<0.005	0.007	<0.005	<0.005	<0.005	<0.005	<0.005	0.008
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	--	--	--	--	<0.001	<0.001	<0.001	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	10-1	10-1	10-1	10-1	10-1	10-1	10-1	10-1	10-1
				02-Dec-2019	04-Jun-2020	30-Nov-2020	08-Jun-2021	25-Nov-2021	20-Jun-2022	23-Nov-2022	10-May-2023	29-Nov-2023
				BH10-1	BH10-1	10-1	BH10-1	BH10-1	BH10-1	BH10-1	BH10-1	BH10-1
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	353	313	378	362	395	264	386	241	156
Ammonia Nitrogen	mg/l	--	--	1.37	1.21	1.24	1.50	1.41	1.06	1.80	0.80	1.57
Bromide	mg/l	--	--	0.2	<0.1	0.2	0.1	0.2	<0.1	0.2	<0.1	0.1
Chemical Oxygen Demand	mg/l	--	--	18	19	33	62	38	20	<10	15	111
Chloride	mg/l	--	250	57	64	51	40	41	77.9	46.8	132	101
Conductivity	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	908	807	840	499	946	596	910	900	819
Dissolved Organic Carbon	mg/l	--	5	4.7	7.2	3.9	4.2	4.2	2.6	5.7	3.9	--
Fluoride	mg/l	1.5	--	0.3	0.2	0.2	0.2	0.2	0.3	0.2	0.1	0.2
Hardness, Calcium Carbonate	mg/l	--	--	347	283	349	289	346	278	316	276	225
Nitrate as N	mg/l	10.0	--	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite as N	mg/l	1.0	--	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrogen, Total Kjeldahl	mg/l	--	--	1.4	1.1	1.5	1.7	1.7	1.4	1.9	0.9	1.8
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.5	7.61	7.21	7.78	7.00	7.79	7.28	7.25	7.84
Phosphorus	mg/l	--	--	0.02	<0.01	0.02	0.07	0.14	0.05	0.01	0.02	0.12
Phosphorus, Total Orthophosphate	mg/l	--	--	<0.2	<0.2	<1.0 ⁽⁷⁾	<0.2	<0.2	<0.2	<0.9 ⁽⁸⁾	<0.5	<0.5
Sulphate	mg/l	--	500 ⁽³⁾	22	21	21	12	11	24.6	23.1	19	10
Temperature (Field)	deg c	--	15	7.9	10.4	7.6	9.6	8.3	10.1	8.1	8.0	6.5
Total Dissolved Solids	mg/l	--	500	476	382	460	420	480	392	484	492	318
Metals												
Aluminum, dissolved	mg/l	--	--	0.002	0.002	0.001	0.002	0.001	0.002	0.002	0.002	0.003
Antimony, dissolved	mg/l	0.006	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.457	0.42	0.457	0.424	0.479	0.382	0.472	0.306	0.312
Beryllium, dissolved	mg/l	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron, dissolved	mg/l	5	--	0.14	0.109	0.135	0.139	0.168	0.102	0.16	0.062	0.103
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	102	84.2	101	85.6	103	81.7	92.3	81.1	67.1
Chromium, dissolved	mg/l	0.05	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Copper, dissolved	mg/l	--	1	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0007	<0.0005
Iron, dissolved	mg/l	--	0.3	8.82	7.66	9.27	8.68	10.5	6.03	9.3	5.25	6.22
Lead, dissolved	mg/l	0.01	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Magnesium, dissolved	mg/l	--	--	22.2	17.6	23.1	18.3	21.7	17.8	20.7	17.7	13.8
Manganese, dissolved	mg/l	--	0.05	0.449	0.418	0.483	0.462	0.499	0.409	0.486	0.337	0.316
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	0.0009	0.0008	0.0007	0.0006	0.0007	0.0010	0.0006	0.0006	0.0015
Nickel, dissolved	mg/l	--	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Potassium, dissolved	mg/l	--	--	9.85	8.61	9.67	8.93	10.4	8.63	11.3	7.09	8.19
Selenium, dissolved	mg/l	0.05	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silver, dissolved	mg/l	--	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	56.1	31.7	37.1	26.2	38.5	52.4	37.1	55.5	55.5
Strontium, dissolved	mg/l	--	--	0.296	0.287	0.337	0.307	0.344	0.293	0.314	0.233	0.218
Thallium, dissolved	mg/l	--	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Tin, dissolved	mg/l	--	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Titanium, dissolved	mg/l	--	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Tungsten, dissolved	mg/l	--	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, dissolved	mg/l	0.02	--	0.0004	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0002	0.0004
Vanadium, dissolved	mg/l	--	--	0.0008	0.0007	0.0008	0.0008	0.0009	0.0005	0.0008	<0.0005	<0.0005
Zinc, dissolved	mg/l	--	5	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	<0.001	<0.001	0.003	0.002	0.002	<0.001	<0.001	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	10-1	10-1	10-1
				06-Dec-2023	25-Apr-2024	23-Oct-2024
				BH10-1	BH10-1	BH10-1
General Chemistry						
Alkalinity (Total as CaCO ₃)	mg/l	--	--	--	297	332
Ammonia Nitrogen	mg/l	--	--	--	0.99	1.67
Bromide	mg/l	--	--	--	<0.1	0.2
Chemical Oxygen Demand	mg/l	--	--	--	21	13
Chloride	mg/l	--	250	--	64	56
Conductivity	uS/cm	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	--	792	811
Dissolved Organic Carbon	mg/l	--	5	2.0	3.0	2.9
Fluoride	mg/l	1.5	--	--	0.2	0.2
Hardness, Calcium Carbonate	mg/l	--	--	--	278	338
Nitrate as N	mg/l	10.0	--	--	<0.1	<0.1
Nitrite as N	mg/l	1.0	--	--	<0.05	<0.05
Nitrogen, Total Kjeldahl	mg/l	--	--	--	1.1	1.9
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--
pH (Field)	-	--	--	--	7.23	9.7
Phosphorus	mg/l	--	--	--	0.02	<0.01
Phosphorus, Total Orthophosphate	mg/l	--	--	--	<0.5	<0.5
Sulphate	mg/l	--	500 ⁽³⁾	--	21	38
Temperature (Field)	deg c	--	15	--	8.9	7.11
Total Dissolved Solids	mg/l	--	500	--	410	460
Metals						
Aluminum, dissolved	mg/l	--	--	--	0.004	0.015
Antimony, dissolved	mg/l	0.006	--	--	<0.0005	<0.0005
Arsenic, dissolved	mg/l	0.01	--	--	<0.001	<0.001
Barium, dissolved	mg/l	1	--	--	0.355	0.471
Beryllium, dissolved	mg/l	--	--	--	<0.0005	<0.0005
Boron, dissolved	mg/l	5	--	--	0.083	0.17
Cadmium, dissolved	mg/l	0.005	--	--	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	--	80.6	97.2
Chromium, dissolved	mg/l	0.05	--	--	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	--	<0.0005	<0.0005
Copper, dissolved	mg/l	--	1	--	<0.0005	<0.0005
Iron, dissolved	mg/l	--	0.3	--	6.19	9.45
Lead, dissolved	mg/l	0.01	--	--	0.0003	<0.0001
Magnesium, dissolved	mg/l	--	--	--	18.7	23
Manganese, dissolved	mg/l	--	0.05	--	0.384	0.466
Mercury, dissolved	mg/l	0.001	--	--	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	0.0008	0.0007
Nickel, dissolved	mg/l	--	--	--	<0.001	<0.001
Potassium, dissolved	mg/l	--	--	--	7.45	10.6
Selenium, dissolved	mg/l	0.05	--	--	<0.001	0.002
Silver, dissolved	mg/l	--	--	--	<0.0001	<0.0001
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	--	41.5	33.6
Strontium, dissolved	mg/l	--	--	--	0.255	0.328
Thallium, dissolved	mg/l	--	--	--	<0.0001	<0.0001
Tin, dissolved	mg/l	--	--	--	<0.005	<0.005
Titanium, dissolved	mg/l	--	--	--	<0.005	<0.005
Tungsten, dissolved	mg/l	--	--	--	<0.01	<0.01
Uranium, dissolved	mg/l	0.02	--	--	0.0003	0.0003
Vanadium, dissolved	mg/l	--	--	--	0.0005	0.0010
Zinc, dissolved	mg/l	--	5	--	<0.005	<0.005
Phenols						
Phenolics, Total Recoverable	mg/l	--	--	--	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	10-2A	10-2A	10-2A	10-2A	10-2A	10-2A	10-2A	10-2A
				03-Dec-2010	13-Jun-2011	29-Nov-2011	23-Jun-2012	11-Nov-2012	25-Jun-2013	21-Nov-2013	28-May-2014
				R - 17	S-16	BH10-2A	S-20	S-20	S-20	S-17	A-17
General Chemistry											
Alkalinity (Total as CaCO ₃)	mg/l	--	--	314	308	376	240	200	160	140	320
Ammonia Nitrogen	mg/l	--	--	0.19	0.04	0.22	<0.050	<0.050	0.060	<0.050	0.22
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	15	55	10	69	59	48	50	8.1
Chloride	mg/l	--	250	62	71	68	69	68	66	66	75
Conductivity	uS/cm	--	--	800	769	928	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	816	735	684	720	700	720	705	831
Dissolved Organic Carbon	mg/l	--	5	4.1	15.5	3.7	18	23	19	19	4.1
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	287	231	344	170	120	92	76	330
Nitrate as N	mg/l	10.0	--	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Nitrite as N	mg/l	1.0	--	<0.10	<0.10	<0.10	<0.010	<0.010	<0.010	<0.010	<0.010
Nitrogen, Total Kjeldahl	mg/l	--	--	0.28	0.14	0.31	0.40	0.50	0.84	0.60	0.41
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	<0.10	<0.10	<0.10	<0.10	<0.10
pH (Field)	-	--	--	7.5	7.3	7.89	7.3	7.4	7.5	7.3	7.47
Phosphorus	mg/l	--	--	0.45	4.21	3.15	2.4	1.7	0.049	0.35	1.5
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	30	1	32	<1	<1	2	<1	26
Temperature (Field)	deg c	--	15	7	7	7.6	9	7	10	7	11.2
Total Dissolved Solids	mg/l	--	500	520	500	603	392	250	302	304	478
Metals											
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.0010	<0.0010	<0.001	<0.001	<0.0010
Barium, dissolved	mg/l	1	--	0.52	1.2	1.0	0.71	0.42	0.26	0.22	2
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.14	0.12	0.19	0.12	0.11	0.11	0.1	0.16
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.00010	<0.00010	<0.0001	<0.0001	<0.00010
Calcium, dissolved	mg/l	--	--	77	48	90	34	20	13	11	76
Chromium, dissolved	mg/l	0.05	--	0.001	<0.001	<0.001	<0.0050	<0.0050	<0.005	<0.005	<0.0050
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.001	0.001	<0.001	<0.0010	<0.0010	<0.001	<0.001	<0.0010
Iron, dissolved	mg/l	--	0.3	1.83	2.21	3.60	0.49	<0.1	<0.1	<0.1	6.1
Lead, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.00050	<0.00050	<0.0005	<0.0005	<0.00050
Magnesium, dissolved	mg/l	--	--	23	27	29	21	17	14	12	35
Manganese, dissolved	mg/l	--	0.05	0.12	0.08	0.14	0.025	0.0091	0.002	0.002	0.15
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	6	7	7	6.3	5.8	5.5	5.1	8
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	43	62	60	77	79	81	78	62
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.01	0.01	0.02	0.015	<0.0050	<0.005	<0.005	<0.0050
Phenols											
Phenolics, Total Recoverable	mg/l	--	--	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	10-2A	10-2A	10-2A	10-2A	10-2A	10-2A	10-2A	10-2A
				26-Nov-2014	26-May-2015	29-Nov-2015	14-Jun-2016	30-Nov-2016	01-Jun-2017	23-Nov-2017	29-Jun-2018
				S-20	BH10-2A	10-3A	10-2A	10-2A	BH10-2A	10-2A	10-2A
General Chemistry											
Alkalinity (Total as CaCO ₃)	mg/l	--	--	180	195	264	239	240	246	357	355
Ammonia Nitrogen	mg/l	--	--	0.15	0.18	0.25	0.23	0.23	0.27	0.32	0.44
Bromide	mg/l	--	--	--	--	--	0.2	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	19	39	22	29	16	24	23	16
Chloride	mg/l	--	250	68	71	78	73	69	78	99	75
Conductivity	uS/cm	--	--	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	720	843	850	550	552	608	927	845
Dissolved Organic Carbon	mg/l	--	5	6.7	5.3	3.5	7.1	4.2	4.0	3.5	2.9
Fluoride	mg/l	1.5	--	--	--	--	<0.5 ⁽⁷⁾	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	110	205	367	180	154	153	322	243
Nitrate as N	mg/l	10.0	--	<0.10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite as N	mg/l	1.0	--	<0.010	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrogen, Total Kjeldahl	mg/l	--	--	0.34	0.5	0.5	0.4	0.3	0.5	0.5	0.5
Nitrogen, Nitrate-Nitrite	mg/l	--	--	<0.10	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.3	7.52	7.5	8.08	7.87	8.0	7.55	7.48
Phosphorus	mg/l	--	--	0.92	0.65	0.64	0.03	0.52	0.15	0.15	0.59
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	<0.2	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	<1	<1	14	1	<1	<1	39	30
Temperature (Field)	deg c	--	15	8	11.4	6	10.9	8.1	10	6.4	12.1
Total Dissolved Solids	mg/l	--	500	272	294	370	316	312	340	490	470
Metals											
Aluminum, dissolved	mg/l	--	--	--	<0.01	--	0.003	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	<0.001	--	<0.0005	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.01	<0.001	<0.001	0.001	0.001	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.54	1.24	1.71	1.07	0.856	0.836	1.31	1.26
Beryllium, dissolved	mg/l	--	--	--	<0.001	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.14	0.184	0.188	0.146	0.16	0.167	0.153	0.143
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	12	31.3	81.5	25.9	19	17.6	78.4	54.4
Chromium, dissolved	mg/l	0.05	--	<0.005	<0.05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	--	<0.001	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.001	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Iron, dissolved	mg/l	--	0.3	<0.1	5.23	7.03	2.45	0.722	0.113	4.67	3.73
Lead, dissolved	mg/l	0.01	--	<0.0005	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Magnesium, dissolved	mg/l	--	--	20	30.8	39.6	28	25.9	26.4	30.7	26.1
Manganese, dissolved	mg/l	--	0.05	0.006	0.089	0.137	0.029	0.013	0.006	0.146	0.11
Mercury, dissolved	mg/l	0.001	--	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	<0.005	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	<0.005	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	6.5	9.5	7.64	7.69	7.08	8.57	7.89	7.62
Selenium, dissolved	mg/l	0.05	--	--	<0.005	--	<0.001	--	--	--	--
Silver, dissolved	mg/l	--	--	--	<0.001	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	61	70	71.7	64.8	63.1	60.6	65.5	57.8
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	<0.001	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	<0.01	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	<0.0001	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	0.003	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.005	<0.02	<0.005	0.014	<0.005	<0.005	<0.005	<0.005
Phenols											
Phenolics, Total Recoverable	mg/l	--	--	--	--	--	--	--	<0.001	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	10-2A	10-2A	10-2A	10-2A	10-2A	10-2A	10-2A	10-2A
				27-Nov-2018	19-Jun-2019	02-Dec-2019	04-Jun-2020	01-Dec-2020	08-Jun-2021	25-Nov-2021	20-Jun-2022
				10-2A	10-2B	BH10-2A	BH10-2A	10-2A	BH10-2A	BH10-2A	BH10-2A
General Chemistry											
Alkalinity (Total as CaCO ₃)	mg/l	--	--	357	166	228	315	173	179	214	232
Ammonia Nitrogen	mg/l	--	--	0.06	0.31	0.30	0.39	0.29	0.26	0.34	0.34
Bromide	mg/l	--	--	--	0.2	0.2	0.3	0.2	0.2	0.2	<0.1
Chemical Oxygen Demand	mg/l	--	--	31	16	15	19	47	36	27	61
Chloride	mg/l	--	250	81	78	78	99	82	73	79	94.3
Conductivity	uS/cm	--	--	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	795	794	805	829	882	511	892	528
Dissolved Organic Carbon	mg/l	--	5	3.8	2.3	3.8	8.9	22.9	11.1	4.7	14.1
Fluoride	mg/l	1.5	--	--	<1.0 ⁽⁹⁾	0.6	0.2	0.2 ⁽¹⁰⁾	<0.5 ⁽⁹⁾	0.3	0.1
Hardness, Calcium Carbonate	mg/l	--	--	271	179	158	256	181	112	287	200
Nitrate as N	mg/l	10.0	--	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite as N	mg/l	1.0	--	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrogen, Total Kjeldahl	mg/l	--	--	0.5	0.4	0.4	0.5	0.4	0.5	0.6	0.9
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	8.1	7.99	7.9	7.97	8.12	9.49	7.68	7.99
Phosphorus	mg/l	--	--	2.31	0.07	0.05	0.23	0.17	0.02	0.95	0.88
Phosphorus, Total Orthophosphate	mg/l	--	--	--	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Sulphate	mg/l	--	500 ⁽³⁾	29	3	<1	26	2	<1	1	1.7
Temperature (Field)	deg c	--	15	7.6	12.1	8.0	11.9	7.6	11.3	8.3	11.4
Total Dissolved Solids	mg/l	--	500	478	338	288	460	350	250	332	370
Metals											
Aluminum, dissolved	mg/l	--	--	--	0.003	0.001	0.002	0.006	0.002	<0.001	0.001
Antimony, dissolved	mg/l	0.006	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, dissolved	mg/l	1	--	1.17	0.773	0.64	1.19	0.784	0.51	1.35	0.918
Beryllium, dissolved	mg/l	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron, dissolved	mg/l	5	--	0.148	0.145	0.131	0.13	0.141	0.126	0.136	0.142
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	61.7	31.9	24.1	56.4	23.8	13.6	64.3	32.1
Chromium, dissolved	mg/l	0.05	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Copper, dissolved	mg/l	--	1	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0015	<0.0005	<0.0005
Iron, dissolved	mg/l	--	0.3	4.06	1.08	0.124	3.34	<0.1	<0.1	4.06	0.229
Lead, dissolved	mg/l	0.01	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Magnesium, dissolved	mg/l	--	--	28.5	24	23.9	28	29.5	18.9	30.7	29
Manganese, dissolved	mg/l	--	0.05	0.101	0.024	0.008	0.086	<0.005	<0.005	0.109	0.014
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	0.0026	0.0028	0.0019	<0.0005	0.0051	0.0014	0.0019
Nickel, dissolved	mg/l	--	--	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Potassium, dissolved	mg/l	--	--	8.27	7.26	7.54	7.59	8.02	6.36	8.3	8.18
Selenium, dissolved	mg/l	0.05	--	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silver, dissolved	mg/l	--	--	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	62.1	66.5	67.4	62.3	61.7	61.7	57.6	63.1
Strontium, dissolved	mg/l	--	--	--	0.495	0.444	0.714	0.607	0.405	0.791	0.654
Thallium, dissolved	mg/l	--	--	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Tin, dissolved	mg/l	--	--	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Titanium, dissolved	mg/l	--	--	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Tungsten, dissolved	mg/l	--	--	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, dissolved	mg/l	0.02	--	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001
Vanadium, dissolved	mg/l	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Zinc, dissolved	mg/l	--	5	<0.005	<0.005	<0.005	<0.005	<0.005	0.006	<0.005	<0.005
Phenols											
Phenolics, Total Recoverable	mg/l	--	--	0.002	<0.001	<0.001	<0.001	0.002	0.002	0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	10-2A	10-2A	10-2A	10-2A	10-2A	10-2A
				23-Nov-2022	11-May-2023	29-Nov-2023	06-Dec-2023	25-Apr-2024	22-Oct-2024
				BH10-2A	BH10-2A	BH10-2A	BH10-2A	BH10-2A	BH10-2A
General Chemistry									
Alkalinity (Total as CaCO ₃)	mg/l	--	--	357	266	348	--	378	387
Ammonia Nitrogen	mg/l	--	--	0.36	0.40	0.46	--	0.45	0.46
Bromide	mg/l	--	--	0.4	0.2	0.2	--	0.3	0.2
Chemical Oxygen Demand	mg/l	--	--	20	27	32	--	12	15
Chloride	mg/l	--	250	77.4	76	89	--	84	85
Conductivity	uS/cm	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	947	658	792	--	890	936
Dissolved Organic Carbon	mg/l	--	5	15.8	5.8	--	3.5	3.3	3.2
Fluoride	mg/l	1.5	--	0.4	<0.5 ⁽⁷⁾	0.3	--	0.4	0.4
Hardness, Calcium Carbonate	mg/l	--	--	315	183	352	--	349	377
Nitrate as N	mg/l	10.0	--	<0.1	<0.1	<0.1	--	<0.1	<0.1
Nitrite as N	mg/l	1.0	--	<0.05	<0.05	<0.05	--	<0.05	<0.05
Nitrogen, Total Kjeldahl	mg/l	--	--	0.6	0.6	0.6	--	0.6	0.6
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.60	7.74	7.73	--	6.97	6.88
Phosphorus	mg/l	--	--	0.18	0.12	1.21	--	0.09	0.01
Phosphorus, Total Orthophosphate	mg/l	--	--	<0.8 ⁽⁶⁾	<0.5	<0.5	--	<0.5	<0.5
Sulphate	mg/l	--	500 ⁽³⁾	21.8	1	26	--	32	31
Temperature (Field)	deg c	--	15	8.1	11.4	6.9	--	11.1	13
Total Dissolved Solids	mg/l	--	500	508	402	498	--	528	564
Metals									
Aluminum, dissolved	mg/l	--	--	0.002	0.009	<0.001	--	0.001	<0.001
Antimony, dissolved	mg/l	0.006	--	<0.0005	<0.0005	<0.0005	--	<0.0005	<0.0005
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	--	<0.001	0.001
Barium, dissolved	mg/l	1	--	1.32	0.718	1.27	--	1	1.04
Beryllium, dissolved	mg/l	--	--	<0.0005	<0.0005	<0.0005	--	<0.0005	<0.0005
Boron, dissolved	mg/l	5	--	0.146	0.146	0.138	--	0.153	0.165
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	--	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	74.6	22.2	87.2	--	87.5	94.2
Chromium, dissolved	mg/l	0.05	--	<0.001	<0.001	<0.001	--	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	<0.0005	<0.0005	<0.0005	--	<0.0005	<0.0005
Copper, dissolved	mg/l	--	1	<0.0005	<0.0005	<0.0005	--	<0.0005	<0.0005
Iron, dissolved	mg/l	--	0.3	3.98	<0.1	4.45	--	3.87	4.2
Lead, dissolved	mg/l	0.01	--	<0.0001	<0.0001	<0.0001	--	0.0002	<0.0001
Magnesium, dissolved	mg/l	--	--	31.2	31	32.6	--	31.7	34.4
Manganese, dissolved	mg/l	--	0.05	0.131	<0.005	0.15	--	0.178	0.185
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	--	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	0.0012	0.0011	0.0006	--	0.0006	0.0009
Nickel, dissolved	mg/l	--	--	<0.001	<0.001	<0.001	--	<0.001	0.001
Potassium, dissolved	mg/l	--	--	8.53	7.56	8.82	--	8.34	9.04
Selenium, dissolved	mg/l	0.05	--	<0.001	<0.001	<0.001	--	<0.001	0.013
Silver, dissolved	mg/l	--	--	<0.0001	<0.0001	<0.0001	--	<0.0001	<0.0001
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	57	61.2	61.1	--	58.5	61
Strontium, dissolved	mg/l	--	--	0.831	0.545	0.882	--	0.783	0.795
Thallium, dissolved	mg/l	--	--	<0.0001	<0.0001	<0.0001	--	<0.0001	<0.0001
Tin, dissolved	mg/l	--	--	<0.005	<0.005	<0.005	--	<0.005	<0.005
Titanium, dissolved	mg/l	--	--	<0.005	<0.005	<0.005	--	<0.005	<0.005
Tungsten, dissolved	mg/l	--	--	<0.01	<0.01	<0.01	--	<0.01	<0.01
Uranium, dissolved	mg/l	0.02	--	0.0001	<0.0001	0.0001	--	0.0002	0.0002
Vanadium, dissolved	mg/l	--	--	<0.0005	<0.0005	<0.0005	--	<0.0005	<0.0005
Zinc, dissolved	mg/l	--	5	<0.005	<0.005	<0.005	--	<0.005	<0.005
Phenols									
Phenolics, Total Recoverable	mg/l	--	--	<0.001	<0.001	<0.001	--	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	10-2B	10-2B	10-2B	10-2B	10-2B	10-2B	10-2B	10-2B
				03-Dec-2010 ⁽¹¹⁾	13-Jun-2011	29-Nov-2011	23-Jun-2012	11-Nov-2012	25-Jun-2013	21-Nov-2013	28-May-2014
				R - 18	S-17	BH10-2B	S-21	S-21	S-21	S-18	A-18
General Chemistry											
Alkalinity (Total as CaCO ₃)	mg/l	--	--	283	285	284	270	280	260	270	260
Ammonia Nitrogen	mg/l	--	--	0.17	0.18	0.21	0.17	0.21	0.22	0.13	0.16
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	30	15	<5	12	4.7	11	6.1	<4.0
Chloride	mg/l	--	250	104	97	108	110	110	110	120	120
Conductivity	uS/cm	--	--	898	879	932	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	887	870	709	875	870	842	830	906
Dissolved Organic Carbon	mg/l	--	5	2.3	2.4	1.5	1.4	1.1	3.5	2.3	1.7
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	330	302	336	310	350	340	350	340
Nitrate as N	mg/l	10.0	--	<0.10	0.13	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Nitrite as N	mg/l	1.0	--	<0.10	<0.10	<0.10	<0.010	<0.010	<0.010	<0.010	<0.010
Nitrogen, Total Kjeldahl	mg/l	--	--	0.29	0.48	0.22	0.51	1.2	0.33	0.93	0.60
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	<0.10	<0.10	--	<0.10	<0.10
pH (Field)	-	--	--	7.7	7.6	7.79	7.6	7.6	7.6	7.4	7.54
Phosphorus	mg/l	--	--	0.89	1.53	0.01	0.50	0.69	0.26	0.20	0.015
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	42	37	48	43	40	39	43	36
Temperature (Field)	deg c	--	15	6	7	8.1	10	7	10	6	10.3
Total Dissolved Solids	mg/l	--	500	584	571	606	488	510	514	516	544
Metals											
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	<0.01	<0.001	<0.001	<0.0010	<0.0010	<0.001	<0.001	<0.0010
Barium, dissolved	mg/l	1	--	0.25	0.22	0.27	0.24	0.27	0.26	0.28	0.26
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.09	0.08	0.10	0.093	0.093	0.092	0.079	0.088
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.00010	<0.00010	<0.0001	<0.0001	<0.00010
Calcium, dissolved	mg/l	--	--	86	73	85	76	85	82	84	82
Chromium, dissolved	mg/l	0.05	--	0.002	<0.001	0.001	<0.0050	<0.0050	<0.005	<0.005	<0.0050
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	0.002	<0.001	<0.001	0.0020	<0.0010	<0.001	<0.001	<0.0010
Iron, dissolved	mg/l	--	0.3	0.33	0.15	0.29	0.22	0.3	0.27	0.34	0.31
Lead, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.00050	<0.00050	<0.0005	<0.0005	<0.00050
Magnesium, dissolved	mg/l	--	--	28	29	30	30	33	31	33	32
Manganese, dissolved	mg/l	--	0.05	0.08	0.09	0.11	0.099	0.11	0.1	0.11	0.11
Mercury, dissolved	mg/l	0.001	--	0.0002	<0.0001	<0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	7	7	7	7.2	7.6	7.5	7.8	7.8
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	46	50	57	61	58	57	58	59
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.01	<0.01	<0.01	<0.0050	<0.0050	<0.005	<0.005	<0.0050
Phenols											
Phenolics, Total Recoverable	mg/l	--	--	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	10-2B	10-2B	10-2B	10-2B	10-2B	10-2B	10-2B	10-2B
				26-Nov-2014	26-May-2015	29-Nov-2015	14-Jun-2016	30-Nov-2016	01-Jun-2017	23-Nov-2017	29-Jun-2018
				S-21	BH10-2B	10-3B	10-2B	10-2B	BH10-2B	10-2D	10-2B
General Chemistry											
Alkalinity (Total as CaCO ₃)	mg/l	--	--	260	283	281	262	284	277	337	344
Ammonia Nitrogen	mg/l	--	--	0.12	0.13	0.12	0.10	0.11	0.09	0.12	0.11
Bromide	mg/l	--	--	--	--	--	<0.1	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	<4.0	18	<10	<10	<10	17	<10	<10
Chloride	mg/l	--	250	98	134	142	130	138	130	175	119
Conductivity	uS/cm	--	--	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	810	1004	1000	803	797	810	1108	947
Dissolved Organic Carbon	mg/l	--	5	1.9	<0.5	0.8	2.7	1.7	3.0	0.9	1.4
Fluoride	mg/l	1.5	--	--	--	--	<0.5 ⁽⁷⁾	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	300	481	434	321	320	321	399	313
Nitrate as N	mg/l	10.0	--	<0.10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite as N	mg/l	1.0	--	<0.010	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrogen, Total Kjeldahl	mg/l	--	--	0.15	0.3	0.2	0.3	0.1	0.3	0.2	0.2
Nitrogen, Nitrate-Nitrite	mg/l	--	--	<0.10	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.5	7.63	7.7	7.54	7.99	7.6	7.61	7.52
Phosphorus	mg/l	--	--	0.071	0.02	<0.01	0.05	0.09	0.09	0.01	<0.01
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	<0.2	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	40	50	52	37	46	40	57	47
Temperature (Field)	deg c	--	15	7	11.3	7	11.9	7.8	12	7.1	11.1
Total Dissolved Solids	mg/l	--	500	438	546	628	528	570	550	592	572
Metals											
Aluminum, dissolved	mg/l	--	--	--	<0.01	--	0.004	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	<0.001	--	<0.0005	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.26	0.31	0.308	0.294	0.294	0.306	0.402	0.41
Beryllium, dissolved	mg/l	--	--	--	<0.001	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.084	0.099	0.095	0.079	0.085	0.098	0.096	0.095
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	77	131	108	77	77.9	80.4	98.3	75.7
Chromium, dissolved	mg/l	0.05	--	<0.005	<0.05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	--	<0.001	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.001	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Iron, dissolved	mg/l	--	0.3	0.23	0.506	0.449	0.19	0.3	0.332	0.457	0.35
Lead, dissolved	mg/l	0.01	--	<0.0005	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Magnesium, dissolved	mg/l	--	--	27	37.3	39.9	31.2	30.5	29.1	37.3	30.1
Manganese, dissolved	mg/l	--	0.05	0.098	0.141	0.119	0.105	0.112	0.114	0.143	0.115
Mercury, dissolved	mg/l	0.001	--	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	<0.005	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	<0.005	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	7.4	10.4	8.15	8.25	7.37	8.21	8.52	8.35
Selenium, dissolved	mg/l	0.05	--	--	<0.005	--	<0.001	--	--	--	--
Silver, dissolved	mg/l	--	--	--	<0.001	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	51	66.6	73.8	68.1	57.3	57.7	73.2	60.3
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	<0.001	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	<0.01	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	0.0020	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	0.004	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.005	<0.02	<0.005	0.013	<0.005	<0.005	<0.005	<0.005
Phenols											
Phenolics, Total Recoverable	mg/l	--	--	--	--	--	--	--	<0.001	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	10-2B	10-2B	10-2B	10-2B	10-2B	10-2B	10-2B	10-2B
				27-Nov-2018	19-Jun-2019	02-Dec-2019	04-Jun-2020	01-Dec-2020	08-Jun-2021	25-Nov-2021	20-Jun-2022
				10-2B	10-2A	BH10-2B	BH10-2B	10-2B	BH10-2B	BH10-2B	BH10-2B
General Chemistry											
Alkalinity (Total as CaCO3)	mg/l	--	--	310	296	247	307	285	277	275	269
Ammonia Nitrogen	mg/l	--	--	0.06	0.09	0.10	0.17	0.13	0.17	0.17	0.18
Bromide	mg/l	--	--	--	0.1	0.1	<0.1	0.1	0.1	0.1	<0.1
Chemical Oxygen Demand	mg/l	--	--	<10	18	13	<10	<10	27	11	<10
Chloride	mg/l	--	250	181	153	164	166	155	144	148	191
Conductivity	uS/cm	--	--	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	1028	953	995	1040	1012	903	1100	914
Dissolved Organic Carbon	mg/l	--	5	1.2	0.8	2.3	5.1	1.6	2.1	1.4	1.2
Fluoride	mg/l	1.5	--	--	0.3	0.5	0.4	0.4	0.4	0.4	0.6
Hardness, Calcium Carbonate	mg/l	--	--	406	375	381	363	357	329	351	344
Nitrate as N	mg/l	10.0	--	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite as N	mg/l	1.0	--	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrogen, Total Kjeldahl	mg/l	--	--	<0.1	<0.1	0.2	0.2	0.2	0.2	0.2	0.3
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	8.01	8.04	7.8	8.06	7.68	7.76	7.54	7.79
Phosphorus	mg/l	--	--	0.04	0.01	0.07	<0.01	0.04	0.09	0.03	0.02
Phosphorus, Total Orthophosphate	mg/l	--	--	--	<0.2	<0.2	<0.2	<1.0 ⁽⁷⁾	<0.2	<0.2	<0.2
Sulphate	mg/l	--	500 ⁽³⁾	51	48	50	56	41	35	38	49.6
Temperature (Field)	deg c	--	15	6.9	12.0	8.0	11.9	7.4	10.2	6.3	10.9
Total Dissolved Solids	mg/l	--	500	674	562	616	540	578	544	582	596
Metals											
Aluminum, dissolved	mg/l	--	--	--	0.003	0.001	0.001	0.003	0.002	0.001	0.004
Antimony, dissolved	mg/l	0.006	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.388	0.372	0.343	0.368	0.337	0.331	0.333	0.339
Beryllium, dissolved	mg/l	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron, dissolved	mg/l	5	--	0.084	0.077	0.094	0.085	0.082	0.065	0.064	0.068
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	101	93.4	96.6	92.8	88.5	83.4	88.4	85.4
Chromium, dissolved	mg/l	0.05	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Copper, dissolved	mg/l	--	1	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0019	<0.0005
Iron, dissolved	mg/l	--	0.3	0.41	0.926	0.353	0.372	0.341	0.412	0.364	0.256
Lead, dissolved	mg/l	0.01	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001
Magnesium, dissolved	mg/l	--	--	37.4	34.4	34	31.8	33	29.2	31.5	31.8
Manganese, dissolved	mg/l	--	0.05	0.137	0.223	0.111	0.111	0.1	0.099	0.092	0.096
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	0.0016	0.0019	0.0018	0.0017	0.0017	0.0018	0.0014
Nickel, dissolved	mg/l	--	--	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Potassium, dissolved	mg/l	--	--	10.2	17.8	9	9.12	8.99	8.39	8.34	8.96
Selenium, dissolved	mg/l	0.05	--	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silver, dissolved	mg/l	--	--	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	66.6	66.9	70.3	66.2	64.7	58.2	61.4	68.6
Strontium, dissolved	mg/l	--	--	--	0.74	0.648	0.7	0.67	0.672	0.702	0.706
Thallium, dissolved	mg/l	--	--	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Tin, dissolved	mg/l	--	--	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Titanium, dissolved	mg/l	--	--	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Tungsten, dissolved	mg/l	--	--	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, dissolved	mg/l	0.02	--	--	0.0028	0.0030	0.0028	0.0027	0.0025	0.0024	0.0021
Vanadium, dissolved	mg/l	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Zinc, dissolved	mg/l	--	5	<0.005	0.007	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Phenols											
Phenolics, Total Recoverable	mg/l	--	--	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	10-2B	10-2B	10-2B	10-2B	10-2B	10-2B
				23-Nov-2022	11-May-2023	29-Nov-2023	06-Dec-2023	25-Apr-2024	22-Oct-2024
				BH10-2B	BH10-2B	BH10-2B	BH10-2B	BH10-2B	BH10-2B
General Chemistry									
Alkalinity (Total as CaCO3)	mg/l	--	--	286	262	290	--	276	281
Ammonia Nitrogen	mg/l	--	--	0.13	0.22	0.15	--	0.19	0.15
Bromide	mg/l	--	--	0.3	<0.1	0.1	--	<0.1	<0.1
Chemical Oxygen Demand	mg/l	--	--	<10	17	<10	--	<10	12
Chloride	mg/l	--	250	179	139	188	--	202	216
Conductivity	uS/cm	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	1106	1083	1178	--	1126	1168
Dissolved Organic Carbon	mg/l	--	5	2.0	2.0	--	1.5	1.1	0.9
Fluoride	mg/l	1.5	--	0.4	0.5	0.3	--	0.4	0.4
Hardness, Calcium Carbonate	mg/l	--	--	360	306	366	--	385	416
Nitrate as N	mg/l	10.0	--	<0.1	<0.1	<0.1	--	<0.1	<0.1
Nitrite as N	mg/l	1.0	--	<0.05	<0.05	<0.05	--	<0.05	<0.05
Nitrogen, Total Kjeldahl	mg/l	--	--	0.2	0.3	0.2	--	0.2	0.2
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.80	6.27	7.87	--	7.12	7.06
Phosphorus	mg/l	--	--	0.01	0.04	0.02	--	<0.01	<0.01
Phosphorus, Total Orthophosphate	mg/l	--	--	<0.6 ⁽⁶⁾	<2.5 ⁽⁷⁾	<0.5	--	<0.5	<0.5
Sulphate	mg/l	--	500 ⁽³⁾	50.9	37	51	--	50	52
Temperature (Field)	deg c	--	15	8.4	10.2	6.2	--	10.4	12.1
Total Dissolved Solids	mg/l	--	500	644	548	606	--	644	660
Metals									
Aluminum, dissolved	mg/l	--	--	0.002	0.001	0.002	--	0.001	0.001
Antimony, dissolved	mg/l	0.006	--	<0.0005	<0.0005	<0.0005	--	<0.0005	<0.0005
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	--	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.333	0.282	0.307	--	0.338	0.387
Beryllium, dissolved	mg/l	--	--	<0.0005	<0.0005	<0.0005	--	<0.0005	<0.0005
Boron, dissolved	mg/l	5	--	0.069	0.067	0.075	--	0.079	0.089
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	--	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	90.1	77.7	93.9	--	94.5	104
Chromium, dissolved	mg/l	0.05	--	<0.001	<0.001	<0.001	--	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	<0.0005	<0.0005	<0.0005	--	<0.0005	<0.0005
Copper, dissolved	mg/l	--	1	0.0007	0.0008	<0.0005	--	<0.0005	<0.0005
Iron, dissolved	mg/l	--	0.3	0.332	0.304	0.324	--	0.34	0.338
Lead, dissolved	mg/l	0.01	--	0.0001	<0.0001	<0.0001	--	0.0003	<0.0001
Magnesium, dissolved	mg/l	--	--	32.7	27.3	32	--	36.2	37.8
Manganese, dissolved	mg/l	--	0.05	0.087	0.077	0.083	--	0.093	0.101
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	--	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	0.0019	0.0016	0.0017	--	0.0018	0.0019
Nickel, dissolved	mg/l	--	--	<0.001	<0.001	<0.001	--	<0.001	<0.001
Potassium, dissolved	mg/l	--	--	8.75	7.55	8.59	--	8.47	9.41
Selenium, dissolved	mg/l	0.05	--	<0.001	<0.001	<0.001	--	<0.001	0.003
Silver, dissolved	mg/l	--	--	<0.0001	<0.0001	<0.0001	--	<0.0001	<0.0001
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	68.6	61.4	73.9	--	73.8	77.4
Strontium, dissolved	mg/l	--	--	0.698	0.563	0.703	--	0.696	0.774
Thallium, dissolved	mg/l	--	--	<0.0001	<0.0001	<0.0001	--	<0.0001	<0.0001
Tin, dissolved	mg/l	--	--	<0.005	<0.005	<0.005	--	<0.005	<0.005
Titanium, dissolved	mg/l	--	--	<0.005	<0.005	<0.005	--	<0.005	<0.005
Tungsten, dissolved	mg/l	--	--	<0.01	<0.01	<0.01	--	<0.01	<0.01
Uranium, dissolved	mg/l	0.02	--	0.0027	0.0018	0.0031	--	0.0030	0.0036
Vanadium, dissolved	mg/l	--	--	<0.0005	<0.0005	<0.0005	--	<0.0005	<0.0005
Zinc, dissolved	mg/l	--	5	0.005	<0.005	<0.005	--	<0.005	<0.005
Phenols									
Phenolics, Total Recoverable	mg/l	--	--	<0.001	<0.001	<0.001	--	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	BH07-1	BH07-1	BH07-1	BH07-1	BH07-1	BH07-1	BH07-1	BH07-1	BH07-1
				27-Jul-2007	28-Nov-2007	13-Jun-2008	26-Nov-2008	06-Jul-2009	15-Dec-2009 ⁽¹²⁾	02-Jul-2010	23-Jun-2012 ⁽¹³⁾	11-Nov-2012 ⁽¹³⁾
							R-10	R-7	R-16	R-16	7-1	7-1
General Chemistry												
Alkalinity (Total as CaCO ₃)	mg/l	--	--	217	221	210	211	220	227	225	--	--
Ammonia Nitrogen	mg/l	--	--	0.02	<0.02	0.04	0.03	0.04	<0.02	<0.02	--	--
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	<1	2	2	1	<1	13	--	--	--
Chemical Oxygen Demand	mg/l	--	--	<5	<5	<5	13	<5	40	10	--	--
Chloride	mg/l	--	250	66	66	93	98	104	91	81	--	--
Conductivity	uS/cm	--	--	680	480	772	783	815	796	767	--	--
Conductivity (Field)	uS/cm	--	--	--	--	--	610	635	745	760	--	--
Dissolved Organic Carbon	mg/l	--	5	2.9	2.8	4.3	1.5	2.1	2.6	1.7	--	--
Dissolved Oxygen (Field)	mg/l	--	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	334	326	378	263	369	382	369	--	--
Nitrate as N	mg/l	10.0	--	2.9	3.55	5.07	5.71	6.14	6.77	6.22	--	--
Nitrite as N	mg/l	1.0	--	<0.1	<0.1	<0.1	<0.10	<0.10	<0.10	<0.10	--	--
Nitrogen, Total Kjeldahl	mg/l	--	--	0.32	0.29	0.2	<0.10	0.18	0.33	<0.10	--	--
pH (Field)	-	--	--	7.6	7.3	7.2	7.3	7.2	7.1	7.2	--	--
Phosphorus	mg/l	--	--	1.55	0.18	0.11	2.33	12.2	0.45	0.09	--	--
Sulphate	mg/l	--	500 ⁽³⁾	20	20	13	13	13	14	15	--	--
Temperature (Field)	deg c	--	15	15	7	11	6	16.0	5	9	--	--
Total Dissolved Solids	mg/l	--	500	436	433	502	509	530	517	499	--	--
Total Suspended Solids	mg/l	--	--	66300	6660	130000	21100	14400	1240	--	--	--
Metals												
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	--
Barium, dissolved	mg/l	1	--	0.41	0.61	0.65	0.61	0.70	0.68	0.67	--	--
Boron, dissolved	mg/l	5	--	0.02	0.01	<0.01	0.02	0.01	<0.01	<0.01	--	--
Cadmium, dissolved	mg/l	0.005	--	<0.0001	0.0036	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	--	--
Calcium, dissolved	mg/l	--	--	91	91	107	74	105	110	105	--	--
Chromium, dissolved	mg/l	0.05	--	0.002	0.004	0.004	0.003	0.006	0.007	0.007	--	--
Copper, dissolved	mg/l	--	1	0.002	0.005	0.008	0.006	0.004	<0.001	0.006	--	--
Iron, dissolved	mg/l	--	0.3	0.48	<0.03	0.03	<0.03	<0.03	<0.03	<0.03	--	--
Lead, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	--
Magnesium, dissolved	mg/l	--	--	--	24	27	19	26	26	26	--	--
Manganese, dissolved	mg/l	--	0.05	0.06	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--	--
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	--	--
Potassium, dissolved	mg/l	--	--	7	5	6	6	4	4	5	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	10	5	5	34	6	6	7	--	--
Zinc, dissolved	mg/l	--	5	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	0.01	--	--
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	BH07-1	BH07-1	BH07-1	BH07-1	BH07-1	BH07-1	BH07-1	BH07-1	BH07-1
				25-Jun-2013 ⁽¹³⁾	21-Nov-2013 ⁽¹³⁾	28-May-2014 ⁽¹³⁾	25-Nov-2014 ⁽¹³⁾	26-May-2015 ⁽¹⁴⁾	29-Nov-2015 ⁽¹⁴⁾	14-Jun-2016 ⁽¹³⁾	30-Nov-2016 ⁽¹³⁾	01-Jun-2017 ⁽¹³⁾
				BH07-1	07-1	BH07-1	07-1	07-1	07-1	07-1	07-1	07-1
General Chemistry												
Alkalinity (Total as CaCO ₃)	mg/l	--	--	--	--	--	--	--	--	--	--	--
Ammonia Nitrogen	mg/l	--	--	--	--	--	--	--	--	--	--	--
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chloride	mg/l	--	250	--	--	--	--	--	--	--	--	--
Conductivity	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	555	--	--	--
Dissolved Organic Carbon	mg/l	--	5	--	--	--	--	--	--	--	--	--
Dissolved Oxygen (Field)	mg/l	--	--	--	--	--	--	--	6.71	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nitrate as N	mg/l	10.0	--	--	--	--	--	--	--	--	--	--
Nitrite as N	mg/l	1.0	--	--	--	--	--	--	--	--	--	--
Nitrogen, Total Kjeldahl	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	--	--	--	--	--	7.8	--	--	--
Phosphorus	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	--	--	--	--	--	--	--	--	--
Temperature (Field)	deg c	--	15	--	--	--	--	--	1	--	--	--
Total Dissolved Solids	mg/l	--	500	--	--	--	--	--	--	--	--	--
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--	--	--
Metals												
Arsenic, dissolved	mg/l	0.01	--	--	--	--	--	--	--	--	--	--
Barium, dissolved	mg/l	1	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	--	--	--	--	--	--	--	--	--
Cadmium, dissolved	mg/l	0.005	--	--	--	--	--	--	--	--	--	--
Calcium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chromium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	--	--	--	--	--	--	--	--	--
Iron, dissolved	mg/l	--	0.3	--	--	--	--	--	--	--	--	--
Lead, dissolved	mg/l	0.01	--	--	--	--	--	--	--	--	--	--
Magnesium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Manganese, dissolved	mg/l	--	0.05	--	--	--	--	--	--	--	--	--
Mercury, dissolved	mg/l	0.001	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	--	--	--	--	--	--	--	--	--
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	--	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	BH07-1	BH07-1	BH07-1	BH07-1	BH07-1	BH07-1
				23-Nov-2017 ⁽¹³⁾	29-Jun-2018 ⁽¹³⁾	26-Nov-2018 ⁽¹³⁾	18-Jun-2019 ⁽¹³⁾	29-Nov-2019 ⁽¹³⁾	02-Dec-2019 ⁽¹³⁾
				07-1	BH07-1	BH07-1	BH07-1	BH07-1	BH07-1
General Chemistry									
Alkalinity (Total as CaCO ₃)	mg/l	--	--	--	--	--	--	--	--
Ammonia Nitrogen	mg/l	--	--	--	--	--	--	--	--
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	--	--	--	--	--	--
Chloride	mg/l	--	250	--	--	--	--	--	--
Conductivity	uS/cm	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	--
Dissolved Organic Carbon	mg/l	--	5	--	--	--	--	--	--
Dissolved Oxygen (Field)	mg/l	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	--	--	--	--	--	--
Nitrate as N	mg/l	10.0	--	--	--	--	--	--	--
Nitrite as N	mg/l	1.0	--	--	--	--	--	--	--
Nitrogen, Total Kjeldahl	mg/l	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	--	--	--	--	--	--
Phosphorus	mg/l	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	--	--	--	--	--	--
Temperature (Field)	deg c	--	15	--	--	--	--	--	--
Total Dissolved Solids	mg/l	--	500	--	--	--	--	--	--
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--
Metals									
Arsenic, dissolved	mg/l	0.01	--	--	--	--	--	--	--
Barium, dissolved	mg/l	1	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	--	--	--	--	--	--
Cadmium, dissolved	mg/l	0.005	--	--	--	--	--	--	--
Calcium, dissolved	mg/l	--	--	--	--	--	--	--	--
Chromium, dissolved	mg/l	0.05	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	--	--	--	--	--	--
Iron, dissolved	mg/l	--	0.3	--	--	--	--	--	--
Lead, dissolved	mg/l	0.01	--	--	--	--	--	--	--
Magnesium, dissolved	mg/l	--	--	--	--	--	--	--	--
Manganese, dissolved	mg/l	--	0.05	--	--	--	--	--	--
Mercury, dissolved	mg/l	0.001	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	--	--	--	--	--	--
Phenols									
Phenolics, Total Recoverable	mg/l	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	BH07-2	BH07-2	BH07-2	BH07-2	BH07-2	BH07-2	BH07-2	BH07-2
				17-Jul-2007	26-Nov-2007	13-Jun-2008	26-Nov-2008	06-Jul-2009	05-Dec-2009	30-Jun-2010	30-Nov-2010
							R-16	R-3	R-15	R-15	R- 8
General Chemistry											
Alkalinity (Total as CaCO3)	mg/l	--	--	207	241	239	240	247	247	241	250
Ammonia Nitrogen	mg/l	--	--	0.05	0.03	<0.02	0.03	0.02	0.02	<0.02	<0.02
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	2	<1	<1	2	<1	2	--	2
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	<5	<5	<5	5	<5	5	<5	20
Chloride	mg/l	--	250	45	59	62	55	51	54	59	60
Conductivity	uS/cm	--	--	625	500	709	694	668	696	708	702
Conductivity (Field)	uS/cm	--	--	--	--	--	500	660	635	605	620
Dissolved Organic Carbon	mg/l	--	5	3.4	3	2.7	1.8	2.9	3.4	2.8	2.0
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	277	286	321	303	284	287	318	299
Nitrate as N	mg/l	10.0	--	0.62	0.15	0.51	0.79	0.56	0.60	0.71	0.73
Nitrite as N	mg/l	1.0	--	<0.1	<0.1	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10
Nitrogen, Total Kjeldahl	mg/l	--	--	0.3	0.21	0.21	2.16	<0.10	<0.10	0.18	<0.10
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.8	7.3	7.4	7.3	8.0	7.8	7.7	7.5
Phosphorus	mg/l	--	--	1.92	0.65	1.36	1.17	2.91	2.66	2.48	1.67
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	38	34	36	36	31	33	33	34
Temperature (Field)	deg c	--	15	13.9	8	10	6	12.0	7	11	9
Total Dissolved Solids	mg/l	--	500	392	460	461	451	434	452	460	456
Total Suspended Solids	mg/l	--	--	11900	12700	13300	8820	16200	12300	--	4850
Metals											
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.11	0.2	0.27	0.29	0.25	0.26	0.25	0.21
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.05	0.05	0.04	0.04	0.06	0.02	0.05	0.05
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	73	75	84	80	76	77	86	82
Chromium, dissolved	mg/l	0.05	--	0.002	0.002	0.002	0.001	0.003	0.001	0.002	0.001
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	0.001	0.001	0.002	0.005	0.002	0.001	<0.001	0.001
Iron, dissolved	mg/l	--	0.3	0.21	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Lead, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Magnesium, dissolved	mg/l	--	--	--	24	27	25	23	23	25	23
Manganese, dissolved	mg/l	--	0.05	0.18	0.16	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	7	5	6	5	5	5	5	5
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	18	18	21	21	21	21	23	23
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Phenols											
Phenolics, Total Recoverable	mg/l	--	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	BH07-2	BH07-2	BH07-2	BH07-2	BH07-2	BH07-2	BH07-2	BH07-2
				13-Jun-2011	24-Nov-2011	23-Jun-2012	11-Nov-2012	25-Jun-2013	21-Nov-2013	28-May-2014	26-Nov-2014
				S-12	BH07-2	S-19	S-19	S-16	S-15	A-16	R-15
General Chemistry											
Alkalinity (Total as CaCO3)	mg/l	--	--	242	245	260	250	240	240	230	240
Ammonia Nitrogen	mg/l	--	--	0.02	<0.02	<0.050	<0.050	0.070	<0.050	<0.050	<0.050
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	--	--	--	--	--	--
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	8	10	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
Chloride	mg/l	--	250	53	50	42	42	59	43	63	64
Conductivity	uS/cm	--	--	652	664	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	630	640	640	625	620	630	723	650
Dissolved Organic Carbon	mg/l	--	5	2.1	1.6	1.0	1.1	1.1	1.1	1.0	1.1
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	264	287	300	300	320	300	310	300
Nitrate as N	mg/l	10.0	--	0.50	0.89	2.2	1.5	1.4	1.6	1.00	1.21
Nitrite as N	mg/l	1.0	--	<0.10	<0.10	<0.010	<0.010	<0.010	<0.010	<0.010	0.011
Nitrogen, Total Kjeldahl	mg/l	--	--	<0.10	<0.10	0.44	1.3	0.31	1.1	0.91	<1.0 ⁽¹⁵⁾
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	2.2	1.5	1.4	1.6	1.00	1.22
pH (Field)	-	--	--	7.6	7.88	7.5	7.4	7.3	7.4	7.49	7.4
Phosphorus	mg/l	--	--	3.18	0.77	3.2	2.4	1.0	0.98	2.2	1.8
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	26	32	40	31	36	36	36	36
Temperature (Field)	deg c	--	15	11	7.0	11	8	12	6	9.8	6
Total Dissolved Solids	mg/l	--	500	424	432	412	320	408	390	436	354
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--	--
Metals											
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.0010	<0.0010	<0.001	<0.001	<0.0010	<0.001
Barium, dissolved	mg/l	1	--	0.22	0.21	0.2	0.15	0.2	0.18	0.19	0.18
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.05	0.06	0.046	0.037	0.045	0.035	0.044	0.041
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.00010	<0.00010	<0.0001	<0.0001	<0.00010	<0.0001
Calcium, dissolved	mg/l	--	--	66	77	78	80	86	80	83	81
Chromium, dissolved	mg/l	0.05	--	<0.001	0.002	<0.0050	<0.0050	<0.005	<0.005	<0.0050	<0.005
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	0.001	<0.001	0.0011	<0.0010	<0.001	<0.001	<0.0010	<0.001
Iron, dissolved	mg/l	--	0.3	<0.03	<0.03	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lead, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.00050	<0.00050	<0.0005	<0.0005	<0.00050	<0.0005
Magnesium, dissolved	mg/l	--	--	24	23	25	23	27	24	26	24
Manganese, dissolved	mg/l	--	0.05	<0.01	0.02	<0.0020	<0.0020	0.002	<0.002	<0.0020	<0.002
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	5	5	4.7	4.1	4.9	4.4	4.9	4.7
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	22	23	23	20	24	22	26	24
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.01	<0.01	<0.0050	<0.0050	<0.005	<0.005	<0.0050	<0.005
Phenols											
Phenolics, Total Recoverable	mg/l	--	--	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	BH07-2	BH07-2	BH07-2	BH07-2	BH07-2	BH07-2	BH07-2	BH07-2
				26-May-2015	29-Nov-2015	14-Jun-2016	30-Nov-2016	01-Jun-2017	23-Nov-2017	29-Jun-2018	27-Nov-2018
General Chemistry											
Alkalinity (Total as CaCO3)	mg/l	--	--	251	246	249	253	250	256	260	271
Ammonia Nitrogen	mg/l	--	--	0.06	0.02	0.02	0.03	0.03	0.01	0.09	0.02
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	--	--	--	--	--	--
Bromide	mg/l	--	--	--	--	<0.1	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	33	25	42	<10	23	14	33	24
Chloride	mg/l	--	250	68	62	76	72	95	77	64	69
Conductivity	uS/cm	--	--	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	698	750	642	620	598	692	687	684
Dissolved Organic Carbon	mg/l	--	5	<0.5	1.2	<0.5	1.1	2.0	0.6	0.5	0.6
Fluoride	mg/l	1.5	--	--	--	0.2	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	422	374	334	302	282	289	257	307
Nitrate as N	mg/l	10.0	--	1.3	1.3	1.5	1.4	0.7	1.5	1.5	1.5
Nitrite as N	mg/l	1.0	--	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrogen, Total Kjeldahl	mg/l	--	--	0.2	0.2	0.3	<0.1	0.2	0.1	0.2	0.1
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.55	7.6	7.67	7.87	7.6	7.69	7.49	7.99
Phosphorus	mg/l	--	--	0.43	0.69	0.79	0.17	0.57	0.34	1.59	0.79
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	<0.2	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	36	36	37	39	34	37	34	36
Temperature (Field)	deg c	--	15	10.9	5	9.1	8.1	13	6.5	13.0	7.3
Total Dissolved Solids	mg/l	--	500	434	408	422	410	472	390	406	422
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--	--
Metals											
Aluminum, dissolved	mg/l	--	--	<0.01	--	<0.001	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	<0.001	--	<0.0005	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.224	0.209	0.201	0.226	0.232	0.241	0.215	0.182
Beryllium, dissolved	mg/l	--	--	<0.001	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.06	0.043	0.036	0.039	0.053	0.04	0.035	0.029
Cadmium, dissolved	mg/l	0.005	--	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	121	99.3	89.3	78.9	73.3	75.2	66.2	79.7
Chromium, dissolved	mg/l	0.05	--	<0.05	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	<0.001	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0017	0.0009
Iron, dissolved	mg/l	--	0.3	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lead, dissolved	mg/l	0.01	--	<0.001	<0.0001	<0.0001	<0.0001	0.0002	<0.0001	<0.0001	<0.0001
Magnesium, dissolved	mg/l	--	--	28.8	30.7	27.1	25.5	23.9	24.7	22.4	26.1
Manganese, dissolved	mg/l	--	0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	<0.005	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	<0.005	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	6.74	4.61	4.91	4.69	5.96	5.27	4.97	4.9
Selenium, dissolved	mg/l	0.05	--	<0.005	--	<0.001	--	--	--	--	--
Silver, dissolved	mg/l	--	--	<0.001	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	31.2	24.9	26.4	25.9	28.7	27.8	22.6	25.4
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	<0.001	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	<0.01	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	0.0079	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	0.004	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.02	<0.005	<0.005	<0.005	0.007	<0.005	0.011	<0.005
Phenols											
Phenolics, Total Recoverable	mg/l	--	--	--	--	--	--	<0.001	<0.001	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	BH07-2	BH07-2	BH07-2
				19-Jun-2019	02-Dec-2019	04-Jun-2020
				07-2	07-2	BH07-2
General Chemistry						
Alkalinity (Total as CaCO3)	mg/l	--	--	258	207	263
Ammonia Nitrogen	mg/l	--	--	0.05	0.04	0.06
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	--
Bromide	mg/l	--	--	<0.1	<0.1	<0.1
Chemical Oxygen Demand	mg/l	--	--	38	53	30
Chloride	mg/l	--	250	90	106	87
Conductivity	uS/cm	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	758	680	791
Dissolved Organic Carbon	mg/l	--	5	0.6	2.4	5.0
Fluoride	mg/l	1.5	--	<0.1	0.4	0.1
Hardness, Calcium Carbonate	mg/l	--	--	311	326	324
Nitrate as N	mg/l	10.0	--	1.1	0.8	2.7
Nitrite as N	mg/l	1.0	--	<0.05	<0.05	<0.05
Nitrogen, Total Kjeldahl	mg/l	--	--	0.2	0.2	0.2
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--
pH (Field)	-	--	--	7.89	7.9	7.84
Phosphorus	mg/l	--	--	1.11	1.42	1.61
Phosphorus, Total Orthophosphate	mg/l	--	--	<0.2	<0.2	<0.2
Sulphate	mg/l	--	500 ⁽³⁾	35	33	50
Temperature (Field)	deg c	--	15	10.3	7.9	12.1
Total Dissolved Solids	mg/l	--	500	448	456	436
Total Suspended Solids	mg/l	--	--	--	--	--
Metals						
Aluminum, dissolved	mg/l	--	--	0.817	0.003	0.003
Antimony, dissolved	mg/l	0.006	--	<0.0005	<0.0005	<0.0005
Arsenic, dissolved	mg/l	0.01	--	0.001	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.362	0.205	0.194
Beryllium, dissolved	mg/l	--	--	<0.0005	<0.0005	<0.0005
Boron, dissolved	mg/l	5	--	0.047	0.028	0.025
Cadmium, dissolved	mg/l	0.005	--	0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	81.6	85.1	85.7
Chromium, dissolved	mg/l	0.05	--	0.004	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	0.0082	<0.0005	<0.0005
Copper, dissolved	mg/l	--	1	0.0153	0.0013	0.0012
Iron, dissolved	mg/l	--	0.3	3.57	<0.1	<0.1
Lead, dissolved	mg/l	0.01	--	0.0026	<0.0001	<0.0001
Magnesium, dissolved	mg/l	--	--	26.1	27.5	26.7
Manganese, dissolved	mg/l	--	0.05	0.499	<0.005	<0.005
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	0.0024	0.0030	0.0023
Nickel, dissolved	mg/l	--	--	0.007	<0.001	<0.001
Potassium, dissolved	mg/l	--	--	8.06	5.22	4.27
Selenium, dissolved	mg/l	0.05	--	0.001	<0.001	<0.001
Silver, dissolved	mg/l	--	--	<0.0001	<0.0001	<0.0001
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	34.8	30.7	26.8
Strontium, dissolved	mg/l	--	--	0.414	0.252	0.242
Thallium, dissolved	mg/l	--	--	0.0001	<0.0001	<0.0001
Tin, dissolved	mg/l	--	--	<0.005	<0.005	<0.005
Titanium, dissolved	mg/l	--	--	0.074	<0.005	<0.005
Tungsten, dissolved	mg/l	--	--	<0.01	<0.01	<0.01
Uranium, dissolved	mg/l	0.02	--	0.0074	0.0061	0.0082
Vanadium, dissolved	mg/l	--	--	0.0070	<0.0005	<0.0005
Zinc, dissolved	mg/l	--	5	0.025	0.006	<0.005
Phenols						
Phenolics, Total Recoverable	mg/l	--	--	<0.001	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	BH07-3	BH07-3	BH07-3	BH07-3	BH07-3	BH07-3	BH07-3	BH07-3	BH07-3
				27-Jul-2007	26-Nov-2007	13-Jun-2008	26-Nov-2008	06-Jul-2009	05-Dec-2009	30-Jun-2010	30-Nov-2010	13-Jun-2011
Alkalinity (Total as CaCO3)	mg/l	--	--	259	271	275	285	291	292	286	296	307
Ammonia Nitrogen	mg/l	--	--	0.13	0.04	<0.02	0.11	0.11	0.10	0.09	0.08	0.10
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	1	<1	<1	<1	<1	<1	--	2	--
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	<5	<5	<5	15	<5	20	10	25	20
Chloride	mg/l	--	250	104	63	63	119	125	115	124	145	147
Conductivity	uS/cm	--	--	700	510	784	1010	1020	1020	1040	1100	1110
Conductivity (Field)	uS/cm	--	--	--	--	--	510	840	805	800	785	750
Dissolved Organic Carbon	mg/l	--	5	2.5	2.1	1.8	1.3	2.4	2.0	2.6	1.6	1.6
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	351	291	335	332	356	360	369	388	357
Nitrate as N	mg/l	10.0	--	<0.1	<0.1	<0.1	<0.10	0.32	<0.10	<0.10	<0.10	<0.10
Nitrite as N	mg/l	1.0	--	<0.1	<0.1	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Nitrogen, Total Kjeldahl	mg/l	--	--	0.22	<0.1	0.17	<0.10	0.29	0.25	0.14	<0.10	<0.10
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.7	7.2	7.3	7.4	8.0	7.9	7.8	7.7	7.7
Phosphorus	mg/l	--	--	0.62	0.29	0.6	2.96	5.92	2.82	3.35	1.46	2.28
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	53	40	44	50	53	53	53	53	56
Temperature (Field)	deg c	--	15	15	8	10	6	13.0	6	11	8	10
Total Dissolved Solids	mg/l	--	500	580	497	510	657	663	663	676	715	722
Total Suspended Solids	mg/l	--	--	17700	436	381	10600	6960	4990	--	3110	--
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.15	0.12	0.13	0.12	0.13	0.14	0.14	0.12	0.14
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.12	0.09	0.07	0.09	0.11	0.06	0.08	0.10	0.11
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	81	72	83	80	85	88	90	96	82
Chromium, dissolved	mg/l	0.05	--	0.002	0.002	0.002	0.002	0.004	0.003	0.008	0.002	0.002
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.001	0.001	0.002	0.001	<0.001	0.001	<0.001	<0.001	<0.001
Iron, dissolved	mg/l	--	0.3	1.05	<0.03	<0.03	0.46	0.77	0.73	0.73	0.55	0.62
Lead, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Magnesium, dissolved	mg/l	--	--	--	27	31	32	35	34	35	36	37
Manganese, dissolved	mg/l	--	0.05	0.06	<0.01	<0.01	0.03	0.03	0.04	0.03	0.02	0.03
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0002	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	10	6	7	8	8	8	9	9	8
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	61	34	35	54	61	61	63	70	73
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	BH07-3	BH07-3	BH07-3	BH07-3	BH07-3	BH07-3	BH07-3	BH07-3	BH07-3
				24-Nov-2011	23-Jun-2012	11-Nov-2012	25-Jun-2013	21-Nov-2013	28-May-2014	26-Nov-2014	26-May-2015	29-Nov-2015
				BH07-3	S-16	S-16	S-18	S-13	A-15	R-13	BH07-3	07-3
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	288	290	280	290	280	290	290	296	291
Ammonia Nitrogen	mg/l	--	--	0.08	<0.050	0.070	0.15	<0.050	0.10	0.075	0.12	0.08
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	--	--	--	--	--	--	--
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	8	5.8	7.3	4.5	<4.0	<4.0	<4.0	16	32
Chloride	mg/l	--	250	123	140	140	160	140	160	130	185	178
Conductivity	uS/cm	--	--	1020	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	906	760	740	750	635	1150	605	1204	1250
Dissolved Organic Carbon	mg/l	--	5	1.2	1.3	0.98	0.89	1.1	1.2	1.1	<0.5	0.9
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	356	370	370	420	380	440	360	555	413
Nitrate as N	mg/l	10.0	--	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.1	<0.1
Nitrite as N	mg/l	1.0	--	<0.10	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.05	<0.05
Nitrogen, Total Kjeldahl	mg/l	--	--	<0.10	0.39	0.96	0.44	0.89	0.39	<0.20 ⁽¹⁵⁾	0.2	0.2
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	--	--
pH (Field)	-	--	--	7.76	7.6	7.5	7.5	7.4	7.50	7.2	7.39	7.4
Phosphorus	mg/l	--	--	0.18	0.73	0.83	0.74	0.50	0.082	0.57	0.05	0.21
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	53	56	43	54	49	50	49	55	56
Temperature (Field)	deg c	--	15	7.3	12	7	12	6	9.9	5	10.9	6
Total Dissolved Solids	mg/l	--	500	663	624	544	694	610	812	578	672	652
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	0.011	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	<0.001	--
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.0010	<0.0010	<0.001	<0.001	<0.0010	<0.001	<0.01	<0.001
Barium, dissolved	mg/l	1	--	0.14	0.14	0.14	0.16	0.15	0.17	0.14	0.166	0.141
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	<0.001	--
Boron, dissolved	mg/l	5	--	0.11	0.098	0.091	0.1	0.095	0.11	0.096	0.118	0.102
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.00010	<0.00010	<0.0001	<0.0001	<0.00010	<0.0001	<0.001	<0.0001
Calcium, dissolved	mg/l	--	--	88	88	90	100	91	110	89	148	100
Chromium, dissolved	mg/l	0.05	--	0.003	<0.0050	<0.0050	<0.005	<0.005	<0.0050	<0.005	<0.05	<0.001
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	<0.001	--
Copper, dissolved	mg/l	--	1	<0.001	<0.0010	0.0022	<0.001	<0.001	<0.0010	<0.001	0.01	<0.0005
Iron, dissolved	mg/l	--	0.3	0.58	0.46	0.55	0.53	0.51	0.55	0.39	0.635	0.525
Lead, dissolved	mg/l	0.01	--	<0.001	<0.00050	<0.00050	<0.0005	<0.0005	<0.00050	<0.0005	<0.001	<0.0001
Magnesium, dissolved	mg/l	--	--	33	37	36	41	37	43	34	44.9	39.4
Manganese, dissolved	mg/l	--	0.05	0.02	0.026	0.024	0.028	0.025	0.029	0.024	<0.05	0.026
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	<0.005	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	<0.005	--
Potassium, dissolved	mg/l	--	--	8	8.5	8.6	9.5	9	9.5	8.6	11.4	8.75
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	<0.005	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	<0.001	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	74	72	66	77	76	82	71	91.3	75.2
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	<0.001	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	<0.01	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	0.004	--
Zinc, dissolved	mg/l	--	5	<0.01	<0.0050	<0.0050	<0.005	<0.005	<0.0050	<0.005	<0.02	<0.005
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	--	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	BH07-3	BH07-3	BH07-3	BH07-3	BH07-3	BH07-3	BH07-3	BH07-3	BH07-3
				14-Jun-2016	30-Nov-2016	01-Jun-2017	23-Nov-2017	29-Jun-2018	27-Nov-2018	19-Jun-2019	02-Dec-2019	04-Jun-2020
General Chemistry				07-3	07-3	BH07-3	07-3	07-3	07-3	07-3	07-3	BH07-3
Alkalinity (Total as CaCO3)	mg/l	--	--	299	296	320	296	312	319	295	225	278
Ammonia Nitrogen	mg/l	--	--	0.07	0.07	0.11	0.08	0.15	0.06	0.08	0.06	0.08
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	--	--	--	--	--	--	--
Bromide	mg/l	--	--	<0.1	--	--	--	--	--	0.1	<0.1	<0.1
Chemical Oxygen Demand	mg/l	--	--	<10	28	28	<10	<10	<10	35	17	34
Chloride	mg/l	--	250	167	170	219	214	217	218	213	221	266
Conductivity	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	976	517	845	1124	1199	1198	1041	1205	1146
Dissolved Organic Carbon	mg/l	--	5	<0.5	1.5	1.6	2.6	<0.5	0.6	<0.5	4.9	4.6
Fluoride	mg/l	1.5	--	0.5	--	--	--	--	--	0.5	0.6	0.4
Hardness, Calcium Carbonate	mg/l	--	--	406	367	410	423	383	474	448	453	429
Nitrate as N	mg/l	10.0	--	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite as N	mg/l	1.0	--	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrogen, Total Kjeldahl	mg/l	--	--	0.2	0.1	0.3	0.2	0.3	<0.1	0.1	0.1	0.2
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.62	8.01	7.6	7.71	7.46	8.05	8.02	7.8	8.01
Phosphorus	mg/l	--	--	0.13	0.17	0.37	0.12	0.09	0.14	0.38	0.28	0.95
Phosphorus, Total Orthophosphate	mg/l	--	--	<0.2	--	--	--	--	--	<0.2	<0.2	<0.2
Sulphate	mg/l	--	500 ⁽³⁾	56	55	56	54	55	58	60	59	72
Temperature (Field)	deg c	--	15	10.5	7.6	13	6.7	12.2	7.8	11.3	7.2	12.1
Total Dissolved Solids	mg/l	--	500	624	612	762	610	832	776	736	762	782
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	<0.001	--	--	--	--	--	0.002	0.002	0.005
Antimony, dissolved	mg/l	0.006	--	<0.0005	--	--	--	--	--	<0.0005	<0.0005	<0.0005
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.159	0.204	0.167	0.163	0.195	0.189	0.173	0.171	0.177
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	<0.0005	<0.0005	<0.0005
Boron, dissolved	mg/l	5	--	0.086	0.086	0.11	0.082	0.078	0.076	0.087	0.061	0.059
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	99.6	88.1	101	99.3	88.7	116	108	113	108
Chromium, dissolved	mg/l	0.05	--	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	<0.0005	<0.0005	<0.0005
Copper, dissolved	mg/l	--	1	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0021	<0.0005	<0.0005	<0.0005
Iron, dissolved	mg/l	--	0.3	0.486	0.407	0.55	0.591	0.557	1.34	0.64	0.568	0.579
Lead, dissolved	mg/l	0.01	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0004	<0.0001	<0.0001	<0.0001
Magnesium, dissolved	mg/l	--	--	38.3	35.8	38.1	42.4	39.3	44.9	43.6	41.8	38.8
Manganese, dissolved	mg/l	--	0.05	0.024	0.021	0.035	0.034	0.031	0.068	0.034	0.033	0.036
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	0.0022	0.0022	0.0020
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	<0.001	<0.001	<0.001
Potassium, dissolved	mg/l	--	--	9.39	8.36	10.2	9.37	9.34	11.3	10.7	9.86	9.62
Selenium, dissolved	mg/l	0.05	--	<0.001	--	--	--	--	--	<0.001	<0.001	<0.001
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	<0.0001	<0.0001	<0.0001
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	77.4	89.2	68.3	77.7	72.9	78.3	83	75.4	71.3
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	0.847	0.761	0.838
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	<0.0001	<0.0001	<0.0001
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	<0.005	<0.005	<0.005
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	<0.005	<0.005	<0.005
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	<0.01	<0.01	<0.01
Uranium, dissolved	mg/l	0.02	--	0.0052	--	--	--	--	--	0.0053	0.0061	0.0059
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	<0.0005	<0.0005	<0.0005
Zinc, dissolved	mg/l	--	5	<0.005	<0.005	<0.005	<0.005	0.006	<0.005	<0.005	<0.005	<0.005
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	--	--	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	BH07-4	BH07-4	BH07-4	BH07-4	BH07-4	BH07-4	BH07-4	BH07-4	BH07-4
				17-Jul-2007	26-Nov-2007	13-Jun-2008	26-Nov-2008	06-Jul-2009	05-Dec-2009	30-Jun-2010	30-Nov-2010	13-Jun-2011
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	270	294	301	273	270	270	255	263	271
Ammonia Nitrogen	mg/l	--	--	<0.02	0.13	0.15	<0.02	<0.02	<0.02	0.09	<0.02	<0.02
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	4	<1	2	<1	<1	<1	--	2	--
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	<5	<5	<5	5	<5	8	<5	5	10
Chloride	mg/l	--	250	63	115	122	61	67	64	65	72	74
Conductivity	uS/cm	--	--	700	490	1040	780	775	781	759	772	780
Conductivity (Field)	uS/cm	--	--	--	--	--	480	770	775	745	735	730
Dissolved Organic Carbon	mg/l	--	5	2	3	3.2	1.3	1.6	1.8	1.7	1.5	1.7
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	323	359	385	323	303	298	308	308	304
Nitrate as N	mg/l	10.0	--	<0.1	<0.1	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Nitrite as N	mg/l	1.0	--	<0.1	<0.1	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Nitrogen, Total Kjeldahl	mg/l	--	--	0.13	0.49	0.32	<0.10	<0.10	<0.10	<0.10	<0.10	0.22
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.6	7.4	7.3	7.4	8.0	8.0	7.9	7.8	7.8
Phosphorus	mg/l	--	--	1.06	0.25	0.03	0.21	0.36	0.30	0.23	0.21	0.13
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	44	50	53	44	43	42	39	43	42
Temperature (Field)	deg c	--	15	14.8	7	10	6	13.0	7	9	8	10
Total Dissolved Solids	mg/l	--	500	502	648	676	507	504	508	493	502	507
Total Suspended Solids	mg/l	--	--	2320	10700	10900	281	276	336	--	184	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.11	0.13	0.13	0.12	0.13	0.14	0.13	0.12	0.13
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.09	0.11	0.12	0.09	0.10	0.05	0.07	0.08	0.08
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	80	86	90	80	75	75	77	79	74
Chromium, dissolved	mg/l	0.05	--	0.002	0.003	0.005	0.001	0.003	0.001	0.002	0.001	<0.001
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	0.002	<0.001	0.002	0.005	0.002	0.001	0.001	0.001	0.002
Iron, dissolved	mg/l	--	0.3	0.2	1.46	1.1	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Lead, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Magnesium, dissolved	mg/l	--	--	--	35	39	30	28	27	28	27	29
Manganese, dissolved	mg/l	--	0.05	0.02	0.05	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	7	9	9	7	7	7	7	7	7
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	35	55	64	41	33	38	32	35	35
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.01	0.07	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	BH07-4	BH07-4	BH07-4	BH07-4	BH07-4	BH07-4	BH07-4	BH07-4	BH07-4
				24-Nov-2011	23-Jun-2012	11-Nov-2012	25-Jun-2013	21-Nov-2013	28-May-2014	26-Nov-2014	26-May-2015	29-Nov-2015
General Chemistry				BH07-4	S-17	S-18	S-19	S-14	A-14	R-14	BH07-4	07-4
Alkalinity (Total as CaCO3)	mg/l	--	--	259	250	250	250	250	250	260	253	247
Ammonia Nitrogen	mg/l	--	--	<0.02	<0.050	<0.050	0.073	<0.050	<0.050	<0.050	0.09	0.01
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	--	--	--	--	--	--	--
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	5	5.4	<4.0	4.5	<4.0	<4.0	<4.0	23	13
Chloride	mg/l	--	250	67	75	69	81	78	90	82	91	88
Conductivity	uS/cm	--	--	750	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	727	730	658	640	635	811	640	864	820
Dissolved Organic Carbon	mg/l	--	5	1.2	1.1	1.0	0.90	1.0	1.1	1.0	<0.5	0.8
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	292	300	300	330	310	330	300	426	362
Nitrate as N	mg/l	10.0	--	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.1	<0.1
Nitrite as N	mg/l	1.0	--	<0.10	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.05	<0.05
Nitrogen, Total Kjeldahl	mg/l	--	--	0.14	0.28	0.94	0.26	1.2	<0.10	<0.10	0.1	0.2
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	--	--
pH (Field)	-	--	--	7.82	7.7	7.5	7.4	7.4	7.60	7.3	7.59	7.6
Phosphorus	mg/l	--	--	0.12	0.38	0.57	0.57	0.39	0.22	0.30	0.14	0.13
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	43	42	36	40	39	40	42	45	44
Temperature (Field)	deg c	--	15	7.5	11	7	11	6	11.3	5	11.1	7
Total Dissolved Solids	mg/l	--	500	488	428	414	456	440	498	422	466	460
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	<0.01	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	<0.001	--
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.0010	<0.0010	<0.001	<0.001	<0.0010	<0.001	<0.01	<0.001
Barium, dissolved	mg/l	1	--	0.13	0.13	0.13	0.14	0.14	0.14	0.14	0.146	0.139
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	<0.001	--
Boron, dissolved	mg/l	5	--	0.09	0.066	0.066	0.068	0.064	0.076	0.07	0.076	0.069
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.00010	<0.00010	<0.0001	<0.0001	<0.00010	<0.0001	<0.001	<0.0001
Calcium, dissolved	mg/l	--	--	74	73	74	81	77	81	76	117	89.5
Chromium, dissolved	mg/l	0.05	--	0.002	<0.0050	<0.0050	<0.005	<0.005	<0.0050	<0.005	<0.05	<0.001
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	<0.001	--
Copper, dissolved	mg/l	--	1	0.001	0.0014	<0.0010	0.001	0.001	<0.0010	0.001	<0.005	<0.0005
Iron, dissolved	mg/l	--	0.3	<0.03	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1
Lead, dissolved	mg/l	0.01	--	<0.001	<0.00050	<0.00050	<0.0005	<0.0005	<0.00050	<0.0005	<0.001	<0.0001
Magnesium, dissolved	mg/l	--	--	26	29	28	30	29	31	28	32.6	33.4
Manganese, dissolved	mg/l	--	0.05	<0.01	<0.0020	<0.0020	<0.002	<0.002	<0.0020	<0.002	<0.05	<0.005
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	<0.005	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	<0.005	--
Potassium, dissolved	mg/l	--	--	7	7	6.9	7.3	7	7.5	7	9.19	6.86
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	<0.005	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	<0.001	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	40	37	34	38	39	45	38	43.7	42
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	<0.001	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	<0.01	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	0.003	--
Zinc, dissolved	mg/l	--	5	<0.01	<0.0050	<0.0050	<0.005	<0.005	<0.0050	0.005	<0.02	<0.005
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	--	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	BH07-4	BH07-4	BH07-4	BH07-4	BH07-4	BH07-4	BH07-4	BH07-4	BH07-4
				14-Jun-2016	30-Nov-2016	01-Jun-2017	23-Nov-2017	29-Jun-2018	27-Nov-2018	19-Jun-2019	02-Dec-2019	04-Jun-2020
				07-4	07-4	BH07-4	07-4	07-4	07-4	07-4	07-4	BH07-4
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	259	266	270	280	278	281	273	232	254
Ammonia Nitrogen	mg/l	--	--	0.02	0.03	0.02	0.02	0.07	<0.01	0.04	0.02	0.05
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	--	--	--	--	--	--	--
Bromide	mg/l	--	--	<0.1	--	--	--	--	--	<0.1	<0.1	<0.1
Chemical Oxygen Demand	mg/l	--	--	<10	<10	24	<10	<10	<10	55	<10	<10
Chloride	mg/l	--	250	95	88	96	89	96	92	97	93	126
Conductivity	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	719	760	705	770	821	759	779	766	784
Dissolved Organic Carbon	mg/l	--	5	<0.5	1.4	2.2	<0.5	0.8	0.7	1.2	<0.5	4.3
Fluoride	mg/l	1.5	--	0.5	--	--	--	--	--	0.5	0.6	0.5
Hardness, Calcium Carbonate	mg/l	--	--	352	305	302	286	275	307	353	328	317
Nitrate as N	mg/l	10.0	--	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1
Nitrite as N	mg/l	1.0	--	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrogen, Total Kjeldahl	mg/l	--	--	0.2	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.60	8.03	7.55	7.68	7.77	8.01	8.01	7.9	8.01
Phosphorus	mg/l	--	--	0.06	0.14	0.13	0.04	0.17	0.10	0.03	0.10	0.48
Phosphorus, Total Orthophosphate	mg/l	--	--	<0.2	--	--	--	--	--	<0.2	<0.2	<0.2
Sulphate	mg/l	--	500 ⁽³⁾	43	46	43	45	36	39	44	45	51
Temperature (Field)	deg c	--	15	10.9	8.4	13	7.9	12.1	7.8	10.1	8.2	12.1
Total Dissolved Solids	mg/l	--	500	470	444	484	384	480	482	506	480	482
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	<0.001	--	--	--	--	--	0.006	0.001	0.008
Antimony, dissolved	mg/l	0.006	--	<0.0005	--	--	--	--	--	<0.0005	<0.0005	<0.0005
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.151	0.133	0.14	0.144	0.152	0.133	0.154	0.146	0.156
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	<0.0005	<0.0005	<0.0005
Boron, dissolved	mg/l	5	--	0.056	0.061	0.076	0.075	0.056	0.062	0.062	0.059	0.055
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	87.7	74.8	77.4	70.5	65.8	76.7	86.3	83.4	79.5
Chromium, dissolved	mg/l	0.05	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	<0.0005	<0.0005	<0.0005
Copper, dissolved	mg/l	--	1	<0.0005	<0.0005	<0.0005	0.0007	0.0008	0.0011	0.0013	0.0011	0.0014
Iron, dissolved	mg/l	--	0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lead, dissolved	mg/l	0.01	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Magnesium, dissolved	mg/l	--	--	32.2	28.8	26.4	26.8	26.8	28	33.5	29.2	28.7
Manganese, dissolved	mg/l	--	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	0.0024	0.0023	0.0023
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	<0.001	<0.001	<0.001
Potassium, dissolved	mg/l	--	--	7.75	6.71	7.81	7.11	7.21	7.74	8.41	7.63	7.84
Selenium, dissolved	mg/l	0.05	--	<0.001	--	--	--	--	--	<0.001	<0.001	<0.001
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	<0.0001	<0.0001	<0.0001
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	40.2	37.5	38.1	46.5	35.7	38.6	40.8	44.7	44.2
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	0.572	0.468	0.514
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	<0.0001	<0.0001	<0.0001
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	<0.005	<0.005	<0.005
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	<0.005	<0.005	<0.005
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	<0.01	<0.01	<0.01
Uranium, dissolved	mg/l	0.02	--	0.0050	--	--	--	--	--	0.0051	0.0047	0.0046
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	<0.0005	<0.0005	<0.0005
Zinc, dissolved	mg/l	--	5	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	--	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	BH11-01	BH11-01	BH11-01	BH11-01	BH11-01	BH11-01	BH11-01	BH11-01	BH11-01
				02-Feb-2011 ⁽¹¹⁾	15-Jun-2011 ⁽¹¹⁾	29-Nov-2011 ⁽¹¹⁾	22-Jun-2012	10-Nov-2012	25-Jun-2013 ⁽¹⁶⁾	20-Nov-2013 ⁽¹⁷⁾	28-May-2014	25-Nov-2014
				BH11-01	S-19	BH11-01	S-8	S-12	S-12	S-8	A-21	R-3
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	779	688	600	490	560	570	610	530	580
Ammonia Nitrogen	mg/l	--	--	23.1	11.5	12.5	12 ⁽⁵⁾	12 ⁽⁵⁾	13	13	12 ⁽⁵⁾	13
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	70	70	30	28	24	28	40	20	28
Chloride	mg/l	--	250	76	58	55	37	40	44	47	46	48
Conductivity	uS/cm	--	--	1630	1400	1280	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	--	485	1221	1420	1345	1320	1360	1159	1395
Dissolved Organic Carbon	mg/l	--	5	21.4	14.3	10.0	6.7	8.4	8.6	10	7.9	9.8
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	639	599	493	430	480	530	570	510	530
Nitrate as N	mg/l	10.0	--	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Nitrite as N	mg/l	1.0	--	<0.10	<0.10	<0.10	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Nitrogen, Total Kjeldahl	mg/l	--	--	23.3	14.5	14.1	11 ⁽⁵⁾	11 ⁽⁵⁾	14	14	12 ⁽⁵⁾	13
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
pH (Field)	-	--	--	--	7.7	6.68	6.9	7.0	7.2	7.0	7.05	7.0
Phosphorus	mg/l	--	--	1.09	0.66	1.89	1.4	2.1	2.3	4.7	0.67	0.65
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	35	30	39	46	35	37	34	35	40
Temperature (Field)	deg c	--	15	--	10.0	7.9	13	10	12	9	11.0	8
Total Dissolved Solids	mg/l	--	500	1060	910	832	580	638	710	708	656	652
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.01	<0.01	0.0034	0.0033	0.004	0.004	0.0030	0.003
Barium, dissolved	mg/l	1	--	2.8	2.3	2.3	1.9	2.2	2.3	2.5	2.1	2.1
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.29	0.19	0.21	0.16	0.18	0.2	0.23	0.19	0.23
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.00010	<0.00010	<0.0001	<0.0001	<0.00010	<0.0001
Calcium, dissolved	mg/l	--	--	190	174	138	120	130	150	150	140	140
Chromium, dissolved	mg/l	0.05	--	<0.005	0.004	0.002	<0.0050	<0.0050	<0.005	<0.005	<0.0050	<0.005
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	0.001	<0.001	0.002	<0.0010	<0.0010	<0.005	<0.005	<0.0010	<0.001
Iron, dissolved	mg/l	--	0.3	15.6	7.74	8.29	9	9.9	11	13	9.8	11
Lead, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.00050	<0.00050	<0.0005	<0.0005	<0.00050	<0.0005
Magnesium, dissolved	mg/l	--	--	40	40	36	34	37	40	46	40	42
Manganese, dissolved	mg/l	--	0.05	0.23	0.19	0.16	0.15	0.15	0.17	0.18	0.19	0.18
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	30	20	18	18	18	20	20	19	19
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	59	58	48	40	42	47	56	47	50
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.01	<0.01	0.06	0.0091	<0.0050	<0.005	<0.005	<0.0050	0.015
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	--	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	BH11-01	BH11-01	BH11-01	BH11-01	BH11-01	BH11-01	BH11-01	BH11-01	BH11-01
				29-May-2015	30-Nov-2015	14-Jun-2016	29-Nov-2016	01-Jun-2017	22-Nov-2017 ⁽¹⁸⁾	28-Jun-2018	26-Nov-2018	18-Jun-2019
				BH11-01	11-01	11-01	11-01	BH11-01	11-01	BH11-01	11-01	11-1
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	655	630	580	562	536	550	542	462	380
Ammonia Nitrogen	mg/l	--	--	12.5	13.9	13.5	13.7	11.3	11.4 ⁽⁶⁾	9.18	6.74	7.34 ⁽⁶⁾
Bromide	mg/l	--	--	0.5	--	0.4	--	--	--	--	--	<0.1
Chemical Oxygen Demand	mg/l	--	--	73	38	55	44	49	54	71	50	33
Chloride	mg/l	--	250	59	53	53	47	43	46	35	35	30
Conductivity	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	1375	1150	1152	958	1205	--	995	988	903
Dissolved Organic Carbon	mg/l	--	5	14.6	11.8	8.6	8.6	8.0	9.0	5.9	6.8	2.2
Fluoride	mg/l	1.5	--	0.1	--	0.2	--	--	--	--	--	<0.1
Hardness, Calcium Carbonate	mg/l	--	--	767 ⁽¹⁹⁾	546	526	475	466	495	415	398	380
Nitrate as N	mg/l	10.0	--	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1
Nitrite as N	mg/l	1.0	--	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.47	0.44
Nitrogen, Total Kjeldahl	mg/l	--	--	11.5 ⁽⁶⁾	15.1	14.6	14.9	11.7	11.1	9.7	7.8	6.5
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	6.68	6.8	6.66	7.1	6.7	7.05	7.05	7.39	7.34
Phosphorus	mg/l	--	--	9.25	0.03	0.87	5.02	1.14	1.14	5.80	1.36	1.16
Phosphorus, Total Orthophosphate	mg/l	--	--	1.2	--	<0.2	--	--	--	--	--	<0.2
Sulphate	mg/l	--	500 ⁽³⁾	37	39	42	45	45	49	48	52	55
Temperature (Field)	deg c	--	15	12.0	8	12.1	8.6	13	6.9	12.8	7.9	13.8
Total Dissolved Solids	mg/l	--	500	742	702	672	630	604	618	606	552	502
Metals												
Aluminum, dissolved	mg/l	--	--	<0.01	--	0.002	--	--	--	--	--	0.004
Antimony, dissolved	mg/l	0.006	--	<0.001	--	<0.0005	--	--	--	--	--	<0.0005
Arsenic, dissolved	mg/l	0.01	--	<0.01	0.003	0.004	0.004	0.004	0.004	0.005	0.002	0.005
Barium, dissolved	mg/l	1	--	2.6	1.56	2.21	1.95	1.38	1.43	1.88	0.946	1.08
Beryllium, dissolved	mg/l	--	--	<0.001	--	--	--	--	--	--	--	<0.0005
Boron, dissolved	mg/l	5	--	0.317	0.209	0.183	0.206	0.162	0.186	0.178	0.123	0.098
Cadmium, dissolved	mg/l	0.005	--	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	220	145	143	125	131	131	105	105	105
Chromium, dissolved	mg/l	0.05	--	<0.05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	0.005	--	--	--	--	--	--	--	0.0022
Copper, dissolved	mg/l	--	1	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	0.0007	0.0010	0.0023	0.0020
Iron, dissolved	mg/l	--	0.3	13.5	9.26	11.3	9.69	9.85	11.5	9.93	4.81	6.94
Lead, dissolved	mg/l	0.01	--	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0002
Magnesium, dissolved	mg/l	--	--	53	44.8	40.9	39.5	34	40.9	36.9	32.9	28.9
Manganese, dissolved	mg/l	--	0.05	0.207	0.168	0.169	0.153	0.172	0.155	0.144	0.165	0.157
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	0.005	--	--	--	--	--	--	--	0.0084
Nickel, dissolved	mg/l	--	--	0.009	--	--	--	--	--	--	--	0.002
Potassium, dissolved	mg/l	--	--	23.5	16.9	20.3	16.1	16.7	16.4	15.4	15	13
Selenium, dissolved	mg/l	0.05	--	<0.005	--	<0.001	--	--	--	--	--	<0.001
Silver, dissolved	mg/l	--	--	<0.001	--	--	--	--	--	--	--	0.0002
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	61.7	53.1	47.5	42	32.9	41.1	31.4	27.9	22.8
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	0.274
Thallium, dissolved	mg/l	--	--	<0.001	--	--	--	--	--	--	--	<0.0001
Tin, dissolved	mg/l	--	--	<0.01	--	--	--	--	--	--	--	<0.005
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	<0.005
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	<0.01
Uranium, dissolved	mg/l	0.02	--	--	--	0.0008	--	--	--	--	--	0.0008
Vanadium, dissolved	mg/l	--	--	0.012	--	--	--	--	--	--	--	0.0005
Zinc, dissolved	mg/l	--	5	<0.02	<0.005	0.009	<0.005	0.013	0.006	0.006	0.008	0.006
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	--	--	--	--	0.003	<0.001	<0.001	0.002	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	BH11-01	BH11-01	BH11-01	BH11-01	BH11-01	BH11-01	BH11-01	BH11-01	BH11-01
				02-Dec-2019	04-Jun-2020	30-Nov-2020	08-Jun-2021	25-Nov-2021	20-Jun-2022	23-Nov-2022	10-May-2023	29-Nov-2023
				BH11-01	BH11-01	11-01	BH11-01	BH11-01	BH11-01	BH11-01	BH11-01	BH11-01
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	392	414	425	420	430	448	447	405	406
Ammonia Nitrogen	mg/l	--	--	7.55 ⁽⁶⁾	6.73 ⁽⁶⁾	7.38	5.73	7.61	6.78	6.65	7.61	6.66
Bromide	mg/l	--	--	0.1	<0.1	0.1	0.1	0.1	<0.1	0.1	0.1	0.1
Chemical Oxygen Demand	mg/l	--	--	46	34	41	42	43	34	23	27	32
Chloride	mg/l	--	250	34	35	30	29	30	37.0	29.9	28	30
Conductivity	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	996	942	920	903	1060	928	1114	942	942
Dissolved Organic Carbon	mg/l	--	5	6.9	8.7	6.5	5.6	5.5	5.0	8.0	5.0	3.9
Fluoride	mg/l	1.5	--	0.3	0.2	0.2	0.3	0.2	0.4	0.2	0.2	<0.1
Hardness, Calcium Carbonate	mg/l	--	--	399	354	395	366	375	386	371	359	346
Nitrate as N	mg/l	10.0	--	<0.1	<0.1	<0.1	0.2	0.1	<0.1	<0.1	0.2	<0.1
Nitrite as N	mg/l	1.0	--	0.61	0.07	<0.05	0.71	0.77	<0.05	0.5	1.09	0.39
Nitrogen, Total Kjeldahl	mg/l	--	--	6.9	5.8	8.0	6.3	7.6	7.1	6.7	7.5	6.6
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.2	7.39	7.06	6.97	6.92	6.89	7.21	6.48	7.49
Phosphorus	mg/l	--	--	1.18	0.47	1.82	1.15	1.16	0.50	1.35	1.49	0.91
Phosphorus, Total Orthophosphate	mg/l	--	--	<0.2	<0.2	<1.0 ⁽⁷⁾	<0.2	<0.2	<0.2	<1 ⁽⁸⁾	<0.5	<0.5
Sulphate	mg/l	--	500 ⁽³⁾	55	66	51	49	47	57.3	48.6	48	53
Temperature (Field)	deg c	--	15	8.1	12.9	7.9	12.3	7.8	11.9	9.1	10.3	7.3
Total Dissolved Solids	mg/l	--	500	552	498	536	528	548	554	564	532	484
Metals												
Aluminum, dissolved	mg/l	--	--	0.002	0.069	0.004	0.002	0.003	0.001	0.003	0.001	0.002
Antimony, dissolved	mg/l	0.006	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic, dissolved	mg/l	0.01	--	0.004	0.002	0.003	0.002	0.003	0.003	0.003	0.003	0.001
Barium, dissolved	mg/l	1	--	0.851	0.734	1.27	0.929	1.01	0.989	1.27	1.01	0.696
Beryllium, dissolved	mg/l	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron, dissolved	mg/l	5	--	0.108	0.097	0.126	0.129	0.141	0.141	0.155	0.122	0.113
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	108	95.5	105	98.3	101	103	99.3	95.3	93.5
Chromium, dissolved	mg/l	0.05	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	0.0014	0.0017	0.0013	0.0018	0.0014	0.0016	0.0013	0.0011	0.0011
Copper, dissolved	mg/l	--	1	<0.0005	0.0014	0.0008	0.0005	0.0012	0.0006	0.0018	<0.0005	0.0008
Iron, dissolved	mg/l	--	0.3	6.84	4.07	7.36	3.97	7.2	5.05	7.27	5.69	3.81
Lead, dissolved	mg/l	0.01	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Magnesium, dissolved	mg/l	--	--	31.3	28.1	32.1	29.1	30.1	31.2	29.8	29.4	27.4
Manganese, dissolved	mg/l	--	0.05	0.175	0.171	0.185	0.19	0.183	0.201	0.191	0.188	0.154
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	0.0092	0.0093	0.0081	0.0084	0.0075	0.0075	0.0067	0.0054	0.0067
Nickel, dissolved	mg/l	--	--	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.001	0.001
Potassium, dissolved	mg/l	--	--	13.2	12.3	13.3	12	12.5	13.8	13.5	12	11.7
Selenium, dissolved	mg/l	0.05	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silver, dissolved	mg/l	--	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	25.6	23.2	25.7	23.3	25.5	28.7	28.2	24.8	23.3
Strontium, dissolved	mg/l	--	--	0.282	0.286	0.312	0.314	0.314	0.334	0.313	0.29	0.277
Thallium, dissolved	mg/l	--	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Tin, dissolved	mg/l	--	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Titanium, dissolved	mg/l	--	--	<0.005	0.007	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Tungsten, dissolved	mg/l	--	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, dissolved	mg/l	0.02	--	0.0008	0.0008	0.0008	0.0009	0.0007	0.0009	0.0007	0.0007	0.0007
Vanadium, dissolved	mg/l	--	--	0.0006	0.0006	0.0006	<0.0005	<0.0005	0.0006	0.0006	<0.0005	<0.0005
Zinc, dissolved	mg/l	--	5	<0.005	<0.005	<0.005	<0.005	0.007	<0.005	<0.005	<0.005	<0.005
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	0.002	<0.001	0.003	0.002	<0.001	<0.001	<0.001	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	BH11-01	BH11-01	BH11-01
				06-Dec-2023	25-Apr-2024	23-Oct-2024
				BH11-01	BH11-1	BH11-1
General Chemistry						
Alkalinity (Total as CaCO3)	mg/l	--	--	--	384	457
Ammonia Nitrogen	mg/l	--	--	--	6.24	6.93
Bromide	mg/l	--	--	--	0.1	0.1
Chemical Oxygen Demand	mg/l	--	--	--	34	40
Chloride	mg/l	--	250	--	28	31
Conductivity	uS/cm	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	--	909	947
Dissolved Organic Carbon	mg/l	--	5	--	3.7	4.7
Fluoride	mg/l	1.5	--	--	0.2	0.2
Hardness, Calcium Carbonate	mg/l	--	--	--	355	432
Nitrate as N	mg/l	10.0	--	--	<0.1	0.2
Nitrite as N	mg/l	1.0	--	--	0.26	<0.05
Nitrogen, Total Kjeldahl	mg/l	--	--	--	6.2	7.0
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--
pH (Field)	-	--	--	--	7.06	7.00
Phosphorus	mg/l	--	--	--	1.29	0.23
Phosphorus, Total Orthophosphate	mg/l	--	--	--	<0.5	<0.5
Sulphate	mg/l	--	500 ⁽³⁾	--	53	50
Temperature (Field)	deg c	--	15	--	10.3	13.2
Total Dissolved Solids	mg/l	--	500	--	498	598
Metals						
Aluminum, dissolved	mg/l	--	--	--	0.002	0.002
Antimony, dissolved	mg/l	0.006	--	--	<0.0005	<0.0005
Arsenic, dissolved	mg/l	0.01	--	--	0.003	0.003
Barium, dissolved	mg/l	1	--	--	1.05	1.28
Beryllium, dissolved	mg/l	--	--	--	<0.0005	<0.0005
Boron, dissolved	mg/l	5	--	--	0.109	0.139
Cadmium, dissolved	mg/l	0.005	--	--	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	--	93	115
Chromium, dissolved	mg/l	0.05	--	--	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	--	0.0011	0.0012
Copper, dissolved	mg/l	--	1	--	0.0007	<0.0005
Iron, dissolved	mg/l	--	0.3	--	6.32	8.03
Lead, dissolved	mg/l	0.01	--	--	0.0003	<0.0001
Magnesium, dissolved	mg/l	--	--	--	29.7	35.4
Manganese, dissolved	mg/l	--	0.05	--	0.17	0.22
Mercury, dissolved	mg/l	0.001	--	--	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	0.0067	0.0058
Nickel, dissolved	mg/l	--	--	--	0.001	0.002
Potassium, dissolved	mg/l	--	--	--	11.2	12.2
Selenium, dissolved	mg/l	0.05	--	--	<0.001	0.003
Silver, dissolved	mg/l	--	--	--	<0.0001	<0.0001
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	--	22.8	25.6
Strontium, dissolved	mg/l	--	--	--	0.27	0.335
Thallium, dissolved	mg/l	--	--	--	<0.0001	<0.0001
Tin, dissolved	mg/l	--	--	--	<0.005	<0.005
Titanium, dissolved	mg/l	--	--	--	<0.005	<0.005
Tungsten, dissolved	mg/l	--	--	--	<0.01	<0.01
Uranium, dissolved	mg/l	0.02	--	--	0.0009	0.0007
Vanadium, dissolved	mg/l	--	--	--	<0.0005	0.0007
Zinc, dissolved	mg/l	--	5	--	<0.005	<0.005
Phenols						
Phenolics, Total Recoverable	mg/l	--	--	--	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM1	OMM1	OMM1	OMM1	OMM1	OMM1	OMM1	OMM1	OMM1
				01-Jan-1990	01-Dec-1990	01-Nov-1991	01-Jun-1992	01-Dec-1992	01-Sep-1993	01-May-1994	01-Nov-1994	01-Jun-1995
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	492	515	425	--	--	594	664	557	678
Ammonia Nitrogen	mg/l	--	--	--	--	--	--	--	--	--	--	--
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	--	11.2	9	7.5	8	16.2	7
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chloride	mg/l	--	250	2	4	4	14.5	9	18	21	24	25
Conductivity	uS/cm	--	--	1100	1065	940	--	--	1086	1120	1039	920
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Dissolved Organic Carbon	mg/l	--	5	--	--	--	--	--	--	--	--	--
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	--	606	473	532	583	516	607	643	826
Nitrate as N	mg/l	10.0	--	--	--	--	--	--	--	--	--	--
Nitrite as N	mg/l	1.0	--	--	--	--	--	--	--	--	--	--
Nitrogen, Total Kjeldahl	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	6.9	--	--	--	--	6.91	6.82	6.94	6.86
Phosphorus	mg/l	--	--	--	--	--	0.3	0.03	--	--	0.289	--
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	69	45	43	--	--	28.1	25.5	25	19
Temperature (Field)	deg c	--	15	--	--	--	--	--	--	--	--	--
Total Dissolved Solids	mg/l	--	500	--	--	--	--	--	--	--	--	--
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.005	--	<0.2	--	--	--	0.002	--
Barium, dissolved	mg/l	1	--	--	0.332	--	0.332	0.33	--	--	0.267	--
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	--	--	--	--	0.04	--	--	0.084	--
Cadmium, dissolved	mg/l	0.005	--	--	--	--	--	--	--	--	--	--
Calcium, dissolved	mg/l	--	--	--	50	120	130	146	110	152	172	181
Chromium, dissolved	mg/l	0.05	--	<0.05	<0.006	--	0.026	<0.01	--	--	<0.01	--
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.05	0.044	--	0.058	<0.01	--	--	<0.01	--
Iron, dissolved	mg/l	--	0.3	0.17	1.37	0.01	12.1	0.58	25.03	1.8	0.49	9.48
Lead, dissolved	mg/l	0.01	--	<0.02	0.04	--	<0.1	<0.05	--	--	0.0013	--
Magnesium, dissolved	mg/l	--	--	--	43	42	50.4	53	59	56	51	69
Manganese, dissolved	mg/l	--	0.05	2.03	0.94	0.78	2.85	3.5	5.55	3.34	2.99	4.67
Mercury, dissolved	mg/l	0.001	--	--	--	--	--	--	--	--	--	--
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	-- ⁽²²⁾	6.6	5.2	7.9	6	7	10	6	8
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	-- ⁽²²⁾	4	5	9.7	6	7	8	10	18
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	0.24	<0.005	--	0.131	0.06	--	--	<0.01	--
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	<0.002	--	--	<0.002	<0.002	<0.002	<0.002	<0.001	0.006

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM1	OMM1	OMM1	OMM1	OMM1	OMM1	OMM1	OMM1	OMM1
				12-Jun-1996	01-Jun-1997	01-Jul-2001	01-Nov-2001	01-Jul-2002	01-Nov-2002	10-Jul-2003	27-Dec-2003	26-Aug-2004
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	617	630	524	433	603	516	552	570	621
Ammonia Nitrogen	mg/l	--	--	--	--	--	--	1.07	0.88	1.07	0.85	0.92
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	13	13	11	5	10	11	2	3	2
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	--	--	--	--	10	13	17	14	29
Chloride	mg/l	--	250	31.4	26.6	20.4	20.5	25.7	30.7	22.7	18.7	27.6
Conductivity	uS/cm	--	--	1170	1110	887	908	1100	1050	1070	1080	1140
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Dissolved Organic Carbon	mg/l	--	5	--	--	4.3	6	4.3	8	4	5	5.1
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	706	658	430	582	645	544	575	566	617
Nitrate as N	mg/l	10.0	--	--	--	--	--	<0.1	0.1	<0.1	<0.1	0.2
Nitrite as N	mg/l	1.0	--	--	--	--	--	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrogen, Total Kjeldahl	mg/l	--	--	--	--	--	--	1.17	1.29	1.52	1.24	1.37
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.1	7.09	6.99	8.13	6.88	6.79	--	--	--
Phosphorus	mg/l	--	--	<0.1	--	0.02	0.02	0.02	0.05	0.06	0.32	<0.01
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	13.8	20	36	36	36	36	36	36	35
Temperature (Field)	deg c	--	15	--	--	--	--	--	--	--	--	--
Total Dissolved Solids	mg/l	--	500	682	674	624	--	664	560	665	630	701
Total Suspended Solids	mg/l	--	--	--	--	--	--	67	78	104	150	60
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	<0.001	--	0.005	0.002	0.005	0.004	0.003	0.004	0.002
Barium, dissolved	mg/l	1	--	0.469	--	0.345	0.405	0.415	0.34	0.39	0.435	0.441
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.017	--	0.03	0.06	0.05	0.06	0.006	0.058	0.087
Cadmium, dissolved	mg/l	0.005	--	<0.001	--	--	<0.01	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	174	149	134	131	157	132	143	140	151
Chromium, dissolved	mg/l	0.05	--	<0.01	--	<0.01	<0.01	<0.01	<0.01	0.005	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	0.011	--	<0.01	<0.01	<0.02	<0.01	<0.002	<0.002	<0.002
Iron, dissolved	mg/l	--	0.3	14.6	18.3	28.1	26.1	27.7	23	26.6	21.5	29.1
Lead, dissolved	mg/l	0.01	--	0.0019	--	<0.0002	<0.1	<0.0002	0.0003	<0.0002	<0.02	0.0004
Magnesium, dissolved	mg/l	--	--	65	68.1	53.1	58.2	61.5	52.1	53	52.4	58.5
Manganese, dissolved	mg/l	--	0.05	3.64	2.86	2.09	2.54	2.72	2.31	2.35	2.43	2.54
Mercury, dissolved	mg/l	0.001	--	--	--	--	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	8.88	6.8	5.4	7	8.2	6	7.9	6.9	8.3
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	16.1	14.5	11.9	14	13.3	16.3	18	15.9	23.5
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	0.018	--	<0.01	0.02	0.02	0.01	<0.005	0.007	0.009
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	<0.001	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM1	OMM1	OMM1	OMM1	OMM1	OMM1	OMM1	OMM1	OMM1
				22-Dec-2004	21-Jun-2005	10-Dec-2005	30-Jun-2006	28-Nov-2006	29-Jun-2007	26-Nov-2007	13-Jun-2008	26-Nov-2008
R-3												
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	642	600	535	538	540	530	526	535	499
Ammonia Nitrogen	mg/l	--	--	0.99	1.06	1.32	1.75	1.96	2.01	2.23	2.22	3.03
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	<1	<3	<3	6	4	7	4	4	5
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	11	9	22	11	24	10	7	6	18
Chloride	mg/l	--	250	7.1	24.6	13.8	31	17	18	15	11	10
Conductivity	uS/cm	--	--	1150	1075	1100	1135	1210	1225	1210	1020	968
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	--	--	--	1330
Dissolved Organic Carbon	mg/l	--	5	4.7	19.9	9.6	4.5	4.5	5.2	5.1	4.3	3.5
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	559	600	548	533	599	518	502	553	491
Nitrate as N	mg/l	10.0	--	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.10
Nitrite as N	mg/l	1.0	--	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.10
Nitrogen, Total Kjeldahl	mg/l	--	--	1.69	1.77	1.74	2.3	2.34	2.68	2.41	2.84	3.01
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	--	6.62	7.1	7	7	7.1	7	7	7
Phosphorus	mg/l	--	--	0.03	0.12	0.02	0.27	0.02	6.72	0.7	0.48	0.36
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	0.428	0.364	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	53	39	38	37	35	36	36	38	37
Temperature (Field)	deg c	--	15	--	14.4	6	8	8	9	7	9	6
Total Dissolved Solids	mg/l	--	500	685	681	602	683	683	663	636	663	629
Total Suspended Solids	mg/l	--	--	51	110	51	570	7330	2930	3480	648	299
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	0.003	<0.001	0.002	0.002	0.001	0.002	0.002	<0.01	0.002
Barium, dissolved	mg/l	1	--	0.376	0.454	0.369	0.41	0.41	0.37	0.35	0.4	0.37
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.079	0.076	0.081	0.07	0.08	0.07	0.08	0.1	0.06
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0002	0.0002	<0.001	<0.0001
Calcium, dissolved	mg/l	--	--	138	144	130	126	146	120	117	129	116
Chromium, dissolved	mg/l	0.05	--	<0.002	<0.002	<0.002	0.001	0.001	0.002	0.002	<0.01	0.003
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.002	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001
Iron, dissolved	mg/l	--	0.3	24.7	27.5	22	18.6	17.2	16.7	15.1	16.3	17.9
Lead, dissolved	mg/l	0.01	--	0.0005	<0.0002	<0.0002	<0.001	<0.001	<0.001	<0.001	<0.01	<0.001
Magnesium, dissolved	mg/l	--	--	52.2	58.7	54	53	57	53	51	56	49
Manganese, dissolved	mg/l	--	0.05	2.27	2.42	1.94	2.35	2.34	2.01	2.18	2.3	1.75
Mercury, dissolved	mg/l	0.001	--	<0.00006	<0.00005	<0.00006	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	7.6	8.7	8.7	9	9	8	8	9	9
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	20.9	24.1	19.6	20	19	15	15	17	14
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.005	0.013	0.011	0.01	0.02	<0.01	<0.01	<0.1	<0.01
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	<0.001	<0.001	0.004	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM1	OMM1	OMM1	OMM1	OMM1	OMM1	OMM1	OMM1	OMM1
				06-Jul-2009	08-Dec-2009 ⁽¹²⁾	30-Jun-2010 ⁽¹¹⁾	03-Dec-2010 ⁽²⁰⁾	13-Jun-2011 ⁽¹¹⁾	29-Nov-2011 ⁽¹¹⁾	22-Jun-2012	10-Nov-2012	25-Jun-2013
				R-10	R-4	R-9	R - 9	S-2	OMM-1	S-11	S-3	S-9
General Chemistry												
Alkalinity (Total as CaCO ₃)	mg/l	--	--	481	472	473	503	544	494	520	560	590
Ammonia Nitrogen	mg/l	--	--	2.59	2.85	2.33	1.99	1.79	2.48	2.5	3.2	4.2
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	5	2	--	--	--	--	--	--	--
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	<5	75	10	5	10	5	13	7.2	16
Chloride	mg/l	--	250	8	7	7	10	12	13	13	14	17
Conductivity	uS/cm	--	--	916	902	902	952	971	951	--	--	--
Conductivity (Field)	uS/cm	--	--	1400	1485	1505	1600	1510	958	1555	1605	1495
Dissolved Organic Carbon	mg/l	--	5	3.8	2.9	2.8	2.6	2.8	2.3	2.4	2.7	3.3
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	456	459	488	482	537	494	540	580	610
Nitrate as N	mg/l	10.0	--	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Nitrite as N	mg/l	1.0	--	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.010	<0.010	<0.010
Nitrogen, Total Kjeldahl	mg/l	--	--	3.10	3.01	2.32	1.96	2.04	2.53	2.6	3.3	4.4
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	<0.10	<0.10	<0.10
pH (Field)	-	--	--	7.0	7.2	7.3	7.2	7.2	7.03	7.2	7.2	7.3
Phosphorus	mg/l	--	--	3.33	0.06	0.02	<0.01	<0.01	<0.01	0.002	0.008	0.30
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	39	38	37	37	35	38	36	33	32
Temperature (Field)	deg c	--	15	17.0	9	13	9	14	8.6	14	10	11
Total Dissolved Solids	mg/l	--	500	595	586	586	619	631	618	564	586	632
Total Suspended Solids	mg/l	--	--	8050	101	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	0.002	0.002	<0.01	<0.01	<0.01	<0.01	0.0012	0.0011	0.001
Barium, dissolved	mg/l	1	--	0.33	0.38	0.34	0.36	0.38	0.40	0.44	0.51	0.61
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.08	0.02	0.06	0.04	0.04	0.05	0.047	0.053	0.068
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00010	<0.00010	<0.0001
Calcium, dissolved	mg/l	--	--	110	113	123	122	131	127	130	150	150
Chromium, dissolved	mg/l	0.05	--	0.005	0.004	0.006	0.002	0.004	0.002	<0.0050	<0.0050	<0.005
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010	<0.001
Iron, dissolved	mg/l	--	0.3	10.9	9.38	12.1	13.2	17.0	13.7	15	15	17
Lead, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00050	<0.00050	<0.0005
Magnesium, dissolved	mg/l	--	--	44	43	44	43	51	43	51	54	58
Manganese, dissolved	mg/l	--	0.05	2.11	1.43	1.92	1.89	2.21	2.05	2.2	2.4	2.7
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00010	<0.00010	<0.00010
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	8	7	7	6	7	7	7.3	7.9	9
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	11	9	9	9	8	11	10	11	14
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	<0.0050	<0.0050	<0.005
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	<0.001	<0.001	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM1	OMM1	OMM1	OMM1	OMM1	OMM1	OMM1	OMM1	OMM1
				21-Nov-2013 ⁽²¹⁾	27-May-2014	25-Nov-2014	26-May-2015	30-Nov-2015	14-Jun-2016	29-Nov-2016	01-Jun-2017	23-Nov-2017
				S-11	A-10	R-9	OMM-1	1	OMM-1	OMM-1	OMM1	OMM-1
General Chemistry												
Alkalinity (Total as CaCO ₃)	mg/l	--	--	500	590	550	594	579	635	597	629	529
Ammonia Nitrogen	mg/l	--	--	3.4 ⁽⁵⁾	4.1	4.4	7.47 ⁽⁶⁾	4.49	6.20 ⁽⁶⁾	6.61 ⁽⁶⁾	7.01 ⁽⁶⁾	4.71 ⁽⁶⁾
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	--	--	--	--	--	--	--
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	6.1	4.1	7.6	16	14	10	13	20	21
Chloride	mg/l	--	250	15	19	18	17	18	20	15	18	11
Conductivity	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	1616	1145	1650	1204	1200	1082	929	1042	902
Dissolved Organic Carbon	mg/l	--	5	2.7	2.8	2.8	2.1	2.9	2.1	4.0	3.5	1.8
Fluoride	mg/l	1.5	--	--	--	--	--	--	0.2	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	510	630	520	763	695	627	538	545	528
Nitrate as N	mg/l	10.0	--	<0.10	<0.10	<0.10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite as N	mg/l	1.0	--	<0.010	<0.010	<0.010	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrogen, Total Kjeldahl	mg/l	--	--	3.4 ⁽⁵⁾	4.0	4.2 ⁽⁵⁾	4.7	4.5	5.1	5.1	5.9	4.5
Nitrogen, Nitrate-Nitrite	mg/l	--	--	<0.10	<0.10	<0.10	--	--	--	--	--	--
pH (Field)	-	--	--	7.1	6.61	7.2	6.69	6.7	6.98	6.83	6.9	6.86
Phosphorus	mg/l	--	--	<0.002	0.004	0.008	0.02	<0.01	0.01	0.01	<0.01	0.22
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	<0.2	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	33	34	35	34	36	34	36	34	41
Temperature (Field)	deg c	--	15	9	13.2	8	12.9	9	12.1	8.8	12	8.4
Total Dissolved Solids	mg/l	--	500	568	634	562	628	648	664	578	620	462
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	<0.01	--	<0.001	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	<0.001	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	0.001	0.0012	0.001	<0.01	0.001	<0.001	<0.001	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.45	0.62	0.57	0.64	0.647	0.785	0.683	0.702	0.669
Beryllium, dissolved	mg/l	--	--	--	--	--	<0.001	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.049	0.063	0.061	0.085	0.069	0.069	0.068	0.102	0.066
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.00010	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	130	150	130	208	171	158	129	136	126
Chromium, dissolved	mg/l	0.05	--	<0.005	<0.0050	<0.005	<0.05	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	--	--	--	0.013	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.001	<0.0010	<0.001	0.009	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Iron, dissolved	mg/l	--	0.3	15	18	16	16.2	15.1	16	11.8	17	11.3
Lead, dissolved	mg/l	0.01	--	<0.0005	<0.00050	<0.0005	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Magnesium, dissolved	mg/l	--	--	48	59	46	59.5	65	56.8	52.4	50.1	51.5
Manganese, dissolved	mg/l	--	0.05	2.2	2.6	2.4	2.64	3.77	2.42	1.93	2.42	2.08
Mercury, dissolved	mg/l	0.001	--	<0.00010	<0.00010	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	--	--	0.007	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	0.007	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	7.6	8.7	8.2	9.97	8.37	10.4	8.62	10.1	8.89
Selenium, dissolved	mg/l	0.05	--	--	--	--	<0.005	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	<0.001	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	11	13	11	17.8	13.1	14.8	12.2	14.6	13
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	<0.001	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	<0.01	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	0.014	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.005	<0.0050	<0.005	<0.02	<0.005	<0.005	<0.005	<0.005	<0.005
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	--	--	--	--	--	--	--	<0.002 ⁽⁷⁾	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM1	OMM1	OMM1	OMM1	OMM1
				28-Jun-2018	26-Nov-2018	18-Jun-2019	29-Nov-2019	04-Jun-2020
				OMM-1	OMM-1	OMM-1	OMM1	OMM-1
General Chemistry								
Alkalinity (Total as CaCO3)	mg/l	--	--	547	561	488	450	483
Ammonia Nitrogen	mg/l	--	--	4.18	3.43	3.07	2.58	2.36
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	--	--	--
Bromide	mg/l	--	--	--	--	<0.1	<0.1	<0.1
Chemical Oxygen Demand	mg/l	--	--	<10	<10	<10	<10	20
Chloride	mg/l	--	250	10	10	11	11	13
Conductivity	uS/cm	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	927	914	926	920	978
Dissolved Organic Carbon	mg/l	--	5	1.7	2.3	1.2	4.8	7.2
Fluoride	mg/l	1.5	--	--	--	<0.1	0.2	0.2
Hardness, Calcium Carbonate	mg/l	--	--	437	498	473	483	454
Nitrate as N	mg/l	10.0	--	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite as N	mg/l	1.0	--	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrogen, Total Kjeldahl	mg/l	--	--	4.2	3.8	3.1	2.8	2.1
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--
pH (Field)	-	--	--	6.93	7.46	7.42	7.4	--
Phosphorus	mg/l	--	--	0.02	0.02	<0.01	0.13	0.07
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	<0.2	<0.2	<0.2
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	36	38	37	41	48
Temperature (Field)	deg c	--	15	12.1	7.8	11	7.0	12.4
Total Dissolved Solids	mg/l	--	500	540	554	540	510	512
Total Suspended Solids	mg/l	--	--	--	--	--	--	--
Metals								
Aluminum, dissolved	mg/l	--	--	--	--	0.001	<0.001	0.002
Antimony, dissolved	mg/l	0.006	--	--	--	<0.0005	<0.0005	<0.0005
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.57	0.562	0.539	0.492	0.498
Beryllium, dissolved	mg/l	--	--	--	--	<0.0005	<0.0005	<0.0005
Boron, dissolved	mg/l	5	--	0.043	0.038	0.04	0.034	0.033
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	103	118	115	117	113
Chromium, dissolved	mg/l	0.05	--	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	--	--	0.0417	0.0695	0.0306
Copper, dissolved	mg/l	--	1	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Iron, dissolved	mg/l	--	0.3	9.18	11.5	9.1	7.37	8.37
Lead, dissolved	mg/l	0.01	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Magnesium, dissolved	mg/l	--	--	44	49.1	45.5	46.2	41.9
Manganese, dissolved	mg/l	--	0.05	1.29	1.42	1.36	1.29	1.32
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	--	0.0036	0.0039	0.0040
Nickel, dissolved	mg/l	--	--	--	--	0.001	0.001	0.002
Potassium, dissolved	mg/l	--	--	7.85	9.17	7.88	7.63	6.9
Selenium, dissolved	mg/l	0.05	--	--	--	<0.001	<0.001	<0.001
Silver, dissolved	mg/l	--	--	--	--	<0.0001	<0.0001	<0.0001
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	8.04	9.04	9.85	9.19	9.06
Strontium, dissolved	mg/l	--	--	--	--	0.328	0.305	0.33
Thallium, dissolved	mg/l	--	--	--	--	<0.0001	<0.0001	<0.0001
Tin, dissolved	mg/l	--	--	--	--	<0.005	<0.005	<0.005
Titanium, dissolved	mg/l	--	--	--	--	<0.005	<0.005	<0.005
Tungsten, dissolved	mg/l	--	--	--	--	<0.01	<0.01	<0.01
Uranium, dissolved	mg/l	0.02	--	--	--	0.0042	0.0051	0.0047
Vanadium, dissolved	mg/l	--	--	--	--	<0.0005	<0.0005	<0.0005
Zinc, dissolved	mg/l	--	5	<0.005	<0.005	<0.005	<0.005	<0.005
Phenols								
Phenolics, Total Recoverable	mg/l	--	--	<0.001	<0.001	<0.001	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM2	OMM2	OMM2	OMM2	OMM2	OMM2	OMM2	OMM2	OMM2
				01-Jan-1990	01-Dec-1990	01-Nov-1991	01-Jun-1992	01-Dec-1992	01-Sep-1993	01-May-1994	01-Nov-1994	01-Jun-1995
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	270	289	293	--	--	286	331	300	344
Ammonia Nitrogen	mg/l	--	--	--	--	--	--	--	--	--	--	--
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	2.4	<1	2	3.4	<1	2.1	1
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chloride	mg/l	--	250	--, ⁽²²⁾	5	5	8.5	8	8	7	5	12
Conductivity	uS/cm	--	--	675	690	690	--	--	621	655	611	548
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Dissolved Organic Carbon	mg/l	--	5	--	--	--	--	--	--	--	--	--
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	--	269	334	253	411	302	332	338	375
Nitrate as N	mg/l	10.0	--	--	--	--	--	--	--	--	--	--
Nitrite as N	mg/l	1.0	--	--	--	--	--	--	--	--	--	--
Nitrogen, Total Kjeldahl	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.6	--	--	--	--	7.42	7.58	7.73	7.6
Phosphorus	mg/l	--	--	--	--	--	0.1	0.03	--	--	0.16	--
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	64	46	45	--	--	44	49	55	57
Temperature (Field)	deg c	--	15	--	--	--	--	--	--	--	--	--
Total Dissolved Solids	mg/l	--	500	--	--	--	--	--	--	--	--	--
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.005	--	<0.2	--	--	--	0.001	--
Barium, dissolved	mg/l	1	--	--	0.129	--	0.11	0.12	--	--	0.103	--
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	--	--	--	--	0.03	--	--	0.064	--
Cadmium, dissolved	mg/l	0.005	--	0.009	<0.002	--	<0.02	<0.01	--	--	<0.001	--
Calcium, dissolved	mg/l	--	--	--	34	78	53	102	68	85	69	94
Chromium, dissolved	mg/l	0.05	--	<0.05	<0.006	--	<0.02	<0.01	--	--	<0.01	--
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.05	0.01	--	0.017	0.03	--	--	<0.01	--
Iron, dissolved	mg/l	--	0.3	<0.05	0.011	<0.01	1.7	0.63	2.3	0.07	0.253	0.14
Lead, dissolved	mg/l	0.01	--	<0.01	0.06	--	<0.1	<0.05	--	--	0.004	--
Magnesium, dissolved	mg/l	--	--	--	30	34	29	38	32	29	40	34
Manganese, dissolved	mg/l	--	0.05	0.06	0.021	<0.005	0.04	0.04	0.07	<0.05	0.11	<0.01
Mercury, dissolved	mg/l	0.001	--	--	--	--	--	--	--	--	--	--
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	--	5	--	6	6	6	8	5	5.2
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	--	5	7	9	8	7	6	6	6
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.05	<0.005	--	0.042	0.11	--	--	<0.01	--
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	<0.002	--	0.011	<0.002	0.005	0.029	<0.002	<0.001	<0.002

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM2	OMM2	OMM2	OMM2	OMM2	OMM2	OMM2	OMM2	OMM2
				12-Jun-1996	01-Jun-1997	01-Jun-1998	01-Aug-1999	01-Jun-2000	01-Jul-2001	01-Nov-2001	01-Jul-2002	01-Nov-2002
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	414	556	345	352	392	360	313	351	342
Ammonia Nitrogen	mg/l	--	--	--	--	--	--	--	--	--	0.03	0.01
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	<1	2	<1	<1	<1	<1	<1	<1	<1
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	--	--	--	--	--	--	--	10	<2
Chloride	mg/l	--	250	6.3	5.9	6.3	6.3	--	6.9	7	7	7.3
Conductivity	uS/cm	--	--	842	973	673	706	--	613	657	711	707
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Dissolved Organic Carbon	mg/l	--	5	--	--	--	--	0.2	0.3	<0.2	<0.5	<0.5
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	473	681	398	416	428	401	405	409	376
Nitrate as N	mg/l	10.0	--	--	--	--	--	--	--	--	<0.1	0.2
Nitrite as N	mg/l	1.0	--	--	--	--	--	--	--	--	<0.1	<0.1
Nitrogen, Total Kjeldahl	mg/l	--	--	--	--	--	--	--	--	--	0.09	<0.05
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.55	7.68	7.51	7.97	8.05	7.6	8.37	7.6	7.48
Phosphorus	mg/l	--	--	<0.1	--	--	--	--	0.01	<0.01	<0.01	0.02
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	52.1	55	52	51	50	53	53	55	53
Temperature (Field)	deg c	--	15	--	--	--	--	--	--	--	--	--
Total Dissolved Solids	mg/l	--	500	504	574	380	476	428	400	--	530	386
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--	9	<3
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	<0.001	--	--	--	--	0.001	0.001	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.169	--	--	--	0.136	0.13	0.13	0.14	0.13
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	<0.01	--	--	--	--	0.03	0.02	0.03	0.02
Cadmium, dissolved	mg/l	0.005	--	<0.001	--	--	--	--	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	117	159	99	108	--	105	102	106	97
Chromium, dissolved	mg/l	0.05	--	<0.01	--	--	--	--	<0.01	<0.01	<0.01	<0.01
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.01	--	--	--	--	<0.01	<0.01	<0.01	<0.01
Iron, dissolved	mg/l	--	0.3	0.338	0.01	0.03	<0.02	0.06	0.3	0.8	0.03	0.07
Lead, dissolved	mg/l	0.01	--	<0.0002	--	--	--	--	0.0002	<0.0002	<0.0002	0.005
Magnesium, dissolved	mg/l	--	--	43.6	53.1	36.1	35	33.7	33.6	36.6	35.1	32.5
Manganese, dissolved	mg/l	--	0.05	0.028	0.02	<0.01	0.02	<0.01	0.02	<0.01	<0.01	0.03
Mercury, dissolved	mg/l	0.001	--	--	--	--	--	--	--	--	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	6.72	5.9	1.8	2.5	5	4.8	4.1	5.4	4.7
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	6.19	4.9	5	5.5	5.3	5	5.8	5.5	5.5
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.01	--	--	--	--	<0.01	<0.01	0.01	<0.01
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	<0.001	--	--	--	--	0.01	<0.001	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM2 10-Jul-2003	OMM2 27-Dec-2003	OMM2 26-Aug-2004	OMM2 22-Dec-2004	OMM2 21-Jun-2005	OMM2 09-Dec-2005	OMM2 30-Jun-2006	OMM2 28-Nov-2006	OMM2 29-Jun-2007
General Chemistry												
Alkalinity (Total as CaCO ₃)	mg/l	--	--	351	405	417	411	414	388	433	404	346
Ammonia Nitrogen	mg/l	--	--	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.02	<0.02	0.08
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	<1	<1	<1	<1	<3	<3	<1	<1	<1
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	<2	<2	6	<5	<5	<5	<5	<5	<5
Chloride	mg/l	--	250	7	7	7.4	23.9	7.2	9.4	9	9	12
Conductivity	uS/cm	--	--	743	789	792	787	800	710	740	680	745
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Dissolved Organic Carbon	mg/l	--	5	0.3	<1	<0.5	<0.5	8	5.1	3.4	<0.5	1
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	414	422	456	417	489	405	455	427	365
Nitrate as N	mg/l	10.0	--	0.2	0.2	0.2	0.1	0.2	0.1	<0.1	<0.1	0.13
Nitrite as N	mg/l	1.0	--	<0.1	<0.1	<0.1	<0.1	<0.1	0.7	<0.1	<0.1	<0.1
Nitrogen, Total Kjeldahl	mg/l	--	--	0.08	<0.05	<0.05	<0.05	0.05	0.43	0.3	0.1	0.15
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	--	--	--	--	7.2	7	6.8	6.7	6.9
Phosphorus	mg/l	--	--	0.23	<0.01	<0.01	<0.01	1.99	1.81	6.76	0.01	0.55
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	0.137	0.142	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	49	54	55	33	54	48	49	47	45
Temperature (Field)	deg c	--	15	--	--	--	--	14.4	6	9	7	8
Total Dissolved Solids	mg/l	--	500	425	457	476	454	486	438	565	532	467
Total Suspended Solids	mg/l	--	--	166	3	<3	3	848	376	1480	1530	525
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	<0.001	0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.138	0.15	0.158	0.145	0.189	0.095	0.18	0.18	0.13
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	<0.005	0.021	0.022	0.021	0.007	0.022	0.02	0.03	0.02
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	0.0002	<0.0001	<0.0001	<0.0001	0.0008	<0.0001
Calcium, dissolved	mg/l	--	--	109	110	117	109	127	101	118	105	100
Chromium, dissolved	mg/l	0.05	--	0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.001	0.003	0.001
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.004	<0.001	<0.001
Iron, dissolved	mg/l	--	0.3	0.051	0.013	0.011	0.008	0.036	0.591	0.34	0.46	0.53
Lead, dissolved	mg/l	0.01	--	0.0002	<0.02	<0.0002	0.0002	<0.0002	0.0003	<0.001	<0.001	<0.001
Magnesium, dissolved	mg/l	--	--	34.5	35.9	39.9	35.6	42.1	36.7	39	40	28
Manganese, dissolved	mg/l	--	0.05	0.002	<0.001	<0.001	<0.001	0.002	0.024	0.02	0.01	0.06
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	<0.00006	<0.00005	<0.00006	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	5.5	5.1	5.8	5.7	6.3	6	7	6	7
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	6.6	6.4	6.3	6.1	7	6.6	10	8	6
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.02	0.01	<0.01
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	<0.001	<0.001	<0.001	<0.001	<0.001	0.004	<0.001	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM2	OMM2	OMM2	OMM2	OMM2	OMM2	OMM2	OMM2	OMM2
				26-Nov-2007	30-Jun-2008	26-Nov-2008	06-Jul-2009	05-Dec-2009	30-Jun-2010	03-Dec-2010	13-Jun-2011	24-Nov-2011
						R-2	R-9	R-2	R-2	R - 11	S-1	OMM-2
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	337	392	338	342	335	301	316	281	299
Ammonia Nitrogen	mg/l	--	--	<0.02	<0.02	0.02	<0.02	<0.02	0.07	<0.02	<0.02	0.08
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	<1	2	<1	<1	<1	--	--	--	--
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	<5	<5	13	<5	5	60	8	5	55
Chloride	mg/l	--	250	9	9	9	9	10	10	11	12	12
Conductivity	uS/cm	--	--	755	799	719	714	709	649	678	616	654
Conductivity (Field)	uS/cm	--	--	--	--	820	800	875	760	780	695	660
Dissolved Organic Carbon	mg/l	--	5	1.6	1.4	0.9	1.5	1.4	2.4	1.6	1.0	1.6
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	359	429	354	394	355	318	330	342	325
Nitrate as N	mg/l	10.0	--	<0.1	0.12	0.15	0.16	0.14	0.15	0.16	0.16	0.25
Nitrite as N	mg/l	1.0	--	<0.1	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Nitrogen, Total Kjeldahl	mg/l	--	--	0.24	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.13
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7	7.2	7.1	7.2	7.4	7.5	7.4	7.6	8.20
Phosphorus	mg/l	--	--	0.95	0.86	0.24	0.77	0.21	7.69	0.12	0.33	3.50
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	48	49	49	50	48	50	45	47	48
Temperature (Field)	deg c	--	15	7	12	6	16.0	8	10	9	9	9.0
Total Dissolved Solids	mg/l	--	500	441	519	467	464	461	422	441	400	425
Total Suspended Solids	mg/l	--	--	642	1230	1020	507	697	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.14	0.17	0.14	0.14	0.14	0.13	0.13	0.13	0.16
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.02	0.02	0.02	0.03	<0.01	0.02	0.02	0.01	0.03
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	96	114	94	105	96	86	91	84	89
Chromium, dissolved	mg/l	0.05	--	0.001	0.002	0.001	0.003	0.001	0.004	<0.001	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001
Iron, dissolved	mg/l	--	0.3	0.03	0.48	0.43	<0.03	<0.03	0.13	<0.03	<0.03	0.29
Lead, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Magnesium, dissolved	mg/l	--	--	29	35	29	32	28	25	25	32	25
Manganese, dissolved	mg/l	--	0.05	0.05	0.02	0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	5	5	5	5	5	5	5	5	4
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	6	5	5	7	6	6	6	6	7
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	<0.001	<0.001	<0.001	<0.001	<0.001	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM2	OMM2	OMM2	OMM2	OMM2	OMM2	OMM2	OMM2	OMM2
				22-Jun-2012	10-Nov-2012	26-Jun-2013 ⁽²⁴⁾	20-Nov-2013	28-May-2014	25-Nov-2014	29-May-2015	30-Nov-2015	14-Jun-2016
				S-10	S-2	S-11	S-10	A-20	R-1	OMM-2	2	OMM-2
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	320	300	310	300	320	350	345	345	371
Ammonia Nitrogen	mg/l	--	--	<0.050	<0.050	0.10	<0.050	<0.050	<0.050	0.04	0.05	0.04
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	--	--	--	--	--	--	--
Bromide	mg/l	--	--	--	--	--	--	--	--	<0.1	--	<0.1
Chemical Oxygen Demand	mg/l	--	--	15	<4.0	11	<4.0	<4.0	<4.0	<10	<10	<10
Chloride	mg/l	--	250	10	10	10	10	10	11	10	9	10
Conductivity	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	715	740	730	735	707	720	713	725	676
Dissolved Organic Carbon	mg/l	--	5	1.1	0.58	0.70	0.66	0.66	0.75	<0.5	0.6	<0.5
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	0.1	--	0.1
Hardness, Calcium Carbonate	mg/l	--	--	370	370	370	360	360	390	539	488	410
Nitrate as N	mg/l	10.0	--	0.23	0.19	0.12	0.14	0.12	0.15	0.2	0.1	0.1
Nitrite as N	mg/l	1.0	--	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.05	<0.05	<0.05
Nitrogen, Total Kjeldahl	mg/l	--	--	0.52	0.32	0.35	0.53	0.21	<0.10	<0.1	0.1	0.1
Nitrogen, Nitrate-Nitrite	mg/l	--	--	0.23	0.19	0.12	0.14	0.12	0.15	--	--	--
pH (Field)	-	--	--	7.7	7.6	7.5	7.5	7.42	7.4	7.26	7.3	7.40
Phosphorus	mg/l	--	--	1.6	1.4	2.0	2.6	0.52	0.98	0.08	0.27	0.09
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	0.4	--	<0.2
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	50	40	47	45	44	46	50	49	50
Temperature (Field)	deg c	--	15	11	8	10	8	11.4	8	12.1	8	11.9
Total Dissolved Solids	mg/l	--	500	390	386	394	394	388	376	406	454	422
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	<0.01	--	<0.001
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	<0.001	--	<0.0005
Arsenic, dissolved	mg/l	0.01	--	<0.0010	<0.0010	<0.001	<0.001	<0.0010	<0.001	<0.01	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.14	0.13	0.14	0.13	0.13	0.14	0.141	0.148	0.149
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	<0.001	--	--
Boron, dissolved	mg/l	5	--	0.021	0.024	0.024	0.021	0.034	0.024	0.055	0.025	0.023
Cadmium, dissolved	mg/l	0.005	--	<0.00010	<0.00010	<0.0001	<0.0001	<0.00010	<0.0001	<0.001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	99	99	100	97	99	110	157	131	111
Chromium, dissolved	mg/l	0.05	--	<0.0050	<0.0050	<0.005	<0.005	<0.0050	<0.005	<0.05	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	<0.001	--	--
Copper, dissolved	mg/l	--	1	<0.0010	<0.0010	<0.001	<0.001	<0.0010	<0.001	<0.005	<0.0005	<0.0005
Iron, dissolved	mg/l	--	0.3	0.15	<0.1	<0.1	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1
Lead, dissolved	mg/l	0.01	--	<0.00050	<0.00050	<0.0005	<0.0005	<0.00050	<0.0005	<0.001	<0.0001	<0.0001
Magnesium, dissolved	mg/l	--	--	30	30	30	29	28	30	35.8	39	32.3
Manganese, dissolved	mg/l	--	0.05	0.016	<0.0020	0.012	<0.002	0.0024	<0.002	<0.05	<0.005	<0.005
Mercury, dissolved	mg/l	0.001	--	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	<0.005	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	<0.005	--	--
Potassium, dissolved	mg/l	--	--	5.2	5.2	5.3	5	4.9	5.1	6.91	5.1	5.5
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	<0.005	--	<0.001
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	<0.001	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	7.1	6.8	6.6	6.5	6.4	6.7	8.28	6.86	6.65
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	<0.001	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	<0.01	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	0.0080
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	0.005	--	--
Zinc, dissolved	mg/l	--	5	0.0086	<0.0050	<0.005	<0.005	<0.0050	<0.005	<0.02	<0.005	0.007
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	--	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM2	OMM2	OMM2	OMM2	OMM2	OMM2	OMM2	OMM2
				29-Nov-2016	01-Jun-2017	22-Nov-2017	28-Jun-2018	26-Nov-2018	18-Jun-2019	02-Dec-2019	04-Jun-2020
				OMM-2	OMM2	OMM-2	OMM-2	OMM-2	OMM-2	OMM2	OMM-2
General Chemistry											
Alkalinity (Total as CaCO3)	mg/l	--	--	386	526	406	357	354	337	240	286
Ammonia Nitrogen	mg/l	--	--	0.02	0.02	0.03	0.05	0.01	0.04	0.03	0.03
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	--	--	--	--	--	--
Bromide	mg/l	--	--	--	--	--	--	--	<0.1	<0.1	<0.1
Chemical Oxygen Demand	mg/l	--	--	<10	10	<10	<10	18	<10	32	10
Chloride	mg/l	--	250	9	9	11	10	11	11	12	14
Conductivity	uS/cm	--	--	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	625	705	739	669	649	705	670	693
Dissolved Organic Carbon	mg/l	--	5	1.1	1.0	1.3	<0.5	0.8	<0.5	2.3	3.4
Fluoride	mg/l	1.5	--	--	--	--	--	--	<0.1	0.3	0.1
Hardness, Calcium Carbonate	mg/l	--	--	394	494	417	320	378	377	337	333
Nitrate as N	mg/l	10.0	--	0.1	<0.1	0.2	0.5	0.2	0.2	0.2	0.3
Nitrite as N	mg/l	1.0	--	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrogen, Total Kjeldahl	mg/l	--	--	<0.1	0.1	<0.1	0.2	<0.1	<0.1	0.2	<0.1
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.76	7.4	7.53	7.48	8	7.82	7.9	--
Phosphorus	mg/l	--	--	0.79	0.98	1.03	0.05	0.36	0.57	1.83	0.48
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	<0.2	<0.2	<0.2
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	51	56	55	49	52	54	56	64
Temperature (Field)	deg c	--	15	8.8	12	7.4	11.9	7.5	10.9	7.4	12.2
Total Dissolved Solids	mg/l	--	500	424	512	416	416	384	424	392	392
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--	--
Metals											
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	<0.001	0.005	<0.001
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	<0.0005	<0.0005	<0.0005
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.143	0.185	0.148	0.139	0.152	0.142	0.13	0.125
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	<0.0005	<0.0005	<0.0005
Boron, dissolved	mg/l	5	--	0.024	0.034	0.039	0.03	0.021	0.022	0.019	0.019
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	105	133	111	82	98	99.2	89	86.7
Chromium, dissolved	mg/l	0.05	--	<0.001	<0.001	<0.001	<0.001	0.003	<0.001	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	<0.0005	<0.0005	<0.0005
Copper, dissolved	mg/l	--	1	<0.0005	<0.0005	<0.0005	<0.0005	0.0111	<0.0005	<0.0005	<0.0005
Iron, dissolved	mg/l	--	0.3	<0.1	<0.1	<0.1	<0.1	3.49	<0.1	<0.1	<0.1
Lead, dissolved	mg/l	0.01	--	<0.0001	<0.0001	<0.0001	<0.0001	0.0027	<0.0001	0.0003	<0.0001
Magnesium, dissolved	mg/l	--	--	32.2	39.3	33.8	28	32.4	31.4	28	28.3
Manganese, dissolved	mg/l	--	0.05	<0.005	<0.005	<0.005	<0.005	0.074	<0.005	0.007	<0.005
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	0.0018	0.0028	0.0029
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	<0.001	<0.001	<0.001
Potassium, dissolved	mg/l	--	--	4.89	6.29	5.27	5.02	6.07	5.67	4.96	5.33
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	<0.001	<0.001	<0.001
Silver, dissolved	mg/l	--	--	--	--	--	--	--	<0.0001	<0.0001	<0.0001
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	5.87	7.48	6.32	5.57	6.42	6.47	6.67	6.62
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	0.267	0.21	0.234
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	<0.0001	<0.0001	<0.0001
Tin, dissolved	mg/l	--	--	--	--	--	--	--	<0.005	<0.005	<0.005
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	<0.005	<0.005	<0.005
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	<0.01	<0.01	<0.01
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	0.0065	0.0068	0.0068
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	<0.0005	<0.0005	<0.0005
Zinc, dissolved	mg/l	--	5	<0.005	<0.005	<0.005	<0.005	0.017	<0.005	0.01	<0.005
Phenols											
Phenolics, Total Recoverable	mg/l	--	--	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM3	OMM3	OMM3	OMM3	OMM3	OMM3	OMM3	OMM3	OMM3
				01-Jan-1990	01-Dec-1990	01-Nov-1991	01-May-1994	01-Nov-1994	01-Jun-1995	12-Jun-1996	26-Nov-1996	01-Jun-1997
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	196	257	236	325	409	812	319	277	382
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	2.5	<1	4.1	3	<1	9	2
Chloride	mg/l	--	250	4.4	4	3	3	3	10	4	22.5	5.3
Conductivity	uS/cm	--	--	545	580	550	628	743	585	669	747	707
Dissolved Organic Carbon	mg/l	--	5	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	--	282	265	327	445	586	366	435	524
pH (Field)	-	--	--	7.55	--	--	7.28	7.52	7.12	7.78	8.17	8.02
Phosphorus	mg/l	--	--	--	--	--	--	0.136	--	<0.1	--	--
Sulphate	mg/l	--	500 ⁽³⁾	46	38	38	39	42	37	41.1	17	41
Total Dissolved Solids	mg/l	--	500	--	--	--	--	--	--	382	482	514
Metals												
Arsenic, dissolved	mg/l	0.01	--	0.002	<0.005	--	--	0.001	--	<0.001	--	--
Barium, dissolved	mg/l	1	--	0.253	--	--	--	0.318	--	0.312	--	--
Boron, dissolved	mg/l	5	--	--	--	--	--	0.075	--	<0.01	--	--
Cadmium, dissolved	mg/l	0.005	--	0.052	<0.002	--	--	<0.0001	--	<0.001	--	--
Calcium, dissolved	mg/l	--	--	--	49	64	88	105	155	96	130	127
Chromium, dissolved	mg/l	0.05	--	<0.005	<0.006	--	--	<0.01	--	<0.01	--	--
Copper, dissolved	mg/l	--	1	<0.05	0.014	--	--	<0.01	--	<0.01	--	--
Iron, dissolved	mg/l	--	0.3	0.02	0.11	<0.01	0.08	0.37	0.06	0.096	0.49	0.04
Lead, dissolved	mg/l	0.01	--	0.01	0.06	--	--	0.0002	--	0.0002	--	--
Magnesium, dissolved	mg/l	--	--	--	24	25	26	44	48	30.6	26.2	35.6
Manganese, dissolved	mg/l	--	0.05	<0.05	0.005	<0.005	<0.05	0.098	0.02	0.05	0.53	<0.01
Potassium, dissolved	mg/l	--	--	--	4	4	6	4	5.4	4.79	13.2	5
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	--	3	4	3	4	4	3.83	16.6	3.4
Zinc, dissolved	mg/l	--	5	0.14	<0.005	--	--	<0.01	--	<0.01	--	--
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	<0.002	--	0.004	<0.002	<0.001	<0.002	<0.001	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM3	OMM3	OMM3
				01-Jun-1998	01-Aug-1999	01-Jun-2000
General Chemistry						
Alkalinity (Total as CaCO3)	mg/l	--	--	286	310	339
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	<1	<1	<1
Chloride	mg/l	--	250	3.7	3.4	3.3
Conductivity	uS/cm	--	--	568	606	--
Dissolved Organic Carbon	mg/l	--	5	--	--	1.8
Hardness, Calcium Carbonate	mg/l	--	--	333	357	342
pH (Field)	-	--	--	7.45	7.85	8.09
Phosphorus	mg/l	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	42	42	40
Total Dissolved Solids	mg/l	--	500	328	364	374
Metals						
Arsenic, dissolved	mg/l	0.01	--	--	--	--
Barium, dissolved	mg/l	1	--	--	--	0.257
Boron, dissolved	mg/l	5	--	--	--	--
Cadmium, dissolved	mg/l	0.005	--	--	--	--
Calcium, dissolved	mg/l	--	--	86.9	96.6	--
Chromium, dissolved	mg/l	0.05	--	--	--	--
Copper, dissolved	mg/l	--	1	--	--	--
Iron, dissolved	mg/l	--	0.3	0.04	<0.02	0.02
Lead, dissolved	mg/l	0.01	--	--	--	--
Magnesium, dissolved	mg/l	--	--	27.7	27.7	26.1
Manganese, dissolved	mg/l	--	0.05	<0.01	<0.01	<0.01
Potassium, dissolved	mg/l	--	--	<0.4	2	3.7
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	3.2	3.6	3.5
Zinc, dissolved	mg/l	--	5	--	--	--
Phenols						
Phenolics, Total Recoverable	mg/l	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5
				01-Jan-1990	01-Mar-1990	01-Dec-1990	01-Nov-1991	01-Jun-1992	01-Dec-1992	01-Sep-1993	01-May-1994	01-Nov-1994
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	240	260	289	220	--	--	204	230	329
Ammonia Nitrogen	mg/l	--	--	--	--	--	--	--	--	--	--	--
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	--	7	<1	5	5.9	<1	10.3
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chloride	mg/l	--	250	24	7	11	9	11	11	11	13	14
Conductivity	uS/cm	--	--	--	--	640	440	--	--	454	458	646
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Dissolved Organic Carbon	mg/l	--	5	--	--	--	--	--	--	--	--	--
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	--	204	250	196	211	272	189	211	302
Nitrate as N	mg/l	10.0	--	--	--	--	--	--	--	--	--	--
Nitrite as N	mg/l	1.0	--	--	--	--	--	--	--	--	--	--
Nitrogen, Total Kjeldahl	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.17	7.32	--	--	--	--	7.29	7.49	7.42
Phosphorus	mg/l	--	--	--	0.032	--	--	<0.1	0.03	--	--	<0.1
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	9	4	3	1	--	--	13	18	7
Temperature (Field)	deg c	--	15	--	--	--	--	--	--	--	--	--
Total Dissolved Solids	mg/l	--	500	--	--	--	--	--	--	--	--	--
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	0.002	<0.005	<0.005	<0.05	<0.2	--	--	--	0.001
Barium, dissolved	mg/l	1	--	--	--	0.346	0.23	<0.2	0.26	--	--	0.288
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	--	--	--	0.07	--	0.1	--	--	0.075
Cadmium, dissolved	mg/l	0.005	--	<0.001	--	<0.002	<0.004	<0.02	<0.01	--	--	<0.001
Calcium, dissolved	mg/l	--	--	--	71	82	55	64	81	55	63	81
Chromium, dissolved	mg/l	0.05	--	<0.05	<0.001	<0.006	<0.01	<0.02	<0.01	--	--	<0.01
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.05	0.004	<0.005	<0.01	0.021	0.03	--	--	<0.01
Iron, dissolved	mg/l	--	0.3	7	7.93	7.64	4.61	5.8	3.36	11.94	4.35	0.35
Lead, dissolved	mg/l	0.01	--	<0.01	<0.005	0.04	0.18	<0.1	<0.05	--	--	<0.004
Magnesium, dissolved	mg/l	--	--	--	17	17	14	12	17	13	13	24
Manganese, dissolved	mg/l	--	0.05	0.18	0.25	0.34	0.17	0.22	0.22	0.31	0.25	0.31
Mercury, dissolved	mg/l	0.001	--	--	--	--	--	--	--	--	--	--
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	--	9.44	9.81	7.3	9	10	9	8	10
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	--	12	13	8	10	11	9	9	15
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.05	<0.008	<0.005	<0.001	0.11	0.16	--	--	<0.01
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	<0.002	0.006	--	<0.002	0.002	0.005	0.037	<0.002	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5
				01-Jun-1995	12-Jun-1996	01-Jun-1997	01-Nov-1997	01-Jun-1998	01-Nov-1998	01-Aug-1999	01-Nov-1999	01-Jun-2000
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	250	238	200	374	358	340	414	372	483
Ammonia Nitrogen	mg/l	--	--	--	--	--	--	--	--	--	--	--
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	11	3	1	3	4	<1	7	3	4
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chloride	mg/l	--	250	15	18	14.5	--	29.4	25.2	25.6	27.2	32.5
Conductivity	uS/cm	--	--	447	526	413	723	664	726	842	770	--
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Dissolved Organic Carbon	mg/l	--	5	--	--	--	--	--	--	--	--	5.9
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	362	265	250	421	353	347	450	381	459
Nitrate as N	mg/l	10.0	--	--	--	--	--	--	--	--	--	--
Nitrite as N	mg/l	1.0	--	--	--	--	--	--	--	--	--	--
Nitrogen, Total Kjeldahl	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	8.25	7.51	8.04	7.81	7.18	7.05	7.35	7.36	7.63
Phosphorus	mg/l	--	--	--	<0.1	--	--	--	--	--	--	--
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	10	13.9	17	23	22	26	25	26	26
Temperature (Field)	deg c	--	15	--	--	--	--	--	--	--	--	--
Total Dissolved Solids	mg/l	--	500	--	288	248	384	376	430	556	494	552
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	--	<0.001	--	--	--	--	--	--	--
Barium, dissolved	mg/l	1	--	--	0.256	--	--	--	--	--	--	0.524
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	--	0.056	--	--	--	--	--	--	--
Cadmium, dissolved	mg/l	0.005	--	--	<0.001	--	--	--	--	--	--	--
Calcium, dissolved	mg/l	--	--	92	79.4	68.5	126	106	103	140	118	--
Chromium, dissolved	mg/l	0.05	--	--	<0.01	--	--	--	--	--	--	--
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	--	<0.01	--	--	--	--	--	--	--
Iron, dissolved	mg/l	--	0.3	8.52	6.42	0.31	11.1	9.08	10.4	12.9	12	14.3
Lead, dissolved	mg/l	0.01	--	--	0.0002	--	--	--	--	--	--	--
Magnesium, dissolved	mg/l	--	--	19	16.1	12.5	25.5	21.1	21.5	24	20.7	25.2
Manganese, dissolved	mg/l	--	0.05	0.5	0.377	0.28	0.69	0.47	0.48	0.6	0.52	0.62
Mercury, dissolved	mg/l	0.001	--	--	--	--	--	--	--	--	--	--
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	8	8.11	5.7	10.1	9.7	6.9	8.3	8.8	9.7
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	10	10.1	7.9	21.5	11.6	21.7	23	23.6	22.9
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	--	<0.01	--	--	--	--	--	--	--
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	<0.002	0.011	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5
				01-Jul-2001	01-Nov-2001	01-Jul-2002	01-Nov-2002	10-Jul-2003	27-Dec-2003	26-Aug-2004	22-Dec-2004	21-Jun-2005
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	426	424	360	447	444	561	489	549	428
Ammonia Nitrogen	mg/l	--	--	--	--	0.98	1	1.09	1.13	0.85	0.93	0.66
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	3	<1	2	1	<1	1	<1	<1	<3
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	--	--	--	19	23	25	25	21	16
Chloride	mg/l	--	250	31.9	31.5	29.1	32.8	33.2	33.9	32.2	32	40.4
Conductivity	uS/cm	--	--	790	826	736	928	903	1070	962	1040	890
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Dissolved Organic Carbon	mg/l	--	5	5.4	9	4.9	5.7	5.5	8	5.8	6.2	12.8
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	429	454	358	435	441	503	473	480	424
Nitrate as N	mg/l	10.0	--	--	--	<0.1	<0.1	<0.1	0.1	0.2	0.1	<0.1
Nitrite as N	mg/l	1.0	--	--	--	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrogen, Total Kjeldahl	mg/l	--	--	--	--	1.08	1.38	1.41	1.6	1.34	1.52	1.08
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.19	8.36	7.16	6.99	--	--	--	--	6.83
Phosphorus	mg/l	--	--	0.03	0.03	0.03	0.04	0.03	0.04	0.02	0.17	0.08
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	0.633
Sulphate	mg/l	--	500 ⁽³⁾	26	24	17	27	12	6	16	12	12
Temperature (Field)	deg c	--	15	--	--	--	--	--	--	--	--	10.4
Total Dissolved Solids	mg/l	--	500	488	--	404	504	151	615	564	601	510
Total Suspended Solids	mg/l	--	--	--	--	54	42	32	30	40	290	135
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	0.001	<0.001	0.001	<0.001	0.001	<0.001
Barium, dissolved	mg/l	1	--	0.49	0.525	0.39	0.495	0.489	0.603	0.53	0.551	0.49
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.29	0.26	0.19	0.26	0.219	0.345	0.293	0.328	0.22
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	137	141	111	134	137	156	143	148	129
Chromium, dissolved	mg/l	0.05	--	<0.01	<0.01	<0.01	<0.01	0.003	<0.001	<0.001	<0.002	<0.002
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.01	<0.01	<0.01	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002
Iron, dissolved	mg/l	--	0.3	12.5	15.8	10.4	13	14.9	17	17.6	17.7	15.6
Lead, dissolved	mg/l	0.01	--	<0.0002	<0.0002	<0.0002	0.0004	<0.0002	<0.02	<0.0002	0.0003	<0.0002
Magnesium, dissolved	mg/l	--	--	21.2	24.8	19.6	23.7	24	27.5	27.9	26.9	24.7
Manganese, dissolved	mg/l	--	0.05	0.54	0.61	0.44	0.54	0.516	0.626	0.584	0.608	0.578
Mercury, dissolved	mg/l	0.001	--	--	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00006	<0.00005
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	7.5	9.5	12.3	10.6	11.1	10.9	10.8	11.4	9.2
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	23.4	27.3	23.1	26.9	31.7	35.4	31	32.5	30
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.01	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005	<0.005	<0.005
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5
				09-Dec-2005	30-Jun-2006	28-Nov-2006	29-Jun-2007	26-Nov-2007	13-Jun-2008	26-Nov-2008	06-Jul-2009	08-Dec-2009
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	458	412	266	392	425	368	401	348	398
Ammonia Nitrogen	mg/l	--	--	0.82	0.78	0.67	0.79	0.82	0.69	0.79	0.76	0.83
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	<3	2	<1	4	1	5	<1	<1	<1
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	28	15	<5	13	13	8	28	<5	15
Chloride	mg/l	--	250	37.9	45	31	37	36	34	33	40	33
Conductivity	uS/cm	--	--	520	495	505	1460	1210	794	852	789	852
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	--	1210	1105	1060
Dissolved Organic Carbon	mg/l	--	5	17.4	6.3	3.1	6.6	7.4	5	5.4	4.8	5.5
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	416	409	261	367	372	375	388	328	365
Nitrate as N	mg/l	10.0	--	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.10	<0.10	<0.10
Nitrite as N	mg/l	1.0	--	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.10	<0.10	<0.10
Nitrogen, Total Kjeldahl	mg/l	--	--	1.42	1.04	0.9	1.15	1.12	0.9	1.10	0.97	0.98
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.2	7.3	7.4	7.3	7.2	7.1	7.2	7.0	7.3
Phosphorus	mg/l	--	--	0.47	0.82	<0.01	0.24	0.44	0.43	0.01	0.21	0.24
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	0.727	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	15	8	14	10	13	15	15	19	18
Temperature (Field)	deg c	--	15	5	8	6	9	7	8	5	14.0	6
Total Dissolved Solids	mg/l	--	500	513	580	404	536	562	516	554	513	554
Total Suspended Solids	mg/l	--	--	192	745	760	614	742	288	290	311	263
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.239	0.47	0.29	0.44	0.42	0.35	0.40	0.38	0.44
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.31	0.22	0.13	0.21	0.3	0.2	0.24	0.22	0.11
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	123	126	75	114	116	114	119	100	113
Chromium, dissolved	mg/l	0.05	--	<0.002	0.001	0.001	0.002	0.002	0.02	0.002	0.004	0.002
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Iron, dissolved	mg/l	--	0.3	0.069	15.4	9.76	13.9	14.7	11.2	12.7	13.0	13.2
Lead, dissolved	mg/l	0.01	--	<0.0002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Magnesium, dissolved	mg/l	--	--	26.6	23	18	20	20	22	22	19	20
Manganese, dissolved	mg/l	--	0.05	0.328	0.48	0.37	0.51	0.58	0.47	0.50	0.44	0.47
Mercury, dissolved	mg/l	0.001	--	<0.00006	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	10.4	10	8	8	9	8	10	8	9
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	34.1	29	24	30	26	28	29	24	26
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.005	<0.01	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5
				30-Jun-2010	30-Nov-2010	13-Jun-2011	24-Nov-2011	22-Jun-2012	10-Nov-2012	25-Jun-2013	20-Nov-2013	27-May-2014
				R-3	R-1	S-6	OMM-5	S-3	S-5	S-4	S-5	A-3
General Chemistry												
Alkalinity (Total as CaCO ₃)	mg/l	--	--	368	365	277	343	360	410	340	380	310
Ammonia Nitrogen	mg/l	--	--	0.77	0.87	0.65	0.79	0.83	0.94	1.1	1.0	0.96
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	2	--	--	--	--	--	--	--
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	13	20	15	18	15	15	18	17	6.8
Chloride	mg/l	--	250	39	42	64	54	42	39	61	41	46
Conductivity	uS/cm	--	--	809	820	729	823	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	995	1008	--	795	945	925	890	900	805
Dissolved Organic Carbon	mg/l	--	5	4.8	4.6	3.9	3.9	3.3	3.9	3.3	4.1	3.2
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	350	384	311	369	360	400	390	400	340
Nitrate as N	mg/l	10.0	--	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Nitrite as N	mg/l	1.0	--	<0.10	<0.10	<0.10	<0.10	<0.010	<0.010	<0.010	<0.010	<0.010
Nitrogen, Total Kjeldahl	mg/l	--	--	0.82	0.85	0.61	1.41	1.3	1.5	1.4	1.2	1.2
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	<0.10	<0.10	<0.10	<0.10	<0.10
pH (Field)	-	--	--	7.4	7.3	--	8.03	7.4	7.5	7.3	7.4	7.00
Phosphorus	mg/l	--	--	0.09	0.16	0.02	0.04	0.18	0.11	0.15	0.022	0.019
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	18	20	21	22	19	16	19	19	21
Temperature (Field)	deg c	--	--	15	7	--	7.0	11	7	10	6	10.5
Total Dissolved Solids	mg/l	--	500	<u>526</u>	<u>533</u>	474	<u>535</u>	434	456	454	<u>506</u>	424
Total Suspended Solids	mg/l	--	--	--	287	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010	<0.001	<0.001	<0.0010
Barium, dissolved	mg/l	1	--	0.36	0.35	0.31	0.39	0.39	0.43	0.41	0.43	0.36
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.15	0.15	0.11	0.15	0.13	0.16	0.15	0.16	0.13
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.00010	<0.00010	<0.0001	<0.0001	<0.00010
Calcium, dissolved	mg/l	--	--	112	116	95	113	110	120	120	120	100
Chromium, dissolved	mg/l	0.05	--	0.005	0.002	0.001	0.001	<0.0050	<0.0050	<0.005	<0.005	<0.0050
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010	<0.001	<0.001	<0.0010
Iron, dissolved	mg/l	--	0.3	<u>13.0</u>	<u>10.7</u>	<u>9.67</u>	<u>11.4</u>	<u>12</u>	<u>14</u>	<u>12</u>	<u>13</u>	<u>11</u>
Lead, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	<0.00050	<0.00050	<0.0005	<0.0005	<0.00050
Magnesium, dissolved	mg/l	--	--	17	23	18	21	22	23	23	24	20
Manganese, dissolved	mg/l	--	0.05	<u>0.52</u>	<u>0.47</u>	<u>0.42</u>	<u>0.52</u>	<u>0.56</u>	<u>0.6</u>	<u>0.55</u>	<u>0.6</u>	<u>0.5</u>
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	7	10	8	9	9.1	9.4	9.7	9.5	9
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	22	27	24	27	32	29	33	31	32
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.01	<0.01	<0.01	<0.01	<0.0050	<0.0050	<0.005	<0.005	<0.0050
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	--	<0.001	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5
				25-Nov-2014	26-May-2015	30-Nov-2015	14-Jun-2016	29-Nov-2016	01-Jun-2017	22-Nov-2017	28-Jun-2018	26-Nov-2018
				R-5	OMM-5	5	OMM-5	OMM-5	OMM5	OMM-5	OMM-5	OMM-5
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	400	358	445	369	350	278	281	500	533
Ammonia Nitrogen	mg/l	--	--	1.2	2.43 ⁽⁶⁾	1.55	1.43	1.33	0.89	1.08	1.72	1.72
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	--	--	--	--	--	--	--
Bromide	mg/l	--	--	--	--	--	<0.1	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	8.5	25	20	15	15	14	12	22	22
Chloride	mg/l	--	250	49	47	52	53	47	44	32	45	46
Conductivity	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	890	812	805	733	701	740	591	961	960
Dissolved Organic Carbon	mg/l	--	5	4.0	2.9	5.1	3.9	4.3	3.4	5.4	6.3	6.0
Fluoride	mg/l	1.5	--	--	--	--	<0.1	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	390	464	503	363	325	262	222	357	433
Nitrate as N	mg/l	10.0	--	<0.10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite as N	mg/l	1.0	--	<0.010	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrogen, Total Kjeldahl	mg/l	--	--	1.3	1.4	1.6	1.5	1.3	1.0	1.0	1.9	2.0
Nitrogen, Nitrate-Nitrite	mg/l	--	--	<0.10	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.5	6.97	7.1	7.08	7.25	7.2	7.33	7.05	7.42
Phosphorus	mg/l	--	--	0.023	0.04	0.04	0.05	0.06	0.02	0.03	0.04	<0.01
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	<0.2	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	13	15	12	14	14	17	12	7	5
Temperature (Field)	deg c	--	--	15	6	11.1	7	11.6	8.8	11	5.8	11.9
Total Dissolved Solids	mg/l	--	500	480	464	534	454	420	362	270	538	528
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	<0.01	--	0.003	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	<0.001	--	<0.0005	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.44	0.399	0.517	0.418	0.375	0.287	0.283	0.515	0.562
Beryllium, dissolved	mg/l	--	--	--	<0.001	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.17	0.17	0.184	0.14	0.162	0.107	0.1	0.162	0.19
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	120	148	152	110	95.8	77	66.8	104	127
Chromium, dissolved	mg/l	0.05	--	<0.005	<0.05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	--	<0.001	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.001	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Iron, dissolved	mg/l	--	0.3	13	12.5	14.8	12	9.97	7.56	7.99	15.1	17.2
Lead, dissolved	mg/l	0.01	--	<0.0005	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Magnesium, dissolved	mg/l	--	--	23	22.6	29.7	21.4	20.7	17	13.5	23.9	28.4
Manganese, dissolved	mg/l	--	0.05	0.59	0.623	0.736	0.541	0.512	0.374	0.358	0.597	0.711
Mercury, dissolved	mg/l	0.001	--	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	<0.005	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	<0.005	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	9.7	11.3	10.4	10.6	8.86	8.07	8.19	11.9	15.2
Selenium, dissolved	mg/l	0.05	--	--	<0.005	--	<0.001	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	<0.001	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	32	38.7	35.5	33.4	29.6	27.2	28.9	37.1	40.6
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	<0.001	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	<0.01	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	<0.0001	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	0.008	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.005	<0.02	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	--	--	--	--	--	<0.001	<0.001	<0.001	0.003

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5
				18-Jun-2019	29-Nov-2019	04-Jun-2020	30-Nov-2020	08-Jun-2021	25-Nov-2021	20-Jun-2022	23-Nov-2022	23-Nov-2022
				OMM-5	OMM5	OMM-5	OMM-5	OMM-5	OMM-5	OMM-5	OMM-5	Dup-2
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	250	345	359	392	372	392	277	339	337
Ammonia Nitrogen	mg/l	--	--	0.76	0.87	1.00	1.38	1.18	1.42	1.08	1.19	1.22
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	--	--	--	--	--	--	--
Bromide	mg/l	--	--	<0.1	0.1	<0.1	0.1	0.1	0.2	<0.1	0.1	0.2
Chemical Oxygen Demand	mg/l	--	--	<10	<10	18	18	19	22	14	10	10
Chloride	mg/l	--	250	51	46	56	38	37	35	85.6	58.0	57.8
Conductivity	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	820	980	851	832	766	903	760	862	--
Dissolved Organic Carbon	mg/l	--	5	2.0	4.0	8.5	4.7	4.1	4.8	3.5	5.2	5.4
Fluoride	mg/l	1.5	--	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1	<0.1
Hardness, Calcium Carbonate	mg/l	--	--	260	363	327	348	304	339	311	311	309
Nitrate as N	mg/l	10.0	--	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite as N	mg/l	1.0	--	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrogen, Total Kjeldahl	mg/l	--	--	0.8	1.0	1.0	1.3	1.3	1.7	1.4	1.3	1.2
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.35	7.4	7.32	7.14	7.26	6.98	7.30	7.28	--
Phosphorus	mg/l	--	--	0.03	0.17	0.02	0.04	0.02	0.03	0.04	0.02	0.02
Phosphorus, Total Orthophosphate	mg/l	--	--	<0.2	<0.2	<0.2	<1.0 ⁽⁷⁾	<0.2	<0.2	<0.2	<0.9 ⁽⁸⁾	<0.9 ⁽⁸⁾
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	21	16	23	16	17	17	27.1	20.1	19.8
Temperature (Field)	deg c	--	15	12.1	8.1	9.3	7.4	11.5	8.5	11.3	8.1	--
Total Dissolved Solids	mg/l	--	500	338	484	452	522	446	480	434	452	474
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	0.002	0.003	0.003	0.002	0.007	0.003	0.004	0.003	0.003
Antimony, dissolved	mg/l	0.006	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.284	0.359	0.373	0.399	0.354	0.407	0.362	0.351	0.355
Beryllium, dissolved	mg/l	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron, dissolved	mg/l	5	--	0.096	0.14	0.139	0.171	0.143	0.156	0.115	0.124	0.125
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	75.7	107	96.1	100	88.7	99.2	91.6	91.7	90.9
Chromium, dissolved	mg/l	0.05	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Copper, dissolved	mg/l	--	1	<0.0005	<0.0005	<0.0005	<0.0005	0.0017	<0.0005	<0.0005	<0.0005	<0.0005
Iron, dissolved	mg/l	--	0.3	7.65	10.7	11	12.4	11	13.1	9.95	10.6	10.6
Lead, dissolved	mg/l	0.01	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Magnesium, dissolved	mg/l	--	--	17.3	23.2	21.1	23.6	19.9	22.1	19.9	19.9	20
Manganese, dissolved	mg/l	--	0.05	0.352	0.474	0.515	0.526	0.556	0.585	0.717	0.538	0.536
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	0.0018	0.0008	0.0009	<0.0005	0.0007	<0.0005	0.0006	0.0005	0.0005
Nickel, dissolved	mg/l	--	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Potassium, dissolved	mg/l	--	--	8.39	9.5	9.08	10.4	8.55	10.3	9.6	9.19	9.15
Selenium, dissolved	mg/l	0.05	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silver, dissolved	mg/l	--	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	29.8	32.7	31.7	30	26.8	27.8	26.8	26.6	26.7
Strontium, dissolved	mg/l	--	--	0.214	0.274	0.288	0.294	0.295	0.313	0.291	0.283	0.288
Thallium, dissolved	mg/l	--	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Tin, dissolved	mg/l	--	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Titanium, dissolved	mg/l	--	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Tungsten, dissolved	mg/l	--	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, dissolved	mg/l	0.02	--	0.0001	0.0001	0.0001	<0.0001	0.0001	<0.0001	0.0001	<0.0001	0.0001
Vanadium, dissolved	mg/l	--	--	<0.0005	0.0006	0.0006	0.0008	0.0006	0.0007	0.0006	0.0006	0.0006
Zinc, dissolved	mg/l	--	5	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	<0.001	<0.001	<0.001	0.002	<0.001	0.002	<0.001	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5
				23-Nov-2022	10-May-2023	29-Nov-2023	06-Dec-2023	25-Apr-2024	22-Oct-2024
General Chemistry				OMM5	OMM-5	OMM-5	OMM-5	OMM - 5	OMM5
Alkalinity (Total as CaCO3)	mg/l	--	--	--	223	364	--	352	393
Ammonia Nitrogen	mg/l	--	--	--	0.96	0.99	--	1.31	1.36
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	--	--	--	--
Bromide	mg/l	--	--	--	<0.1	0.1	--	<0.1	0.1
Chemical Oxygen Demand	mg/l	--	--	--	14	12	--	15	13
Chloride	mg/l	--	250	--	121	59	--	49	55
Conductivity	uS/cm	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	862	874	922	--	858	913
Dissolved Organic Carbon	mg/l	--	5	--	3.7	--	3.3	3.8	4.3
Fluoride	mg/l	1.5	--	--	<0.1	<0.1	--	<0.1	<0.1
Hardness, Calcium Carbonate	mg/l	--	--	--	278	327	--	316	387
Nitrate as N	mg/l	10.0	--	--	<0.1	<0.1	--	<0.1	<0.1
Nitrite as N	mg/l	1.0	--	--	<0.05	<0.05	--	<0.05	<0.05
Nitrogen, Total Kjeldahl	mg/l	--	--	--	1.1	1.2	--	1.5	1.5
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.28	6.87	7.63	--	7.35	6.94
Phosphorus	mg/l	--	--	--	0.02	<0.01	--	0.13	<0.01
Phosphorus, Total Orthophosphate	mg/l	--	--	--	<0.5	<0.5	--	<0.5	<0.5
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	--	26	22	--	17	15
Temperature (Field)	deg c	--	15	8.1	8.1	7.1	--	8.6	12.5
Total Dissolved Solids	mg/l	--	500	--	466	472	--	418	506
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--
Metals									
Aluminum, dissolved	mg/l	--	--	--	0.002	0.003	--	0.003	0.003
Antimony, dissolved	mg/l	0.006	--	--	<0.0005	<0.0005	--	<0.0005	<0.0005
Arsenic, dissolved	mg/l	0.01	--	--	<0.001	<0.001	--	<0.001	0.002
Barium, dissolved	mg/l	1	--	--	0.288	0.336	--	0.365	0.441
Beryllium, dissolved	mg/l	--	--	--	<0.0005	<0.0005	--	<0.0005	<0.0005
Boron, dissolved	mg/l	5	--	--	0.07	0.113	--	0.109	0.149
Cadmium, dissolved	mg/l	0.005	--	--	<0.0001	<0.0001	--	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	--	81.4	97.1	--	90.3	112
Chromium, dissolved	mg/l	0.05	--	--	<0.001	<0.001	--	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	--	<0.0005	<0.0005	--	<0.0005	<0.0005
Copper, dissolved	mg/l	--	1	--	<0.0005	<0.0005	--	<0.0005	<0.0005
Iron, dissolved	mg/l	--	0.3	--	7.87	10.2	--	10.1	12.6
Lead, dissolved	mg/l	0.01	--	--	<0.0001	<0.0001	--	0.0003	<0.0001
Magnesium, dissolved	mg/l	--	--	--	18.1	20.5	--	21.9	25.9
Manganese, dissolved	mg/l	--	0.05	--	0.407	0.509	--	0.534	0.607
Mercury, dissolved	mg/l	0.001	--	--	<0.0001	<0.0001	--	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	0.0008	0.0006	--	0.0006	0.0007
Nickel, dissolved	mg/l	--	--	--	<0.001	<0.001	--	<0.001	<0.001
Potassium, dissolved	mg/l	--	--	--	7.35	8.08	--	9.24	10.7
Selenium, dissolved	mg/l	0.05	--	--	<0.001	<0.001	--	<0.001	0.024
Silver, dissolved	mg/l	--	--	--	<0.0001	<0.0001	--	<0.0001	<0.0001
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	--	38.8	31	--	36.1	36
Strontium, dissolved	mg/l	--	--	--	0.236	0.295	--	0.262	0.328
Thallium, dissolved	mg/l	--	--	--	<0.0001	<0.0001	--	<0.0001	<0.0001
Tin, dissolved	mg/l	--	--	--	<0.005	<0.005	--	<0.005	<0.005
Titanium, dissolved	mg/l	--	--	--	<0.005	<0.005	--	<0.005	0.012
Tungsten, dissolved	mg/l	--	--	--	<0.01	<0.01	--	<0.01	<0.01
Uranium, dissolved	mg/l	0.02	--	--	<0.0001	0.0001	--	<0.0001	0.0001
Vanadium, dissolved	mg/l	--	--	--	<0.0005	0.0006	--	0.0006	0.0011
Zinc, dissolved	mg/l	--	5	--	<0.005	<0.005	--	<0.005	<0.005
Phenols									
Phenolics, Total Recoverable	mg/l	--	--	--	<0.001	<0.001	--	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6
				01-Jan-1990	01-Mar-1990	01-Dec-1990	01-Nov-1991	01-Jun-1992	01-Dec-1992	01-Sep-1993	01-May-1994	01-Nov-1994
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	174	260	260	265	--	--	210	309	496
Ammonia Nitrogen	mg/l	--	--	--	--	--	--	--	--	--	--	--
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	--	39	<1	2	2.9	<1	7.2
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chloride	mg/l	--	250	3	8	9	8	3	13	7	17	37
Conductivity	uS/cm	--	--	--	380	533	590	--	--	420	612	1075
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Dissolved Organic Carbon	mg/l	--	5	--	--	--	--	--	--	--	--	--
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	--	197	265	312	165	425	194	300	532
Nitrate as N	mg/l	10.0	--	--	--	--	--	--	--	--	--	--
Nitrite as N	mg/l	1.0	--	--	--	--	--	--	--	--	--	--
Nitrogen, Total Kjeldahl	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.4	7.32	--	--	--	--	7.21	7.25	7.43
Phosphorus	mg/l	--	--	--	<0.01	--	--	<0.1	0.03	--	--	0.153
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	14	7	1	4	--	--	3	16	29
Temperature (Field)	deg c	--	15	--	--	--	--	--	--	--	--	--
Total Dissolved Solids	mg/l	--	500	--	--	--	--	--	--	--	--	--
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	0.002	<0.005	<0.005	<0.05	<0.2	--	--	--	0.002
Barium, dissolved	mg/l	1	--	--	--	0.346	0.23	<0.214	0.26	--	--	0.288
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	--	--	--	0.08	--	0.08	--	--	0.087
Cadmium, dissolved	mg/l	0.005	--	<0.001	<0.001	<0.002	<0.004	<0.02	<0.01	--	--	<0.001
Calcium, dissolved	mg/l	--	--	--	56	75	95	47	129	59	93	151
Chromium, dissolved	mg/l	0.05	--	<0.05	<0.001	<0.006	<0.01	<0.02	<0.01	--	--	<0.01
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.05	0.003	0.106	<0.01	<0.005	0.01	--	--	<0.01
Iron, dissolved	mg/l	--	0.3	0.88	0.85	1.49	0.08	1.9	1.8	6.03	5.97	0.378
Lead, dissolved	mg/l	0.01	--	<0.25	<0.005	<0.03	<0.04	<0.1	<0.05	--	--	0.004
Magnesium, dissolved	mg/l	--	--	--	10	15	18	12	25	11	16	37
Manganese, dissolved	mg/l	--	0.05	1	1.34	1.57	1.47	1.26	4.7	2.03	1.4	2.04
Mercury, dissolved	mg/l	0.001	--	--	--	--	--	--	--	--	--	--
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	--	5	6	6	6	9	6	7	9
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	--	4	7	4	9	12	6	8	18
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.05	0.013	<0.005	<0.01	<0.02	0.05	--	--	<0.01
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	<0.002	<0.002	--	<0.002	<0.002	<0.002	0.006	<0.002	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6
				01-Jun-1995	12-Jun-1996	26-Nov-1996	01-Jun-1997	01-Nov-1997	01-Jun-1998	01-Nov-1998	01-Aug-1999	01-Nov-1999
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	220	194	181	170	436	224	569	606	640
Ammonia Nitrogen	mg/l	--	--	--	--	--	--	--	--	--	--	--
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	8	2	2	<1	1	1	<1	11	<1
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chloride	mg/l	--	250	2	8	20.4	1.2	--	4.7	41.9	37.3	33
Conductivity	uS/cm	--	--	362	421	550	297	877	419	1160	1142	1170
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Dissolved Organic Carbon	mg/l	--	5	--	--	--	--	--	--	--	--	--
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	179	164	274	173	528	196	596	617	607
Nitrate as N	mg/l	10.0	--	--	--	--	--	--	--	--	--	--
Nitrite as N	mg/l	1.0	--	--	--	--	--	--	--	--	--	--
Nitrogen, Total Kjeldahl	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	8.04	7.72	8.25	8.16	7.98	7.29	6.86	7.2	7.6
Phosphorus	mg/l	--	--	--	<0.1	--	--	--	--	--	--	--
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	4	12.4	35	4	39	9	29	17	15
Temperature (Field)	deg c	--	15	--	--	--	--	--	--	--	--	--
Total Dissolved Solids	mg/l	--	500	--	214	338	178	506	230	701	754	688
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	--	<0.001	<0.001	--	--	--	--	--	--
Barium, dissolved	mg/l	1	--	--	0.256	--	--	--	--	--	--	--
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	--	0.044	--	--	--	--	--	--	--
Cadmium, dissolved	mg/l	0.005	--	--	<0.001	--	--	--	--	--	--	--
Calcium, dissolved	mg/l	--	--	55	50.5	87.6	48.5	168	62.4	176	190	182
Chromium, dissolved	mg/l	0.05	--	--	<0.01	--	--	--	--	--	--	--
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	--	<0.01	--	--	--	--	--	--	--
Iron, dissolved	mg/l	--	0.3	3.28	2.21	0.18	0.02	5.67	3.03	24.9	25.5	29.2
Lead, dissolved	mg/l	0.01	--	--	<0.0002	<0.0002	--	--	--	--	--	--
Magnesium, dissolved	mg/l	--	--	10	9.14	13.3	7.59	25.8	9.69	37.5	34	36.4
Manganese, dissolved	mg/l	--	0.05	0.8	0.602	0.15	0.44	1.2	0.47	1.62	1.55	1.34
Mercury, dissolved	mg/l	0.001	--	--	--	--	--	--	--	--	--	--
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	4.5	4.38	7.1	2.4	11	5	4	5.1	7.6
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	10	6.59	14.9	7.2	47.7	9.7	37.8	49.1	42.1
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	--	<0.01	--	--	--	--	--	--	--
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	--	0.038	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6
				01-Jun-2000	01-Nov-2000	01-Jul-2001	01-Nov-2001	01-Jul-2002	01-Nov-2002	10-Jul-2003	27-Dec-2003	26-Aug-2004
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	254	692	280	507	241	213	318	477	195
Ammonia Nitrogen	mg/l	--	--	--	--	--	--	0.45	0.29	0.43	0.51	0.46
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	<1	<1	<1	<1	<1	<1	<1	1	<1
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	--	--	--	--	6	11	8	16	17
Chloride	mg/l	--	250	3.1	26.6	53.1	19.6	3.2	38.4	33.4	58.5	25.2
Conductivity	uS/cm	--	--	--	--	634	971	449	522	698	1020	473
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Dissolved Organic Carbon	mg/l	--	5	1.9	4.8	1.4	9	1.6	1.9	1.6	4	3.3
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	205	642	347	579	222	224	327	471	151
Nitrate as N	mg/l	10.0	--	--	--	--	--	<0.1	<0.1	0.1	0.1	0.2
Nitrite as N	mg/l	1.0	--	--	--	--	--	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrogen, Total Kjeldahl	mg/l	--	--	--	--	--	--	0.37	0.42	0.42	0.77	0.96
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	8.03	7.51	7.38	8.17	7.31	7.31	--	--	--
Phosphorus	mg/l	--	--	--	<0.01	0.02	<0.01	<0.01	0.02	<0.01	0.02	<0.01
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	5	11	10	12	4	4	10	7	9
Temperature (Field)	deg c	--	15	--	--	--	--	--	--	--	--	--
Total Dissolved Solids	mg/l	--	500	250	686	396	--	258	258	415	570	253
Total Suspended Solids	mg/l	--	--	--	--	--	--	18	13	18	32	5
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	--	--	0.001	0.001	0.001	0.001	0.001	0.002	0.001
Barium, dissolved	mg/l	1	--	--	0.515	0.225	0.49	0.155	0.18	0.251	0.372	0.123
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.152	--	0.18	0.43	0.14	0.21	0.022	0.286	0.046
Cadmium, dissolved	mg/l	0.005	--	--	--	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	--	--	108	172	67.5	69	99	147	47
Chromium, dissolved	mg/l	0.05	--	--	--	<0.01	<0.01	<0.01	<0.01	0.001	<0.001	0.001
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	--	--	<0.01	<0.01	<0.01	<0.01	0.005	<0.002	<0.002
Iron, dissolved	mg/l	--	0.3	5.98	20.7	9.99	20.6	5.97	3.91	4.75	14.5	2.82
Lead, dissolved	mg/l	0.01	--	--	--	<0.0002	<0.0002	0.0005	<0.0002	<0.0002	<0.02	0.0002
Magnesium, dissolved	mg/l	--	--	10.5	42.5	18.8	36.3	12.9	12.5	19.3	25.5	8.21
Manganese, dissolved	mg/l	--	0.05	0.58	1.34	0.52	1.13	0.44	0.42	0.441	0.838	0.223
Mercury, dissolved	mg/l	0.001	--	--	--	--	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	4.6	9	4.9	7	7.3	5.5	6.1	7.5	5.3
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	14.2	25.7	17.9	40.7	12.8	17.4	21.8	29.9	42.5
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	--	--	<0.01	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	--	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6
				22-Dec-2004	21-Jun-2005	09-Dec-2005	30-Jun-2006	28-Nov-2006	29-Jun-2007	26-Nov-2007	13-Jun-2008	26-Nov-2008
R-7												
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	366	190	276	274	284	231	234	275	371
Ammonia Nitrogen	mg/l	--	--	0.51	0.35	0.32	0.25	0.21	0.23	0.23	0.21	0.23
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	<1	<3	<3	<1	1	1	<1	11	<1
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	10	9	10	<5	<5	<5	<5	12	18
Chloride	mg/l	--	250	19.7	26.6	47.6	55	26	58	36	47	59
Conductivity	uS/cm	--	--	715	400	560	555	590	625	600	700	899
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	--	--	--	640
Dissolved Organic Carbon	mg/l	--	5	2	3.8	3.3	2.8	1.6	2.4	3.1	4.3	3.1
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	188	169	231	287	262	257	224	320	409
Nitrate as N	mg/l	10.0	--	0.1	0.1	0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.10
Nitrite as N	mg/l	1.0	--	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.10
Nitrogen, Total Kjeldahl	mg/l	--	--	0.81	0.62	0.62	0.47	0.44	0.43	0.43	0.69	0.66
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	--	7.33	7.3	7.3	7.2	7.2	7.1	7.1	7.2
Phosphorus	mg/l	--	--	<0.01	0.04	0.01	0.05	<0.01	0.07	0.03	0.01	0.01
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	0.856	1.05	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	13	15	17	21	24	22	27	24	21
Temperature (Field)	deg c	--	15	--	12.3	6	8	7	8	7	8	5
Total Dissolved Solids	mg/l	--	500	404	247	352	462	425	417	387	455	584
Total Suspended Solids	mg/l	--	--	11	14	39	54	56	33	23	36	29
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.19	0.117	0.101	0.23	0.19	0.15	0.18	0.17	0.22
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.064	0.015	0.06	0.05	0.08	0.05	0.06	0.06	0.11
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0003	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	59.4	52.1	70	90	77	80	70	97	126
Chromium, dissolved	mg/l	0.05	--	<0.002	<0.002	<0.002	<0.001	0.001	0.002	0.001	0.001	0.002
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.002	0.027	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	0.006
Iron, dissolved	mg/l	--	0.3	2.87	2.71	0.067	1.05	4.01	6.06	0.56	6.39	10.4
Lead, dissolved	mg/l	0.01	--	0.001	0.0006	<0.0002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Magnesium, dissolved	mg/l	--	--	9.59	9.43	13.6	15	17	14	12	19	23
Manganese, dissolved	mg/l	--	0.05	0.327	0.253	0.057	0.18	0.33	0.39	0.08	0.36	0.47
Mercury, dissolved	mg/l	0.001	--	<0.00006	<0.00005	<0.00006	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	6	4.4	5.9	5	6	7	5	4	5
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	78.6	25.6	36.8	32	33	38	30	29	39
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.005	0.013	<0.005	<0.01	0.02	<0.01	0.05	<0.01	<0.01
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	<0.001	<0.001	0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6
				06-Jul-2009	08-Dec-2009	30-Jun-2010 ⁽¹¹⁾	30-Nov-2010	13-Jun-2011	24-Nov-2011 ⁽¹¹⁾	22-Jun-2012	10-Nov-2012	25-Jun-2013
				R-14	R-6	R-4	R-2	S-3	OMM-6	S-4	S-4	S-2
General Chemistry												
Alkalinity (Total as CaCO ₃)	mg/l	--	--	291	542	424	408	311	276	280	320	360
Ammonia Nitrogen	mg/l	--	--	0.09	0.17	0.09	0.11	0.08	0.23	0.11	0.17	0.20
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	<1	<1	--	2	--	--	--	--	--
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	<5	10	5	33	25	15	25	10	9.2
Chloride	mg/l	--	250	100	99	62	86	88	94	100	98	89
Conductivity	uS/cm	--	--	885	1300	992	1030	842	876	--	--	--
Conductivity (Field)	uS/cm	--	--	695	675	700	680	--	918	735	755	768
Dissolved Organic Carbon	mg/l	--	5	3.9	4.7	5.0	4.2	<u>7.2</u>	4.4	<u>5.4</u>	4.2	2.6
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	324	437	351	362	311	241	240	280	330
Nitrate as N	mg/l	10.0	--	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.16	<0.10	<0.10
Nitrite as N	mg/l	1.0	--	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.010	<0.010	<0.010
Nitrogen, Total Kjeldahl	mg/l	--	--	0.48	0.48	0.40	0.41	0.47	0.82	0.77	1.2	0.87
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	0.16	<0.10	<0.10
pH (Field)	-	--	--	7.3	7.4	7.3	7.2	--	7.19	7.3	7.3	7.4
Phosphorus	mg/l	--	--	0.03	0.03	0.01	0.01	<0.01	<0.01	<0.002	<0.002	0.007
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	15	15	19	24	12	37	27	27	27
Temperature (Field)	deg c	--	15	15.0	6	11	8	--	9.0	11	6	9
Total Dissolved Solids	mg/l	--	500	<u>575</u>	<u>845</u>	<u>645</u>	<u>670</u>	<u>547</u>	<u>569</u>	454	<u>512</u>	<u>504</u>
Total Suspended Solids	mg/l	--	--	42	44	--	35	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	0.002	0.002	<0.01	<0.001	<0.001	<0.01	<0.0010	<0.0010	<0.001
Barium, dissolved	mg/l	1	--	0.19	0.28	0.24	0.19	0.24	0.17	0.18	0.2	0.28
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.13	0.17	0.27	0.22	0.22	0.26	0.27	0.31	0.24
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00010	<0.00010	<0.0001
Calcium, dissolved	mg/l	--	--	100	137	111	112	95	75	76	88	100
Chromium, dissolved	mg/l	0.05	--	0.004	0.004	0.023	0.002	<0.001	0.001	<0.0050	<0.0050	<0.005
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010	<0.001
Iron, dissolved	mg/l	--	0.3	<u>6.00</u>	<u>5.78</u>	<u>11.4</u>	<u>10.9</u>	<u>2.35</u>	<u>6.12</u>	<u>0.53</u>	<u>4.2</u>	0.11
Lead, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00050	<0.00050	<0.0005
Magnesium, dissolved	mg/l	--	--	18	23	18	20	18	13	13	14	18
Manganese, dissolved	mg/l	--	0.05	<u>0.23</u>	<u>0.27</u>	<u>0.52</u>	<u>0.38</u>	<u>0.23</u>	<u>0.27</u>	<u>0.1</u>	<u>0.33</u>	0.029
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00010	<0.00010	<0.00010
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	5	6	5	6	5	6	5.8	6.2	5.9
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	45	123	75	75	52	92	95	95	87
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0050	<0.0050	<0.005
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	<0.001	<0.001	--	<0.001	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6
				20-Nov-2013	27-May-2014	25-Nov-2014	26-May-2015	30-Nov-2015	14-Jun-2016	29-Nov-2016	01-Jun-2017	22-Nov-2017
				S-3	A-4	R-6	OMM-6	6	OMM-6	OMM-6	OMM6	OMM-6
General Chemistry												
Alkalinity (Total as CaCO ₃)	mg/l	--	--	330	320	290	278	274	273	389	360	509
Ammonia Nitrogen	mg/l	--	--	0.24	0.16	0.18	0.15	0.08	0.06	0.15	0.16	1.04
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	--	--	--	--	--	--	--
Bromide	mg/l	--	--	--	--	--	--	--	<0.1	--	--	--
Chemical Oxygen Demand	mg/l	--	--	10	<4.0	4.1	<10	10	<10	<10	24	30
Chloride	mg/l	--	250	37	22	19	17	21	22	27	8	105
Conductivity	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	730	674	695	747	730	496	613	495	1206
Dissolved Organic Carbon	mg/l	--	5	3.4	1.7	1.9	1.2	1.8	1.5	2.9	1.9	11.2
Fluoride	mg/l	1.5	--	--	--	--	--	--	<0.1	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	270	250	250	362	272	254	248	275	414
Nitrate as N	mg/l	10.0	--	<0.10	<0.10	<0.10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite as N	mg/l	1.0	--	<0.010	<0.010	<0.010	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrogen, Total Kjeldahl	mg/l	--	--	0.70	0.47	0.26	0.2	0.2	0.2	0.2	0.3	2.2
Nitrogen, Nitrate-Nitrite	mg/l	--	--	<0.10	<0.10	<0.10	--	--	--	--	--	--
pH (Field)	-	--	--	7.2	7.28	7.3	7.28	7.3	7.47	7.49	7.5	7.08
Phosphorus	mg/l	--	--	<0.002	0.009	0.008	<0.01	0.01	0.03	0.01	<0.01	<0.01
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	<0.2	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	13	14	14	12	10	9	16	13	52
Temperature (Field)	deg c	--	15	6	12.5	5	12.9	8	12.2	8.9	12	8.1
Total Dissolved Solids	mg/l	--	500	496	372	314	300	290	298	430	358	694
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	<0.01	--	<0.001	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	<0.001	--	<0.0005	--	--	--
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.0010	<0.001	<0.01	<0.001	<0.001	<0.001	<0.001	0.001
Barium, dissolved	mg/l	1	--	0.16	0.2	0.17	0.168	0.121	0.174	0.168	0.14	0.292
Beryllium, dissolved	mg/l	--	--	--	--	--	<0.001	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.18	0.13	0.1	0.107	0.098	0.071	0.078	0.103	0.467
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.00010	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	85	79	78	119	86.6	79.3	77	81.8	129
Chromium, dissolved	mg/l	0.05	--	<0.005	<0.0050	<0.005	<0.05	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	--	--	--	<0.001	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.001	0.0017	<0.001	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Iron, dissolved	mg/l	--	0.3	5.3	0.19	2.4	1.3	3.41	0.439	0.564	3.42	13.6
Lead, dissolved	mg/l	0.01	--	<0.0005	<0.00050	<0.0005	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Magnesium, dissolved	mg/l	--	--	14	14	13	15.9	13.6	13.7	13.5	17.2	22.4
Manganese, dissolved	mg/l	--	0.05	0.36	0.077	0.47	0.397	0.227	0.278	0.206	0.578	0.945
Mercury, dissolved	mg/l	0.001	--	<0.00010	<0.00010	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001	0.0002	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	--	--	<0.005	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	<0.005	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	5.7	5.4	4.8	5.31	4.04	4.16	3.69	3.87	7.26
Selenium, dissolved	mg/l	0.05	--	--	--	--	<0.005	--	<0.001	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	<0.001	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	68	54	24	20.6	17.8	14.8	13.3	25	101
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	<0.001	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	<0.01	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	0.0006	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	0.006	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.005	0.0052	<0.005	<0.02	<0.005	0.009	<0.005	<0.005	<0.005
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	--	--	--	--	--	--	--	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6
				28-Jun-2018	26-Nov-2018	18-Nov-2019	29-Nov-2019	04-Jun-2020	30-Nov-2020	08-Jun-2021	25-Nov-2021	20-Jun-2022
				OMM-6	OMM-6	OMM-6	OMM6	OMM-6	OMM-6	OMM-6	OMM-6	OMM-6
General Chemistry												
Alkalinity (Total as CaCO ₃)	mg/l	--	--	572	559	378	445	465	463	436	417	420
Ammonia Nitrogen	mg/l	--	--	0.67	0.44	0.15	0.25	0.05	0.06	0.02	0.04	0.02
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	--	--	--	--	--	--	--
Bromide	mg/l	--	--	--	--	<0.1	0.1	<0.1	0.1	<0.1	0.1	<0.1
Chemical Oxygen Demand	mg/l	--	--	25	23	<10	<10	14	15	10	12	<10
Chloride	mg/l	--	250	55	62	35	65	62	52	45	53	48.8
Conductivity	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	1099	1037	989	989	948	1008	821	992	839
Dissolved Organic Carbon	mg/l	--	5	<u>6.5</u>	<u>5.3</u>	2.2	4.2	<u>7.7</u>	3.5	3.4	3.8	3.5
Fluoride	mg/l	1.5	--	--	--	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Hardness, Calcium Carbonate	mg/l	--	--	381	455	368	483	440	415	379	375	401
Nitrate as N	mg/l	10.0	--	<0.1	<0.1	0.1	<0.1	0.2	<0.1	0.1	<0.1	0.4
Nitrite as N	mg/l	1.0	--	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrogen, Total Kjeldahl	mg/l	--	--	1.1	0.7	0.4	0.5	0.2	0.3	0.3	0.3	0.4
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.27	7.63	7.57	7.5	2.68	7.18	7.14	6.97	7.19
Phosphorus	mg/l	--	--	<0.01	<0.01	<0.01	0.07	<0.01	<0.01	<0.01	<0.01	<0.01
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	<0.2	<0.2	<0.2	<1.0 ⁽⁷⁾	<0.2	<0.2	1.3
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	31	31	43	36	32	24	26	33	27.6
Temperature (Field)	deg c	--	15	12.4	8.4	12	7.9	9.3	8.1	11.6	8.8	11.4
Total Dissolved Solids	mg/l	--	500	<u>654</u>	<u>610</u>	496	<u>642</u>	<u>574</u>	<u>580</u>	<u>538</u>	<u>550</u>	<u>520</u>
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	0.001
Antimony, dissolved	mg/l	0.006	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic, dissolved	mg/l	0.01	--	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.236	0.254	0.212	0.24	0.226	0.233	0.206	0.228	0.206
Beryllium, dissolved	mg/l	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron, dissolved	mg/l	5	--	0.278	0.278	0.228	0.17	0.205	0.209	0.195	0.181	0.157
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	117	138	110	150	137	129	119	118	126
Chromium, dissolved	mg/l	0.05	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	--	--	0.0017	0.0030	<0.0005	0.0039	0.0024	0.0041	0.0011
Copper, dissolved	mg/l	--	1	<0.0005	0.0022	0.0015	<0.0005	0.0010	<0.0005	0.0009	<0.0005	<0.0005
Iron, dissolved	mg/l	--	0.3	<u>10.9</u>	<u>10.8</u>	<u>2.59</u>	<u>11.3</u>	<u>0.324</u>	<u>6.89</u>	<u>1.7</u>	<u>5.51</u>	<u>0.857</u>
Lead, dissolved	mg/l	0.01	--	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Magnesium, dissolved	mg/l	--	--	21.7	26.9	22.5	26.2	24	22.4	19.9	19.9	20.9
Manganese, dissolved	mg/l	--	0.05	<u>1.32</u>	<u>1.55</u>	<u>0.553</u>	<u>1.16</u>	0.048	<u>0.661</u>	<u>0.361</u>	<u>1.03</u>	<u>0.123</u>
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Nickel, dissolved	mg/l	--	--	--	--	0.002	0.002	0.002	0.002	0.002	0.003	0.002
Potassium, dissolved	mg/l	--	--	5	7.67	6.08	8.72	8.39	8.72	7.87	8.69	9.65
Selenium, dissolved	mg/l	0.05	--	--	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silver, dissolved	mg/l	--	--	--	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	72.6	58.7	47.4	51.4	51	41.1	32.4	31.5	31.2
Strontium, dissolved	mg/l	--	--	--	--	0.305	0.386	0.379	0.342	0.342	0.35	0.364
Thallium, dissolved	mg/l	--	--	--	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Tin, dissolved	mg/l	--	--	--	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Titanium, dissolved	mg/l	--	--	--	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Tungsten, dissolved	mg/l	--	--	--	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, dissolved	mg/l	0.02	--	--	--	0.0009	0.0014	0.0012	0.0015	0.0011	0.0010	0.0010
Vanadium, dissolved	mg/l	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Zinc, dissolved	mg/l	--	5	<0.005	<0.005	0.007	0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	<0.001	0.002	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6
				23-Nov-2022	10-May-2023	29-Nov-2023	06-Dec-2023	25-Apr-2024	23-Oct-2024
				OMM-6	OMM-6	OMM-6	OMM-6	OMM - 6	OMM6
General Chemistry									
Alkalinity (Total as CaCO3)	mg/l	--	--	361	372	465	--	523	553
Ammonia Nitrogen	mg/l	--	--	0.08	0.05	0.35	--	0.72	1.23
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	--	--	--	--
Bromide	mg/l	--	--	<0.1	<0.1	<0.1	--	0.1	0.1
Chemical Oxygen Demand	mg/l	--	--	<10	<10	17	--	17	29
Chloride	mg/l	--	250	54.8	33	87	--	97	55
Conductivity	uS/cm	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	988	815	1175	--	1240	1099
Dissolved Organic Carbon	mg/l	--	5	4.5	3.5	--	<u>11.5</u>	<u>7.6</u>	<u>6.9</u>
Fluoride	mg/l	1.5	--	<0.1	<0.1	<0.1	--	<0.1	<0.1
Hardness, Calcium Carbonate	mg/l	--	--	347	334	379	--	480	476
Nitrate as N	mg/l	10.0	--	0.1	0.3	0.2	--	0.2	<0.1
Nitrite as N	mg/l	1.0	--	<0.05	<0.05	<0.05	--	<0.05	<0.05
Nitrogen, Total Kjeldahl	mg/l	--	--	0.3	0.3	0.9	--	1.6	1.7
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.39	7.04	7.7	--	6.99	6.98
Phosphorus	mg/l	--	--	<0.01	<0.01	<0.01	--	<0.01	<0.01
Phosphorus, Total Orthophosphate	mg/l	--	--	<0.7 ⁽⁸⁾	<0.5	<0.5	--	<0.5	<0.5
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	58.2	39	44	--	19	4
Temperature (Field)	deg c	--	15	7.9	8.2	6.6	--	9.0	13.3
Total Dissolved Solids	mg/l	--	500	<u>544</u>	490	<u>644</u>	--	<u>676</u>	<u>638</u>
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--
Metals									
Aluminum, dissolved	mg/l	--	--	0.002	<0.001	0.001	--	<0.001	0.003
Antimony, dissolved	mg/l	0.006	--	<0.0005	<0.0005	<0.0005	--	<0.0005	<0.0005
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	--	<0.001	0.002
Barium, dissolved	mg/l	1	--	0.169	0.156	0.197	--	0.232	0.262
Beryllium, dissolved	mg/l	--	--	<0.0005	<0.0005	<0.0005	--	<0.0005	<0.0005
Boron, dissolved	mg/l	5	--	0.154	0.105	0.142	--	0.23	0.292
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	--	<0.0001	0.0002
Calcium, dissolved	mg/l	--	--	108	105	120	--	147	146
Chromium, dissolved	mg/l	0.05	--	<0.001	<0.001	<0.001	--	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	0.0008	0.0023	0.0021	--	0.0027	0.0034
Copper, dissolved	mg/l	--	1	0.0010	0.0007	0.0010	--	0.0008	<0.0005
Iron, dissolved	mg/l	--	0.3	0.216	<u>1.53</u>	<u>1.57</u>	--	<u>2.41</u>	<u>15.4</u>
Lead, dissolved	mg/l	0.01	--	<0.0001	<0.0001	<0.0001	--	0.0002	<0.0001
Magnesium, dissolved	mg/l	--	--	19	17.7	19.2	--	27.3	27.2
Manganese, dissolved	mg/l	--	0.05	<u>0.229</u>	<u>0.332</u>	<u>0.406</u>	--	<u>0.798</u>	<u>1.09</u>
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	--	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	<0.0005	<0.0005	<0.0005	--	<0.0005	<0.0005
Nickel, dissolved	mg/l	--	--	0.002	0.001	0.002	--	0.003	0.002
Potassium, dissolved	mg/l	--	--	8.74	8.25	9.37	--	11.7	10.6
Selenium, dissolved	mg/l	0.05	--	<0.001	<0.001	<0.001	--	<0.001	0.009
Silver, dissolved	mg/l	--	--	<0.0001	<0.0001	<0.0001	--	<0.0001	<0.0001
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	29.9	27.9	43.4	--	69.1	51.5
Strontium, dissolved	mg/l	--	--	0.317	0.29	0.357	--	0.432	0.424
Thallium, dissolved	mg/l	--	--	<0.0001	<0.0001	<0.0001	--	<0.0001	<0.0001
Tin, dissolved	mg/l	--	--	<0.005	<0.005	<0.005	--	<0.005	<0.005
Titanium, dissolved	mg/l	--	--	<0.005	<0.005	<0.005	--	<0.005	<0.005
Tungsten, dissolved	mg/l	--	--	<0.01	<0.01	<0.01	--	<0.01	<0.01
Uranium, dissolved	mg/l	0.02	--	0.0008	0.0010	0.0010	--	0.0012	0.0012
Vanadium, dissolved	mg/l	--	--	<0.0005	<0.0005	<0.0005	--	<0.0005	0.0012
Zinc, dissolved	mg/l	--	5	<0.005	<0.005	<0.005	--	<0.005	<0.005
Phenols									
Phenolics, Total Recoverable	mg/l	--	--	<0.001	<0.001	<0.001	--	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7
				01-Jan-1990	01-Mar-1990	01-Dec-1990	01-Nov-1991	01-Jun-1992	01-Dec-1992	01-Sep-1993	01-May-1994	01-Nov-1994
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	184	203	178	235	--	--	188	466	549
Ammonia Nitrogen	mg/l	--	--	--	--	--	--	--	--	--	--	--
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	3	--	--	47.9	1.6	3	3.2	11	24.6
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chloride	mg/l	--	250	9	6	9	8	7	6	6	19	23
Conductivity	uS/cm	--	--	455	410	346	520	--	--	391	843	1023
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Dissolved Organic Carbon	mg/l	--	5	--	--	--	--	--	--	--	--	--
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	203	197	280	265	169	188	172	420	442
Nitrate as N	mg/l	10.0	--	--	--	--	--	--	--	--	--	--
Nitrite as N	mg/l	1.0	--	--	--	--	--	--	--	--	--	--
Nitrogen, Total Kjeldahl	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.45	7.39	--	7.37	--	--	7.27	7.14	7.71
Phosphorus	mg/l	--	--	--	<0.01	--	--	<0.1	0.03	--	--	0.153
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	12	5	2	7	--	--	5	4	<1
Temperature (Field)	deg c	--	15	--	--	--	--	--	--	--	--	--
Total Dissolved Solids	mg/l	--	500	--	--	--	--	--	--	--	--	--
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	0.002	<0.005	<0.005	<0.05	<0.2	--	--	--	0.002
Barium, dissolved	mg/l	1	--	--	--	0.057	0.07	0.079	0.07	--	--	0.153
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	--	--	--	0.07	--	0.11	--	--	0.083
Cadmium, dissolved	mg/l	0.005	--	<0.001	<0.001	<0.002	<0.004	<0.02	<0.01	--	--	<0.001
Calcium, dissolved	mg/l	--	--	--	57	52	79	51	57	51	131	112
Chromium, dissolved	mg/l	0.05	--	<0.05	<0.001	<0.006	<0.01	<0.02	<0.01	--	--	<0.01
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.05	0.003	0.106	<0.01	<0.005	0.01	--	--	<0.01
Iron, dissolved	mg/l	--	0.3	8	7.53	5.73	0.08	21.5	5.29	4.07	16.19	0.39
Lead, dissolved	mg/l	0.01	--	<0.25	<0.005	0.06	<0.04	<0.1	<0.05	--	--	<0.0003
Magnesium, dissolved	mg/l	--	--	--	10	9	16	10	11	10	22	39
Manganese, dissolved	mg/l	--	0.05	0.18	0.38	0.4	0.45	0.3	0.25	0.19	0.75	1.24
Mercury, dissolved	mg/l	0.001	--	--	--	--	--	--	--	--	--	--
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	--	7	6	7	6	6	7	12	10
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	--	8	6	4	10	11	10	13	21
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.05	0.013	<0.005	<0.01	<0.02	0.05	--	--	<0.01
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	<0.002	<0.002	--	<0.002	<0.002	<0.002	0.006	<0.002	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7
				01-Jun-1995	12-Jun-1996	26-Nov-1996	01-Jun-1997	01-Nov-1997	01-Jun-1998	01-Nov-1998	01-Aug-1999	01-Nov-1999
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	611	504	248	380	360	400	521	480	408
Ammonia Nitrogen	mg/l	--	--	--	--	--	--	--	--	--	--	--
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	21	15	17	6	5	3	6	18	7
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chloride	mg/l	--	250	30	34.6	42.9	22.4	--	38	43.3	29.6	28.1
Conductivity	uS/cm	--	--	839	1030	967	750	716	816	1080	926	850
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Dissolved Organic Carbon	mg/l	--	5	--	--	--	--	--	--	--	--	--
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	577	514	461	488	375	434	533	485	391
Nitrate as N	mg/l	10.0	--	--	--	--	--	--	--	--	--	--
Nitrite as N	mg/l	1.0	--	--	--	--	--	--	--	--	--	--
Nitrogen, Total Kjeldahl	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.58	7	8.25	7.59	7.5	6.9	6.81	7.25	8.03
Phosphorus	mg/l	--	--	--	<0.1	--	--	--	--	--	--	--
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	1	16.4	19	25	27	31	45	26	24
Temperature (Field)	deg c	--	15	--	--	--	--	--	--	--	--	--
Total Dissolved Solids	mg/l	--	500	--	564	562	420	414	452	612	564	504
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	--	<0.001	--	--	--	--	--	--	--
Barium, dissolved	mg/l	1	--	--	0.206	--	--	--	--	--	--	--
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	--	0.212	--	--	--	--	--	--	--
Cadmium, dissolved	mg/l	0.005	--	--	<0.001	--	--	--	--	--	--	--
Calcium, dissolved	mg/l	--	--	178	159	142	133	112	130	155	149	121
Chromium, dissolved	mg/l	0.05	--	--	<0.01	--	--	--	--	--	--	--
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	--	<0.01	--	--	--	--	--	--	--
Iron, dissolved	mg/l	--	0.3	13	2.84	0.24	18	29	32.9	45.5	37.3	32.2
Lead, dissolved	mg/l	0.01	--	--	<0.0002	--	--	--	--	--	--	--
Magnesium, dissolved	mg/l	--	--	32	28	25.7	21.9	22.8	26.2	35	26.9	21.1
Manganese, dissolved	mg/l	--	0.05	--	1.19	1.21	1.08	1.2	1.36	1.59	1.25	1
Mercury, dissolved	mg/l	0.001	--	--	--	--	--	--	--	--	--	--
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	11	12.6	12.7	12.2	12.2	8.1	8.6	11.3	10.6
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	19	22.9	25.8	20.9	27.9	25	30.2	31.9	29.2
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	--	<0.01	--	--	--	--	--	--	--
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	0.006	0.076	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM7 01-Jun-2000	OMM7 01-Nov-2000	OMM7 01-Jul-2001	OMM7 01-Nov-2001	OMM7 01-Jul-2002	OMM7 01-Nov-2002	OMM7 10-Jul-2003	OMM7 27-Dec-2003	OMM7 26-Aug-2004
General Chemistry												
Alkalinity (Total as CaCO ₃)	mg/l	--	--	439	432	541	511	525	675	597	597	531
Ammonia Nitrogen	mg/l	--	--	--	--	--	--	3.88	4.15	3.59	3.55	2.74
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	5	28	7	4	8	9	1	2	1
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	--	--	--	--	33	32	37	31	43
Chloride	mg/l	--	250	29.3	30.4	35.3	36.5	33.4	36.7	32.1	32.3	27.7
Conductivity	uS/cm	--	--	--	--	954	1050	1050	1260	1120	1140	994
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Dissolved Organic Carbon	mg/l	--	5	4.6	7.5	7	13	9.2	8.2	7.8	14	6.2
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	378	387	509	589	524	584	547	524	461
Nitrate as N	mg/l	10.0	--	--	--	--	--	<0.1	<0.1	0.1	<0.1	0.2
Nitrite as N	mg/l	1.0	--	--	--	--	--	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrogen, Total Kjeldahl	mg/l	--	--	--	--	--	--	4	4.48	4.27	4.42	3.43
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.5	7.46	7.11	7.86	7	6.8	--	--	--
Phosphorus	mg/l	--	--	<0.1	0.02	0.02	0.02	0.02	0.04	0.04	0.05	0.01
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	27	29	23	17	20	11	8	10	7
Temperature (Field)	deg c	--	15	--	--	--	--	--	--	--	--	--
Total Dissolved Solids	mg/l	--	500	468	508	570	--	670	714	677	672	596
Total Suspended Solids	mg/l	--	--	--	--	--	--	76	102	100	52	66
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	<0.1	--	<0.001	<0.001	<0.001	0.001	<0.001	0.001	0.001
Barium, dissolved	mg/l	1	--	0.225	0.055	0.305	0.375	0.31	0.36	0.311	0.317	0.258
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.28	--	0.3	0.36	0.35	0.38	0.406	0.399	0.465
Cadmium, dissolved	mg/l	0.005	--	<0.01	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	119	--	161	184	167	182	170	161	140
Chromium, dissolved	mg/l	0.05	--	<0.01	--	<0.01	<0.01	<0.01	<0.01	0.008	<0.001	0.001
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.01	--	<0.01	<0.01	<0.01	<0.01	<0.002	<0.002	<0.002
Iron, dissolved	mg/l	--	0.3	27.6	29.2	38.1	47	35.2	43.8	42.3	37.6	35.4
Lead, dissolved	mg/l	0.01	--	<0.1	--	<0.0002	<0.0002	<0.0002	<0.0002	0.0002	<0.02	<0.0002
Magnesium, dissolved	mg/l	--	--	19.2	23.7	25.9	31.5	26.1	31.4	29.7	29.2	26.7
Manganese, dissolved	mg/l	--	0.05	0.85	0.88	1.07	1.24	1.09	1.23	1.12	1.11	0.936
Mercury, dissolved	mg/l	0.001	--	--	--	--	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	12.7	12.7	12.1	19.5	17.9	17.2	16.1	14.5	13
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	27.8	25.2	30.7	39.7	36.6	42	41	37.2	35.8
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	0.05	--	<0.01	<0.01	0.01	<0.01	<0.005	0.006	<0.005
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	--	--	0.021	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7
				22-Dec-2004	21-Jun-2005	09-Dec-2005	30-Jun-2006	28-Nov-2006	29-Jun-2007	26-Nov-2007	13-Jun-2008	26-Nov-2008
General Chemistry												R-8
Alkalinity (Total as CaCO3)	mg/l	--	--	576	468	376	426	369	270	338	342	345
Ammonia Nitrogen	mg/l	--	--	2.47	2.24	2.34	2.32	2.22	1.61	2.18	2.22	3.11
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	<1	<3	<3	3	2	3	<1	7	<1
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	23	28	31	19	12	15	7	12	23
Chloride	mg/l	--	250	34.2	46.4	76.5	41	34	49	30	26	60
Conductivity	uS/cm	--	--	1080	97	435	445	600	615	590	759	864
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	--	--	--	660
Dissolved Organic Carbon	mg/l	--	5	<u>7</u>	<u>16.5</u>	<u>5.4</u>	<u>7.2</u>	<u>6.3</u>	<u>5.9</u>	<u>6.1</u>	<u>5.1</u>	4.5
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	470	416	347	394	368	255	287	352	331
Nitrate as N	mg/l	10.0	--	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.10
Nitrite as N	mg/l	1.0	--	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.10
Nitrogen, Total Kjeldahl	mg/l	--	--	3.76	2.9	2.92	2.9	2.57	1.86	2.49	3.59	3.94
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	--	6.71	7.3	7.4	7.4	7.3	7.3	7.1	7.3
Phosphorus	mg/l	--	--	0.02	0.32	0.15	0.58	<0.01	0.2	0.43	0.12	0.19
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	0.71	0.719	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	5	2	2	8	7	8	14	29	18
Temperature (Field)	deg c	--	15	--	14.4	5	8	6	9	6	9	6
Total Dissolved Solids	mg/l	--	500	<u>631</u>	<u>548</u>	464	<u>588</u>	<u>511</u>	430	473	493	<u>562</u>
Total Suspended Solids	mg/l	--	--	58	194	232	365	228	279	289	169	280
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.254	0.242	0.075	0.23	0.21	0.13	0.17	0.18	0.21
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.406	0.365	0.3	0.21	0.26	0.21	0.18	0.14	0.14
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	145	128	105	123	116	79	90	108	98
Chromium, dissolved	mg/l	0.05	--	<0.002	<0.002	<0.002	0.002	0.001	0.002	0.002	0.002	0.002
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.002	<0.002	<0.002	0.003	<0.001	<0.001	<0.001	0.002	<0.001
Iron, dissolved	mg/l	--	0.3	<u>36.3</u>	<u>30.1</u>	0.069	<u>33.8</u>	<u>26.4</u>	<u>18.6</u>	<u>20.5</u>	<u>19.2</u>	<u>21.7</u>
Lead, dissolved	mg/l	0.01	--	0.0005	<0.0002	<0.0002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Magnesium, dissolved	mg/l	--	--	26.1	23.6	20.9	21	19	14	15	20	21
Manganese, dissolved	mg/l	--	0.05	<u>1</u>	<u>0.892</u>	<u>0.511</u>	<u>0.72</u>	<u>0.73</u>	<u>0.54</u>	<u>0.67</u>	<u>0.62</u>	<u>0.73</u>
Mercury, dissolved	mg/l	0.001	--	<0.00006	<0.00005	<0.00006	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	12.9	12.3	12.4	12	11	9	10	12	11
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	34.2	33.3	30.8	33	31	22	28	25	21
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.005	0.014	<0.005	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	<0.001	<0.001	0.004	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7
				06-Jul-2009	08-Dec-2009	30-Jun-2010	30-Nov-2010	13-Jun-2011	29-Nov-2011	22-Jun-2012	10-Nov-2012	25-Jun-2013
				R-15	R-5	R-5	R-3	S-4	OMM-7	S-5	S-6	S-5
General Chemistry												
Alkalinity (Total as CaCO ₃)	mg/l	--	--	400	367	360	404	425	445	490	480	470
Ammonia Nitrogen	mg/l	--	--	2.61	3.09	2.74	1.59	2.94	2.98	3.5	3.5	4.0
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	1	1	--	3	--	--	--	--	--
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	25	18	15	25	25	15	25	15	43
Chloride	mg/l	--	250	31	107	55	39	36	40	69	58	43
Conductivity	uS/cm	--	--	860	1040	871	883	873	947	--	--	--
Conductivity (Field)	uS/cm	--	--	625	640	665	705	--	981	725	760	740
Dissolved Organic Carbon	mg/l	--	5	5.8	6.1	6.1	5.4	5.5	4.6	4.5	4.4	4.4
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	407	453	359	383	403	438	570	490	490
Nitrate as N	mg/l	10.0	--	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Nitrite as N	mg/l	1.0	--	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.010	<0.010	<0.010
Nitrogen, Total Kjeldahl	mg/l	--	--	2.72	3.36	2.87	2.64	2.98	3.24	3.8	3.9	4.7
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	<0.10	<0.10	<0.10
pH (Field)	-	--	--	7.1	7.2	7.2	7.3	--	6.86	7.3	7.4	7.3
Phosphorus	mg/l	--	--	0.18	0.17	0.09	0.09	0.15	0.35	0.25	0.12	1.1
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	27	23	22	29	25	25	16	10	18
Temperature (Field)	deg c	--	15	15.0	7	10	8	--	7.9	11	7	10
Total Dissolved Solids	mg/l	--	500	559	676	566	574	567	616	584	540	540
Total Suspended Solids	mg/l	--	--	403	475	--	174	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010	<0.001
Barium, dissolved	mg/l	1	--	0.22	0.29	0.20	0.18	0.20	0.21	0.24	0.23	0.23
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.16	0.08	0.14	0.14	0.15	0.16	0.18	0.19	0.2
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00010	<0.00010	<0.0001
Calcium, dissolved	mg/l	--	--	117	132	104	114	112	126	150	140	130
Chromium, dissolved	mg/l	0.05	--	0.004	0.003	0.006	0.002	0.031	<0.001	<0.0050	<0.0050	<0.005
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010	<0.001
Iron, dissolved	mg/l	--	0.3	21.0	24.7	20.8	17.6	20.5	19.6	25	23	23
Lead, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00050	<0.00050	<0.0005
Magnesium, dissolved	mg/l	--	--	28	30	24	24	30	30	46	37	37
Manganese, dissolved	mg/l	--	0.05	0.75	0.77	0.72	0.66	0.82	0.72	0.9	0.88	0.81
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00010	<0.00010	<0.00010
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	12	12	9	11	10	11	14	12	13
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	25	24	24	23	21	23	33	33	30
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0050	0.0073	<0.005
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	<0.001	<0.001	--	<0.001	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7
				20-Nov-2013	27-May-2014	25-Nov-2014	26-May-2015	30-Nov-2015	14-Jun-2016	29-Nov-2016	01-Jun-2017	22-Nov-2017
				S-2	A-5	R-7	OMM-7	7	OMM-7	OMM-7	OMM7	OMM-7
General Chemistry												
Alkalinity (Total as CaCO ₃)	mg/l	--	--	470	580	580	605	540	615	698	676	412
Ammonia Nitrogen	mg/l	--	--	3.9 ⁽⁵⁾	4.4	4.4 ⁽⁵⁾	5.96 ⁽⁶⁾	4.13 ⁽⁶⁾	4.94 ⁽⁶⁾	5.35	4.79 ⁽⁶⁾	2.52
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	--	--	--	--	--	--	--
Bromide	mg/l	--	--	--	--	--	--	--	0.1	--	--	--
Chemical Oxygen Demand	mg/l	--	--	20	22	23	34	24	27	28	40	31
Chloride	mg/l	--	250	43	63	67	62	50	60	67	65	69
Conductivity	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	765	1269	780	1304	1300	1108	1168	1005	952
Dissolved Organic Carbon	mg/l	--	5	4.7	5.7	5.7	5.4	7.1	7.4	8.9	7.9	9.2
Fluoride	mg/l	1.5	--	--	--	--	--	--	<0.1	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	470	580	510	730	548	569	594	496	375
Nitrate as N	mg/l	10.0	--	<0.10	<0.10	<0.10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite as N	mg/l	1.0	--	<0.010	<0.010	<0.010	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrogen, Total Kjeldahl	mg/l	--	--	3.8 ⁽⁵⁾	4.5	4.2 ⁽⁵⁾	4.3	3.2	4.3	5.4	4.0	3.2
Nitrogen, Nitrate-Nitrite	mg/l	--	--	<0.10	<0.10	<0.10	--	--	--	--	--	--
pH (Field)	-	--	--	7.5	6.68	7.6	6.77	6.8	6.83	6.79	7.0	6.97
Phosphorus	mg/l	--	--	0.12	0.20	0.18	0.28	0.07	0.22	0.07	0.03	0.03
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	<0.2	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	13	<1	<1	<1	<1	<1	<1	<1	25
Temperature (Field)	deg c	--	15	8	12.1	5	11.9	7	12.2	9.6	12	7.8
Total Dissolved Solids	mg/l	--	500	554	674	634	680	592	654	722	702	498
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	<0.01	--	0.006	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	<0.001	--	<0.0005	--	--	--
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.0010	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.21	0.29	0.29	0.283	0.258	0.297	0.328	0.304	0.239
Beryllium, dissolved	mg/l	--	--	--	--	--	<0.001	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.19	0.29	0.29	0.35	0.34	0.289	0.376	0.418	0.243
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.00010	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	130	160	150	222	159	168	171	145	111
Chromium, dissolved	mg/l	0.05	--	<0.005	<0.0050	<0.005	<0.05	0.001	<0.001	<0.001	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	--	--	--	<0.001	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.001	<0.0010	<0.001	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Iron, dissolved	mg/l	--	0.3	22	31	36	34.2	28.1	35.7	36.9	35.2	27.9
Lead, dissolved	mg/l	0.01	--	<0.0005	<0.00050	<0.0005	<0.001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001
Magnesium, dissolved	mg/l	--	--	35	43	33	43	36.4	36.5	40.3	32.6	23.9
Manganese, dissolved	mg/l	--	0.05	0.72	0.94	1.1	1.13	0.989	1.08	1.25	1.07	0.82
Mercury, dissolved	mg/l	0.001	--	<0.00010	<0.00010	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	--	--	<0.005	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	<0.005	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	12	15	14	16.8	13.3	15.4	13.9	15.1	9.23
Selenium, dissolved	mg/l	0.05	--	--	--	--	<0.005	--	<0.001	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	<0.001	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	29	52	44	55.2	73.5	53.8	55.7	73	38.7
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	<0.001	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	<0.01	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	0.0002	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	0.015	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.005	<0.0050	<0.005	<0.02	<0.005	<0.005	<0.005	<0.005	<0.005
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	--	--	--	--	--	--	--	<0.002 ⁽⁷⁾	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7
				28-Jun-2018	26-Nov-2018	18-Jun-2019	29-Nov-2019	04-Jun-2020	30-Nov-2020	08-Jun-2021	25-Nov-2021	20-Jun-2022
				OMM-7	OMM-7	OMM-7	OMM7	OMM-7	OMM-7	OMM-7	OMM-7	OMM-7
General Chemistry												
Alkalinity (Total as CaCO ₃)	mg/l	--	--	488	422	382	354	391	395	398	391	398
Ammonia Nitrogen	mg/l	--	--	3.06	2.70	3.17	3.13	3.54 ⁽⁶⁾	3.56	3.24	3.35	3.33
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	--	--	--	--	--	--	--
Bromide	mg/l	--	--	--	--	0.1	0.1	<0.1	0.1	0.1	0.1	<0.1
Chemical Oxygen Demand	mg/l	--	--	25	14	<10	<10	14	21	17	19	13
Chloride	mg/l	--	250	32	29	28	36	36	31	31	32	41.4
Conductivity	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	899	821	800	819	891	837	828	917	818
Dissolved Organic Carbon	mg/l	--	5	7.2	5.5	2.8	4.4	8.7	4.8	4.1	5.3	3.7
Fluoride	mg/l	1.5	--	--	--	<0.1	<0.1	<0.1	0.1	0.1	0.1	0.2
Hardness, Calcium Carbonate	mg/l	--	--	355	359	361	382	375	374	344	355	376
Nitrate as N	mg/l	10.0	--	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite as N	mg/l	1.0	--	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrogen, Total Kjeldahl	mg/l	--	--	3.4	3.3	3.2	3.2	3.2	3.7	3.6	3.3	3.6
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.02	7.48	7.63	7.6	7.62	7.09	7.21	6.98	7.31
Phosphorus	mg/l	--	--	0.05	0.06	0.06	0.08	0.25	0.07	0.03	0.09	0.09
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	<0.2	<0.2	<0.2	<1.0 ⁽⁷⁾	<0.2	<0.2	1.5
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	17	32	33	41	41	30	31	27	31.9
Temperature (Field)	deg c	--	15	11.1	8.1	11.8	7.1	9.8	7.8	10.8	8.4	11.2
Total Dissolved Solids	mg/l	--	500	504	440	452	478	464	478	416	474	470
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	0.006	0.004	0.004	0.003	0.004	0.004	0.004
Antimony, dissolved	mg/l	0.006	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.216	0.193	0.176	0.193	0.206	0.187	0.181	0.175	0.188
Beryllium, dissolved	mg/l	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron, dissolved	mg/l	5	--	0.223	0.185	0.191	0.132	0.128	0.138	0.13	0.139	0.138
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	97.2	98.8	96.4	103	101	98.6	93.4	96.8	102
Chromium, dissolved	mg/l	0.05	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Copper, dissolved	mg/l	--	1	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Iron, dissolved	mg/l	--	0.3	23.8	20.6	20.3	15.6	15.5	15.1	14.4	15.5	15.9
Lead, dissolved	mg/l	0.01	--	<0.0001	<0.0001	0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Magnesium, dissolved	mg/l	--	--	27.2	27.3	29.3	30.2	30	31	26.9	27.6	29.1
Manganese, dissolved	mg/l	--	0.05	0.622	0.591	0.672	0.434	0.449	0.391	0.447	0.46	0.679
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Nickel, dissolved	mg/l	--	--	--	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Potassium, dissolved	mg/l	--	--	10.2	11.4	15.2	11.7	11.5	10.4	10.6	10.6	12.1
Selenium, dissolved	mg/l	0.05	--	--	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silver, dissolved	mg/l	--	--	--	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	27	24.4	22.8	21.8	20.5	19.9	18.8	20.5	22.7
Strontium, dissolved	mg/l	--	--	--	--	0.373	0.351	0.404	0.373	0.394	0.378	0.428
Thallium, dissolved	mg/l	--	--	--	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Tin, dissolved	mg/l	--	--	--	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Titanium, dissolved	mg/l	--	--	--	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Tungsten, dissolved	mg/l	--	--	--	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, dissolved	mg/l	0.02	--	--	--	0.0002	0.0002	0.0002	0.0003	0.0003	0.0002	0.0003
Vanadium, dissolved	mg/l	--	--	--	--	0.0017	0.0013	0.0013	0.0012	0.0013	0.0012	0.0014
Zinc, dissolved	mg/l	--	5	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	<0.005	<0.005
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	<0.001	0.002	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7
				23-Nov-2022	10-May-2023	29-Nov-2023	06-Dec-2023	25-Apr-2024	23-Oct-2024
				OMM-7	OMM-7	OMM-7	OMM-7	OMM - 7	OMM7
General Chemistry									
Alkalinity (Total as CaCO ₃)	mg/l	--	--	411	407	437	--	468	539
Ammonia Nitrogen	mg/l	--	--	3.23	3.88	3.85	--	3.80	3.94
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	--	--	--	--
Bromide	mg/l	--	--	0.1	0.1	0.1	--	0.1	0.1
Chemical Oxygen Demand	mg/l	--	--	15	20	15	--	17	23
Chloride	mg/l	--	250	34.2	33	37	--	45	48
Conductivity	uS/cm	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	929	911	978	--	1043	1077
Dissolved Organic Carbon	mg/l	--	5	6.1	5.1	4.9	--	5.3	4.4
Fluoride	mg/l	1.5	--	<0.1	<0.1	<0.1	--	0.1	0.1
Hardness, Calcium Carbonate	mg/l	--	--	348	362	379	--	425	491
Nitrate as N	mg/l	10.0	--	<0.1	<0.1	<0.1	--	<0.1	<0.1
Nitrite as N	mg/l	1.0	--	<0.05	<0.05	<0.05	--	<0.05	<0.05
Nitrogen, Total Kjeldahl	mg/l	--	--	3.3	3.8	3.9	--	4.1	3.9
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.26	6.95	7.72	--	7.19	6.93
Phosphorus	mg/l	--	--	0.06	0.04	0.42	--	0.04	<0.01
Phosphorus, Total Orthophosphate	mg/l	--	--	<0.2	<0.5	<0.5	--	<0.5	<0.5
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	23.8	21	16	--	12	3
Temperature (Field)	deg c	--	15	8.3	8.4	6.5	--	9.2	11.1
Total Dissolved Solids	mg/l	--	500	484	466	458	--	538	596
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--
Metals									
Aluminum, dissolved	mg/l	--	--	0.004	0.003	0.005	--	0.004	0.005
Antimony, dissolved	mg/l	0.006	--	<0.0005	<0.0005	<0.0005	--	<0.0005	<0.0005
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	--	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.164	0.168	0.174	--	0.211	0.243
Beryllium, dissolved	mg/l	--	--	<0.0005	<0.0005	<0.0005	--	<0.0005	<0.0005
Boron, dissolved	mg/l	5	--	0.143	0.14	0.135	--	0.143	0.167
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	--	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	94.2	98.4	104	--	113	133
Chromium, dissolved	mg/l	0.05	--	<0.001	<0.001	<0.001	--	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	<0.0005	<0.0005	<0.0005	--	<0.0005	<0.0005
Copper, dissolved	mg/l	--	1	<0.0005	<0.0005	<0.0005	--	<0.0005	<0.0005
Iron, dissolved	mg/l	--	0.3	13.7	15	16.8	--	18.9	21.7
Lead, dissolved	mg/l	0.01	--	<0.0001	<0.0001	<0.0001	--	0.0003	<0.0001
Magnesium, dissolved	mg/l	--	--	27.4	28.2	28.9	--	34.4	38.6
Manganese, dissolved	mg/l	--	0.05	0.587	0.738	0.592	--	0.783	0.9
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	--	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	<0.0005	<0.0005	<0.0005	--	<0.0005	<0.0005
Nickel, dissolved	mg/l	--	--	<0.001	<0.001	<0.001	--	<0.001	<0.001
Potassium, dissolved	mg/l	--	--	11.1	11	11	--	12	12.5
Selenium, dissolved	mg/l	0.05	--	<0.001	<0.001	<0.001	--	<0.001	0.009
Silver, dissolved	mg/l	--	--	<0.0001	<0.0001	<0.0001	--	<0.0001	0.0001
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	22.4	22.9	24.6	--	27.5	29.9
Strontium, dissolved	mg/l	--	--	0.391	0.378	0.401	--	0.439	0.523
Thallium, dissolved	mg/l	--	--	<0.0001	<0.0001	<0.0001	--	<0.0001	<0.0001
Tin, dissolved	mg/l	--	--	<0.005	<0.005	<0.005	--	<0.005	<0.005
Titanium, dissolved	mg/l	--	--	<0.005	<0.005	<0.005	--	<0.005	<0.005
Tungsten, dissolved	mg/l	--	--	<0.01	<0.01	<0.01	--	<0.01	<0.01
Uranium, dissolved	mg/l	0.02	--	0.0003	0.0002	0.0002	--	0.0003	0.0003
Vanadium, dissolved	mg/l	--	--	0.0011	0.0013	0.0013	--	0.0015	0.0016
Zinc, dissolved	mg/l	--	5	<0.005	<0.005	<0.005	--	<0.005	<0.005
Phenols									
Phenolics, Total Recoverable	mg/l	--	--	<0.001	<0.001	<0.001	--	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8
				01-Jan-1990	01-Dec-1990	01-Nov-1991	01-Jun-1992	01-Dec-1992	01-Sep-1993	01-May-1994	01-Nov-1994	01-Jun-1995
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	210	283	238	1	--	134	220	447	230
Ammonia Nitrogen	mg/l	--	--	--	--	--	--	--	--	--	--	--
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	2	--	42	9.5	12	2.4	<1	1.4	8
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chloride	mg/l	--	250	58	15	25	--	12	9	10	30	11
Conductivity	uS/cm	--	--	663	644	670	--	--	329	436	957	373
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Dissolved Organic Carbon	mg/l	--	5	--	--	--	--	--	--	--	--	--
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	--	214	325	145	240	163	199	359	248
Nitrate as N	mg/l	10.0	--	--	--	--	--	--	--	--	--	--
Nitrite as N	mg/l	1.0	--	--	--	--	--	--	--	--	--	--
Nitrogen, Total Kjeldahl	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.45	--	7.29	--	--	7.84	7.61	7.54	7.78
Phosphorus	mg/l	--	--	--	--	--	<0.1	0.07	--	--	0.13	--
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	20	18	33	--	12	28	17	33	21
Temperature (Field)	deg c	--	15	--	--	--	--	--	--	--	--	--
Total Dissolved Solids	mg/l	--	500	--	--	--	--	--	--	--	--	--
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.005	<0.05	<0.2	--	--	--	0.001	--
Barium, dissolved	mg/l	1	--	--	0.302	0.32	0.125	0.19	--	--	0.415	--
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	--	--	0.13	--	0.09	--	--	0.103	--
Cadmium, dissolved	mg/l	0.005	--	<0.001	<0.002	<0.004	<0.02	<0.01	--	--	<0.0001	--
Calcium, dissolved	mg/l	--	--	--	44	98	44	73	52	62	85	76.3
Chromium, dissolved	mg/l	0.05	--	<0.05	<0.006	<0.01	<0.02	<0.01	--	--	<0.01	--
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.05	<0.005	<0.01	0.025	0.04	--	--	<0.01	--
Iron, dissolved	mg/l	--	0.3	1.04	0.47	0.08	2.6	1.48	1.69	0.38	0.32	1.11
Lead, dissolved	mg/l	0.01	--	<0.03	<0.03	<0.04	<0.1	<0.05	--	--	<0.001	--
Magnesium, dissolved	mg/l	--	--	--	17	19	8	14	8	11	35	14
Manganese, dissolved	mg/l	--	0.05	0.12	0.1	0.09	0.16	0.14	0.13	0.06	0.26	0.12
Mercury, dissolved	mg/l	0.001	--	--	--	--	--	--	--	--	--	--
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	--	7	9	5	8	5	8	12	6
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	--	12	6	11	25	9	12	43	9
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.05	<0.05	<0.01	0.062	0.13	--	--	<0.01	--
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	<0.002	--	<0.002	<0.002	0.012	0.044	<0.002	<0.001	0.002

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM8 12-Jun-1996	OMM8 26-Nov-1996	OMM8 01-Jun-1997	OMM8 01-Nov-1997	OMM8 01-Jun-1998	OMM8 01-Nov-1998	OMM8 01-Aug-1999	OMM8 01-Nov-1999	OMM8 01-Jun-2000
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	141	155	126	234	118	244	350	280	208
Ammonia Nitrogen	mg/l	--	--	--	--	--	--	--	--	--	--	--
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	<1	<1	2	4	<1	<1	<1	<1	<1
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chloride	mg/l	--	250	6.5	9.2	5.6	--	4.1	13	15.5	12.8	26.7
Conductivity	uS/cm	--	--	329	494	287	470	270	527	677	572	--
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Dissolved Organic Carbon	mg/l	--	5	--	--	--	--	--	--	--	--	2.7
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	145	268	167	252	130	248	387	276	209
Nitrate as N	mg/l	10.0	--	--	--	--	--	--	--	--	--	--
Nitrite as N	mg/l	1.0	--	--	--	--	--	--	--	--	--	--
Nitrogen, Total Kjeldahl	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.76	8.34	8.15	8.02	7.79	7.55	7.84	7.67	8.16
Phosphorus	mg/l	--	--	<0.1	--	--	--	--	--	--	--	--
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	21.8	15	23	17	21	18	18	20	12
Temperature (Field)	deg c	--	15	--	--	--	--	--	--	--	--	--
Total Dissolved Solids	mg/l	--	500	200	308	174	264	146	314	444	390	264
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	<0.001	--	--	--	--	--	--	--	--
Barium, dissolved	mg/l	1	--	0.118	--	--	--	--	--	--	--	0.151
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.01	--	--	--	--	--	--	--	--
Cadmium, dissolved	mg/l	0.005	--	<0.001	--	--	--	--	--	--	--	--
Calcium, dissolved	mg/l	--	--	44.4	82.5	48	75.7	40.5	74.7	112	82.4	--
Chromium, dissolved	mg/l	0.05	--	<0.01	--	--	--	--	--	--	--	--
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.01	--	--	--	--	--	--	--	--
Iron, dissolved	mg/l	--	0.3	0.055	0.31	0.06	0.9	0.33	0.5	0.5	0.31	0.4
Lead, dissolved	mg/l	0.01	--	0.0002	--	--	--	--	--	--	--	--
Magnesium, dissolved	mg/l	--	--	8.22	14.9	7.54	15.1	6.89	14.6	20.9	16.9	11.2
Manganese, dissolved	mg/l	--	0.05	0.06	0.1	0.04	0.1	0.04	0.07	0.09	0.06	0.05
Mercury, dissolved	mg/l	0.001	--	--	--	--	--	--	--	--	--	--
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	5.33	8.6	6.1	9	3.3	6	3.4	5	4.6
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	10.9	9.9	4.5	10.5	6.2	14.6	14.5	17.8	16.8
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.01	--	--	--	--	--	--	--	--
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	0.065	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8
				01-Nov-2000	01-Jul-2001	01-Nov-2001	01-Jul-2002	01-Nov-2002	10-Jul-2003	27-Dec-2003	26-Aug-2004	22-Dec-2004
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	346	291	243	170	342	209	196	243	230
Ammonia Nitrogen	mg/l	--	--	--	--	--	0.08	0.02	0.82	0.11	0.02	0.02
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	<1	3	<1	<1	<1	<1	<1	<1	<1
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	--	--	--	9	28	13	7	14	5
Chloride	mg/l	--	250	23.2	19.8	13.4	9.3	26	40.2	55.2	12.7	34.6
Conductivity	uS/cm	--	--	--	558	449	371	672	521	599	492	556
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Dissolved Organic Carbon	mg/l	--	5	3.5	1.8	9	3	3.5	3.1	6	2.9	3
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	333	278	257	173	319	208	250	220	239
Nitrate as N	mg/l	10.0	--	--	--	--	<0.1	<0.1	0.1	<0.1	<0.1	0.1
Nitrite as N	mg/l	1.0	--	--	--	--	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrogen, Total Kjeldahl	mg/l	--	--	--	--	--	0.31	0.22	1.09	0.28	0.54	0.19
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.96	7.75	8.54	7.84	7.33	--	--	--	--
Phosphorus	mg/l	--	--	<0.01	0.07	0.02	<0.01	0.02	1.79	0.21	0.04	0.04
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	15	18	12	13	19	15	27	13	16
Temperature (Field)	deg c	--	15	--	--	--	--	--	--	--	--	--
Total Dissolved Solids	mg/l	--	500	388	312	--	216	340	302	309	274	292
Total Suspended Solids	mg/l	--	--	--	--	--	6	5	16	4	17	3
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	--	0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	0.001
Barium, dissolved	mg/l	1	--	0.24	0.165	0.16	0.12	0.22	0.096	0.152	0.064	0.153
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	--	0.05	0.06	0.03	0.09	<0.005	0.038	0.077	0.038
Cadmium, dissolved	mg/l	0.005	--	--	<0.0001	<0.0001	<0.0001	<0.0001	0.0003	0.0004	0.002	<0.0001
Calcium, dissolved	mg/l	--	--	--	85.6	79.3	52.6	98.2	64.3	76.6	66.7	72.6
Chromium, dissolved	mg/l	0.05	--	--	<0.01	<0.01	<0.01	<0.01	0.001	<0.001	0.028	<0.002
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	--	<0.01	<0.01	<0.01	<0.01	<0.002	<0.002	<0.002	<0.002
Iron, dissolved	mg/l	--	0.3	0.6	0.41	0.65	0.17	0.28	0.125	0.162	0.57	0.189
Lead, dissolved	mg/l	0.01	--	--	0.0002	<0.0002	<0.0002	<0.0002	0.0007	<0.02	0.0002	0.0002
Magnesium, dissolved	mg/l	--	--	21.4	15.6	14.3	10.1	17.7	11.5	14.1	12.9	14
Manganese, dissolved	mg/l	--	0.05	0.08	0.06	0.07	0.04	0.08	0.051	0.051	0.061	0.047
Mercury, dissolved	mg/l	0.001	--	--	--	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00006
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	6.2	4.2	6.9	5.1	7.8	5.2	5.9	6.2	6.6
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	18	16.4	12.1	15.6	16.2	28.4	18.3	22.4	17.6
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	--	<0.01	<0.01	<0.01	<0.01	<0.005	<0.005	0.049	<0.005
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8
				21-Jun-2005	09-Dec-2005	30-Jun-2006	28-Nov-2006	29-Jun-2007	26-Nov-2007	13-Jun-2008	26-Nov-2008	06-Jul-2009
General Chemistry											R-5	R-16
Alkalinity (Total as CaCO ₃)	mg/l	--	--	208	225	277	244	482	264	423	225	406
Ammonia Nitrogen	mg/l	--	--	0.03	0.02	0.05	0.04	0.07	0.06	<0.02	0.02	<0.02
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	<3	<3	<1	<1	<1	<1	3	<1	<1
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	6	12	<5	<5	18	<5	<5	25	9
Chloride	mg/l	--	250	27.6	72.9	39	22	34	22	30	20	43
Conductivity	uS/cm	--	--	400	600	620	590	620	585	882	507	900
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	--	--	680	770
Dissolved Organic Carbon	mg/l	--	5	6.7	5.4	<0.5	4.3	3.9	4.1	3.5	3.0	3.0
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	208	269	282	246	457	249	440	230	419
Nitrate as N	mg/l	10.0	--	0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.10	<0.10
Nitrite as N	mg/l	1.0	--	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.10	<0.10
Nitrogen, Total Kjeldahl	mg/l	--	--	0.22	0.35	0.22	0.34	0.28	0.31	0.29	0.14	<0.10
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.6	7.3	7.4	7.5	7.4	7.5	7.3	7.3	7.4
Phosphorus	mg/l	--	--	0.08	0.25	2.16	0.08	0.19	0.2	0.22	0.23	0.24
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	0.507	0.622	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	13	31	11	13	18	17	22	13	27
Temperature (Field)	deg c	--	15	13.5	5	7	6	7	5	8	6	16.0
Total Dissolved Solids	mg/l	--	500	257	359	421	355	636	374	573	330	585
Total Suspended Solids	mg/l	--	--	29	272	595	276	247	110	450	199	109
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.155	0.154	0.21	0.16	0.36	0.15	0.38	0.15	0.36
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.034	0.089	0.08	0.1	0.22	0.06	0.23	0.05	0.21
Cadmium, dissolved	mg/l	0.005	--	<0.0001	0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	59.1	77.2	85	67	122	75	130	69	125
Chromium, dissolved	mg/l	0.05	--	<0.002	<0.002	<0.001	0.001	0.003	0.001	0.002	<0.001	0.003
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.002	<0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Iron, dissolved	mg/l	--	0.3	0.241	0.046	0.24	0.21	0.7	0.12	0.6	0.10	0.17
Lead, dissolved	mg/l	0.01	--	<0.0002	<0.0002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Magnesium, dissolved	mg/l	--	--	14.5	18.5	17	19	37	15	28	14	26
Manganese, dissolved	mg/l	--	0.05	0.059	0.009	0.06	0.06	0.14	0.06	0.08	0.04	0.06
Mercury, dissolved	mg/l	0.001	--	<0.00005	<0.00006	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	5.2	9.2	7	7	12	8	10	6	11
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	16.8	23.5	23	18	39	16	28	12	28
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.005	<0.005	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	<0.001	0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8
				08-Dec-2009	30-Jun-2010	30-Nov-2010	13-Jun-2011	29-Nov-2011	22-Jun-2012	10-Nov-2012	25-Jun-2013	20-Nov-2013
				R-7	R-6	R- 4	S-7	OMM-8	S-1	S-9	S-6	S-6
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	194	228	190	204	212	240	240	230	210
Ammonia Nitrogen	mg/l	--	--	0.03	<0.02	<0.02	0.03	<0.02	<0.050	<0.050	0.090	<0.050
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	<1	--	2	--	--	--	--	--	--
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	28	<5	15	15	<5	15	<4.0	14	8.7
Chloride	mg/l	--	250	20	40	32	32	24	33	25	30	16
Conductivity	uS/cm	--	--	470	589	498	490	506	--	--	--	--
Conductivity (Field)	uS/cm	--	--	785	745	705	740	593	761	735	720	750
Dissolved Organic Carbon	mg/l	--	5	3.5	2.6	2.9	3.3	2.4	2.7	2.3	2.2	2.2
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	193	238	218	206	230	240	250	260	240
Nitrate as N	mg/l	10.0	--	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Nitrite as N	mg/l	1.0	--	<0.10	<0.10	<0.10	<0.10	<0.10	<0.010	<0.010	<0.010	<0.010
Nitrogen, Total Kjeldahl	mg/l	--	--	<0.10	0.14	<0.10	0.25	0.34	0.14	0.37	0.65	0.40
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	<0.10	<0.10	<0.10	<0.10
pH (Field)	-	--	--	7.6	7.5	7.4	7.4	7.54	7.4	7.3	7.2	7.2
Phosphorus	mg/l	--	--	0.12	0.10	0.06	0.10	0.01	0.20	0.037	0.14	0.061
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	23	21	24	13	22	20	28	24	25
Temperature (Field)	deg c	--	15	6	11	8	10	14.5	12	7	9	7
Total Dissolved Solids	mg/l	--	500	306	383	324	318	329	324	318	310	284
Total Suspended Solids	mg/l	--	--	95	--	63	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.12	0.13	0.08	0.14	0.12	0.13	0.11	0.12	0.091
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.02	0.03	0.02	0.04	0.03	0.048	0.032	0.041	0.029
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00010	<0.00010	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	59	74	66	61	69	72	76	80	72
Chromium, dissolved	mg/l	0.05	--	<0.001	0.005	<0.001	0.047	<0.001	<0.0050	<0.0050	<0.005	<0.005
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010	<0.001	<0.001
Iron, dissolved	mg/l	--	0.3	0.06	0.19	0.08	0.10	0.11	0.13	<0.1	0.14	<0.1
Lead, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00050	<0.00050	<0.0005	<0.0005
Magnesium, dissolved	mg/l	--	--	11	13	13	13	14	14	15	15	13
Manganese, dissolved	mg/l	--	0.05	0.03	0.06	0.04	0.04	0.05	0.052	0.043	0.048	0.039
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00010	<0.00010	<0.00010	<0.00010
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	4	4	4	5	5	4.7	5.8	5.1	5.7
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	10	21	16	20	14	25	15	22	11
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0050	<0.0050	<0.005	<0.005
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	<0.001	--	<0.001	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8
				27-May-2014	25-Nov-2014	26-May-2015	30-Nov-2015	14-Jun-2016	29-Nov-2016	01-Jun-2017	22-Nov-2017	28-Jun-2018
				A-6	R-10	OMM-8	8	OMM-8	OMM-8	OMM8	OMM-8	OMM-8
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	140	180	178	254	187	208	172	185	239
Ammonia Nitrogen	mg/l	--	--	<0.050	<0.050	0.06	0.09	0.04	0.02	0.04	0.08	0.03
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	--	--	--	--	--	--	--
Bromide	mg/l	--	--	--	--	--	--	<0.1	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	<4.0	5.2	16	<10	<10	<10	20	<10	13
Chloride	mg/l	--	250	48	26	33	24	49	23	31	29	48
Conductivity	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	437	780	508	500	473	438	560	434	581
Dissolved Organic Carbon	mg/l	--	5	2.0	2.5	1.4	2.5	1.8	2.6	3.2	5.3	3.2
Fluoride	mg/l	1.5	--	--	--	--	--	0.2	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	200	190	201	282	207	200	155	176	175
Nitrate as N	mg/l	10.0	--	<0.10	<0.10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite as N	mg/l	1.0	--	<0.010	<0.010	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrogen, Total Kjeldahl	mg/l	--	--	0.29	0.14	0.2	0.2	0.3	0.1	0.3	0.2	0.3
Nitrogen, Nitrate-Nitrite	mg/l	--	--	<0.10	<0.10	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.60	7.3	7.51	7.5	7.90	8.29	7.8	7.66	7.61
Phosphorus	mg/l	--	--	0.040	0.083	0.04	0.04	0.25	0.09	0.14	0.02	0.06
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	<0.2	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	20	22	17	23	23	17	21	21	15
Temperature (Field)	deg c	--	15	10.9	6	11.0	7	10.2	11.2	10	9.8	11.1
Total Dissolved Solids	mg/l	--	500	286	226	266	322	290	234	248	256	316
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	<0.01	--	0.001	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	<0.001	--	<0.0005	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	<0.0010	<0.001	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.091	0.07	0.085	0.103	0.109	0.077	0.102	0.135	0.171
Beryllium, dissolved	mg/l	--	--	--	--	<0.001	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.02	0.017	<0.05	0.04	0.02	0.026	0.047	0.038	0.06
Cadmium, dissolved	mg/l	0.005	--	<0.00010	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	60	60	60.6	89.8	62	60.6	42.8	50.5	48.3
Chromium, dissolved	mg/l	0.05	--	<0.0050	<0.005	<0.05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	--	--	<0.001	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.0010	<0.001	<0.005	<0.0005	<0.0005	<0.0005	0.0013	<0.0005	<0.0005
Iron, dissolved	mg/l	--	0.3	<0.1	<0.1	<0.2	0.117	0.116	0.148	<0.1	<0.1	0.144
Lead, dissolved	mg/l	0.01	--	<0.00050	<0.0005	<0.001	<0.0001	<0.0001	<0.0001	0.0005	<0.0001	<0.0001
Magnesium, dissolved	mg/l	--	--	12	9.6	12.2	13.9	12.6	11.8	11.7	12	13.2
Manganese, dissolved	mg/l	--	0.05	0.039	0.029	<0.05	0.055	0.04	0.031	0.028	0.036	0.032
Mercury, dissolved	mg/l	0.001	--	<0.00010	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	--	<0.005	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	<0.005	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	4.8	4.3	5.21	5.35	5.2	4.66	5.47	6.33	4.92
Selenium, dissolved	mg/l	0.05	--	--	--	<0.005	--	<0.001	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	<0.001	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	18	13	27.2	19.1	21.3	14.4	18.8	16.7	32.1
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	<0.001	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	<0.01	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	0.0011	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	<0.001	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.0050	<0.005	<0.02	<0.005	<0.005	<0.005	0.019	<0.005	<0.005
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	--	--	--	--	--	--	<0.001	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8
				26-Nov-2018	18-Jun-2019	29-Nov-2019	04-Jun-2020	30-Nov-2020	08-Jun-2021	25-Nov-2021	20-Jun-2022	23-Nov-2022
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	251	206	219	189	184	177	187	199	--
Ammonia Nitrogen	mg/l	--	--	0.13	0.02	0.03	0.05	0.03	0.03	0.05	0.07	--
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	--	--	--	--	--	--	--
Bromide	mg/l	--	--	--	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	--
Chemical Oxygen Demand	mg/l	--	--	<10	14	<10	13	14	12	<10	59	--
Chloride	mg/l	--	250	37	61	32	49	26	45	25	68.4	--
Conductivity	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	528	571	544	516	437	503	485	630	593
Dissolved Organic Carbon	mg/l	--	5	3.6	2.0	2.8	5.1	2.9	3.7	2.9	3.0	--
Fluoride	mg/l	1.5	--	--	<0.1	<0.1	<0.1	0.2	0.2	0.3	0.3	--
Hardness, Calcium Carbonate	mg/l	--	--	239	238	228	192	162	152	182	167	--
Nitrate as N	mg/l	10.0	--	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	--
Nitrite as N	mg/l	1.0	--	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	--
Nitrogen, Total Kjeldahl	mg/l	--	--	0.2	0.1	0.2	0.1	<0.1	0.2	0.1	0.4	--
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.95	7.89	7.8	7.84	7.90	7.82	7.58	7.79	7.68
Phosphorus	mg/l	--	--	<0.01	<0.01	0.08	0.03	0.01	<0.01	<0.01	0.02	--
Phosphorus, Total Orthophosphate	mg/l	--	--	--	<0.2	<0.2	<0.2	<1.0 ⁽⁷⁾	<0.2	<0.2	<0.2	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	19	12	17	31	8	17	19	16.1	--
Temperature (Field)	deg c	--	15	12.3	11.3	8.8	11.4	9.5	11.1	9.8	11.8	10.1
Total Dissolved Solids	mg/l	--	500	288	318	306	274	224	274	262	306	--
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	0.002	0.002	0.002	0.002	0.002	0.001	0.003	--
Antimony, dissolved	mg/l	0.006	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	--
Arsenic, dissolved	mg/l	0.01	--	<0.001	0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--
Barium, dissolved	mg/l	1	--	0.135	0.212	0.203	0.182	0.159	0.143	0.132	0.158	--
Beryllium, dissolved	mg/l	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	--
Boron, dissolved	mg/l	5	--	0.048	0.036	0.049	0.03	0.056	0.016	0.029	0.03	--
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	--
Calcium, dissolved	mg/l	--	--	69.8	67	65.5	54.8	45.9	44.2	54	48.9	--
Chromium, dissolved	mg/l	0.05	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--
Cobalt, dissolved	mg/l	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	--
Copper, dissolved	mg/l	--	1	0.0017	<0.0005	<0.0005	<0.0005	<0.0005	0.0013	<0.0005	0.0009	--
Iron, dissolved	mg/l	--	0.3	0.202	<0.1	0.171	<0.1	<0.1	<0.1	<0.1	<0.1	--
Lead, dissolved	mg/l	0.01	--	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	--
Magnesium, dissolved	mg/l	--	--	15.7	17.2	15.5	13.3	11.4	10	11.5	10.8	--
Manganese, dissolved	mg/l	--	0.05	0.051	0.029	0.047	0.028	0.026	0.026	0.042	0.024	--
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	--
Molybdenum, dissolved	mg/l	--	--	--	0.0013	0.0012	0.0017	0.0017	0.0011	0.0011	0.0014	--
Nickel, dissolved	mg/l	--	--	--	0.002	0.002	0.001	0.001	<0.001	<0.001	<0.001	--
Potassium, dissolved	mg/l	--	--	7.3	5.59	6.15	4.95	5.91	4.15	4.89	5.46	--
Selenium, dissolved	mg/l	0.05	--	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--
Silver, dissolved	mg/l	--	--	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	16.5	25.8	21.3	23.4	20.7	28.4	13.5	44.4	--
Strontium, dissolved	mg/l	--	--	--	0.173	0.163	0.156	0.126	0.128	0.152	0.139	--
Thallium, dissolved	mg/l	--	--	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	--
Tin, dissolved	mg/l	--	--	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	--
Titanium, dissolved	mg/l	--	--	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	--
Tungsten, dissolved	mg/l	--	--	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--
Uranium, dissolved	mg/l	0.02	--	--	0.0077	0.0038	0.0030	0.0030	0.0013	0.0013	0.0015	--
Vanadium, dissolved	mg/l	--	--	--	0.0010	0.0005	0.0006	<0.0005	<0.0005	<0.0005	<0.0005	--
Zinc, dissolved	mg/l	--	5	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	--
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8
				23-Nov-2022	23-Nov-2022	10-May-2023	29-Nov-2023	06-Dec-2023	25-Apr-2024	23-Oct-2024
				OMM-8	Dup-1	OMM-8	OMM-8	OMM-8	OMM - 8	OMM8
General Chemistry										
Alkalinity (Total as CaCO3)	mg/l	--	--	200	197	181	191	--	176	191
Ammonia Nitrogen	mg/l	--	--	0.04	0.04	0.02	0.03	--	0.01	0.02
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	--	--	--	--	--
Bromide	mg/l	--	--	<0.1	<0.1	<0.1	<0.1	--	<0.1	<0.1
Chemical Oxygen Demand	mg/l	--	--	<10	<10	<10	<10	--	<10	12
Chloride	mg/l	--	250	53.9	53.8	58	26	--	78	33
Conductivity	uS/cm	--	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	593	--	556	473	--	622	455
Dissolved Organic Carbon	mg/l	--	5	3.0	4.0	3.7	3.0	--	2.8	2.9
Fluoride	mg/l	1.5	--	0.2	0.3	0.1	0.1	--	0.1	0.4
Hardness, Calcium Carbonate	mg/l	--	--	216	215	134	177	--	206	183
Nitrate as N	mg/l	10.0	--	<0.1	<0.1	<0.1	<0.1	--	<0.1	<0.1
Nitrite as N	mg/l	1.0	--	<0.05	<0.05	<0.05	<0.05	--	<0.05	<0.05
Nitrogen, Total Kjeldahl	mg/l	--	--	0.1	0.1	0.2	0.2	--	0.2	0.2
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.68	--	7.58	8.04	--	7.22	7.76
Phosphorus	mg/l	--	--	<0.01	0.01	0.01	<0.01	--	<0.01	<0.01
Phosphorus, Total Orthophosphate	mg/l	--	--	<0.2	<0.4 ⁽⁶⁾	<0.5	<0.5	--	<0.5	<0.5
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	18.9	19.0	16	21	--	24	13
Temperature (Field)	deg c	--	15	10.1	--	7.9	8.4	--	8.9	16.3
Total Dissolved Solids	mg/l	--	500	332	326	294	218	--	316	292
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--
Metals										
Aluminum, dissolved	mg/l	--	--	0.002	0.002	0.001	0.002	--	0.001	0.007
Antimony, dissolved	mg/l	0.006	--	<0.0005	<0.0005	<0.0005	<0.0005	--	<0.0005	<0.0005
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.108	0.125	0.118	0.099	--	0.163	0.137
Beryllium, dissolved	mg/l	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	<0.0005	<0.0005
Boron, dissolved	mg/l	5	--	0.02	0.021	0.032	0.031	--	0.014	0.028
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.0001	--	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	65.5	65.3	39	51.1	--	58.5	54.3
Chromium, dissolved	mg/l	0.05	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	<0.0005	<0.0005
Copper, dissolved	mg/l	--	1	<0.0005	0.0016	<0.0005	<0.0005	--	<0.0005	<0.0005
Iron, dissolved	mg/l	--	0.3	<0.1	<0.1	<0.1	<0.1	--	<0.1	<0.1
Lead, dissolved	mg/l	0.01	--	<0.0001	<0.0001	<0.0001	<0.0001	--	0.0002	<0.0001
Magnesium, dissolved	mg/l	--	--	12.8	12.7	8.88	12	--	14.6	11.5
Manganese, dissolved	mg/l	--	0.05	0.009	0.007	0.021	0.037	--	0.039	0.05
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	<0.0001	--	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	0.0006	0.0007	0.0007	0.0007	--	0.0009	0.0009
Nickel, dissolved	mg/l	--	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001
Potassium, dissolved	mg/l	--	--	4.63	4.52	3.91	4.03	--	5.69	4.6
Selenium, dissolved	mg/l	0.05	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	0.004
Silver, dissolved	mg/l	--	--	<0.0001	0.0002	<0.0001	<0.0001	--	<0.0001	<0.0001
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	19.2	18.9	50.8	15	--	33.5	21.5
Strontium, dissolved	mg/l	--	--	0.178	0.177	0.098	0.132	--	0.153	0.156
Thallium, dissolved	mg/l	--	--	<0.0001	<0.0001	<0.0001	<0.0001	--	<0.0001	<0.0001
Tin, dissolved	mg/l	--	--	<0.005	<0.005	<0.005	<0.005	--	<0.005	<0.005
Titanium, dissolved	mg/l	--	--	<0.005	<0.005	<0.005	<0.005	--	<0.005	<0.005
Tungsten, dissolved	mg/l	--	--	<0.01	<0.01	<0.01	<0.01	--	<0.01	<0.01
Uranium, dissolved	mg/l	0.02	--	0.0009	0.0009	0.0006	0.0008	--	0.0010	0.0009
Vanadium, dissolved	mg/l	--	--	<0.0005	<0.0005	0.0006	<0.0005	--	<0.0005	0.0006
Zinc, dissolved	mg/l	--	5	<0.005	<0.005	<0.005	<0.005	--	<0.005	<0.005
Phenols										
Phenolics, Total Recoverable	mg/l	--	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM9	OMM9	OMM9	OMM9	OMM9	OMM9	OMM9	OMM9	OMM9
				01-Jan-1990	01-Nov-1990	01-Dec-1990	01-Jun-1992	01-Dec-1992	01-Sep-1993	01-May-1994	01-Nov-1994	01-Jun-1995
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	240	299	260	--	--	181	262	211	258
Ammonia Nitrogen	mg/l	--	--	--	--	--	--	--	--	--	--	--
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	<1	--	18.1	<1	3	1.8	<1	<1	7
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chloride	mg/l	--	250	26	11	11	7	5	6	12	9	10
Conductivity	uS/cm	--	--	600	690	599	--	--	382	485	424	417
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Dissolved Organic Carbon	mg/l	--	5	--	--	--	--	--	--	--	--	--
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	--	330	301	190	275	147	225	275	272
Nitrate as N	mg/l	10.0	--	--	--	--	--	--	--	--	--	--
Nitrite as N	mg/l	1.0	--	--	--	--	--	--	--	--	--	--
Nitrogen, Total Kjeldahl	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.48	--	--	--	--	7.71	7.65	7.81	8.23
Phosphorus	mg/l	--	--	--	--	--	0.34	0.29	--	--	<0.1	--
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	1	15	8	--	--	3	6	5	6
Temperature (Field)	deg c	--	15	--	--	--	--	--	--	--	--	--
Total Dissolved Solids	mg/l	--	500	--	--	--	--	--	--	--	--	--
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	0.017	<0.005	<0.05	<0.2	--	--	--	<0.001	--
Barium, dissolved	mg/l	1	--	--	0.1	0.053	0.063	0.08	--	--	0.055	--
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	--	0.07	--	--	0.03	--	--	0.077	--
Cadmium, dissolved	mg/l	0.005	--	0.027	<0.002	0.004	<0.02	<0.01	--	--	<0.0001	--
Calcium, dissolved	mg/l	--	--	--	94	72	45	77	39	66	82	86
Chromium, dissolved	mg/l	0.05	--	<0.05	<0.006	0.01	<0.02	<0.01	--	--	<0.01	--
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.05	<0.014	<0.01	0.023	<0.01	--	--	<0.01	--
Iron, dissolved	mg/l	--	0.3	0.19	0.24	<0.008	1.9	0.02	4.11	0.06	0.19	1.86
Lead, dissolved	mg/l	0.01	--	<0.02	<0.03	<0.04	<0.1	<0.05	--	--	0.002	--
Magnesium, dissolved	mg/l	--	--	--	23	17	19	20	12	14	17	14
Manganese, dissolved	mg/l	--	0.05	<0.05	0.054	<0.005	0.04	0.04	0.14	<0.05	0.04	0.1
Mercury, dissolved	mg/l	0.001	--	--	--	--	--	--	--	--	--	--
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	--	4	4	4	4	13	4	3	4
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	--	17	15	18	16	11	12	11	13
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.05	<0.005	--	0.045	0.1	--	--	<0.01	--
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	<0.002	--	<0.002	0.017	0.002	0.012	<0.002	<0.001	<0.002

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM9 12-Jun-1996	OMM9 26-Nov-1996	OMM9 01-Jun-1997	OMM9 01-Nov-1997	OMM9 01-Jun-1998	OMM9 01-Nov-1998	OMM9 01-Aug-1999	OMM9 01-Nov-1999	OMM9 01-Jun-2000
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	296	225	286	334	376	410	450	450	479
Ammonia Nitrogen	mg/l	--	--	--	--	--	--	--	--	--	--	--
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	2	<1	<1	<1	<1	<1	<1	<1	<1
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chloride	mg/l	--	250	33.5	91.9	87	--	68.3	70.8	82.8	56.8	32.2
Conductivity	uS/cm	--	--	658	765	782	902	883	994	1026	939	--
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Dissolved Organic Carbon	mg/l	--	5	--	--	--	--	--	--	--	--	1
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	310	387	507	547	485	523	578	490	455
Nitrate as N	mg/l	10.0	--	--	--	--	--	--	--	--	--	--
Nitrite as N	mg/l	1.0	--	--	--	--	--	--	--	--	--	--
Nitrogen, Total Kjeldahl	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.89	8.15	7.88	7.8	7.34	7.49	7.33	7.5	7.78
Phosphorus	mg/l	--	--	<0.1	--	--	--	--	--	--	--	--
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	12.9	45	22	63	34	29	26	26	21
Temperature (Field)	deg c	--	15	--	--	--	--	--	--	--	--	--
Total Dissolved Solids	mg/l	--	500	358	448	508	550	540	616	618	626	542
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	<0.001	--	--	--	--	--	--	--	--
Barium, dissolved	mg/l	1	--	0.065	--	--	--	--	--	--	--	0.106
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	<0.01	--	--	--	--	--	--	--	--
Cadmium, dissolved	mg/l	0.005	--	<0.001	--	--	--	--	--	--	--	--
Calcium, dissolved	mg/l	--	--	90.4	110	134	163	141	148	171	143	--
Chromium, dissolved	mg/l	0.05	--	<0.01	--	--	--	--	--	--	--	--
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.01	--	--	--	--	--	--	--	--
Iron, dissolved	mg/l	--	0.3	0.37	0.11	0.1	0.79	0.08	0.07	<0.02	0.06	0.13
Lead, dissolved	mg/l	0.01	--	0.0002	--	--	--	--	--	--	--	--
Magnesium, dissolved	mg/l	--	--	20.3	27	25.9	33.5	31.7	36.6	36.1	31.7	29.4
Manganese, dissolved	mg/l	--	0.05	0.016	0.02	0.02	0.04	<0.01	<0.01	<0.01	<0.01	<0.01
Mercury, dissolved	mg/l	0.001	--	--	--	--	--	--	--	--	--	--
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	4.18	7.8	4.8	5.8	2.3	2.4	0.3	3	4.4
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	15.4	19.7	17.5	21.8	13.6	15.2	23.3	25.3	29.5
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	0.024	--	--	--	--	--	--	--	--
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	0.098	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM9
				01-Nov-2000
General Chemistry				
Alkalinity (Total as CaCO3)	mg/l	--	--	518
Ammonia Nitrogen	mg/l	--	--	--
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	<1
Bromide	mg/l	--	--	--
Chemical Oxygen Demand	mg/l	--	--	--
Chloride	mg/l	--	250	43.8
Conductivity	uS/cm	--	--	--
Conductivity (Field)	uS/cm	--	--	--
Dissolved Organic Carbon	mg/l	--	5	3.3
Fluoride	mg/l	1.5	--	--
Hardness, Calcium Carbonate	mg/l	--	--	484
Nitrate as N	mg/l	10.0	--	--
Nitrite as N	mg/l	1.0	--	--
Nitrogen, Total Kjeldahl	mg/l	--	--	--
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--
pH (Field)	-	--	--	7.91
Phosphorus	mg/l	--	--	<0.01
Phosphorus, Total Orthophosphate	mg/l	--	--	--
Sodium Adsorption Ratio	-	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	23
Temperature (Field)	deg c	--	15	--
Total Dissolved Solids		--	500	610
Total Suspended Solids	mg/l	--	--	--
Metals				
Aluminum, dissolved	mg/l	--	--	--
Antimony, dissolved	mg/l	0.006	--	--
Arsenic, dissolved	mg/l	0.01	--	--
Barium, dissolved	mg/l	1	--	0.11
Beryllium, dissolved	mg/l	--	--	--
Boron, dissolved	mg/l	5	--	--
Cadmium, dissolved	mg/l	0.005	--	--
Calcium, dissolved	mg/l	--	--	--
Chromium, dissolved	mg/l	0.05	--	--
Cobalt, dissolved	mg/l	--	--	--
Copper, dissolved	mg/l	--	1	--
Iron, dissolved	mg/l	--	0.3	0.1
Lead, dissolved	mg/l	0.01	--	--
Magnesium, dissolved	mg/l	--	--	36.2
Manganese, dissolved	mg/l	--	0.05	<0.01
Mercury, dissolved	mg/l	0.001	--	--
Molybdenum, dissolved	mg/l	--	--	--
Nickel, dissolved	mg/l	--	--	--
Potassium, dissolved	mg/l	--	--	4.3
Selenium, dissolved	mg/l	0.05	--	--
Silver, dissolved	mg/l	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	31.8
Strontium, dissolved	mg/l	--	--	--
Thallium, dissolved	mg/l	--	--	--
Tin, dissolved	mg/l	--	--	--
Titanium, dissolved	mg/l	--	--	--
Tungsten, dissolved	mg/l	--	--	--
Uranium, dissolved	mg/l	0.02	--	--
Vanadium, dissolved	mg/l	--	--	--
Zinc, dissolved	mg/l	--	5	--
Phenols				
Phenolics, Total Recoverable	mg/l	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM9	OMM9	OMM9	OMM9	OMM9	OMM9	OMM9	OMM9	OMM9
				01-Jul-2001	01-Nov-2001	01-Jul-2002	01-Nov-2002	10-Jul-2003	27-Dec-2003	26-Aug-2004	22-Dec-2004	21-Jun-2005
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	437	364	378	489	477	483	492	453	306
Ammonia Nitrogen	mg/l	--	--	--	--	0.01	<0.01	0.09	0.02	<0.01	<0.01	<0.01
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	<1	<1	<1	<1	<1	<1	<1	<1	<3
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	--	--	4	8	4	5	10	<5	20
Chloride	mg/l	--	250	31.5	48.5	28.2	63.1	96.3	78.4	36.8	69.1	222
Conductivity	uS/cm	--	--	851	824	926	1090	1090	1090	935	997	1443
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Dissolved Organic Carbon	mg/l	--	5	1.8	<3	0.6	2	1.5	4	1.1	0.8	15.5
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	422	462	368	506	518	488	469	457	600
Nitrate as N	mg/l	10.0	--	--	--	<0.1	1.1	1.5	1.5	1.1	1.3	1.4
Nitrite as N	mg/l	1.0	--	--	--	<0.1	1.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrogen, Total Kjeldahl	mg/l	--	--	--	--	0.19	0.17	0.16	0.12	0.14	0.05	0.1
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.53	8.04	7.6	7.18	--	--	--	--	7.62
Phosphorus	mg/l	--	--	0.02	0.3	0.01	0.16	<0.01	0.05	<0.01	0.01	<0.01
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	0.571
Sulphate	mg/l	--	500 ⁽³⁾	16	17	14	17	13	11	10	11	8
Temperature (Field)	deg c	--	15	--	--	--	--	--	--	--	--	11
Total Dissolved Solids	mg/l	--	500	496	--	522	576	630	602	544	554	668
Total Suspended Solids	mg/l	--	--	--	--	17	106	5	63	20	15	33
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	0.001	<0.001	<0.001	0.001	<0.001	0.001	0.001	0.001	<0.001
Barium, dissolved	mg/l	1	--	0.1	0.125	0.105	0.125	0.12	0.12	0.113	0.104	0.155
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.45	0.39	0.31	0.31	0.303	0.378	0.308	0.391	0.272
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.01	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	126	130	99.2	148	153	144	135	134	176
Chromium, dissolved	mg/l	0.05	--	<0.01	<0.01	<0.01	<0.01	0.001	<0.001	0.002	<0.002	0.002
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.01	<0.01	<0.01	<0.01	<0.002	<0.002	<0.002	<0.002	0.004
Iron, dissolved	mg/l	--	0.3	0.04	0.24	0.03	0.03	0.013	0.006	0.43	0.006	1.08
Lead, dissolved	mg/l	0.01	--	<0.0002	<0.1	<0.0002	0.0002	0.0002	<0.02	0.0005	<0.0002	0.001
Magnesium, dissolved	mg/l	--	--	26	30.4	29.2	33.3	33	31.2	31.9	29.6	39.1
Manganese, dissolved	mg/l	--	0.05	<0.01	0.02	<0.01	<0.01	0.002	<0.001	0.016	<0.001	0.027
Mercury, dissolved	mg/l	0.001	--	--	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00006	<0.00005
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	1.8	4.1	<0.4	6.1	5.3	4.7	4.8	4.8	5.3
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	34.7	41.6	36.5	36.8	41.9	41.3	30.2	32.8	32.2
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.01	<0.01	0.01	<0.01	<0.005	<0.005	<0.005	<0.005	0.008
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM9	OMM9	OMM9	OMM9	OMM9	OMM9	OMM9	OMM9	OMM9
				10-Dec-2005	30-Jun-2006	28-Nov-2006	29-Jun-2007	28-Nov-2007	13-Jun-2008	26-Nov-2008	06-Jul-2009	08-Dec-2009
General Chemistry												
Alkalinity (Total as CaCO ₃)	mg/l	--	--	374	380	400	384	433	490	537	774	685
Ammonia Nitrogen	mg/l	--	--	<0.01	0.02	<0.02	0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	<3	<1	<1	<1	<1	<1	<1	<1	<1
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	15	<5	<5	<5	<5	<5	18	14	23
Chloride	mg/l	--	250	183	69	32	24	28	46	60	69	51
Conductivity	uS/cm	--	--	505	545	590	640	595	1140	1230	1550	1350
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	--	605	580	565
Dissolved Organic Carbon	mg/l	--	5	3.2	<0.5	1.4	2.5	2.8	4.3	4.3	5.6	5.1
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	583	428	461	374	406	604	543	758	651
Nitrate as N	mg/l	10.0	--	2	0.87	1.17	0.97	0.97	1.65	1.47	1.38	1.56
Nitrite as N	mg/l	1.0	--	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.10	<0.10	<0.10
Nitrogen, Total Kjeldahl	mg/l	--	--	0.81	0.11	0.21	0.08	0.58	0.43	0.24	0.25	0.15
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.3	7.3	7.2	7.3	7.2	7.2	7.4	7.3	7.4
Phosphorus	mg/l	--	--	0.05	2.34	<0.01	0.39	0.41	0.9	0.23	0.48	<0.01
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	0.629	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	14	17	85	44	32	77	59	20	8
Temperature (Field)	deg c	--	15	5	8	6	8	7	8	5	17.0	5
Total Dissolved Solids	mg/l	--	500	674	604	632	547	579	741	800	1010	878
Total Suspended Solids	mg/l	--	--	72	1850	1040	898	475	1130	669	567	17
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.137	0.1	0.11	0.1	0.1	0.12	0.13	0.17	0.20
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.262	0.15	0.23	0.32	0.37	0.4	0.47	0.89	0.58
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	171	127	132	112	123	184	163	231	198
Chromium, dissolved	mg/l	0.05	--	<0.002	0.002	0.002	0.002	0.003	0.003	0.003	0.008	0.005
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.002	0.002	0.002	0.001	0.002	0.002	0.003	0.003	0.003
Iron, dissolved	mg/l	--	0.3	0.012	<0.03	<0.03	0.05	<0.03	<0.03	<0.03	<0.03	<0.03
Lead, dissolved	mg/l	0.01	--	<0.0002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Magnesium, dissolved	mg/l	--	--	38.1	27	32	23	24	35	33	44	38
Manganese, dissolved	mg/l	--	0.05	<0.001	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Mercury, dissolved	mg/l	0.001	--	<0.00006	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	5.4	4	5	5	4	5	5	6	6
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	34.9	28	40	45	32	35	39	58	66
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.005	<0.01	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM9	OMM9	OMM9	OMM9	OMM9	OMM9	OMM9	OMM9	OMM9
				30-Jun-2010	30-Nov-2010	13-Jun-2011	29-Nov-2011	22-Jun-2012	10-Nov-2012	25-Jun-2013	20-Nov-2013	27-May-2014
				R-7	R-5	S-8	OMM-9	S-7	S-10	S-7	S-7	A-8
General Chemistry												
Alkalinity (Total as CaCO ₃)	mg/l	--	--	690	677	657	647	540	470	530	560	530
Ammonia Nitrogen	mg/l	--	--	<0.02	<0.02	<0.02	<0.02	<0.050	<0.050	0.059	<0.050	<0.050
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	2	--	--	--	--	--	--	--
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	5	20	13	<5	8.2	<4.0	7.1	11	<4.0
Chloride	mg/l	--	250	61	61	59	53	45	44	91	82	37
Conductivity	uS/cm	--	--	1380	1340	1290	1270	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	590	565	605	661	600	620	680	605	1052
Dissolved Organic Carbon	mg/l	--	5	4.4	4.0	4.0	3.0	3.3	2.5	2.4	2.5	1.9
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	605	691	598	618	520	500	600	590	510
Nitrate as N	mg/l	10.0	--	1.08	1.09	1.25	1.40	1.3	1.9	1.9	2.4	1.26
Nitrite as N	mg/l	1.0	--	<0.10	<0.10	<0.10	<0.10	<0.010	<0.010	<0.010	<0.010	<0.010
Nitrogen, Total Kjeldahl	mg/l	--	--	0.39	<0.10	0.28	0.17	0.35	0.39	0.39	0.34	0.28
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	1.3	1.9	1.9	2.4	1.26
pH (Field)	-	--	--	7.5	7.4	7.5	7.83	7.5	7.4	7.3	7.4	7.06
Phosphorus	mg/l	--	--	<0.01	0.28	<0.01	0.02	0.55	0.53	0.76	<0.01 ⁽¹⁵⁾	0.097
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	18	11	19	9	19	18	9	9	6
Temperature (Field)	deg c	--	15	9	7	10	8.2	10	7	11	6	12.4
Total Dissolved Solids	mg/l	--	500	<u>897</u>	<u>871</u>	<u>838</u>	<u>826</u>	<u>626</u>	<u>604</u>	<u>678</u>	<u>708</u>	<u>606</u>
Total Suspended Solids	mg/l	--	--	--	502	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010	<0.001	<0.001	<0.0010
Barium, dissolved	mg/l	1	--	0.16	0.14	0.16	0.17	0.14	0.14	0.15	0.15	0.13
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.75	0.60	0.73	0.71	0.57	0.58	0.55	0.53	0.51
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.00010	<0.00010	<0.0001	<0.0001	<0.00010
Calcium, dissolved	mg/l	--	--	183	209	172	188	150	150	180	180	150
Chromium, dissolved	mg/l	0.05	--	0.008	0.002	0.002	0.002	<0.0050	<0.0050	<0.005	<0.005	<0.0050
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	0.002	0.002	0.003	0.002	0.0019	0.0020	0.002	0.002	0.0019
Iron, dissolved	mg/l	--	0.3	<0.03	<0.03	<0.03	<0.03	<0.1	<0.1	<0.1	<0.1	<0.1
Lead, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	<0.00050	<0.00050	<0.0005	<0.0005	<0.00050
Magnesium, dissolved	mg/l	--	--	36	41	41	36	34	32	38	38	33
Manganese, dissolved	mg/l	--	0.05	<0.01	<0.01	<0.01	<0.01	<0.0020	<0.0020	<0.002	<0.002	<0.0020
Mercury, dissolved	mg/l	0.001	--	<0.0001	0.0001	<0.0001	<0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	6	6	6	6	5.8	5.6	6.3	6.1	5.9
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	59	56	48	49	49	53	48	53	56
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.01	<0.01	<0.01	<0.01	<0.0050	<0.0050	<0.005	<0.005	<0.0050
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	--	<0.001	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM9	OMM9	OMM9	OMM9	OMM9	OMM9	OMM9	OMM9	OMM9
				25-Nov-2014	26-May-2015	30-Nov-2015	14-Jun-2016	29-Nov-2016	01-Jun-2017	22-Nov-2017	28-Jun-2018	26-Nov-2018
				R-11	OMM-9	9	OMM-9	OMM-9	OMM9	OMM-9	OMM-9	OMM-9
General Chemistry												
Alkalinity (Total as CaCO ₃)	mg/l	--	--	580	504	457	487	556	442	468	669	629
Ammonia Nitrogen	mg/l	--	--	<0.050	0.04	0.06	0.03	0.02	0.02	0.03	0.04	0.02
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	--	--	--	--	--	--	--
Bromide	mg/l	--	--	--	--	--	<0.1	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	<4.0	14	<10	11	<10	10	<10	10	13
Chloride	mg/l	--	250	83	145	99	225	224	427	205	144	93
Conductivity	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	590	1014	1020	739	1304	745	1308	1494	1154
Dissolved Organic Carbon	mg/l	--	5	2.5	0.9	1.5	1.5	2.8	2.4	3.2	4.1	3.4
Fluoride	mg/l	1.5	--	--	--	--	<0.1	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	570	773	623	564	681	859	585	524	497
Nitrate as N	mg/l	10.0	--	2.24	1.3	1.9	1.6	2.0	2.0	1.7	2.2	1.3
Nitrite as N	mg/l	1.0	--	<0.010	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrogen, Total Kjeldahl	mg/l	--	--	0.24	0.5	0.2	0.5	0.3	0.2	0.2	0.4	0.2
Nitrogen, Nitrate-Nitrite	mg/l	--	--	2.24	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.5	7.21	7.2	7.34	7.12	7.4	7.34	7.12	7.68
Phosphorus	mg/l	--	--	0.018	0.03	0.01	0.04	0.18	0.07	0.02	0.13	0.18
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	<0.2	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	10	7	8	15	11	24	19	22	10
Temperature (Field)	deg c	--	--	15	12.9	7	11.1	8.4	11	7.2	12.1	7.1
Total Dissolved Solids	mg/l	--	500	702	744	662	850	954	1680	738	930	724
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	<0.01	--	<0.001	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	<0.001	--	<0.0005	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.16	0.152	0.141	0.126	0.182	0.227	0.173	0.188	0.196
Beryllium, dissolved	mg/l	--	--	<0.001	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.5	0.635	0.444	0.39	0.406	0.4	0.396	0.379	0.466
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	170	240	179	152	194	259	173	155	145
Chromium, dissolved	mg/l	0.05	--	<0.005	<0.05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	--	<0.001	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	0.002	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	0.0010	0.0043	0.0024
Iron, dissolved	mg/l	--	0.3	<0.1	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lead, dissolved	mg/l	0.01	--	<0.0005	<0.001	<0.0001	<0.0001	<0.0001	0.0002	<0.0001	0.0009	<0.0001
Magnesium, dissolved	mg/l	--	--	36	42.3	42.4	44.6	47.9	51.5	37.4	33.3	32.8
Manganese, dissolved	mg/l	--	0.05	<0.002	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Mercury, dissolved	mg/l	0.001	--	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	<0.005	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	<0.005	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	6	7.47	5.65	6.19	6.22	8.87	8.07	7.88	10.4
Selenium, dissolved	mg/l	0.05	--	--	<0.005	--	<0.001	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	<0.001	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	54	65.4	52.5	58.4	50	48.7	51.9	44.5	79.2
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	<0.001	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	<0.01	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	0.0009	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	0.008	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	0.005	<0.02	<0.005	0.009	<0.005	0.008	<0.005	0.007	<0.005
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	--	--	--	--	--	<0.002 ⁽⁷⁾	<0.001	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM9	OMM9	OMM9	OMM9	OMM9	OMM9	OMM9	OMM9	OMM9
				18-Jun-2019	02-Dec-2019	04-Jun-2020	30-Nov-2020	08-Jun-2021	25-Nov-2021	20-Jun-2022	23-Nov-2022	10-May-2023
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	563	334	477	526	531	502	488	476	457
Ammonia Nitrogen	mg/l	--	--	0.07	0.04	0.05	0.04	0.02	0.04	0.02	<0.01	0.04
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	--	--	--	--	--	--	--
Bromide	mg/l	--	--	0.2	<0.1	<0.1	0.1	0.1	0.1	<0.1	0.1	0.1
Chemical Oxygen Demand	mg/l	--	--	14	14	23	28	13	11	19	<10	14
Chloride	mg/l	--	250	181	216	285	129	165	102	194	94.4	530
Conductivity	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	1304	1127	1709	1259	1310	1285	1275	1157	2600
Dissolved Organic Carbon	mg/l	--	5	2.2	2.7	8.4	2.4	2.5	2.4	2.4	3.4	3.3
Fluoride	mg/l	1.5	--	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Hardness, Calcium Carbonate	mg/l	--	--	612	639	665	500	530	461	527	428	897
Nitrate as N	mg/l	10.0	--	2.3	2.8	2.7	1.8	2.1	2.1	3.2	2.4	4.2
Nitrite as N	mg/l	1.0	--	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrogen, Total Kjeldahl	mg/l	--	--	0.2	0.2	0.3	0.3	0.2	0.2	0.4	0.2	0.3
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.65	7.5	7.69	7.07	7.17	7.08	7.47	7.25	6.84
Phosphorus	mg/l	--	--	0.09	0.02	1.01	0.39	0.03	0.10	0.37	0.05	0.03
Phosphorus, Total Orthophosphate	mg/l	--	--	<0.2	<0.2	<0.2	<1.0 ⁽⁷⁾	<0.2	<0.2	2.0	<0.2	<0.5
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	23	26	45	28	17	17	24.6	17.0	26
Temperature (Field)	deg c	--	15	11.5	8.7	11.5	7.9	11.8	8.72	12.0	8.6	8.5
Total Dissolved Solids	mg/l	--	500	900	876	1050	758	812	718	800	670	1570
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	0.002	<0.001	0.001	<0.001	<0.001	<0.001	0.013	0.002	0.001
Antimony, dissolved	mg/l	0.006	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.228	0.234	0.272	0.201	0.209	0.189	0.19	0.138	0.34
Beryllium, dissolved	mg/l	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron, dissolved	mg/l	5	--	0.453	0.38	0.327	0.409	0.382	0.359	0.345	0.321	0.31
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	177	188	193	144	154	136	157	125	256
Chromium, dissolved	mg/l	0.05	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Copper, dissolved	mg/l	--	1	0.0039	0.0024	0.0022	0.0023	0.0021	0.0019	0.0024	0.0017	0.0022
Iron, dissolved	mg/l	--	0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lead, dissolved	mg/l	0.01	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Magnesium, dissolved	mg/l	--	--	41.4	41.3	44.5	34.1	35.2	29.7	32.9	27.9	62.4
Manganese, dissolved	mg/l	--	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Nickel, dissolved	mg/l	--	--	0.003	0.002	0.003	0.003	0.002	0.002	0.002	0.002	0.003
Potassium, dissolved	mg/l	--	--	11.2	10.3	11.1	9.84	9.13	7.77	8.87	7.53	12.3
Selenium, dissolved	mg/l	0.05	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silver, dissolved	mg/l	--	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	83.9	80.8	74.7	86.4	74.2	68.9	78.3	61.8	132
Strontium, dissolved	mg/l	--	--	0.621	0.602	0.728	0.531	0.619	0.535	0.588	0.47	0.944
Thallium, dissolved	mg/l	--	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Tin, dissolved	mg/l	--	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Titanium, dissolved	mg/l	--	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Tungsten, dissolved	mg/l	--	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, dissolved	mg/l	0.02	--	0.0009	0.0010	0.0010	0.0010	0.0010	0.0010	0.0011	0.0008	0.0009
Vanadium, dissolved	mg/l	--	--	0.0006	0.0005	0.0006	0.0005	0.0005	<0.0005	0.0007	<0.0005	0.0005
Zinc, dissolved	mg/l	--	5	0.006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM9	OMM9	OMM9	OMM9
				29-Nov-2023	06-Dec-2023	25-Apr-2024	22-Oct-2024
				OMM-9	OMM-9	OMM - 9	OMM9
General Chemistry							
Alkalinity (Total as CaCO3)	mg/l	--	--	539	--	499	486
Ammonia Nitrogen	mg/l	--	--	0.02	--	0.03	0.02
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	--	--
Bromide	mg/l	--	--	0.1	--	0.1	0.1
Chemical Oxygen Demand	mg/l	--	--	<10	--	<10	<10
Chloride	mg/l	--	250	142	--	75	84
Conductivity	uS/cm	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	1419	--	666	1128
Dissolved Organic Carbon	mg/l	--	5	3.0	--	2.2	3.0
Fluoride	mg/l	1.5	--	<0.1	--	<0.1	<0.1
Hardness, Calcium Carbonate	mg/l	--	--	523	--	451	435
Nitrate as N	mg/l	10.0	--	2.1	--	1.8	1.6
Nitrite as N	mg/l	1.0	--	<0.05	--	<0.05	<0.05
Nitrogen, Total Kjeldahl	mg/l	--	--	0.3	--	0.3	0.2
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--
pH (Field)	-	--	--	7.67	--	7.16	7.05
Phosphorus	mg/l	--	--	0.33	--	0.05	0.01
Phosphorus, Total Orthophosphate	mg/l	--	--	<0.5	--	<0.5	<0.5
Sodium Adsorption Ratio	-	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	16	--	19	18
Temperature (Field)	deg c	--	15	7.6	--	9.1	17.3
Total Dissolved Solids	mg/l	--	500	766	--	636	656
Total Suspended Solids	mg/l	--	--	--	--	--	--
Metals							
Aluminum, dissolved	mg/l	--	--	0.002	--	<0.001	<0.001
Antimony, dissolved	mg/l	0.006	--	<0.0005	--	<0.0005	<0.0005
Arsenic, dissolved	mg/l	0.01	--	<0.001	--	<0.001	0.001
Barium, dissolved	mg/l	1	--	0.167	--	0.161	0.171
Beryllium, dissolved	mg/l	--	--	<0.0005	--	<0.0005	<0.0005
Boron, dissolved	mg/l	5	--	0.297	--	0.317	0.306
Cadmium, dissolved	mg/l	0.005	--	<0.0001	--	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	157	--	131	128
Chromium, dissolved	mg/l	0.05	--	<0.001	--	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	<0.0005	--	<0.0005	<0.0005
Copper, dissolved	mg/l	--	1	0.0018	--	0.0018	0.0023
Iron, dissolved	mg/l	--	0.3	<0.1	--	<0.1	<0.1
Lead, dissolved	mg/l	0.01	--	<0.0001	--	0.0002	<0.0001
Magnesium, dissolved	mg/l	--	--	32.1	--	30.3	27.9
Manganese, dissolved	mg/l	--	0.05	<0.005	--	<0.005	<0.005
Mercury, dissolved	mg/l	0.001	--	<0.0001	--	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	<0.0005	--	<0.0005	<0.0005
Nickel, dissolved	mg/l	--	--	0.002	--	0.002	0.002
Potassium, dissolved	mg/l	--	--	8.16	--	7.72	7.54
Selenium, dissolved	mg/l	0.05	--	<0.001	--	<0.001	0.015
Silver, dissolved	mg/l	--	--	<0.0001	--	<0.0001	<0.0001
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	78	--	76.7	75.9
Strontium, dissolved	mg/l	--	--	0.545	--	0.477	0.462
Thallium, dissolved	mg/l	--	--	<0.0001	--	<0.0001	<0.0001
Tin, dissolved	mg/l	--	--	<0.005	--	<0.005	<0.005
Titanium, dissolved	mg/l	--	--	<0.005	--	<0.005	<0.005
Tungsten, dissolved	mg/l	--	--	<0.01	--	<0.01	<0.01
Uranium, dissolved	mg/l	0.02	--	0.0010	--	0.0009	0.0010
Vanadium, dissolved	mg/l	--	--	0.0005	--	0.0006	0.0007
Zinc, dissolved	mg/l	--	5	<0.005	--	<0.005	<0.005
Phenols							
Phenolics, Total Recoverable	mg/l	--	--	<0.001	--	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM10	OMM10	OMM10	OMM10	OMM10	OMM10	OMM10	OMM10	OMM10
				01-Jan-1990	01-Dec-1990	01-Nov-1991	01-May-1994	01-Nov-1994	01-Jun-1995	12-Jun-1996	26-Nov-1996	01-Jun-1997
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	400	447	278	472	431	453	559	225	477
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	2	--	4.7	<1	<1	13	<1	<1	<1
Chloride	mg/l	--	250	35	58	21	4	5	19	3.4	65	41
Conductivity	uS/cm	--	--	--	992	680	838	716	840	1010	799	927
Dissolved Organic Carbon	mg/l	--	5	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	--	457	175	345	373	645	558	487	601
pH (Field)	-	--	--	7.02	--	--	7.69	7.59	7.82	7.54	8.07	7.74
Phosphorus	mg/l	--	--	--	--	--	<0.1	0.11	--	<0.1	--	--
Sulphate	mg/l	--	500 ⁽³⁾	46	21	22	18	16	16	15	15	15
Total Dissolved Solids	mg/l	--	500	--	--	--	--	--	--	540	448	550
Metals												
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.005	--	<0.001	0.001	--	<0.001	--	--
Barium, dissolved	mg/l	1	--	--	<0.162	--	--	0.108	--	0.121	--	--
Boron, dissolved	mg/l	5	--	--	--	--	<0.01	0.064	--	<0.01	--	--
Cadmium, dissolved	mg/l	0.005	--	0.027	<0.002	--	<0.001	<0.0001	--	<0.001	--	--
Calcium, dissolved	mg/l	--	--	--	65	55	103	116	155	165	148	151
Chromium, dissolved	mg/l	0.05	--	<0.05	<0.006	--	<0.01	<0.01	--	<0.01	--	--
Copper, dissolved	mg/l	--	1	<0.05	0.028	--	<0.01	<0.01	--	<0.01	--	--
Iron, dissolved	mg/l	--	0.3	1.39	0.14	--	0.07	0.27	4.31	0.561	0.43	<0.02
Lead, dissolved	mg/l	0.01	--	<0.02	0.07	0.01	0.0002	0.006	--	0.0002	--	--
Magnesium, dissolved	mg/l	--	--	--	25	21	22	20	43	35.1	27.8	32.4
Manganese, dissolved	mg/l	--	0.05	0.22	0.22	<0.005	0.07	0.05	0.61	0.077	0.05	0.04
Potassium, dissolved	mg/l	--	--	--	5	3	7	5	5	5.08	3.9	5.8
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	--	46	55	28	30	35	21.1	28.7	22.5
Zinc, dissolved	mg/l	--	5	<0.08	<0.005	--	<0.01	<0.01	--	<0.01	--	--
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	<0.002	--	<0.002	<0.002	<0.001	0.003	0.035	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM10	OMM10	OMM10	OMM10	OMM10	OMM10
				01-Nov-1997	01-Jun-1998	01-Nov-1998	01-Aug-1999	01-Nov-1999	01-Jun-2000
General Chemistry									
Alkalinity (Total as CaCO3)	mg/l	--	--	304	562	389	454	474	555
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	<1	<1	<1	<1	<1	<1
Chloride	mg/l	--	250	--	1.3	84.7	82	20.5	12.2
Conductivity	uS/cm	--	--	895	912	989	969	914	--
Dissolved Organic Carbon	mg/l	--	5	--	--	--	--	--	2.2
Hardness, Calcium Carbonate	mg/l	--	--	558	521	473	487	436	478
pH (Field)	-	--	--	8.04	7.14	7.26	7.41	7.24	7.74
Phosphorus	mg/l	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	21	10	28	13	26	22
Total Dissolved Solids	mg/l	--	500	556	508	593	612	560	628
Metals									
Arsenic, dissolved	mg/l	0.01	--	--	--	--	--	--	--
Barium, dissolved	mg/l	1	--	--	--	--	--	--	0.128
Boron, dissolved	mg/l	5	--	--	--	--	--	--	--
Cadmium, dissolved	mg/l	0.005	--	--	--	--	--	--	--
Calcium, dissolved	mg/l	--	--	163	149	136	143	129	--
Chromium, dissolved	mg/l	0.05	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	--	--	--	--	--	--
Iron, dissolved	mg/l	--	0.3	1.79	0.04	0.06	<0.02	<0.02	0.11
Lead, dissolved	mg/l	0.01	--	--	--	--	--	--	--
Magnesium, dissolved	mg/l	--	--	36	35.7	31.9	31.1	27.2	32.4
Manganese, dissolved	mg/l	--	0.05	0.25	0.02	0.07	0.07	0.05	0.11
Potassium, dissolved	mg/l	--	--	3.4	1.2	1.4	0.7	1.7	3.7
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	42.8	30.1	31.8	40.3	46.2	45.4
Zinc, dissolved	mg/l	--	5	--	--	--	--	--	--
Phenols									
Phenolics, Total Recoverable	mg/l	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D
				01-Nov-1994	12-Jun-1996	01-Nov-1996	01-Jun-1997	01-Nov-1997	01-Jun-1998	01-Nov-1998	01-Aug-1999	01-Nov-1999
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	290	279	233	260	244	268	281	166	168
Ammonia Nitrogen	mg/l	--	--	--	--	--	--	--	--	--	--	--
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	<1	<1	1	2	<1	<1	1	<1	<1
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chloride	mg/l	--	250	37	45.2	42.9	24.4	--	34.9	35.5	41.7	58.1
Conductivity	uS/cm	--	--	682	715	643	555	543	593	600	477	530
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Dissolved Organic Carbon	mg/l	--	5	--	--	--	--	--	--	--	--	--
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	293	338	318	309	247	276	287	204	209
Nitrate as N	mg/l	10.0	--	--	--	--	--	--	--	--	--	--
Nitrite as N	mg/l	1.0	--	--	--	--	--	--	--	--	--	--
Nitrogen, Total Kjeldahl	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.65	7.75	8.38	8.26	8.04	7.35	7.54	7.89	7.55
Phosphorus	mg/l	--	--	--	<0.1	--	--	--	--	--	--	--
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	31	37	32	9	18	16	12	14	15
Temperature (Field)	deg c	--	15	--	--	--	--	--	--	--	--	--
Total Dissolved Solids	mg/l	--	500	--	394	413	312	296	312	352	324	334
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	--	--	--	--	--	--	--	--	--
Barium, dissolved	mg/l	1	--	--	0.465	--	--	--	--	--	--	--
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	--	0.065	--	--	--	--	--	--	--
Cadmium, dissolved	mg/l	0.005	--	--	<0.001	--	--	--	--	--	--	--
Calcium, dissolved	mg/l	--	--	76	84.1	85.8	76.1	63.8	73.9	75.2	55.6	58.3
Chromium, dissolved	mg/l	0.05	--	--	<0.01	--	--	--	--	--	--	--
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	--	<0.01	--	--	--	--	--	--	--
Iron, dissolved	mg/l	--	0.3	0.32	0.995	0.13	0.47	0.44	0.4	0.42	0.18	0.26
Lead, dissolved	mg/l	0.01	--	--	0.0002	--	--	--	--	--	--	--
Magnesium, dissolved	mg/l	--	--	25	30.8	24.7	21.2	21	21.8	23.8	15.5	15.1
Manganese, dissolved	mg/l	--	0.05	0.12	0.144	0.14	0.15	0.18	0.2	0.2	0.1	0.1
Mercury, dissolved	mg/l	0.001	--	--	--	--	--	--	--	--	--	--
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	8	6.99	4.2	5.4	5.2	6.2	5.2	4.5	2
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	27	17	16.6	23.1	29.5	21.8	25.4	16	20.5
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	--	<0.01	--	--	--	--	--	--	--
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	--	0.01	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM14D 01-Jun-2000	OMM14D 01-Nov-2000	OMM14D 01-Jul-2001	OMM14D 01-Nov-2001	OMM14D 01-Jul-2002	OMM14D 01-Nov-2002	OMM14D 10-Jul-2003	OMM14D 27-Dec-2003	OMM14D 26-Aug-2004
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	341	348	319	316	315	309	291	282	291
Ammonia Nitrogen	mg/l	--	--	--	--	--	--	0.2	0.01	0.44	0.45	0.43
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	--	--	--	--	6	10	8	10	12
Chloride	mg/l	--	250	45.8	47	48.4	50.5	47.2	45.7	42.4	41.6	42.2
Conductivity	uS/cm	--	--	--	--	714	726	740	715	660	701	694
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Dissolved Organic Carbon	mg/l	--	5	4.7	5.7	3	5	3	4.9	3.2	5	3.1
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	307	295	322	341	321	284	278	272	287
Nitrate as N	mg/l	10.0	--	--	--	--	--	<0.1	<0.1	<0.1	<0.1	0.2
Nitrite as N	mg/l	1.0	--	--	--	--	--	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrogen, Total Kjeldahl	mg/l	--	--	--	--	--	--	0.34	0.13	0.64	0.63	0.67
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	8.02	7.93	7.62	0.57	7.54	7.4	--	--	--
Phosphorus	mg/l	--	--	<0.1	0.03	0.03	0.01	<0.01	0.02	0.01	<0.01	0.02
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	21	23	24	25	24	20	19	19	19
Temperature (Field)	deg c	--	15	--	--	--	--	--	--	--	--	--
Total Dissolved Solids	mg/l	--	500	430	438	426	--	416	376	395	360	373
Total Suspended Solids	mg/l	--	--	--	--	--	--	5	7	3	4	3
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	<0.1	<0.1	<0.001	0.001	<0.001	<0.001	<0.001	0.001	<0.001
Barium, dissolved	mg/l	1	--	0.498	0.405	0.475	0.545	0.48	0.435	0.405	0.414	0.427
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.12	0.1	0.13	0.14	0.13	0.11	0.036	0.099	0.099
Cadmium, dissolved	mg/l	0.005	--	<0.01	<0.01	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	83.8	76.7	91.5	93.3	89.2	78.9	78.2	75.7	78.5
Chromium, dissolved	mg/l	0.05	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.002	<0.002	<0.002
Iron, dissolved	mg/l	--	0.3	0.62	0.67	0.7	1.03	0.73	0.64	0.656	0.656	0.661
Lead, dissolved	mg/l	0.01	--	<0.1	<0.1	0.0002	<0.0002	<0.0002	<0.0002	0.0003	<0.02	<0.0002
Magnesium, dissolved	mg/l	--	--	23.4	25.2	22.7	26.2	23.8	21.1	20.1	20.1	22
Manganese, dissolved	mg/l	--	0.05	0.26	0.23	0.24	0.27	0.22	0.22	0.19	0.192	0.191
Mercury, dissolved	mg/l	0.001	--	--	--	--	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	5.8	6.5	5.4	9.1	7.5	7.1	6.3	5.4	6.5
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	33.5	26.6	33.4	41.4	40	35.8	35.2	32.6	34.3
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	0.06	<0.01	<0.01	<0.01	<0.01	--	<0.005	<0.005	<0.005
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	--	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D
				22-Dec-2004	28-Jun-2005	10-Dec-2005	30-Jun-2006	28-Nov-2006	29-Jun-2007	26-Nov-2007	14-Jun-2008	26-Nov-2008
R-11												
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	250	268	270	270	276	275	283	288	275
Ammonia Nitrogen	mg/l	--	--	0.3	2.76	0.42	0.52	0.49	0.53	0.53	0.54	0.54
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	<1	<3	<3	<1	<1	2	<1	<1	<1
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	<5	24	11	10	9	<5	<5	<5	13
Chloride	mg/l	--	250	79.9	55.8	54.8	56	59	61	58	51	50
Conductivity	uS/cm	--	--	724	557	405	480	470	490	505	718	694
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	--	--	--	550
Dissolved Organic Carbon	mg/l	--	5	2.8	15.8	4.5	2.8	3.3	4.3	5	4.3	3.6
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	283	288	281	280	313	276	277	291	282
Nitrate as N	mg/l	10.0	--	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.10
Nitrite as N	mg/l	1.0	--	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.10
Nitrogen, Total Kjeldahl	mg/l	--	--	0.44	2.76	0.63	0.56	0.73	0.71	0.66	0.78	0.61
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	--	7.29	7.4	7.5	7.3	7.2	7.4	7.5	7.4
Phosphorus	mg/l	--	--	0.02	0.15	0.01	0.04	0.02	0.08	0.03	0.02	0.01
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	0.728	0.883	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	20	22	19	19	19	19	16	18	17
Temperature (Field)	deg c	--	15	--	16.1	6	7	6	8	6	--	6
Total Dissolved Solids	mg/l	--	500	383	373	371	457	476	476	470	467	451
Total Suspended Solids	mg/l	--	--	7	446	10	51	49	32	8	13	13
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	0.001	0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.455	0.454	0.426	0.43	0.48	0.39	0.44	0.48	0.41
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.064	0.032	0.093	0.09	0.1	0.09	0.11	0.11	0.11
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	78.5	79.4	78	79	89	79	78	82	75
Chromium, dissolved	mg/l	0.05	--	<0.002	<0.002	<0.002	0.001	0.002	0.003	0.002	0.003	0.001
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.002	0.002	<0.002	<0.001	<0.001	0.001	<0.001	<0.001	<0.001
Iron, dissolved	mg/l	--	0.3	0.391	0.131	0.69	0.66	0.72	0.76	0.73	0.71	0.71
Lead, dissolved	mg/l	0.01	--	<0.0002	0.0009	<0.0002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Magnesium, dissolved	mg/l	--	--	21.2	21.7	21	20	22	19	20	21	23
Manganese, dissolved	mg/l	--	0.05	0.165	0.115	0.188	0.19	0.2	0.21	0.23	0.24	0.22
Mercury, dissolved	mg/l	0.001	--	<0.00006	<0.00005	<0.00006	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	6.1	6	6.8	7	7	7	6	7	6
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	32.7	28.4	34	35	37	43	35	36	48
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.005	0.013	<0.005	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	<0.001	<0.001	0.004	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D
				06-Jul-2009	05-Dec-2009	30-Jun-2010	03-Dec-2010	13-Jun-2011	29-Nov-2011	22-Jun-2012	10-Nov-2012	25-Jun-2013
				R-4	R-10	R-10	R - 14	S-13	OMM-14D	S-13	S-13	S-13
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	265	262	251	252	245	228	230	240	240
Ammonia Nitrogen	mg/l	--	--	0.56	0.49	0.48	0.50	0.43	0.50	0.45	0.49	0.57
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	1	<1	--	--	--	--	--	--	--
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	<5	8	5	15	10	<5	12	<4.0	11
Chloride	mg/l	--	250	46	49	53	59	51	60	61	61	44
Conductivity	uS/cm	--	--	667	671	673	673	631	645	--	--	--
Conductivity (Field)	uS/cm	--	--	515	520	510	500	520	870	530	515	508
Dissolved Organic Carbon	mg/l	--	5	3.9	3.7	3.7	3.4	3.3	2.6	2.8	2.6	2.5
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	254	247	264	263	241	249	250	250	270
Nitrate as N	mg/l	10.0	--	0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Nitrite as N	mg/l	1.0	--	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.013	<0.010	<0.010
Nitrogen, Total Kjeldahl	mg/l	--	--	0.62	0.53	0.76	0.54	0.68	0.57	0.78	0.71	1.0
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	<0.10	<0.10	<0.10
pH (Field)	-	--	--	7.4	7.7	7.6	7.7	7.5	7.8	7.6	7.4	7.4
Phosphorus	mg/l	--	--	0.01	0.04	0.02	<0.01	<0.01	<0.01	0.030	0.020	0.014
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	19	17	19	20	22	20	23	17	24
Temperature (Field)	deg c	--	15	16.0	7	10	7	9	7.5	10	7	10
Total Dissolved Solids	mg/l	--	500	434	436	437	437	410	419	356	308	356
Total Suspended Solids	mg/l	--	--	25	12	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010	<0.001
Barium, dissolved	mg/l	1	--	0.42	0.47	0.42	0.41	0.36	0.40	0.41	0.41	0.4
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.13	0.06	0.09	0.09	0.08	0.08	0.073	0.065	0.074
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00010	<0.00010	<0.0001
Calcium, dissolved	mg/l	--	--	72	71	76	79	65	70	72	71	76
Chromium, dissolved	mg/l	0.05	--	0.003	<0.001	0.005	<0.001	0.006	<0.001	<0.0050	<0.0050	<0.005
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010	<0.001
Iron, dissolved	mg/l	--	0.3	0.68	0.55	0.73	0.65	0.62	0.64	0.63	0.63	0.73
Lead, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00050	<0.00050	<0.0005
Magnesium, dissolved	mg/l	--	--	18	17	18	16	19	18	18	17	19
Manganese, dissolved	mg/l	--	0.05	0.24	0.18	0.23	0.19	0.17	0.18	0.2	0.19	0.19
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00010	<0.00010	<0.00010
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	6	6	6	6	6	6	6.3	6.1	6.5
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	31	30	30	28	31	32	34	32	36
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0050	<0.0050	<0.005
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	<0.001	<0.001	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D
				21-Nov-2013	27-May-2014	26-Nov-2014	26-May-2015	29-Nov-2015	14-Jun-2016	29-Nov-2016	01-Jun-2017	17-Aug-2017
				S-19	A-11	R-17	OMM-14D	14D	OMM-14A	OMM-14D	OMM14D	OMM14
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	220	220	220	225	213	238	226	226	--
Ammonia Nitrogen	mg/l	--	--	0.45	0.51	0.53	0.49	0.42	0.51	0.47	0.47	--
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	--	--	--	--	--	--	--
Bromide	mg/l	--	--	--	--	--	--	--	<0.1	--	--	--
Chemical Oxygen Demand	mg/l	--	--	8.3	4.3	4.6	14	10	<10	<10	<10	--
Chloride	mg/l	--	250	60	54	64	57	65	68	75	66	--
Conductivity	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	530	652	580	700	700	601	597	640	--
Dissolved Organic Carbon	mg/l	--	5	2.8	2.7	2.7	1.8	2.3	3.0	2.7	3.6	3.1
Fluoride	mg/l	1.5	--	--	--	--	--	--	0.3	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	240	250	240	274	273	268	235	244	--
Nitrate as N	mg/l	10.0	--	<0.10	<0.10	<0.10	<0.1	<0.1	<0.1	<0.1	<0.1	--
Nitrite as N	mg/l	1.0	--	0.056	<0.010	0.010	<0.05	<0.05	<0.05	<0.05	<0.05	--
Nitrogen, Total Kjeldahl	mg/l	--	--	0.79	0.60	0.59	0.7	0.6	0.6	0.5	0.6	--
Nitrogen, Nitrate-Nitrite	mg/l	--	--	<0.10	<0.10	<0.10	--	--	--	--	--	--
pH (Field)	-	--	--	7.4	7.48	7.3	7.41	7.4	7.76	8.09	7.5	--
Phosphorus	mg/l	--	--	0.006	0.009	0.026	0.02	<0.01	0.01	0.02	<0.01	--
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	<0.2	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	24	27	27	24	23	25	25	23	--
Temperature (Field)	deg c	--	15	7	12.9	7	12.6	6	11.3	9.8	10	--
Total Dissolved Solids	mg/l	--	500	372	360	340	332	338	372	364	364	--
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	<0.01	--	0.001	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	<0.001	--	<0.0005	--	--	--
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.0010	<0.001	<0.01	<0.001	<0.001	<0.001	<0.001	--
Barium, dissolved	mg/l	1	--	0.38	0.38	0.36	0.373	0.398	0.395	0.372	0.56	--
Beryllium, dissolved	mg/l	--	--	--	--	--	<0.001	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.06	0.068	0.064	0.089	0.055	0.059	0.051	0.058	--
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.00010	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	--
Calcium, dissolved	mg/l	--	--	68	71	68	78.1	81.9	77.2	66	69.6	--
Chromium, dissolved	mg/l	0.05	--	<0.005	<0.0050	<0.005	<0.05	<0.001	<0.001	<0.001	<0.001	--
Cobalt, dissolved	mg/l	--	--	--	--	--	<0.001	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.001	<0.0010	<0.001	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	--
Iron, dissolved	mg/l	--	0.3	0.62	0.68	0.52	0.732	0.5	0.625	0.539	0.619	--
Lead, dissolved	mg/l	0.01	--	<0.0005	<0.00050	<0.0005	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	--
Magnesium, dissolved	mg/l	--	--	17	18	16	19.1	16.5	18.2	17.1	17.1	--
Manganese, dissolved	mg/l	--	0.05	0.18	0.19	0.17	0.214	0.177	0.182	0.18	0.16	--
Mercury, dissolved	mg/l	0.001	--	<0.00010	<0.00010	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	--
Molybdenum, dissolved	mg/l	--	--	--	--	--	<0.005	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	<0.005	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	6.1	6.1	6.4	7.68	5.63	6.56	5.66	6.08	--
Selenium, dissolved	mg/l	0.05	--	--	--	--	<0.005	--	<0.001	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	<0.001	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	35	34	34	38.3	33.6	37.8	34.8	76.5	--
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	<0.001	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	<0.01	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	0.0005	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	0.004	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.005	<0.0050	0.005	<0.02	0.006	<0.005	<0.005	<0.005	--
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	--	--	--	--	--	--	--	<0.001	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D
				23-Nov-2017	29-Jun-2018	27-Nov-2018	19-Jun-2019	02-Dec-2019	04-Jun-2020	01-Dec-2020	08-Jun-2021	25-Nov-2021
				OMM-14M	OMM-14M	OMM-14D	OMM-14D	OMM14D	OMM-14D	OMM-14D	OMM-14D	OMM-14D
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	222	242	261	251	251	262	258	255	243
Ammonia Nitrogen	mg/l	--	--	0.42	0.61	0.42	0.48	0.43	0.44	0.40	0.44	0.36
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	--	--	--	--	--	--	--
Bromide	mg/l	--	--	--	--	--	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chemical Oxygen Demand	mg/l	--	--	<10	12	11	<10	<10	15	10	11	14
Chloride	mg/l	--	250	74	81	78	85	84	85	73	63	65
Conductivity	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	605	711	657	680	650	751	703	641	712
Dissolved Organic Carbon	mg/l	--	5	2.3	2.5	2.8	1.8	6.9	6.2	2.8	3.5	3.3
Fluoride	mg/l	1.5	--	--	--	--	0.1	0.4	0.2	0.3	0.3	0.3
Hardness, Calcium Carbonate	mg/l	--	--	225	209	254	278	274	257	256	229	232
Nitrate as N	mg/l	10.0	--	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite as N	mg/l	1.0	--	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrogen, Total Kjeldahl	mg/l	--	--	0.6	0.6	0.6	0.6	0.6	0.5	0.6	0.6	0.4
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.82	7.53	8.03	7.97	7.9	7.94	7.63	7.74	7.95
Phosphorus	mg/l	--	--	<0.01	<0.01	0.03	<0.01	<0.01	<0.01	0.02	<0.01	<0.01
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	<0.2	<0.2	<0.2	<1.0 ⁽⁷⁾	<0.2	<0.2
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	21	18	17	20	21	26	19	20	19
Temperature (Field)	deg c	--	15	7.6	11.1	7.2	12.8	8.0	12.2	7.8	11.9	8.6
Total Dissolved Solids	mg/l	--	500	314	402	408	386	414	432	408	370	344
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	0.002	0.001	0.002	0.001	0.003	0.001
Antimony, dissolved	mg/l	0.006	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.362	0.441	0.391	0.433	0.411	0.399	0.397	0.368	0.358
Beryllium, dissolved	mg/l	--	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron, dissolved	mg/l	5	--	0.044	0.041	0.042	0.053	0.045	0.054	0.054	0.056	0.053
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	65.1	59	72.1	78.6	79.2	73.3	72.4	65	66.8
Chromium, dissolved	mg/l	0.05	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Copper, dissolved	mg/l	--	1	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0007	0.0033	<0.0005
Iron, dissolved	mg/l	--	0.3	0.582	0.539	0.667	0.8	0.684	0.744	0.749	0.702	0.719
Lead, dissolved	mg/l	0.01	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0002	<0.0001
Magnesium, dissolved	mg/l	--	--	15.1	14.9	17.9	19.9	18.5	18	18.3	16.3	15.9
Manganese, dissolved	mg/l	--	0.05	0.184	0.187	0.214	0.22	0.211	0.229	0.216	0.211	0.203
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	--	--	0.0010	0.0012	0.0011	0.0010	0.0010	0.0010
Nickel, dissolved	mg/l	--	--	--	--	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Potassium, dissolved	mg/l	--	--	5.6	5.91	6.87	6.87	6.52	6.16	6.25	5.49	5.47
Selenium, dissolved	mg/l	0.05	--	--	--	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silver, dissolved	mg/l	--	--	--	--	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	34.2	33.9	40.5	41.5	43.5	41	39.7	35.5	35.7
Strontium, dissolved	mg/l	--	--	--	--	--	0.301	0.272	0.296	0.288	0.292	0.266
Thallium, dissolved	mg/l	--	--	--	--	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Tin, dissolved	mg/l	--	--	--	--	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Titanium, dissolved	mg/l	--	--	--	--	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Tungsten, dissolved	mg/l	--	--	--	--	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, dissolved	mg/l	0.02	--	--	--	--	0.0005	0.0005	0.0005	0.0004	0.0005	0.0004
Vanadium, dissolved	mg/l	--	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Zinc, dissolved	mg/l	--	5	<0.005	<0.005	<0.005	<0.005	0.006	<0.005	<0.005	<0.005	<0.005
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D
				20-Jun-2022	23-Nov-2022	11-May-2023	29-Nov-2023	06-Dec-2023	25-Apr-2024	22-Oct-2024
General Chemistry										
Alkalinity (Total as CaCO3)	mg/l	--	--	242	221	213	212	--	214	226
Ammonia Nitrogen	mg/l	--	--	0.39	0.37	0.40	0.40	--	0.37	0.36
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	--	--	--	--	--
Bromide	mg/l	--	--	<0.1	0.1	<0.1	<0.1	--	<0.1	<0.1
Chemical Oxygen Demand	mg/l	--	--	12	<10	15	<10	--	<10	12
Chloride	mg/l	--	250	79.8	83.8	88	111	--	110	115
Conductivity	uS/cm	--	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	652	717	800	808	--	734	783
Dissolved Organic Carbon	mg/l	--	5	3.2	3.6	3.1	3.1	--	2.8	2.9
Fluoride	mg/l	1.5	--	0.4	0.2	0.3	0.1	--	0.2	0.2
Hardness, Calcium Carbonate	mg/l	--	--	238	227	238	246	--	253	267
Nitrate as N	mg/l	10.0	--	<0.1	<0.1	<0.1	<0.1	--	<0.1	<0.1
Nitrite as N	mg/l	1.0	--	<0.05	<0.05	<0.05	<0.05	--	<0.05	<0.05
Nitrogen, Total Kjeldahl	mg/l	--	--	0.6	0.4	0.5	0.5	--	0.4	0.5
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.79	7.74	6.69	7.56	--	6.79	6.60
Phosphorus	mg/l	--	--	0.02	<0.01	0.01	<0.01	--	<0.01	<0.01
Phosphorus, Total Orthophosphate	mg/l	--	--	<0.2	<0.4 ⁽⁶⁾	<0.5	<0.5	--	<0.5	<0.5
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	25.7	23.4	23	23	--	23	24
Temperature (Field)	deg c	--	15	12.0	9.3	10.3	7.4	--	9.9	10.9
Total Dissolved Solids	mg/l	--	500	376	400	368	396	--	410	440
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--
Metals										
Aluminum, dissolved	mg/l	--	--	0.006	0.002	0.001	0.001	--	0.001	0.001
Antimony, dissolved	mg/l	0.006	--	<0.0005	<0.0005	<0.0005	<0.0005	--	<0.0005	<0.0005
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.382	0.341	0.354	0.36	--	0.373	0.456
Beryllium, dissolved	mg/l	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	<0.0005	<0.0005
Boron, dissolved	mg/l	5	--	0.059	0.054	0.052	0.05	--	0.053	0.052
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.0001	--	<0.0001	0.0002
Calcium, dissolved	mg/l	--	--	68.6	64.8	68.2	72	--	71.2	74.8
Chromium, dissolved	mg/l	0.05	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	<0.0005	<0.0005
Copper, dissolved	mg/l	--	1	<0.0005	0.0045	<0.0005	<0.0005	--	<0.0005	0.0010
Iron, dissolved	mg/l	--	0.3	0.732	0.678	0.686	0.703	--	0.732	0.477
Lead, dissolved	mg/l	0.01	--	<0.0001	0.0002	<0.0001	<0.0001	--	0.0002	<0.0001
Magnesium, dissolved	mg/l	--	--	16.1	15.9	16.5	16.1	--	18.4	19.5
Manganese, dissolved	mg/l	--	0.05	0.24	0.203	0.203	0.2	--	0.222	0.25
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	<0.0001	--	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	0.0010	0.0011	0.0009	0.0010	--	0.0010	0.0013
Nickel, dissolved	mg/l	--	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001
Potassium, dissolved	mg/l	--	--	5.88	5.61	5.44	5.3	--	6.07	6.36
Selenium, dissolved	mg/l	0.05	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	0.009
Silver, dissolved	mg/l	--	--	<0.0001	<0.0001	<0.0001	<0.0001	--	<0.0001	<0.0001
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	38.7	36.4	37.2	41.6	--	45.4	50.1
Strontium, dissolved	mg/l	--	--	0.284	0.265	0.271	0.263	--	0.264	0.276
Thallium, dissolved	mg/l	--	--	<0.0001	<0.0001	<0.0001	<0.0001	--	<0.0001	<0.0001
Tin, dissolved	mg/l	--	--	<0.005	<0.005	<0.005	<0.005	--	<0.005	<0.005
Titanium, dissolved	mg/l	--	--	<0.005	<0.005	<0.005	<0.005	--	<0.005	<0.005
Tungsten, dissolved	mg/l	--	--	<0.01	<0.01	<0.01	<0.01	--	<0.01	<0.01
Uranium, dissolved	mg/l	0.02	--	0.0004	0.0003	0.0003	0.0003	--	0.0003	0.0004
Vanadium, dissolved	mg/l	--	--	<0.0005	<0.0005	<0.0005	<0.0005	--	<0.0005	<0.0005
Zinc, dissolved	mg/l	--	5	<0.005	<0.005	<0.005	<0.005	--	<0.005	<0.005
Phenols										
Phenolics, Total Recoverable	mg/l	--	--	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M
				01-Nov-1994	12-Jun-1996	26-Nov-1996	01-Jun-1997	01-Nov-1997	01-Jun-1998	01-Nov-1998	01-Aug-1999	01-Nov-1999
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	266	280	250	244	196	192	164	154	152
Ammonia Nitrogen	mg/l	--	--	--	--	--	--	--	--	--	--	--
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chloride	mg/l	--	250	83	30.9	26.5	38.4	--	44.1	17.6	94.1	115
Conductivity	uS/cm	--	--	837	647	575	560	560	462	420	608	649
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Dissolved Organic Carbon	mg/l	--	5	--	--	--	--	--	--	--	--	--
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	363	279	249	318	268	202	189	247	259
Nitrate as N	mg/l	10.0	--	--	--	--	--	--	--	--	--	--
Nitrite as N	mg/l	1.0	--	--	--	--	--	--	--	--	--	--
Nitrogen, Total Kjeldahl	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.71	7.81	8.46	8.15	8.04	7.6	7.64	7.88	8.02
Phosphorus	mg/l	--	--	--	<0.1	--	--	--	--	--	--	--
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	61	16	19	20	21	15	11	18	19
Temperature (Field)	deg c	--	15	--	--	--	--	--	--	--	--	--
Total Dissolved Solids	mg/l	--	500	--	372	308	328	342	244	264	476	436
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	--	--	--	--	--	--	--	--	--
Barium, dissolved	mg/l	1	--	--	0.383	--	--	--	--	--	--	--
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	--	0.093	--	--	--	--	--	--	--
Cadmium, dissolved	mg/l	0.005	--	--	<0.001	--	--	--	--	--	--	--
Calcium, dissolved	mg/l	--	--	94	73.2	67	77.6	68.1	54.1	49.9	66.4	70.1
Chromium, dissolved	mg/l	0.05	--	--	<0.01	--	--	--	--	--	--	--
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	--	<0.01	--	--	--	--	--	--	--
Iron, dissolved	mg/l	--	0.3	0.3	0.492	0.29	0.58	0.4	0.22	0.24	<0.02	0.02
Lead, dissolved	mg/l	0.01	--	--	<0.0002	--	--	--	--	--	--	--
Magnesium, dissolved	mg/l	--	--	31	23.1	19.7	22.5	23.5	15.9	15.5	19.5	20
Manganese, dissolved	mg/l	--	0.05	0.1	0.177	0.14	0.12	0.13	0.09	0.1	0.08	0.08
Mercury, dissolved	mg/l	0.001	--	--	--	--	--	--	--	--	--	--
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	9	6.93	11.4	6.5	8.3	3.2	4.1	3.4	2.1
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	28	28	25.8	21.3	30	19.3	15.5	22	29.2
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	--	<0.01	--	--	--	--	--	--	--
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	--	0.034	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M
				01-Jun-2000	01-Nov-2000	01-Jul-2001	01-Nov-2001	01-Jul-2002	01-Nov-2002	10-Jul-2003	27-Dec-2003	26-Aug-2004
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	204	204	231	227	239	234	243	250	258
Ammonia Nitrogen	mg/l	--	--	--	--	--	--	0.33	0.23	0.3	0.26	0.27
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	--	--	--	--	4	7	10	10	18
Chloride	mg/l	--	250	52	60.3	62.4	81.4	68.6	82.1	71.8	65.2	44.5
Conductivity	uS/cm	--	--	--	--	605	649	659	711	682	704	634
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Dissolved Organic Carbon	mg/l	--	5	2.7	5.1	2.9	4	2.7	2.9	2.6	2	3.2
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	234	186	269	288	287	277	283	277	273
Nitrate as N	mg/l	10.0	--	--	--	--	--	<0.1	0.1	<0.1	<0.1	<0.1
Nitrite as N	mg/l	1.0	--	--	--	--	--	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrogen, Total Kjeldahl	mg/l	--	--	--	--	--	--	0.48	0.35	0.41	0.43	0.75
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	8.13	8.06	7.73	8.59	7.72	7.57	--	--	--
Phosphorus	mg/l	--	--	<0.1	0.02	0.02	0.03	0.02	0.02	0.01	<0.01	0.01
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	15	17	18	20	18	17	18	17	17
Temperature (Field)	deg c	--	15	--	--	--	--	--	--	--	--	--
Total Dissolved Solids	mg/l	--	500	336	356	368	--	396	406	405	364	341
Total Suspended Solids	mg/l	--	--	--	--	--	--	13	5	4	3	28
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	<0.1	<0.1	<0.001	0.001	<0.001	0.001	<0.001	0.001	0.001
Barium, dissolved	mg/l	1	--	0.323	0.275	0.39	0.44	0.44	0.425	0.422	0.446	0.442
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.07	0.06	0.07	0.07	0.06	0.06	<0.005	0.058	0.066
Cadmium, dissolved	mg/l	0.005	--	<0.01	<0.01	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	86.5	49.7	76.6	77.4	76.9	75.7	78.4	76.2	74.8
Chromium, dissolved	mg/l	0.05	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.002	<0.002	<0.002
Iron, dissolved	mg/l	--	0.3	0.29	0.25	0.34	0.51	0.37	0.35	0.358	0.358	0.618
Lead, dissolved	mg/l	0.01	--	<0.1	<0.1	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.02	0.0005
Magnesium, dissolved	mg/l	--	--	16.3	15	19.2	22.9	21.5	21.5	21.1	21	21
Manganese, dissolved	mg/l	--	0.05	0.11	0.1	0.14	0.16	0.16	0.14	0.137	0.146	0.173
Mercury, dissolved	mg/l	0.001	--	--	--	--	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	<0.05	5.5	3.9	5.4	3	4.4	5.5	5	5.8
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	20.9	13.8	23.1	30.5	30.7	30.7	32.7	33.3	28
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	--	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M
				22-Dec-2004	21-Jun-2005	10-Dec-2005	30-Jun-2006	28-Nov-2006	29-Jun-2007	26-Nov-2007	14-Jun-2008	26-Nov-2008
General Chemistry												R-12
Alkalinity (Total as CaCO ₃)	mg/l	--	--	280	246	223	238	227	243	256	274	281
Ammonia Nitrogen	mg/l	--	--	0.47	0.23	0.18	0.21	0.19	0.21	0.2	0.14	0.20
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	<1	<3	<3	<1	<1	1	2	<1	1
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	<5	11	12	9	6	<5	<5	<5	15
Chloride	mg/l	--	250	54.6	90.2	152	73	132	129	150	85	80
Conductivity	uS/cm	--	--	700	600	520	550	480	500	485	802	796
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	--	--	--	500
Dissolved Organic Carbon	mg/l	--	5	2.9	7.9	6.3	2.5	2.9	3.9	4.6	4.1	3.8
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	284	286	338	274	330	321	333	254	286
Nitrate as N	mg/l	10.0	--	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.10
Nitrite as N	mg/l	1.0	--	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.10
Nitrogen, Total Kjeldahl	mg/l	--	--	0.67	0.48	0.35	0.56	0.41	0.36	0.74	0.34	0.34
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	--	7.45	7.4	7.4	7.2	7.3	7.3	7.2	7.3
Phosphorus	mg/l	--	--	0.01	<0.01	0.02	0.09	0.01	0.11	0.1	0.05	0.06
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	1.05	1.15	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	23	23	24	16	18	18	18	18	15
Temperature (Field)	deg c	--	15	--	13.6	6	7	6	8	6	8	6
Total Dissolved Solids	mg/l	--	500	381	402	478	460	583	580	633	521	517
Total Suspended Solids	mg/l	--	--	<3	3	9	53	101	80	62	24	50
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.427	0.545	0.526	0.42	0.5	0.45	0.51	0.41	0.40
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.095	0.045	0.052	0.06	0.06	0.07	0.07	0.05	0.08
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	79.9	75.7	90.2	75	91	84	89	67	75
Chromium, dissolved	mg/l	0.05	--	<0.002	<0.002	<0.002	0.003	0.002	0.004	0.003	0.004	0.002
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.002	0.004	<0.002	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Iron, dissolved	mg/l	--	0.3	0.703	0.372	0.459	0.36	0.4	0.61	0.55	0.27	0.41
Lead, dissolved	mg/l	0.01	--	<0.0002	<0.0002	<0.0002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Magnesium, dissolved	mg/l	--	--	20.6	23.5	27.5	21	25	27	27	21	24
Manganese, dissolved	mg/l	--	0.05	0.201	0.163	0.143	0.12	0.12	0.14	0.15	0.12	0.14
Mercury, dissolved	mg/l	0.001	--	<0.00006	<0.00005	<0.00006	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	6.8	6.5	6.5	7	7	8	6	6	6
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	34	40.9	48.7	39	59	60	45	63	49
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.005	0.016	<0.005	0.01	<0.01	<0.01	0.01	<0.01	<0.01
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	<0.001	<0.001	0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M
				06-Jul-2009	05-Dec-2009	30-Jun-2010	03-Dec-2010	13-Jun-2011	24-Nov-2011	22-Jun-2012	10-Nov-2012	25-Jun-2013
				R-5	R-11	R-11	R - 15	S-14	OMM-14M	S-14	S-14	S-14
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	247	229	221	215	212	200	200	200	200
Ammonia Nitrogen	mg/l	--	--	0.17	0.19	0.21	0.19	0.23	0.26	0.15	0.22	0.46
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	<1	2	--	--	--	--	--	--	--
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	<5	8	5	13	5	<5	7.5	7.1	11
Chloride	mg/l	--	250	54	80	52	103	63	102	93	120	47
Conductivity	uS/cm	--	--	648	717	603	779	603	733	--	--	--
Conductivity (Field)	uS/cm	--	--	500	520	500	545	550	694	540	515	495
Dissolved Organic Carbon	mg/l	--	5	4.2	3.7	3.8	3.4	3.3	2.6	2.8	2.6	2.6
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	215	229	225	260	206	275	250	290	220
Nitrate as N	mg/l	10.0	--	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Nitrite as N	mg/l	1.0	--	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.010	0.024	0.035
Nitrogen, Total Kjeldahl	mg/l	--	--	0.33	0.19	0.46	0.46	0.65	0.41	0.44	0.58	0.56
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	<0.10	<0.10	<0.10
pH (Field)	-	--	--	7.4	7.6	7.8	7.6	7.6	7.08	7.5	7.4	7.5
Phosphorus	mg/l	--	--	0.04	0.04	0.07	0.02	<0.01	<0.01	0.017	0.016	0.042
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	14	15	14	16	15	18	19	17	18
Temperature (Field)	deg c	--	15	15.0	6	9	8	9	8.4	10	8	10
Total Dissolved Solids	mg/l	--	500	421	466	392	506	392	476	378	426	316
Total Suspended Solids	mg/l	--	--	22	52	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010	<0.001
Barium, dissolved	mg/l	1	--	0.33	0.38	0.33	0.41	0.32	0.42	0.39	0.47	0.34
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.09	0.05	0.07	0.08	0.07	0.07	0.058	0.056	0.054
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00010	<0.00010	<0.0001
Calcium, dissolved	mg/l	--	--	58	62	62	71	53	77	66	79	61
Chromium, dissolved	mg/l	0.05	--	0.003	0.002	0.005	0.002	<0.001	0.002	<0.0050	<0.0050	<0.005
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010	<0.001
Iron, dissolved	mg/l	--	0.3	0.29	0.27	0.31	0.36	0.30	0.36	0.29	0.35	0.29
Lead, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00050	<0.00050	<0.0005
Magnesium, dissolved	mg/l	--	--	17	18	17	20	18	20	19	23	16
Manganese, dissolved	mg/l	--	0.05	0.10	0.09	0.11	0.10	0.10	0.12	0.11	0.11	0.099
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.00010	<0.00010	<0.00010
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	6	5	5	6	5	6	6	6.6	5.8
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	49	45	35	41	37	32	42	44	33
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0050	<0.0050	<0.005
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	<0.001	<0.001	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M
				21-Nov-2013	27-May-2014	26-Nov-2014	26-May-2015	29-Nov-2015	14-Jun-2016	30-Nov-2016	01-Jun-2017	23-Nov-2017
				S-20	A-12	S-18	OMM-14M	14M	OMM-14B	OMM-14M	OMM14M	OMM-14D
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	190	180	180	184	181	213	194	213	207
Ammonia Nitrogen	mg/l	--	--	0.18	0.18	0.24	0.28	0.25	0.35	0.33	0.23	0.27
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	--	--	--	--	--	--	--
Bromide	mg/l	--	--	--	--	--	--	--	<0.1	--	--	--
Chemical Oxygen Demand	mg/l	--	--	9.9	<4.0	5.6	15	10	<10	<10	15	<10
Chloride	mg/l	--	250	130	96	120	96	150	88	125	145	166
Conductivity	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	525	700	540	664	660	611	647	630	862
Dissolved Organic Carbon	mg/l	--	5	2.6	2.6	2.5	1.7	2.2	2.7	2.5	2.5	2.5
Fluoride	mg/l	1.5	--	--	--	--	--	--	0.3	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	280	240	260	259	313	258	267	312	317
Nitrate as N	mg/l	10.0	--	<0.10	<0.10	<0.10	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite as N	mg/l	1.0	--	0.078	<0.010	0.013	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrogen, Total Kjeldahl	mg/l	--	--	0.45	0.32	0.45	0.4	0.5	0.6	0.3	0.4	0.4
Nitrogen, Nitrate-Nitrite	mg/l	--	--	<0.10	<0.10	<0.10	--	--	--	--	--	--
pH (Field)	-	--	--	7.5	7.55	7.6	7.64	7.6	7.62	8.04	7.5	7.72
Phosphorus	mg/l	--	--	0.023	0.004	0.035	<0.01	0.02	0.02	0.03	0.02	<0.01
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	<0.2	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	20	24	26	26	27	26	24	34	29
Temperature (Field)	deg c	--	15	7	11.6	6	11.3	7	9.8	8.5	11	7.1
Total Dissolved Solids	mg/l	--	500	454	388	396	392	482	386	424	530	490
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	<0.01	--	<0.001	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	<0.001	--	<0.0005	--	--	--
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.0010	<0.001	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.44	0.37	0.42	0.382	0.465	0.439	0.405	0.469	0.487
Beryllium, dissolved	mg/l	--	--	--	--	--	<0.001	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.044	0.044	0.041	0.06	0.038	0.041	0.035	0.062	0.043
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.00010	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	76	64	71	71.1	88.9	74	73.4	87.6	88.4
Chromium, dissolved	mg/l	0.05	--	<0.005	<0.0050	<0.005	<0.05	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	--	--	--	<0.001	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.001	<0.0010	<0.001	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Iron, dissolved	mg/l	--	0.3	0.36	0.28	0.25	0.418	0.369	0.289	0.303	0.122	0.403
Lead, dissolved	mg/l	0.01	--	<0.0005	<0.00050	<0.0005	<0.001	<0.0001	<0.0001	<0.0001	0.0003	<0.0001
Magnesium, dissolved	mg/l	--	--	22	18	19	19.7	22	17.8	20.4	22.7	23.5
Manganese, dissolved	mg/l	--	0.05	0.11	0.093	0.1	0.119	0.118	0.132	0.119	0.118	0.125
Mercury, dissolved	mg/l	0.001	--	<0.00010	<0.00010	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001	0.0002	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	--	--	<0.005	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	<0.005	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	6.8	6.3	6.2	7.74	6.35	6.53	5.97	7.55	6.64
Selenium, dissolved	mg/l	0.05	--	--	--	--	<0.005	--	<0.001	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	<0.001	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	49	50	43	49.2	50.4	44.2	36.7	41.3	42.4
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	<0.001	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	<0.01	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	0.0007	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	0.003	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.005	<0.0050	<0.005	<0.02	<0.005	<0.005	<0.005	<0.005	<0.005
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	--	--	--	--	--	--	--	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M
				29-Jun-2018	27-Nov-2018	19-Jun-2019	02-Dec-2019	04-Jun-2020	01-Dec-2020	08-Jun-2021	25-Nov-2021	20-Jun-2022
				OMM-14D	OMM-14M	OMM-14M	OMM14M	OMM-14M	OMM-14M	OMM-14M	OMM-14M	OMM 14-M
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	220	231	238	247	250	237	255	234	236
Ammonia Nitrogen	mg/l	--	--	0.35	0.25	0.31	0.25	0.33	0.23	0.30	0.25	0.25
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	--	--	--	--	--	--	--
Bromide	mg/l	--	--	--	--	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chemical Oxygen Demand	mg/l	--	--	<10	12	<10	17	22	18	16	<10	<10
Chloride	mg/l	--	250	161	126	92	171	133	127	77	111	148
Conductivity	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	764	744	646	749	825	825	658	845	650
Dissolved Organic Carbon	mg/l	--	5	1.7	2.2	1.8	3.8	6.4	3.0	4.3	3.1	2.7
Fluoride	mg/l	1.5	--	--	--	0.1	0.3	0.2	0.3	0.3	0.2	0.3
Hardness, Calcium Carbonate	mg/l	--	--	249	237	237	347	260	280	235	276	273
Nitrate as N	mg/l	10.0	--	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite as N	mg/l	1.0	--	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrogen, Total Kjeldahl	mg/l	--	--	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.3	0.5
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.65	8.02	8.04	7.8	8.01	7.71	7.87	7.78	7.89
Phosphorus	mg/l	--	--	<0.01	<0.01	<0.01	0.02	<0.01	0.02	<0.01	<0.01	<0.01
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	<0.2	<0.2	<0.2	<1.0 ⁽⁷⁾	<0.2	<0.2	<0.2
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	24	16	15	18	22	16	15	17	22.0
Temperature (Field)	deg c	--	15	12.1	6.6	10.9	7.9	12.6	8.1	11	8.3	11.7
Total Dissolved Solids	mg/l	--	500	572	440	384	544	426	490	382	444	460
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	0.003	0.006	0.001	0.001	0.002	<0.001	0.002
Antimony, dissolved	mg/l	0.006	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.527	0.38	0.39	0.503	0.443	0.457	0.401	0.471	0.47
Beryllium, dissolved	mg/l	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron, dissolved	mg/l	5	--	0.035	0.025	0.035	0.024	0.027	0.029	0.031	0.027	0.031
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	66.7	63.8	65.7	93.5	72.1	75.7	65.6	77.1	75.9
Chromium, dissolved	mg/l	0.05	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Copper, dissolved	mg/l	--	1	<0.0005	<0.0005	<0.0005	0.0005	0.0006	<0.0005	0.0032	<0.0005	<0.0005
Iron, dissolved	mg/l	--	0.3	0.316	0.322	0.327	0.456	0.344	0.334	0.319	0.39	0.357
Lead, dissolved	mg/l	0.01	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0002	<0.0001	<0.0001
Magnesium, dissolved	mg/l	--	--	20.1	18.8	17.6	27.5	19.4	22.2	17.3	20.3	20.2
Manganese, dissolved	mg/l	--	0.05	0.113	0.099	0.171	0.138	0.123	0.116	0.125	0.112	0.12
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	--	0.0011	0.0014	0.0012	0.0011	0.0011	0.0014	0.0016
Nickel, dissolved	mg/l	--	--	--	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Potassium, dissolved	mg/l	--	--	6.95	6.84	6.24	7.6	6.92	7.14	6.05	6.89	7.23
Selenium, dissolved	mg/l	0.05	--	--	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silver, dissolved	mg/l	--	--	--	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	59.3	64.6	84.6	65.2	56.9	47.1	41.9	56.6	62.8
Strontium, dissolved	mg/l	--	--	--	--	0.225	0.287	0.251	0.249	0.239	0.261	0.26
Thallium, dissolved	mg/l	--	--	--	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Tin, dissolved	mg/l	--	--	--	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Titanium, dissolved	mg/l	--	--	--	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Tungsten, dissolved	mg/l	--	--	--	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, dissolved	mg/l	0.02	--	--	--	0.0013	0.0026	0.0014	0.0013	0.0011	0.0018	0.0020
Vanadium, dissolved	mg/l	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Zinc, dissolved	mg/l	--	5	0.006	<0.005	0.007	<0.005	0.009	<0.005	<0.005	<0.005	<0.005
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	<0.001	<0.001	<0.001	<0.001	<0.001	0.003	<0.001	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M
				23-Nov-2022	11-May-2023	29-Nov-2023	06-Dec-2023	25-Apr-2024	22-Oct-2024
				OMM-14M	OMM-14M	OMM-14M	OMM-14M	OMM14 M	OMM14M
General Chemistry									
Alkalinity (Total as CaCO ₃)	mg/l	--	--	220	202	190	--	190	192
Ammonia Nitrogen	mg/l	--	--	0.23	0.23	0.24	--	0.25	0.23
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	--	--	--	--
Bromide	mg/l	--	--	<0.1	<0.1	<0.1	--	<0.1	<0.1
Chemical Oxygen Demand	mg/l	--	--	<10	<10	<10	--	<10	10
Chloride	mg/l	--	250	148	158	161	--	158	143
Conductivity	uS/cm	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	918	809	927	--	838	794
Dissolved Organic Carbon	mg/l	--	5	28.7	2.4	--	2.6	2.3	2.2
Fluoride	mg/l	1.5	--	0.2	0.2	0.1	--	0.2	0.3
Hardness, Calcium Carbonate	mg/l	--	--	249	240	259	--	272	260
Nitrate as N	mg/l	10.0	--	<0.1	<0.1	<0.1	--	<0.1	<0.1
Nitrite as N	mg/l	1.0	--	<0.05	<0.05	<0.05	--	<0.05	<0.05
Nitrogen, Total Kjeldahl	mg/l	--	--	0.4	0.3	0.3	--	0.4	0.3
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.84	7.15	7.26	--	6.91	6.98
Phosphorus	mg/l	--	--	<0.01	0.01	<0.01	--	<0.01	<0.01
Phosphorus, Total Orthophosphate	mg/l	--	--	<0.4 ⁽⁶⁾	<0.5	<0.5	--	<0.5	<0.5
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	21.4	22	25	--	22	21
Temperature (Field)	deg c	--	15	9.1	9.9	6.9	--	9.5	11.1
Total Dissolved Solids	mg/l	--	500	450	496	498	--	482	480
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--
Metals									
Aluminum, dissolved	mg/l	--	--	0.002	0.001	0.001	--	<0.001	<0.001
Antimony, dissolved	mg/l	0.006	--	<0.0005	<0.0005	<0.0005	--	<0.0005	<0.0005
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	--	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.42	0.42	0.424	--	0.419	0.475
Beryllium, dissolved	mg/l	--	--	<0.0005	<0.0005	<0.0005	--	<0.0005	<0.0005
Boron, dissolved	mg/l	5	--	0.033	0.033	0.039	--	0.043	0.046
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	--	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	68.8	66.5	73.8	--	74.6	71.6
Chromium, dissolved	mg/l	0.05	--	<0.001	<0.001	<0.001	--	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	<0.0005	<0.0005	<0.0005	--	<0.0005	<0.0005
Copper, dissolved	mg/l	--	1	<0.0005	0.0007	<0.0005	--	0.0006	0.0012
Iron, dissolved	mg/l	--	0.3	0.332	0.305	0.342	--	0.345	0.271
Lead, dissolved	mg/l	0.01	--	<0.0001	<0.0001	<0.0001	--	0.0002	<0.0001
Magnesium, dissolved	mg/l	--	--	18.7	18.1	18	--	20.8	19.6
Manganese, dissolved	mg/l	--	0.05	0.1	0.099	0.104	--	0.126	0.125
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	--	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	0.0013	0.0012	0.0013	--	0.0015	0.0016
Nickel, dissolved	mg/l	--	--	<0.001	<0.001	<0.001	--	<0.001	<0.001
Potassium, dissolved	mg/l	--	--	6.71	6.29	6.05	--	6.83	7.03
Selenium, dissolved	mg/l	0.05	--	<0.001	<0.001	<0.001	--	<0.001	<0.001
Silver, dissolved	mg/l	--	--	<0.0001	<0.0001	<0.0001	--	<0.0001	<0.0001
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	62.9	59.8	58.4	--	54.3	54.2
Strontium, dissolved	mg/l	--	--	0.232	0.219	0.242	--	0.237	0.241
Thallium, dissolved	mg/l	--	--	<0.0001	<0.0001	<0.0001	--	<0.0001	<0.0001
Tin, dissolved	mg/l	--	--	<0.005	<0.005	<0.005	--	<0.005	<0.005
Titanium, dissolved	mg/l	--	--	<0.005	<0.005	<0.005	--	<0.005	<0.005
Tungsten, dissolved	mg/l	--	--	<0.01	<0.01	<0.01	--	<0.01	<0.01
Uranium, dissolved	mg/l	0.02	--	0.0012	0.0011	0.0010	--	0.0009	0.0010
Vanadium, dissolved	mg/l	--	--	<0.0005	<0.0005	<0.0005	--	<0.0005	<0.0005
Zinc, dissolved	mg/l	--	5	<0.005	<0.005	<0.005	--	<0.005	<0.005
Phenols									
Phenolics, Total Recoverable	mg/l	--	--	<0.001	<0.001	<0.001	--	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S
				01-Nov-1994	12-Jun-1996	26-Nov-1996	01-Jun-1997	01-Nov-1997	01-Jun-1998	01-Nov-1998	01-Aug-1999	01-Nov-1999
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	242	299	214	239	180	186	164	290	290
Ammonia Nitrogen	mg/l	--	--	--	--	--	--	--	--	--	--	--
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	<1	<1	<1	<1	<1	<1	2	<1	<1
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chloride	mg/l	--	250	53	60.8	68.4	52	58.7	45.3	84.5	38.6	40.1
Conductivity	uS/cm	--	--	672	797	737	587	551	501	616	688	685
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Dissolved Organic Carbon	mg/l	--	5	--	--	--	--	--	--	--	--	--
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	299	344	341	336	236	211	251	313	301
Nitrate as N	mg/l	10.0	--	--	--	--	--	--	--	--	--	--
Nitrite as N	mg/l	1.0	--	--	--	--	--	--	--	--	--	--
Nitrogen, Total Kjeldahl	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.91	7.66	8.28	8.1	8.03	7.51	7.65	7.89	7.97
Phosphorus	mg/l	--	--	--	<0.1	--	--	--	--	--	--	--
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	41	32	23	21	22	17	18	14	14
Temperature (Field)	deg c	--	15	--	--	--	--	--	--	--	--	--
Total Dissolved Solids	mg/l	--	500	--	480	424	334	328	278	370	430	416
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	--	--	--	--	--	--	--	--	--
Barium, dissolved	mg/l	1	--	--	0.541	--	--	--	--	--	--	--
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	--	<0.01	--	--	--	--	--	--	--
Cadmium, dissolved	mg/l	0.005	--	--	<0.001	--	--	--	--	--	--	--
Calcium, dissolved	mg/l	--	--	77	88.7	89.6	83.7	58.7	56.4	64	86.6	84.1
Chromium, dissolved	mg/l	0.05	--	--	<0.01	--	--	--	--	--	--	--
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	--	<0.01	--	--	--	--	--	--	--
Iron, dissolved	mg/l	--	0.3	0.09	0.318	0.16	<0.02	1.27	0.05	0.05	0.42	0.59
Lead, dissolved	mg/l	0.01	--	--	0.0002	--	--	--	--	--	--	--
Magnesium, dissolved	mg/l	--	--	76	29.6	28	22.2	21.4	16.7	21.8	23.2	21.8
Manganese, dissolved	mg/l	--	0.05	<0.05	0.142	0.11	0.13	0.16	0.07	0.07	0.23	0.23
Mercury, dissolved	mg/l	0.001	--	--	--	--	--	--	--	--	--	--
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	6	7.26	8.1	8.2	5.5	3.6	3.1	4.3	4.3
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	20	30.1	29.9	17.5	33.9	20.8	37.2	25.5	31.5
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	--	<0.01	--	--	--	--	--	--	--
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	--	0.033	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM14S 01-Jun-2000	OMM14S 01-Nov-2000	OMM14S 01-Jul-2001	OMM14S 01-Nov-2001	OMM14S 01-Jul-2002	OMM14S 01-Nov-2002	OMM14S 10-Jul-2003	OMM14S 27-Dec-2003	OMM14S 26-Aug-2004
General Chemistry												
Alkalinity (Total as CaCO ₃)	mg/l	--	--	225	176	195	211	230	201	245	223	207
Ammonia Nitrogen	mg/l	--	--	--	--	--	--	0.61	0.45	0.1	0.04	0.06
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	--	--	--	--	8	8	7	7	11
Chloride	mg/l	--	250	59.5	143	128	58.9	95	104	45.2	92.6	145
Conductivity	uS/cm	--	--	--	--	753	564	741	735	600	729	842
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Dissolved Organic Carbon	mg/l	--	5	2.6	3.8	2.1	4	2	3.3	2.6	3	2.1
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	291	274	317	247	315	248	248	237	306
Nitrate as N	mg/l	10.0	--	--	--	--	--	<0.1	<0.1	<0.1	0.1	0.3
Nitrite as N	mg/l	1.0	--	--	--	--	--	<0.1	0.1	<0.1	<0.1	<0.1
Nitrogen, Total Kjeldahl	mg/l	--	--	--	--	--	--	0.69	0.63	0.28	0.18	0.18
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	8.2	8.04	7.79	8.55	7.74	7.63	--	--	--
Phosphorus	mg/l	--	--	<0.1	0.02	0.01	0.01	<0.01	0.03	<0.01	<0.01	<0.01
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	18	22	20	17	21	17	15	14	19
Temperature (Field)	deg c	--	15	--	--	--	--	--	--	--	--	--
Total Dissolved Solids	mg/l	--	500	420	506	538	--	464	386	308	373	445
Total Suspended Solids	mg/l	--	--	--	--	--	--	8	8	3	3	3
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	<0.1	<0.1	<0.001	0.001	<0.001	<0.001	<0.001	0.001	<0.001
Barium, dissolved	mg/l	1	--	0.137	0.43	0.49	0.335	0.51	0.405	0.397	0.403	0.523
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.03	0.05	0.04	0.04	0.05	0.03	<0.005	0.029	0.03
Cadmium, dissolved	mg/l	0.005	--	<0.01	<0.01	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	70	87.7	62.9	86.2	65.6	67.2	62.2	80.7	80.7
Chromium, dissolved	mg/l	0.05	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.001	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.002	<0.002	<0.002
Iron, dissolved	mg/l	--	0.3	0.07	0.25	0.08	0.09	0.1	<0.2	0.034	0.016	0.021
Lead, dissolved	mg/l	0.01	--	<0.1	<0.1	0.0002	<0.0002	0.0002	0.0003	<0.0002	<0.02	<0.0002
Magnesium, dissolved	mg/l	--	--	21.1	24.2	23.9	21.9	24.2	20.4	19.6	19.7	25.3
Manganese, dissolved	mg/l	--	0.05	0.09	0.09	0.09	0.06	0.11	0.06	0.067	0.056	0.077
Mercury, dissolved	mg/l	0.001	--	--	--	--	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	4.3	7.7	3.5	5.1	3.1	6.1	4.8	4.3	5.8
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	16.4	33.7	30.5	29.2	31.5	50.5	31.7	50.6	49.9
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	0.04	<0.01	<0.01	<0.01	<0.01	<0.01	<0.005	<0.005	<0.005
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	--	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S
				22-Dec-2004	28-Jun-2005	10-Dec-2005	30-Jun-2006	28-Nov-2006	29-Jun-2007	26-Nov-2007	14-Jun-2008	26-Nov-2008
				R-13								
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	210	234	203	245	272	213	247	242	268
Ammonia Nitrogen	mg/l	--	--	0.05	0.18	<0.01	0.23	0.22	0.25	0.25	0.22	0.17
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	<1	<3	<3	1	1	1	<1	<1	<1
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	<5	12	11	6	10	<5	<5	<5	15
Chloride	mg/l	--	250	115	74.6	137	84	53	124	104	88	51
Conductivity	uS/cm	--	--	768	600	495	758	610	640	550	768	678
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	--	--	--	570
Dissolved Organic Carbon	mg/l	--	5	2.4	11.2	4.9	<0.5	2.8	3.2	4.2	3.3	3.6
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	263	263	285	298	332	318	277	295	253
Nitrate as N	mg/l	10.0	--	0.2	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.10
Nitrite as N	mg/l	1.0	--	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.10
Nitrogen, Total Kjeldahl	mg/l	--	--	0.15	0.37	0.2	0.42	0.55	0.37	0.5	0.59	0.17
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	--	7.44	7.3	7.2	7.1	7.2	7.2	7.4	7.3
Phosphorus	mg/l	--	--	<0.01	0.07	0.08	0.08	0.02	0.08	0.05	0.04	0.21
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	1.42	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	19	24	22	18	22	19	17	24	13
Temperature (Field)	deg c	--	15	--	7.44	5	7	6	7	6	8	6
Total Dissolved Solids	mg/l	--	500	397	--	436	493	462	540	525	499	441
Total Suspended Solids	mg/l	--	--	<3	22	<3	12	148	74	6	12	8
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	0.001	0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.434	0.287	0.482	0.49	0.5	0.48	0.39	0.4	0.31
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.032	0.087	0.032	0.05	0.07	0.04	0.06	0.04	0.09
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	70.1	70.6	76.1	83	95	91	78	82	70
Chromium, dissolved	mg/l	0.05	--	<0.002	<0.002	<0.002	0.003	0.002	0.002	0.003	0.003	0.001
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.002	0.003	<0.002	0.002	<0.001	<0.001	<0.001	<0.001	<0.001
Iron, dissolved	mg/l	--	0.3	0.016	0.632	0.041	0.13	0.3	0.22	0.23	0.23	0.36
Lead, dissolved	mg/l	0.01	--	<0.0002	0.001	<0.0002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Magnesium, dissolved	mg/l	--	--	21.3	21.1	22.9	22	23	22	20	22	19
Manganese, dissolved	mg/l	--	0.05	0.067	0.149	0.088	0.12	0.13	0.14	0.13	0.13	0.11
Mercury, dissolved	mg/l	0.001	--	<0.00006	<0.00005	<0.00006	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	5.4	12.9	5.9	7	7	7	5	6	5
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	46.2	74.6	55.1	39	29	40	43	36	43
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.005	0.006	<0.005	0.03	<0.01	<0.01	<0.01	<0.01	<0.01
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	<0.001	<0.001	0.004	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S
				06-Jul-2009	05-Dec-2009	30-Jun-2010	03-Dec-2010	13-Jun-2011	24-Nov-2011	23-Jun-2012	11-Nov-2012	25-Jun-2013
				R-6	R-12	R-12	R - 16	S-15	OMM-14S	S-15	S-15	S-15
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	235	231	214	208	211	194	200	200	190
Ammonia Nitrogen	mg/l	--	--	0.15	0.15	0.11	0.22	0.19	0.12	0.12	<0.050	0.32
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	<1	<1	--	--	--	--	--	--	--
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	<5	10	5	13	10	8	13	<4.0	<4.0
Chloride	mg/l	--	250	70	39	56	58	94	52	73	96	93
Conductivity	uS/cm	--	--	693	579	610	590	706	554	--	--	--
Conductivity (Field)	uS/cm	--	--	610	635	605	620	575	701	600	620	610
Dissolved Organic Carbon	mg/l	--	5	3.5	4.0	3.4	3.7	2.2	2.6	2.3	2.0	1.8
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	241	204	222	227	253	224	230	220	260
Nitrate as N	mg/l	10.0	--	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Nitrite as N	mg/l	1.0	--	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.010	<0.010	<0.010
Nitrogen, Total Kjeldahl	mg/l	--	--	0.20	0.20	0.20	0.40	0.32	0.17	0.47	0.44	1.1
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	<0.10	<0.10	<0.10
pH (Field)	-	--	--	7.4	7.5	7.4	7.6	7.5	7.7	7.6	7.5	7.6
Phosphorus	mg/l	--	--	0.03	0.02	0.04	<0.01	<0.01	<0.01	0.012	0.013	0.019
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	18	14	15	16	23	15	21	18	23
Temperature (Field)	deg c	--	15	15.0	8	11	8	11	7.1	11	7	11
Total Dissolved Solids	mg/l	--	500	450	376	397	384	459	360	338	310	384
Total Suspended Solids	mg/l	--	--	25	5	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010	<0.001
Barium, dissolved	mg/l	1	--	0.32	0.32	0.31	0.33	0.35	0.30	0.34	0.35	0.38
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.08	0.05	0.06	0.07	0.06	0.07	0.045	0.048	0.044
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00010	<0.00010	<0.0001
Calcium, dissolved	mg/l	--	--	67	57	61	63	65	60	63	58	71
Chromium, dissolved	mg/l	0.05	--	0.003	0.003	0.005	0.001	<0.001	0.001	<0.0050	<0.0050	<0.005
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0010	0.0021	<0.001
Iron, dissolved	mg/l	--	0.3	0.33	0.16	0.18	0.13	0.17	<0.03	<0.1	<0.1	<0.1
Lead, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.00050	<0.00050	<0.0005
Magnesium, dissolved	mg/l	--	--	18	15	17	17	22	18	18	19	20
Manganese, dissolved	mg/l	--	0.05	0.12	0.08	0.09	0.09	0.12	0.07	0.088	0.0095	0.1
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	0.0003	<0.0001	<0.0001	<0.00010	<0.00010	<0.00010
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	5	5	5	5	5	5	5.4	5.6	6.4
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	40	33	35	21	32	27	34	57	37
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0050	<0.0050	<0.005
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	<0.001	<0.001	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S
				21-Nov-2013	27-May-2014	26-Nov-2014	26-May-2015	29-Nov-2015	14-Jun-2016	30-Nov-2016	01-Jun-2017	23-Nov-2017
				S-21	A-13	S-19	OMM-14S	14S	OMM-14C	OMM-14S	OMM14S	OMM-14S
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	190	240	170	191	190	183	200	249	224
Ammonia Nitrogen	mg/l	--	--	0.15	0.30	0.17	0.30	0.03	0.26	0.17	0.28	0.21
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	--	--	--	--	--	--	--
Bromide	mg/l	--	--	--	--	--	--	--	<0.1	--	--	--
Chemical Oxygen Demand	mg/l	--	--	8.6	<4.0	<4.0	11	<10	<10	<10	<10	10
Chloride	mg/l	--	250	75	76	73	66	110	102	79	94	121
Conductivity	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	590	720	585	763	770	588	544	605	757
Dissolved Organic Carbon	mg/l	--	5	2.6	2.0	2.6	1.4	2.2	2.6	2.1	2.9	1.3
Fluoride	mg/l	1.5	--	--	--	--	--	--	0.2	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	230	300	220	268	279	268	216	252	287
Nitrate as N	mg/l	10.0	--	<0.10	<0.10	<0.10	<0.1	0.2	<0.1	<0.1	<0.1	<0.1
Nitrite as N	mg/l	1.0	--	0.091	<0.010	0.019	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrogen, Total Kjeldahl	mg/l	--	--	0.50	0.61	0.35	0.4	0.2	0.5	0.2	0.4	0.3
Nitrogen, Nitrate-Nitrite	mg/l	--	--	0.13	<0.10	<0.10	--	--	--	--	--	--
pH (Field)	-	--	--	7.6	7.47	7.5	7.39	7.4	7.61	8.1	7.5	7.69
Phosphorus	mg/l	--	--	0.016	<0.002	0.019	<0.01	<0.01	0.06	0.03	0.01	<0.01
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	<0.2	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	17	33	25	26	27	25	22	36	30
Temperature (Field)	deg c	--	15	7	11.1	5	10.9	6	10.9	7.9	12	8.3
Total Dissolved Solids	mg/l	--	500	342	410	296	340	400	372	334	446	434
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	<0.01	--	<0.001	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	<0.001	--	<0.0005	--	--	--
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.0010	<0.001	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.34	0.42	0.31	0.339	0.377	0.397	0.327	0.41	0.454
Beryllium, dissolved	mg/l	--	--	--	--	--	<0.001	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.038	0.062	0.033	0.059	0.034	0.03	0.032	0.051	0.057
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.00010	<0.0001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	64	84	62	74.3	79.3	76	58.9	69.8	73.9
Chromium, dissolved	mg/l	0.05	--	<0.005	<0.0050	<0.005	<0.05	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	--	--	--	<0.001	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.001	<0.0010	<0.001	<0.005	<0.0005	<0.0005	<0.0005	0.0043	<0.0005
Iron, dissolved	mg/l	--	0.3	<0.1	<0.1	<0.1	<0.2	<0.1	<0.1	<0.1	0.326	0.158
Lead, dissolved	mg/l	0.01	--	<0.0005	<0.00050	<0.0005	<0.001	<0.0001	<0.0001	<0.0001	0.0008	<0.0001
Magnesium, dissolved	mg/l	--	--	18	23	16	20	19.5	19.1	16.8	18.8	24.8
Manganese, dissolved	mg/l	--	0.05	0.078	0.1	0.077	0.109	0.037	0.098	0.079	0.111	0.117
Mercury, dissolved	mg/l	0.001	--	<0.00010	<0.00010	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	--	--	<0.005	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	<0.005	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	5.8	6.6	5.6	7.57	5.81	6.57	5.37	6.73	7.14
Selenium, dissolved	mg/l	0.05	--	--	--	--	<0.005	--	<0.001	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	<0.001	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	33	36	27	30.9	52.7	35.1	32.5	41	37.2
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	<0.001	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	<0.01	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	0.0017	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	0.004	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.005	<0.0050	<0.005	<0.02	<0.005	<0.005	<0.005	0.03	<0.005
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	--	--	--	--	--	--	--	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S
				29-Jun-2018	27-Nov-2018	19-Jun-2019	02-Dec-2019	04-Jun-2020	01-Dec-2020	08-Jun-2021	25-Nov-2021	20-Jun-2022
				OMM-14S	OMM-14S	OMM-14S	OMM14S	OMM-14S	OMM-14S	OMM-14S	OMM-14S	OMM 14-S
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	214	234	212	266	230	255	230	244	225
Ammonia Nitrogen	mg/l	--	--	0.31	0.06	0.12	0.14	0.20	0.11	0.13	0.10	0.13
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	--	--	--	--	--	--	--
Bromide	mg/l	--	--	--	--	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chemical Oxygen Demand	mg/l	--	--	<10	<10	<10	12	14	12	10	<10	24
Chloride	mg/l	--	250	144	79	128	93	201	68	107	77	81.3
Conductivity	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	817	618	737	601	998	864	713	746	723
Dissolved Organic Carbon	mg/l	--	5	1.5	2.2	0.6	4.4	5.2	4.2	2.5	2.8	2.7
Fluoride	mg/l	1.5	--	--	--	<0.1	0.2	0.1	0.2	0.3	0.3	0.3
Hardness, Calcium Carbonate	mg/l	--	--	247	214	296	297	344	257	240	234	223
Nitrate as N	mg/l	10.0	--	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite as N	mg/l	1.0	--	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrogen, Total Kjeldahl	mg/l	--	--	0.3	0.1	0.2	0.3	0.2	0.3	0.2	0.1	0.5
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.64	8.01	8.02	7.9	8.04	7.69	7.86	7.68	7.81
Phosphorus	mg/l	--	--	<0.01	0.02	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	0.04
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	<0.2	<0.2	<0.2	<1.0 ⁽⁷⁾	<0.2	<0.2	<0.2
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	24	15	27	13	26	13	19	15	22.9
Temperature (Field)	deg c	--	15	10.7	6.4	10.1	7.7	12.8	8.3	12.1	8.2	11.9
Total Dissolved Solids	mg/l	--	500	510	374	464	436	588	392	446	396	356
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	<0.001	0.001	<0.001	0.004	0.001	<0.001	<0.001
Antimony, dissolved	mg/l	0.006	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.487	0.356	0.488	0.467	0.581	0.423	0.387	0.386	0.355
Beryllium, dissolved	mg/l	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron, dissolved	mg/l	5	--	0.028	0.022	0.018	0.025	0.028	0.028	0.028	0.029	0.036
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	64.4	56.2	78.2	80.5	95	69.7	66.6	65.8	62.6
Chromium, dissolved	mg/l	0.05	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Copper, dissolved	mg/l	--	1	<0.0005	<0.0005	<0.0005	0.0006	<0.0005	<0.0005	0.0036	<0.0005	0.0005
Iron, dissolved	mg/l	--	0.3	0.101	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.806
Lead, dissolved	mg/l	0.01	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0002	<0.0001	<0.0001
Magnesium, dissolved	mg/l	--	--	20.8	17.8	24.4	23.4	25.9	20.2	18	17	16.2
Manganese, dissolved	mg/l	--	0.05	0.098	0.06	0.066	0.098	0.136	0.09	0.098	0.071	0.104
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	--	0.0034	0.0009	0.0022	0.0008	0.0025	0.0011	0.0010
Nickel, dissolved	mg/l	--	--	--	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.007
Potassium, dissolved	mg/l	--	--	6.78	5.83	7.13	6.97	7.98	6	5.72	5.56	5.55
Selenium, dissolved	mg/l	0.05	--	--	--	0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silver, dissolved	mg/l	--	--	--	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	43.2	48	51.3	43.8	52.4	35	47.6	38.8	40
Strontium, dissolved	mg/l	--	--	--	--	0.244	0.225	0.311	0.227	0.238	0.219	0.216
Thallium, dissolved	mg/l	--	--	--	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Tin, dissolved	mg/l	--	--	--	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Titanium, dissolved	mg/l	--	--	--	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Tungsten, dissolved	mg/l	--	--	--	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, dissolved	mg/l	0.02	--	--	--	0.0043	0.0016	0.0032	0.0013	0.0029	0.0013	0.0018
Vanadium, dissolved	mg/l	--	--	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Zinc, dissolved	mg/l	--	5	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	<0.005
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S
				23-Nov-2022	11-May-2023	29-Nov-2023	06-Dec-2023	25-Apr-2024	22-Oct-2024
				OMM-14S	OMM-14S	OMM-14S	OMM-14S	OMM14 S	OMM14S
General Chemistry									
Alkalinity (Total as CaCO ₃)	mg/l	--	--	227	197	188	--	187	185
Ammonia Nitrogen	mg/l	--	--	0.08	0.14	0.07	--	0.08	<0.01
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	--	--	--	--
Bromide	mg/l	--	--	<0.1	<0.1	<0.1	--	<0.1	<0.1
Chemical Oxygen Demand	mg/l	--	--	<10	<10	<10	--	<10	10
Chloride	mg/l	--	250	85.1	101	105	--	93	159
Conductivity	uS/cm	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	709	720	713	--	628	821
Dissolved Organic Carbon	mg/l	--	5	3.6	2.3	--	1.0	2.4	2.2
Fluoride	mg/l	1.5	--	0.2	0.2	0.1	--	0.2	0.2
Hardness, Calcium Carbonate	mg/l	--	--	221	237	226	--	237	262
Nitrate as N	mg/l	10.0	--	<0.1	<0.1	<0.1	--	<0.1	0.1
Nitrite as N	mg/l	1.0	--	<0.05	<0.05	<0.05	--	<0.05	<0.05
Nitrogen, Total Kjeldahl	mg/l	--	--	0.2	0.2	0.2	--	0.2	<0.1
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.96	6.89	7.82	--	7.03	7.05
Phosphorus	mg/l	--	--	<0.01	<0.01	<0.01	--	<0.01	<0.01
Phosphorus, Total Orthophosphate	mg/l	--	--	<0.5 ⁽⁶⁾	<0.5	<0.5	--	<0.5	<0.5
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	19.0	22	24	--	19	22
Temperature (Field)	deg c	--	15	8.4	10.1	6.5	--	9.1	11.0
Total Dissolved Solids	mg/l	--	500	382	392	392	--	358	490
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--
Metals									
Aluminum, dissolved	mg/l	--	--	0.001	<0.001	0.001	--	<0.001	<0.001
Antimony, dissolved	mg/l	0.006	--	<0.0005	<0.0005	<0.0005	--	<0.0005	<0.0005
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	--	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.356	0.371	0.341	--	0.355	0.468
Beryllium, dissolved	mg/l	--	--	<0.0005	<0.0005	<0.0005	--	<0.0005	<0.0005
Boron, dissolved	mg/l	5	--	0.04	0.04	0.042	--	0.047	0.042
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	--	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	62.4	66.9	64.8	--	65.9	73.5
Chromium, dissolved	mg/l	0.05	--	<0.001	<0.001	<0.001	--	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	<0.0005	<0.0005	<0.0005	--	<0.0005	<0.0005
Copper, dissolved	mg/l	--	1	<0.0005	<0.0005	0.0009	--	0.0008	0.0021
Iron, dissolved	mg/l	--	0.3	<0.1	<0.1	<0.1	--	<0.1	<0.1
Lead, dissolved	mg/l	0.01	--	<0.0001	<0.0001	<0.0001	--	0.0002	<0.0001
Magnesium, dissolved	mg/l	--	--	15.8	17	15.5	--	17.5	19
Manganese, dissolved	mg/l	--	0.05	0.064	0.086	0.053	--	0.078	0.035
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	--	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	0.0010	0.0011	0.0012	--	0.0009	0.0018
Nickel, dissolved	mg/l	--	--	<0.001	<0.001	<0.001	--	<0.001	<0.001
Potassium, dissolved	mg/l	--	--	6.03	6.06	5	--	5.52	6.55
Selenium, dissolved	mg/l	0.05	--	<0.001	<0.001	<0.001	--	<0.001	0.002
Silver, dissolved	mg/l	--	--	<0.0001	<0.0001	<0.0001	--	<0.0001	<0.0001
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	41.9	38.1	36.6	--	30.1	55.6
Strontium, dissolved	mg/l	--	--	0.194	0.208	0.183	--	0.206	0.215
Thallium, dissolved	mg/l	--	--	<0.0001	<0.0001	<0.0001	--	<0.0001	<0.0001
Tin, dissolved	mg/l	--	--	<0.005	<0.005	<0.005	--	<0.005	<0.005
Titanium, dissolved	mg/l	--	--	<0.005	<0.005	<0.005	--	<0.005	<0.005
Tungsten, dissolved	mg/l	--	--	<0.01	<0.01	<0.01	--	<0.01	<0.01
Uranium, dissolved	mg/l	0.02	--	0.0008	0.0012	0.0010	--	0.0008	0.0018
Vanadium, dissolved	mg/l	--	--	<0.0005	<0.0005	<0.0005	--	<0.0005	<0.0005
Zinc, dissolved	mg/l	--	5	<0.005	<0.005	<0.005	--	<0.005	<0.005
Phenols									
Phenolics, Total Recoverable	mg/l	--	--	<0.001	<0.001	<0.001	--	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM15	OMM15	OMM15	OMM15	OMM15	OMM15	OMM15	OMM15	OMM15
				01-Nov-2001	01-Jul-2002	01-Nov-2002	10-Jul-2003	27-Dec-2003	26-Aug-2004	21-Dec-2004	21-Jun-2005	10-Dec-2005
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	265	247	231	239	242	249	245	238	247
Ammonia Nitrogen	mg/l	--	--	--	<0.01	<0.01	0.01	0.03	<0.01	<0.01	<0.01	<0.01
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	1	<1	<1	<1	<1	<1	<1	<3	<3
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	--	<3	<2	<2	<2	<2	<5	<5	<5
Chloride	mg/l	--	250	3.2	3	3.3	3	2.9	3.3	3.3	3.1	2.9
Conductivity	uS/cm	--	--	504	503	468	503	544	531	533	447	295
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Dissolved Organic Carbon	mg/l	--	5	2	<1	0.6	0.5	2	<0.5	<0.5	4.3	2.5
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	344	267	307	273	282	286	261	301	290
Nitrate as N	mg/l	10.0	--	--	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Nitrite as N	mg/l	1.0	--	--	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrogen, Total Kjeldahl	mg/l	--	--	--	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.12	0.05
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	8.03	5.73	--	--	--	--	--	7.69	7.4
Phosphorus	mg/l	--	--	0.02	0.03	0.04	0.02	0.02	0.03	0.03	0.64	0.69
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	0.102	0.14
Sulphate	mg/l	--	500 ⁽³⁾	45	45	45	44	45	44	44	45	42
Temperature (Field)	deg c	--	15	--	--	--	--	--	--	--	13	5
Total Dissolved Solids	mg/l	--	500	290	314	290	327	297	301	290	301	300
Total Suspended Solids	mg/l	--	--	--	35	57	22	9	37	35	1130	803
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	<0.001	0.001	0.001	<0.001	0.001	0.001	<0.001	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.145	0.085	0.095	0.084	0.092	0.092	0.082	0.105	0.095
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.02	0.02	<0.01	<0.005	0.01	0.009	0.011	<0.005	0.013
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	92.4	71.8	81.9	73.5	75.5	75	69.7	79.8	76.9
Chromium, dissolved	mg/l	0.05	--	<0.01	<0.01	<0.01	0.001	<0.001	<0.001	<0.002	<0.002	<0.002
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	0.01	<0.01	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	0.003
Iron, dissolved	mg/l	--	0.3	3.91	<0.02	0.29	0.016	<0.005	0.012	0.007	0.006	0.019
Lead, dissolved	mg/l	0.01	--	0.0036	0.0007	0.0002	<0.0002	<0.02	0.0002	<0.0002	<0.0002	<0.0002
Magnesium, dissolved	mg/l	--	--	27.6	21.4	24.8	21.7	22.6	23.9	21.1	24.7	23.8
Manganese, dissolved	mg/l	--	0.05	0.16	<0.01	<0.01	0.003	<0.001	0.004	<0.001	<0.001	0.002
Mercury, dissolved	mg/l	0.001	--	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00006	<0.00005	<0.00006
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	5.6	3.9	12.2	3.9	3.6	4	3.7	4.3	4.6
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	4.9	3.8	3.9	4	3.8	3.9	3.5	4.1	5.5
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	0.04	0.01	0.01	<0.005	<0.005	0.005	0.006	<0.005	<0.005
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	<0.001	<0.001	<0.001	0.051	<0.001	<0.001	<0.001	<0.001	0.004

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM15	OMM15	OMM15	OMM15	OMM15	OMM15	OMM15	OMM15	OMM15
				30-Jun-2006	28-Nov-2006	29-Jun-2007	26-Nov-2007	30-Jun-2008	26-Nov-2008	06-Jul-2009	05-Dec-2009	30-Jun-2010
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	244	242	250	252	251	251	254	255	251
Ammonia Nitrogen	mg/l	--	--	0.06	<0.02	0.07	0.03	0.02	<0.02	<0.02	<0.02	<0.02
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	<1	<1	<1	<1	3	<1	<1	<1	--
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	<5	<5	<5	<5	<5	10	<5	5	43
Chloride	mg/l	--	250	4	5	4	4	3	3	3	3	4
Conductivity	uS/cm	--	--	290	270	300	290	536	541	537	537	529
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	405	390	405	460
Dissolved Organic Carbon	mg/l	--	5	<0.5	0.8	1.4	1.4	1	1.8	1.7	1.4	1.3
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	287	275	282	264	306	301	280	275	266
Nitrate as N	mg/l	10.0	--	0.17	0.16	0.13	0.13	0.16	0.19	0.19	0.13	0.15
Nitrite as N	mg/l	1.0	--	<0.1	<0.1	<0.1	<0.1	<0.1	<0.10	<0.10	<0.10	<0.10
Nitrogen, Total Kjeldahl	mg/l	--	--	<0.05	<0.05	0.28	<0.1	<0.1	0.25	<0.10	<0.10	<0.10
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.3	7.5	7.4	7.5	7.3	7.4	7.5	7.6	7.8
Phosphorus	mg/l	--	--	0.47	0.01	0.41	0.11	0.24	0.20	0.19	0.59	0.35
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	40	37	39	37	39	40	40	40	40
Temperature (Field)	deg c	--	15	7	5	8	6	10	5	13.0	7	10
Total Dissolved Solids	mg/l	--	500	350	340	345	343	348	352	349	349	344
Total Suspended Solids	mg/l	--	--	1890	730	42	340	335	349	418	1060	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.1	0.1	0.1	0.09	0.1	0.09	0.09	0.10	0.09
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.01	0.02	0.01	0.01	<0.01	0.02	0.02	<0.01	0.01
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	0.0004	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	77	69	75	71	83	81	76	74	72
Chromium, dissolved	mg/l	0.05	--	<0.001	<0.001	0.002	0.001	<0.001	0.001	0.033	<0.001	0.005
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	0.004	<0.001	<0.001	0.002	0.002	0.001	<0.001	<0.001	<0.001
Iron, dissolved	mg/l	--	0.3	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Lead, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Magnesium, dissolved	mg/l	--	--	23	25	23	21	24	24	22	22	21
Manganese, dissolved	mg/l	--	0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	4	4	5	4	4	4	4	4	4
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	6	5	4	5	4	4	4	4	5
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM15	OMM15	OMM15	OMM15	OMM15	OMM15	OMM15	OMM15	OMM15
				03-Dec-2010	15-Jun-2011	30-Nov-2011	22-Jun-2012	10-Nov-2012	25-Jun-2013 ⁽²³⁾	20-Nov-2013	28-May-2014	25-Nov-2014
				R - 10	S-18	OMM-15	S-9	S-1	S-10	S-9	A-19	R-2
General Chemistry												
Alkalinity (Total as CaCO ₃)	mg/l	--	--	254	252	251	260	240	250	250	250	250
Ammonia Nitrogen	mg/l	--	--	<0.02	<0.02	<0.02	<0.050	<0.050	0.052	<0.050	<0.050	<0.050
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	--	--	--	--	--	--	--
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	8	5	5	<4.0	<4.0	12	<4.0	<4.0	<4.0
Chloride	mg/l	--	250	5	5	4	4	4	3	3	4	4
Conductivity	uS/cm	--	--	530	528	536	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	435	1385	623	465	470	480	460	565	505
Dissolved Organic Carbon	mg/l	--	5	1.1	2.0	1.0	1.1	0.66	0.81	0.83	1.1	0.78
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	264	279	304	310	290	280	280	290	270
Nitrate as N	mg/l	10.0	--	0.11	<0.10	0.12	0.15	0.11	<0.10	<0.10	0.10	<0.10
Nitrite as N	mg/l	1.0	--	<0.10	<0.10	<0.10	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Nitrogen, Total Kjeldahl	mg/l	--	--	0.17	<0.10	<0.10	0.10	0.23	0.27	<0.50 ⁽¹⁵⁾	<0.20 ⁽¹⁵⁾	0.15
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	0.15	0.11	<0.10	<0.10	0.10	<0.10
pH (Field)	-	--	--	7.6	7.1	7.62	7.8	7.7	7.6	7.6	7.73	7.5
Phosphorus	mg/l	--	--	0.37	0.31	0.33	0.35	0.77	0.004	0.58	0.64	0.24
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	38	40	40	38	35	37	36	38	39
Temperature (Field)	deg c	--	--	15	10.0	7.4	10	7	9	8	9.3	6
Total Dissolved Solids	mg/l	--	500	345	343	348	288	278	310	294	320	298
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.001	<0.0010	<0.001
Barium, dissolved	mg/l	1	--	0.09	0.09	0.10	0.089	0.093	0.098	0.089	0.093	0.091
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	<0.01	0.01	0.02	<0.01	0.019	0.013	0.011	0.013	0.012
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.00010	<0.00010	<0.00010	<0.0001	<0.00010	<0.0001
Calcium, dissolved	mg/l	--	--	71	72	82	80	77	74	74	77	74
Chromium, dissolved	mg/l	0.05	--	<0.001	0.001	<0.001	<0.0050	<0.0050	<0.0050	<0.005	<0.0050	<0.005
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	<0.001	<0.001	<0.001	<0.0010	<0.0010	<0.0010	<0.001	<0.0010	<0.001
Iron, dissolved	mg/l	--	0.3	<0.03	<0.03	<0.03	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lead, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.00050	<0.00050	<0.00050	<0.0005	<0.00050	<0.0005
Magnesium, dissolved	mg/l	--	--	21	24	24	26	24	22	23	24	22
Manganese, dissolved	mg/l	--	0.05	<0.01	<0.01	<0.01	<0.0020	<0.0020	<0.0020	<0.002	<0.0020	<0.002
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	4	4	4	4.4	4.1	3.9	4	4	3.9
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	4	3	5	3.9	4.1	3.6	3.7	3.9	3.6
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.01	<0.01	<0.01	<0.0050	<0.0050	<0.0050	<0.005	<0.0050	<0.005
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	--	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM15	OMM15	OMM15	OMM15	OMM15	OMM15	OMM15	OMM15	OMM15
				29-May-2015	30-Nov-2015	14-Jun-2016	29-Nov-2016	01-Jun-2017	22-Nov-2017	28-Jun-2018	26-Nov-2018	18-Jun-2019
				OMM-15	15	OMM-15	OMM-15	OMM15	OMM-15	OMM-15	OMM-15	OMM-15
General Chemistry												
Alkalinity (Total as CaCO ₃)	mg/l	--	--	263	249	271	275	267	281	290	293	262
Ammonia Nitrogen	mg/l	--	--	0.03	0.04	0.01	0.03	0.03	0.09	0.04	<0.01	0.05
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	--	--	--	--	--	--	--
Bromide	mg/l	--	--	<0.1	--	<0.1	--	--	--	--	--	<0.1
Chemical Oxygen Demand	mg/l	--	--	26	13	28	12	16	24	39	<10	<10
Chloride	mg/l	--	250	4	4	4	3	4	4	4	4	4
Conductivity	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	583	600	491	467	505	547	452	518	576
Dissolved Organic Carbon	mg/l	--	5	<0.5	0.8	<0.5	1.9	1.4	1.3	<0.5	0.7	<0.5
Fluoride	mg/l	1.5	--	0.2	--	0.2	--	--	--	--	--	<0.1
Hardness, Calcium Carbonate	mg/l	--	--	392 ⁽¹⁹⁾	330	316	277	245	283	245	285	283
Nitrate as N	mg/l	10.0	--	0.1	0.1	0.1	<0.1	<0.1	<0.1	0.5	<0.1	<0.1
Nitrite as N	mg/l	1.0	--	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrogen, Total Kjeldahl	mg/l	--	--	0.1	0.2	0.1	<0.1	0.1	0.1	<0.1	<0.1	1.6
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	7.82	7.8	7.62	7.85	7.6	7.79	7.58	8.23	7.99
Phosphorus	mg/l	--	--	0.62	0.04	0.28	0.12	0.35	0.46	0.24	0.04	0.04
Phosphorus, Total Orthophosphate	mg/l	--	--	0.3	--	<0.2	--	--	--	--	--	<0.2
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	38	38	38	39	35	41	38	38	39
Temperature (Field)	deg c	--	15	10.1	9	9.2	8.8	10	8.9	11.1	6.6	10.3
Total Dissolved Solids	mg/l	--	500	308	322	308	292	290	302	334	330	296
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	<0.01	--	0.003	--	--	--	--	--	<0.001
Antimony, dissolved	mg/l	0.006	--	<0.001	--	<0.0005	--	--	--	--	--	<0.0005
Arsenic, dissolved	mg/l	0.01	--	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.096	0.099	0.102	0.096	0.082	0.1	0.104	0.101	0.092
Beryllium, dissolved	mg/l	--	--	<0.001	--	--	--	--	--	--	--	<0.0005
Boron, dissolved	mg/l	5	--	<0.05	0.018	0.013	0.014	0.027	0.016	0.035	0.013	0.012
Cadmium, dissolved	mg/l	0.005	--	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	113	86.6	84.1	72.4	65.5	74.8	62.9	74.1	73.6
Chromium, dissolved	mg/l	0.05	--	<0.05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	<0.001	--	--	--	--	--	--	--	<0.0005
Copper, dissolved	mg/l	--	1	<0.005	<0.0005	<0.0005	<0.0005	<0.0005	0.0010	<0.0005	<0.0005	<0.0005
Iron, dissolved	mg/l	--	0.3	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lead, dissolved	mg/l	0.01	--	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Magnesium, dissolved	mg/l	--	--	26.8	27.4	25.8	23.5	19.8	23.4	21.4	24.3	24.1
Manganese, dissolved	mg/l	--	0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	<0.005	--	--	--	--	--	--	--	0.0030
Nickel, dissolved	mg/l	--	--	<0.005	--	--	--	--	--	--	--	<0.001
Potassium, dissolved	mg/l	--	--	5.5	3.96	4.36	3.88	4.39	4.1	4.15	4.6	4.4
Selenium, dissolved	mg/l	0.05	--	<0.005	--	<0.001	--	--	--	--	--	<0.001
Silver, dissolved	mg/l	--	--	<0.001	--	--	--	--	--	--	--	<0.0001
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	4.9	3.84	3.88	3.36	3.94	3.66	3.37	3.94	3.96
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	0.146
Thallium, dissolved	mg/l	--	--	<0.001	--	--	--	--	--	--	--	<0.0001
Tin, dissolved	mg/l	--	--	<0.01	--	--	--	--	--	--	--	<0.005
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	<0.005
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	<0.01
Uranium, dissolved	mg/l	0.02	--	--	--	0.0075	--	--	--	--	--	0.0077
Vanadium, dissolved	mg/l	--	--	0.005	--	--	--	--	--	--	--	<0.0005
Zinc, dissolved	mg/l	--	5	<0.02	0.007	0.005	<0.005	<0.005	0.005	<0.005	<0.005	<0.005
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	--	--	--	--	<0.001	<0.001	<0.001	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM15	OMM15	OMM15	OMM15	OMM15	OMM15	OMM15	OMM15	OMM15
				02-Dec-2019	04-Jun-2020	30-Nov-2020	08-Jun-2021	25-Nov-2021	21-Jun-2022	23-Nov-2022	11-May-2023	29-Nov-2023
				OMM15	OMM-15	OMM-15	OMM-15	OMM-15	OMM 15	OMM-15	OMM-15	OMM-15
General Chemistry												
Alkalinity (Total as CaCO ₃)	mg/l	--	--	205	260	263	266	264	257	257	257	267
Ammonia Nitrogen	mg/l	--	--	0.03	0.03	0.03	0.07	0.03	<0.01	<0.01	0.03	0.01
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	--	--	--	--	--	--	--
Bromide	mg/l	--	--	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Chemical Oxygen Demand	mg/l	--	--	12	<10	35	36	33	23	<10	<10	28
Chloride	mg/l	--	250	5	5	4	4	4	5.2	4.0	4	4
Conductivity	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	524	597	539	480	564	489	554	608	949
Dissolved Organic Carbon	mg/l	--	5	0.5	3.1	0.8	1.0	1.1	1.8	1.2	1.1	1.0
Fluoride	mg/l	1.5	--	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	<0.1
Hardness, Calcium Carbonate	mg/l	--	--	280	266	272	255	262	264	246	249	256
Nitrate as N	mg/l	10.0	--	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite as N	mg/l	1.0	--	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrogen, Total Kjeldahl	mg/l	--	--	0.1	<0.1	0.2	0.4	0.1	0.2	<0.1	<0.1	<0.1
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	8.0	7.71	7.27	7.91	7.81	7.88	7.85	7.31	7.12
Phosphorus	mg/l	--	--	0.12	<0.01	1.04	0.69	0.39	0.80	0.07	0.25	0.50
Phosphorus, Total Orthophosphate	mg/l	--	--	<0.2	<0.2	<1.0 ⁽⁷⁾	<0.2	<0.2	0.5	<0.4 ⁽⁸⁾	<0.5	<0.5
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	41	50	38	37	36	45.7	37.7	37	39
Temperature (Field)	deg c	--	15	8.9	12.9	8.1	10.9	8.5	11.2	8.8	8.9	7.8
Total Dissolved Solids	mg/l	--	500	296	290	306	308	322	316	312	336	276
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	0.008	0.001	0.011	0.004	0.004	0.107	0.002	0.002	0.004
Antimony, dissolved	mg/l	0.006	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.097	0.094	0.095	0.093	0.095	0.099	0.082	0.084	0.079
Beryllium, dissolved	mg/l	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Boron, dissolved	mg/l	5	--	0.011	0.011	0.012	0.012	0.011	0.011	0.011	0.011	0.011
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	73.6	70.5	70.6	66.2	69.4	69	64.3	64.9	68.1
Chromium, dissolved	mg/l	0.05	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Copper, dissolved	mg/l	--	1	<0.0005	<0.0005	0.0016	0.0039	0.0043	0.0012	<0.0005	<0.0005	<0.0005
Iron, dissolved	mg/l	--	0.3	<0.1	<0.1	<0.1	<0.1	<0.1	0.299	<0.1	<0.1	<0.1
Lead, dissolved	mg/l	0.01	--	<0.0001	<0.0001	<0.0001	0.0002	0.0002	0.0002	<0.0001	<0.0001	<0.0001
Magnesium, dissolved	mg/l	--	--	23.4	21.7	23.3	21.7	21.4	22.2	20.7	21.2	20.9
Manganese, dissolved	mg/l	--	0.05	<0.005	<0.005	<0.005	<0.005	<0.005	0.008	<0.005	<0.005	<0.005
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	0.0030	0.0032	0.0029	0.0029	0.0028	0.0026	0.0027	0.0024	0.0025
Nickel, dissolved	mg/l	--	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Potassium, dissolved	mg/l	--	--	4.39	4.14	4.28	3.96	3.91	4.47	4.05	3.67	3.7
Selenium, dissolved	mg/l	0.05	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silver, dissolved	mg/l	--	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	4	3.93	3.82	3.71	3.48	3.8	3.78	3.82	4.05
Strontium, dissolved	mg/l	--	--	0.147	0.159	0.15	0.158	0.153	0.157	0.141	0.135	0.13
Thallium, dissolved	mg/l	--	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Tin, dissolved	mg/l	--	--	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Titanium, dissolved	mg/l	--	--	<0.005	<0.005	<0.005	<0.005	<0.005	0.013	<0.005	<0.005	<0.005
Tungsten, dissolved	mg/l	--	--	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, dissolved	mg/l	0.02	--	0.0074	0.0069	0.0071	0.0079	0.0071	0.0078	0.0062	0.0063	0.0063
Vanadium, dissolved	mg/l	--	--	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0008	<0.0005	<0.0005	<0.0005
Zinc, dissolved	mg/l	--	5	<0.005	<0.005	<0.005	<0.005	0.009	<0.005	<0.005	<0.005	<0.005
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM15	OMM15	OMM15
				06-Dec-2023	25-Apr-2024	22-Oct-2024 ⁽²⁶⁾
				OMM-15	OMM - 15	OMM-15
General Chemistry						
Alkalinity (Total as CaCO3)	mg/l	--	--	--	257	--
Ammonia Nitrogen	mg/l	--	--	--	<0.01	--
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	--
Bromide	mg/l	--	--	--	<0.1	--
Chemical Oxygen Demand	mg/l	--	--	--	<10	--
Chloride	mg/l	--	250	--	4	--
Conductivity	uS/cm	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	--	549	--
Dissolved Organic Carbon	mg/l	--	5	--	0.6	--
Fluoride	mg/l	1.5	--	--	0.2	--
Hardness, Calcium Carbonate	mg/l	--	--	--	265	--
Nitrate as N	mg/l	10.0	--	--	<0.1	--
Nitrite as N	mg/l	1.0	--	--	<0.05	--
Nitrogen, Total Kjeldahl	mg/l	--	--	--	<0.1	--
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--
pH (Field)	-	--	--	--	7.11	--
Phosphorus	mg/l	--	--	--	0.27	--
Phosphorus, Total Orthophosphate	mg/l	--	--	--	<0.5	--
Sodium Adsorption Ratio	-	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	--	37	--
Temperature (Field)	deg c	--	15	--	8.6	--
Total Dissolved Solids	mg/l	--	500	--	298	--
Total Suspended Solids	mg/l	--	--	--	--	--
Metals						
Aluminum, dissolved	mg/l	--	--	--	0.001	--
Antimony, dissolved	mg/l	0.006	--	--	<0.0005	--
Arsenic, dissolved	mg/l	0.01	--	--	<0.001	--
Barium, dissolved	mg/l	1	--	--	0.091	--
Beryllium, dissolved	mg/l	--	--	--	<0.0005	--
Boron, dissolved	mg/l	5	--	--	0.014	--
Cadmium, dissolved	mg/l	0.005	--	--	<0.0001	--
Calcium, dissolved	mg/l	--	--	--	67.2	--
Chromium, dissolved	mg/l	0.05	--	--	<0.001	--
Cobalt, dissolved	mg/l	--	--	--	<0.0005	--
Copper, dissolved	mg/l	--	1	--	0.0005	--
Iron, dissolved	mg/l	--	0.3	--	<0.1	--
Lead, dissolved	mg/l	0.01	--	--	<0.0001	--
Magnesium, dissolved	mg/l	--	--	--	23.7	--
Manganese, dissolved	mg/l	--	0.05	--	<0.005	--
Mercury, dissolved	mg/l	0.001	--	--	<0.0001	--
Molybdenum, dissolved	mg/l	--	--	--	0.0023	--
Nickel, dissolved	mg/l	--	--	--	<0.001	--
Potassium, dissolved	mg/l	--	--	--	4	--
Selenium, dissolved	mg/l	0.05	--	--	<0.001	--
Silver, dissolved	mg/l	--	--	--	<0.0001	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	--	4.22	--
Strontium, dissolved	mg/l	--	--	--	0.146	--
Thallium, dissolved	mg/l	--	--	--	<0.0001	--
Tin, dissolved	mg/l	--	--	--	<0.005	--
Titanium, dissolved	mg/l	--	--	--	<0.005	--
Tungsten, dissolved	mg/l	--	--	--	<0.01	--
Uranium, dissolved	mg/l	0.02	--	--	0.0069	--
Vanadium, dissolved	mg/l	--	--	--	<0.0005	--
Zinc, dissolved	mg/l	--	5	--	<0.005	--
Phenols						
Phenolics, Total Recoverable	mg/l	--	--	--	<0.001	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OW10 30-Jun-2006	OW10 28-Nov-2006	OW10 29-Jun-2007	OW10 26-Nov-2007	OW10 13-Jun-2008	OW10 26-Nov-2008 R-4	OW10 06-Jul-2009 R-11	OW10 08-Dec-2009 R-9	OW10 30-Jun-2010 R-8
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	562	580	556	540	516	500	568	531	494
Ammonia Nitrogen	mg/l	--	--	0.04	<0.02	0.06	0.04	0.03	0.04	0.03	0.02	0.27
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	<1	<1	<1	<1	<1	<1	<1	<1	--
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	10	<5	5	8	<5	23	<5	15	10
Chloride	mg/l	--	250	43	35	64	52	80	205	86	92	68
Conductivity	uS/cm	--	--	1080	1125	1155	1100	1200	1580	1280	1270	1120
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	1080	1110	1085	1030
Dissolved Organic Carbon	mg/l	--	5	2.8	4.6	5.2	5.7	4.1	3.8	5.0	4.7	4.9
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	474	467	509	553	632	734	588	529	481
Nitrate as N	mg/l	10.0	--	1.43	2.59	1.18	0.72	3.89	0.89	1.31	1.01	0.16
Nitrite as N	mg/l	1.0	--	0.26	0.23	0.13	<0.1	0.16	0.11	<0.10	<0.10	<0.10
Nitrogen, Total Kjeldahl	mg/l	--	--	0.44	0.37	0.35	0.29	0.53	0.20	0.21	<0.10	0.53
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	6.7	6.8	6.8	7	7	7.1	7.0	7.3	7.2
Phosphorus	mg/l	--	--	1.22	0.01	0.81	0.76	0.4	0.53	0.86	0.63	0.26
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	18	19	21	20	16	23	17	25	25
Temperature (Field)	deg c	--	15	8	8	9	7	9	5	16.0	6	12
Total Dissolved Solids	mg/l	--	500	722	761	767	722	780	1030	832	825	728
Total Suspended Solids	mg/l	--	--	16400	23100	8350	4460	1440	6240	6370	1390	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.16	0.17	0.13	0.13	0.15	0.18	0.14	0.20	0.20
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.48	0.62	0.58	0.35	0.28	0.20	0.71	0.28	0.28
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	142	136	161	177	202	233	181	159	143
Chromium, dissolved	mg/l	0.05	--	0.002	0.002	0.003	0.004	0.004	0.004	0.007	0.003	0.007
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	0.007	0.003	0.003	0.005	0.004	0.003	0.004	0.003	0.004
Iron, dissolved	mg/l	--	0.3	<0.03	<0.03	0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Lead, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Magnesium, dissolved	mg/l	--	--	29	31	26	27	31	37	33	32	30
Manganese, dissolved	mg/l	--	0.05	0.64	0.71	0.74	0.89	0.67	0.93	0.87	0.59	0.69
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	6	5	5	4	5	5	5	8	13
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	70	78	63	25	31	36	36	64	33
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	0.03	0.03	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OW10 03-Dec-2010 R - 12	OW10 13-Jun-2011 S-9	OW10 24-Nov-2011 OW-10	OW10 22-Jun-2012 S-12	OW10 10-Nov-2012 S-11	OW10 25-Jun-2013 S-8	OW10 21-Nov-2013 ⁽²⁵⁾ S-12	OW10 27-May-2014 A-9	OW10 25-Nov-2014 R-12
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	551	637	522	540	540	500	590	580	540
Ammonia Nitrogen	mg/l	--	--	0.28	0.43	0.18	0.057	0.058	0.12	<0.050	0.058	<0.050
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	--	--	--	--	--	--	--
Bromide	mg/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	mg/l	--	--	25	10	5	13	12	17	8.5	5.2	8.4
Chloride	mg/l	--	250	78	79	167	110	130	71	90	82	140
Conductivity	uS/cm	--	--	1210	1360	1470	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	975	1005	1333	1060	1075	1040	1045	1254	1010
Dissolved Organic Carbon	mg/l	--	5	5.1	3.8	2.8	2.8	2.9	2.3	3.7	3.1	4.2
Fluoride	mg/l	1.5	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	mg/l	--	--	503	528	540	540	530	490	640	590	630
Nitrate as N	mg/l	10.0	--	0.95	3.43	0.46	0.27	4.1	0.65	3.3	<0.10	2.88
Nitrite as N	mg/l	1.0	--	<0.10	<0.10	<0.10	<0.010	0.061	0.079	0.16	<0.010	0.180
Nitrogen, Total Kjeldahl	mg/l	--	--	0.48	0.74	0.24	0.41	2.3	1.3	0.52	1.6	0.31
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	0.27	4.2	0.73	3.4	<0.10	3.06
pH (Field)	-	--	--	7.4	7.3	7.00	7.3	7.3	7.3	7.4	6.75	7.3
Phosphorus	mg/l	--	--	1.31	1.10	0.20	0.90	1.1	0.71	0.067	0.98	0.047
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sulphate	mg/l	--	500 ⁽³⁾	14	21	26	24	22	20	33	29	35
Temperature (Field)	deg c	--	15	9	11	8.3	12	8	11	7	12.9	8
Total Dissolved Solids	mg/l	--	500	787	884	956	720	762	638	816	734	804
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Antimony, dissolved	mg/l	0.006	--	--	--	--	--	--	--	--	--	--
Arsenic, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.0010	<0.0010	<0.001	<0.001	<0.0010	<0.001
Barium, dissolved	mg/l	1	--	0.21	0.25	0.23	0.2	0.21	0.15	0.18	0.16	0.17
Beryllium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Boron, dissolved	mg/l	5	--	0.15	0.20	0.23	0.35	0.42	0.3	0.21	0.2	0.24
Cadmium, dissolved	mg/l	0.005	--	<0.0001	<0.0001	<0.0001	<0.00010	<0.00010	<0.0001	<0.0001	<0.00010	<0.0001
Calcium, dissolved	mg/l	--	--	163	139	157	150	150	140	180	170	180
Chromium, dissolved	mg/l	0.05	--	0.002	0.002	0.003	<0.0050	<0.0050	<0.005	<0.005	<0.0050	<0.005
Cobalt, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Copper, dissolved	mg/l	--	1	0.002	0.004	0.003	0.0026	0.0027	0.002	0.002	0.0020	0.003
Iron, dissolved	mg/l	--	0.3	<0.03	<0.03	<0.03	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lead, dissolved	mg/l	0.01	--	<0.001	<0.001	<0.001	<0.00050	<0.00050	<0.0005	<0.0005	<0.00050	<0.0005
Magnesium, dissolved	mg/l	--	--	33	44	36	38	36	33	43	42	40
Manganese, dissolved	mg/l	--	0.05	0.35	0.76	0.70	0.66	0.66	0.43	0.7	0.55	0.82
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010
Molybdenum, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Nickel, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Potassium, dissolved	mg/l	--	--	11	16	11	9.1	8.6	6.1	5.8	4.9	4.7
Selenium, dissolved	mg/l	0.05	--	--	--	--	--	--	--	--	--	--
Silver, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	42	70	97	71	110	73	65	75	50
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Thallium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tin, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Uranium, dissolved	mg/l	0.02	--	--	--	--	--	--	--	--	--	--
Vanadium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	--
Zinc, dissolved	mg/l	--	5	<0.01	0.01	<0.01	<0.0050	<0.0050	<0.005	<0.005	<0.0050	<0.005
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	--	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OW10 26-May-2015 OW-10	OW10 30-Nov-2015 10	OW10 14-Jun-2016 OMM-10	OW10 29-Nov-2016 OW-10	OW10 01-Jun-2017 OMM10	OW10 22-Nov-2017 OW-10	OW10 28-Jun-2018 OW-10	OW10 26-Nov-2018 OW-10	OW10 18-Jun-2019 OW-10
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	--	--	636	547	590	597	490	683	727	757	554
Ammonia Nitrogen	mg/l	--	--	0.07	0.03	0.03	0.02	0.02	0.03	0.07 ⁽²⁷⁾	0.02	0.06
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--	--	--	--	--	--	--	--
Bromide	mg/l	--	--	--	--	<0.1	--	--	--	--	--	0.2
Chemical Oxygen Demand	mg/l	--	--	37	10	25	11	18	34	35	33	21
Chloride	mg/l	--	250	126	143	62	116	6	128	114	117	48
Conductivity	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	--	1238	1240	1030	1092	990	1398	1421	1385	1270
Dissolved Organic Carbon	mg/l	--	5	2.6	4.4	2.6	4.9	2.3	8.0	5.3	8.4	3.9
Fluoride	mg/l	1.5	--	--	--	<0.1	--	--	--	--	--	<0.1
Hardness, Calcium Carbonate	mg/l	--	--	896	678	535	524	378	646	544	642	599
Nitrate as N	mg/l	10.0	--	0.1	6.0	1.2	2.2	1.1	0.9	1.3	<0.1	0.1
Nitrite as N	mg/l	1.0	--	<0.05	0.69	0.10	<0.05	<0.05	<0.05	0.08	<0.05	<0.05
Nitrogen, Total Kjeldahl	mg/l	--	--	0.3	0.4	0.4	0.2	0.2	0.5	0.5	0.4	0.3
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	--	--	6.85	6.9	6.76	7.35	6.9	6.87	6.85	7.28	7.36
Phosphorus	mg/l	--	--	0.46	0.03	0.34	0.04	0.01	0.49	0.63	0.68	0.30
Phosphorus, Total Orthophosphate	mg/l	--	--	--	--	<0.2	--	--	--	--	--	<0.2
Sulphate	mg/l	--	500 ⁽³⁾	29	20	20	17	11	17	16	16	20
Temperature (Field)	deg c	--	15	11.9	8	12.8	8.9	12	7.6	14.1	8.4	12.4
Total Dissolved Solids	mg/l	--	500	894	794	694	732	446	854	866	854	614
Total Suspended Solids	mg/l	--	--	--	--	--	--	--	--	--	--	--
Metals												
Aluminum, dissolved	mg/l	--	--	<0.01	--	<0.001	--	--	--	--	--	0.001
Antimony, dissolved	mg/l	0.006	--	<0.001	--	<0.0005	--	--	--	--	--	<0.0005
Arsenic, dissolved	mg/l	0.01	--	<0.01	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, dissolved	mg/l	1	--	0.175	0.172	0.148	0.16	0.091	0.176	0.198	0.185	0.17
Beryllium, dissolved	mg/l	--	--	<0.001	--	--	--	--	--	--	--	<0.0005
Boron, dissolved	mg/l	5	--	0.212	0.301	0.212	0.243	0.105	0.295	0.387	0.347	0.324
Cadmium, dissolved	mg/l	0.005	--	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, dissolved	mg/l	--	--	279	200	160	155	113	193	158	179	167
Chromium, dissolved	mg/l	0.05	--	<0.05	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt, dissolved	mg/l	--	--	0.001	--	--	--	--	--	--	--	0.0011
Copper, dissolved	mg/l	--	1	<0.005	<0.0005	<0.0005	0.0008	<0.0005	0.0035	0.0030	0.0044	0.0045
Iron, dissolved	mg/l	--	0.3	<0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lead, dissolved	mg/l	0.01	--	<0.001	<0.0001	<0.0001	<0.0001	0.0002	<0.0001	<0.0001	<0.0001	<0.0001
Magnesium, dissolved	mg/l	--	--	48.3	43.3	33.1	33.1	22.9	39.5	36.4	47.6	43.9
Manganese, dissolved	mg/l	--	0.05	0.712	0.625	0.417	0.625	0.1	0.715	0.635	0.73	0.479
Mercury, dissolved	mg/l	0.001	--	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum, dissolved	mg/l	--	--	<0.005	--	--	--	--	--	--	--	<0.0005
Nickel, dissolved	mg/l	--	--	0.007	--	--	--	--	--	--	--	0.005
Potassium, dissolved	mg/l	--	--	6.24	4.6	4.67	4.41	3.62	4.72	5.26	7.09	7.06
Selenium, dissolved	mg/l	0.05	--	<0.005	--	<0.001	--	--	--	--	--	<0.001
Silver, dissolved	mg/l	--	--	<0.001	--	--	--	--	--	--	--	<0.0001
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	85.3	119	90.1	89.2	20.1	77.7	73.2	76.8	77.9
Strontium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	0.348
Thallium, dissolved	mg/l	--	--	<0.001	--	--	--	--	--	--	--	<0.0001
Tin, dissolved	mg/l	--	--	<0.01	--	--	--	--	--	--	--	<0.005
Titanium, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	<0.005
Tungsten, dissolved	mg/l	--	--	--	--	--	--	--	--	--	--	<0.01
Uranium, dissolved	mg/l	0.02	--	--	--	0.0008	--	--	--	--	--	0.0010
Vanadium, dissolved	mg/l	--	--	0.011	--	--	--	--	--	--	--	<0.0005
Zinc, dissolved	mg/l	--	5	<0.02	<0.005	<0.005	<0.005	0.009	0.006	<0.005	<0.005	<0.005
Phenols												
Phenolics, Total Recoverable	mg/l	--	--	--	--	--	--	<0.001	<0.001	<0.001	0.004	<0.001

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OW10 02-Dec-2019 ⁽²⁶⁾ OW-10	OW10 04-Jun-2020 OW-10
General Chemistry					
Alkalinity (Total as CaCO3)	mg/l	--	--	--	502
Ammonia Nitrogen	mg/l	--	--	--	0.35
Biochemical Oxygen Demand, 5 Day	mg/l	--	--	--	--
Bromide	mg/l	--	--	--	0.3
Chemical Oxygen Demand	mg/l	--	--	--	25
Chloride	mg/l	--	250	--	79
Conductivity	uS/cm	--	--	--	--
Conductivity (Field)	uS/cm	--	--	--	1116
Dissolved Organic Carbon	mg/l	--	5	--	9.1
Fluoride	mg/l	1.5	--	--	<0.1
Hardness, Calcium Carbonate	mg/l	--	--	--	472
Nitrate as N	mg/l	10.0	--	--	0.3
Nitrite as N	mg/l	1.0	--	--	<0.05
Nitrogen, Total Kjeldahl	mg/l	--	--	--	0.4
Nitrogen, Nitrate-Nitrite	mg/l	--	--	--	--
pH (Field)	-	--	--	--	7.41
Phosphorus	mg/l	--	--	--	0.39
Phosphorus, Total Orthophosphate	mg/l	--	--	--	<0.2
Sulphate	mg/l	--	500 ⁽³⁾	--	42
Temperature (Field)	deg c	--	15	--	11.4
Total Dissolved Solids	mg/l	--	500	--	658
Total Suspended Solids	mg/l	--	--	--	--
Metals					
Aluminum, dissolved	mg/l	--	--	--	0.003
Antimony, dissolved	mg/l	0.006	--	--	<0.0005
Arsenic, dissolved	mg/l	0.01	--	--	<0.001
Barium, dissolved	mg/l	1	--	--	0.161
Beryllium, dissolved	mg/l	--	--	--	<0.0005
Boron, dissolved	mg/l	5	--	--	0.182
Cadmium, dissolved	mg/l	0.005	--	--	<0.0001
Calcium, dissolved	mg/l	--	--	--	127
Chromium, dissolved	mg/l	0.05	--	--	<0.001
Cobalt, dissolved	mg/l	--	--	--	0.0016
Copper, dissolved	mg/l	--	1	--	0.0048
Iron, dissolved	mg/l	--	0.3	--	<0.1
Lead, dissolved	mg/l	0.01	--	--	<0.0001
Magnesium, dissolved	mg/l	--	--	--	37.6
Manganese, dissolved	mg/l	--	0.05	--	0.635
Mercury, dissolved	mg/l	0.001	--	--	<0.0001
Molybdenum, dissolved	mg/l	--	--	--	<0.0005
Nickel, dissolved	mg/l	--	--	--	0.005
Potassium, dissolved	mg/l	--	--	--	9.5
Selenium, dissolved	mg/l	0.05	--	--	<0.001
Silver, dissolved	mg/l	--	--	--	<0.0001
Sodium, dissolved	mg/l	--	200 ⁽⁴⁾	--	47.3
Strontium, dissolved	mg/l	--	--	--	0.3
Thallium, dissolved	mg/l	--	--	--	<0.0001
Tin, dissolved	mg/l	--	--	--	<0.005
Titanium, dissolved	mg/l	--	--	--	<0.005
Tungsten, dissolved	mg/l	--	--	--	<0.01
Uranium, dissolved	mg/l	0.02	--	--	0.0008
Vanadium, dissolved	mg/l	--	--	--	<0.0005
Zinc, dissolved	mg/l	--	5	--	<0.005
Phenols					
Phenolics, Total Recoverable	mg/l	--	--	--	<0.001

Footnotes:

- Tables should be read in conjunction with the accompanying document.
- < Indicates parameter not detected above laboratory method detection limit.
- > Indicates parameter detected above equipment analytical range.
- Chemical not analyzed or criteria not defined.

Value Parameter is greater than ODWQS(169/03)-Health

Value Parameter is greater than ODWQS-AO

- (1) Ontario Drinking Water Quality Standards - Health Based Standards (June 2003, revised January 2020).
- (2) Ontario Drinking Water Quality Standards - Aesthetic Objectives. Aesthetic Objectives are established for parameters that may impair the taste, odour or colour of water or which may interfere with good water quality control practices. For certain parameters, both aesthetic objectives and health-related MACs have been derived (June 2003, revised July 2017).
- (3) There may be a laxative effect in some individuals when sulphate levels exceed 500 mg/L.
- (4) The aesthetic objective for sodium in drinking water is 200 mg/L. The local Medical Officer of Health should be notified when the sodium concentration exceeds 20 mg/L so that this information may be communicated to local physicians for their use with patients on sodium restricted diets.
- (5) TKN < NH4: Both values fall within acceptable RPD limits for duplicates and are likely equivalent.
- (6) INOG6 Note that Ammonia (as N) results are greater than TKN results due to the error associated to higher than normal sample dilutions.
- (7) GEN02 Elevated Reporting Limit due to matrix interference.
- (8) REV 1 Revision 1 - results updated based on data review
- (9) GEN04 Elevated detection limit because of dilution required due to the presence of high levels of non-target analytes.
- (10) GEN12 Sample contained significant interference - results may be biased as a result.
- (11) Arsenic MRL elevated due to matrix interference.
- (12) TP MRL elevated due to matrix interference.
- (13) Monitoring location was damaged and could not be sampled.
- (14) Insufficient sample volume was collected for analysis.
- (15) Due to the sample matrix, sample required dilution. Detection limit was adjusted accordingly.
- (16) Metal Analysis:RDL of Cu was adjusted due to high concentration of Barium.
- (17) Metal Analysis:RDL of Copper was adjusted due to high concentration of Barium.
- (18) Field conductivity not measured during sampling session.
- (19) The concentration of hardness calculated by the analytical laboratory was found to be erroneous. The reported concentration of hardness was calculated by Golder Associates Ltd.
- (20) Due to matrix interference 2 X dilution factor required for VOCs.Arsenic MRL elevated due to matrix interference.
- (21) The reported concentrations for general chemistry and metal parameters originally assigned to OMM1 were reassigned to OW10, and vice versa, for the November 2013 monitoring session. This reassignment was made based on a review of field notes and historical data. Parameters measured in the field were not reassigned.
- (22) No result(s) available.
- (23) The reported concentrations for general chemistry and metal parameters originally assigned to OMM15 were reassigned to OMM2, and vice versa, for the June 2013 monitoring session. This reassignment was made based on a review of field notes and historical data. Parameters measured in the field were not reassigned.
- (24) The reported concentrations for general chemistry and metal parameters originally assigned to OMM2 were reassigned to OMM15, and vice versa, for the June 2013 monitoring session. This reassignment was made based on a review of field notes and historical data. Parameters measured in the field were not reassigned.
- (25) The reported concentrations for general chemistry and metal parameters originally assigned to OW10 were reassigned to OMM1, and vice versa, for the November 2013 monitoring session. This reassignment was made based on a review of field notes and historical data. Parameters measured in the field were not reassigned.
- (26) Sample was inadvertently missed. No sample was collected.
- (27) REV 1 Revision 1 - Ammonia result updated based adjusted background correction for this sample.

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	BH11-01	BH11-01	BH11-01	BH11-01	BH11-01	BH11-01	BH11-01	BH11-01
				02-Feb-2011 ⁽³⁾	15-Jun-2011 ⁽³⁾	29-Nov-2011 ⁽³⁾	22-Jun-2012	10-Nov-2012	25-Jun-2013 ⁽⁴⁾	20-Nov-2013 ⁽⁵⁾	28-May-2014
				BH11-01	S-19	BH11-01	S-8	S-12	S-12	S-8	A-21
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	<0.0050	--	<0.0050	--
Styrene	mg/l	--	--	--	--	<0.0005	--	<0.00020	--	<0.00020	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	<0.0005	--	<0.00020	--	<0.00020	--
1,1,1-Trichloroethane	mg/l	--	--	--	--	<0.0004	--	<0.00010	--	<0.00010	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	<0.0005	--	<0.00020	--	<0.00020	--
1,1,2-Trichloroethane	mg/l	--	--	--	--	<0.0004	--	<0.00020	--	<0.00020	--
1,1-Dichloroethane	mg/l	--	--	--	--	0.0004	--	0.00030	--	0.00024	--
1,1-Dichloroethylene	mg/l	0.014	--	--	--	<0.0005	--	<0.00010	--	<0.00010	--
1,2-Dibromoethane	mg/l	--	--	--	--	<0.0002	--	<0.00020	--	<0.00020	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	0.0010	--	0.00042	--	0.00068	--
1,2-Dichloroethane	mg/l	0.005	--	--	--	<0.0002	--	<0.00020	--	<0.00020	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--	<0.0005	--	<0.00010	--	<0.00010	--
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	0.0010	--	<0.00020	--	<0.00020	--
1,3-Dichlorobenzene	mg/l	--	--	--	--	<0.0004	--	<0.00020	--	<0.00020	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	0.0014	--	0.00054	--	0.00077	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	<0.0050	--	<0.0050	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	<0.01	--	<0.01	--
Benzene	mg/l	0.001	--	--	--	0.0009	--	0.00081	--	0.00077	--
Bromodichloromethane	mg/l	--	--	--	--	<0.0003	--	<0.00010	--	<0.00010	--
Bromoform	mg/l	--	--	--	--	<0.0004	--	<0.00020	--	<0.00020	--
Bromomethane	mg/l	--	--	--	--	<0.0005	--	<0.00050	--	<0.00050	--
Carbon Tetrachloride	mg/l	0.002	--	--	--	<0.0005	--	<0.00010	--	<0.00010	--
Chlorobenzene	mg/l	0.08	0.03	--	--	0.0014	--	0.00088	--	0.0010	--
Chloroethane	mg/l	--	--	--	--	0.0011	--	0.0012	--	0.0011	--
Chloroform	mg/l	--	--	--	--	<0.0005	--	<0.00010	--	<0.00010	--
Chloromethane	mg/l	--	--	--	--	<0.0002	--	<0.00050	--	<0.00050	--
cis-1,2-Dichloroethene	mg/l	--	--	--	--	<0.0004	--	0.00011	--	<0.00010	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	<0.0002	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	<0.00020	--	<0.00020	--
Dibromochloromethane	mg/l	--	--	--	--	<0.0003	--	<0.00020	--	<0.00020	--
Dichlorodifluoromethane	mg/l	--	--	--	--	<0.0005	--	<0.00050	--	<0.00050	--
Ethylbenzene	mg/l	0.14	0.0016	--	--	<0.0005	--	<0.00010	--	<0.00010	--
m,p-Xylenes	mg/l	--	--	--	--	<0.0005	--	<0.00010	--	<0.00010	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	0.0017	--	0.0013	--
Methylene Chloride	mg/l	0.05	--	--	--	<0.0040	--	<0.00050	--	<0.00050	--
n-Hexane	mg/l	--	--	--	--	--	--	<0.00050	--	<0.00050	--
o-Xylene	mg/l	--	--	--	--	<0.0005	--	<0.00010	--	<0.00010	--
Tetrachloroethylene	mg/l	0.01	--	--	--	<0.0003	--	<0.00010	--	<0.00010	--
Toluene	mg/l	0.06	0.024	--	--	<0.0005	--	<0.00020	--	<0.00020	--
trans-1,2-Dichloroethene	mg/l	--	--	--	--	<0.0004	--	<0.00010	--	<0.00010	--
trans-1,3-Dichloropropene	mg/l	--	--	--	--	<0.0002	--	<0.00020	--	<0.00020	--
Trichloroethene	mg/l	0.005	--	--	--	<0.0003	--	0.00016	--	0.00014	--
Trichlorofluoromethane	mg/l	--	--	--	--	<0.0005	--	<0.00020	--	<0.00020	--
Vinyl Chloride	mg/l	0.001	--	--	--	<0.0002	--	<0.00020	--	<0.00020	--
Xylenes, Total	mg/l	0.09	0.02	--	--	<0.0010	--	<0.00010	--	<0.00010	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	BH11-01	BH11-01	BH11-01	BH11-01	BH11-01	BH11-01	BH11-01	BH11-01
				25-Nov-2014 R-3	29-May-2015 BH11-01	30-Nov-2015 11-01	14-Jun-2016 11-01	29-Nov-2016 11-01	01-Jun-2017 BH11-01	22-Nov-2017 ⁽⁶⁾ 11-01	28-Jun-2018 BH11-01
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	<0.0050	--	<0.0050	--	<0.0050	--	<0.0050	--
Styrene	mg/l	--	--	<0.00020	--	<0.0005	--	<0.0005	--	<0.0005	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	<0.00020	--	<0.0005	--	<0.0005	--	<0.0005	--
1,1,1-Trichloroethane	mg/l	--	--	<0.00010	--	<0.0005	--	<0.0005	--	<0.0005	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	<0.00020	--	<0.0005	--	<0.0005	--	<0.0005	--
1,1,2-Trichloroethane	mg/l	--	--	<0.00020	--	<0.0005	--	<0.0005	--	<0.0005	--
1,1-Dichloroethane	mg/l	--	--	0.00020	--	<0.0005	--	<0.0005	--	<0.0005	--
1,1-Dichloroethylene	mg/l	0.014	--	<0.00010	--	<0.0005	--	<0.0005	--	<0.0005	--
1,2-Dibromoethane	mg/l	--	--	<0.00020	--	<0.0002	--	<0.0002	--	<0.0002	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	0.00051	--	<0.0005	--	0.0009	--	<0.0005	--
1,2-Dichloroethane	mg/l	0.005	--	<0.00020	--	<0.0005	--	<0.0005	--	<0.0005	--
1,2-Dichloroethene	mg/l	--	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--
1,2-Dichloropropane	mg/l	--	--	<0.00010	--	<0.0005	--	<0.0005	--	<0.0005	--
1,3,5-Trimethylbenzene	mg/l	--	--	<0.00020	--	<0.0005	--	<0.0005	--	<0.0005	--
1,3-Dichlorobenzene	mg/l	--	--	<0.00020	--	<0.0005	--	<0.0005	--	<0.0005	--
1,3-Dichloropropene, Total	mg/l	--	--	<0.00028	--	<0.0005	--	<0.0005	--	<0.0005	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	0.00069	--	0.0010	--	0.0012	--	<0.0005	--
Methyl Ethyl Ketone	mg/l	--	--	<0.0050	--	<0.0050	--	<0.0050	--	<0.0050	--
2-Hexanone	mg/l	--	--	--	--	<0.0100	--	<0.0100	--	<0.0100	--
Acetone	mg/l	--	--	<0.01	--	<0.0050	--	<0.0050	--	<0.0050	--
Benzene	mg/l	0.001	--	0.00066	--	0.0008	--	0.0011	--	<0.0005	--
Bromodichloromethane	mg/l	--	--	<0.00010	--	<0.0005	--	<0.0005	--	<0.0005	--
Bromoform	mg/l	--	--	<0.00020	--	<0.0005	--	<0.0005	--	<0.0005	--
Bromomethane	mg/l	--	--	<0.00050	--	<0.0005	--	<0.0005	--	<0.0005	--
Carbon Tetrachloride	mg/l	0.002	--	<0.00010	--	<0.0002	--	<0.0002	--	<0.0002	--
Chlorobenzene	mg/l	0.08	0.03	0.00078	--	0.0011	--	0.0013	--	<0.0005	--
Chloroethane	mg/l	--	--	0.00098	--	<0.0010	--	<0.0010	--	<0.0010	--
Chloroform	mg/l	--	--	<0.00010	--	<0.0005	--	<0.0005	--	<0.0005	--
Chloromethane	mg/l	--	--	<0.00050	--	<0.0030	--	<0.0030	--	<0.0030	--
cis-1,2-Dichloroethene	mg/l	--	--	<0.00010	--	<0.0005	--	<0.0005	--	<0.0005	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	<0.00020	--	<0.0005	--	<0.0005	--	<0.0005	--
Dibromochloromethane	mg/l	--	--	<0.00020	--	<0.0005	--	<0.0005	--	<0.0005	--
Dichlorodifluoromethane	mg/l	--	--	<0.00050	--	<0.0010	--	<0.0010	--	<0.0010	--
Ethylbenzene	mg/l	0.14	0.0016	0.00016	--	<0.0005	--	<0.0005	--	<0.0005	--
m,p-Xylenes	mg/l	--	--	<0.00010	--	<0.0005	--	<0.0005	--	<0.0005	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	0.0013	--	<0.0020	--	<0.0020	--	<0.0020	--
Methylene Chloride	mg/l	0.05	--	<0.00050	--	<0.0050	--	<0.0050	--	<0.0050	--
n-Hexane	mg/l	--	--	<0.00050	--	<0.0010	--	<0.0010	--	<0.0010	--
o-Xylene	mg/l	--	--	<0.00010	--	<0.0005	--	<0.0005	--	<0.0005	--
Tetrachloroethylene	mg/l	0.01	--	<0.00010	--	<0.0005	--	<0.0005	--	<0.0005	--
Toluene	mg/l	0.06	0.024	<0.00020	--	<0.0005	--	<0.0005	--	<0.0005	--
trans-1,2-Dichloroethene	mg/l	--	--	<0.00010	--	<0.0005	--	<0.0005	--	<0.0005	--
trans-1,3-Dichloropropene	mg/l	--	--	<0.00020	--	<0.0005	--	<0.0005	--	<0.0005	--
Trichloroethene	mg/l	0.005	--	<0.00010	--	<0.0005	--	<0.0005	--	<0.0005	--
Trichlorofluoromethane	mg/l	--	--	<0.00020	--	<0.0010	--	<0.0010	--	<0.0010	--
Vinyl Chloride	mg/l	0.001	--	<0.00020	--	<0.0005	--	<0.0005	--	<0.0005	--
Xylenes, Total	mg/l	0.09	0.02	<0.00010	--	<0.0005	--	<0.0005	--	<0.0005	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	BH11-01	BH11-01	BH11-01	BH11-01	BH11-01	BH11-01	BH11-01	BH11-01
				26-Nov-2018	18-Jun-2019	02-Dec-2019	04-Jun-2020	30-Nov-2020	08-Jun-2021	25-Nov-2021	20-Jun-2022
				11-01	11-1	BH11-01	BH11-01	11-01	BH11-01	BH11-01	BH11-01
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	<0.0050	--	<0.0050	--	<0.0050	--	<0.0050	--
Styrene	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
1,1,1-Trichloroethane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
1,1,2-Trichloroethane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
1,1-Dichloroethane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
1,1-Dichloroethylene	mg/l	0.014	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
1,2-Dibromoethane	mg/l	--	--	<0.0002	--	<0.0002	--	<0.0002	--	<0.0002	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
1,2-Dichloroethane	mg/l	0.005	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
1,2-Dichloroethene	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
1,2-Dichloropropane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
1,3,5-Trimethylbenzene	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
1,3-Dichlorobenzene	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
1,3-Dichloropropene, Total	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	<0.0005	--	0.0006	--	0.0006	--	0.0006	--
Methyl Ethyl Ketone	mg/l	--	--	<0.0050	--	<0.0050	--	<0.0050	--	<0.0050	--
2-Hexanone	mg/l	--	--	<0.0100	--	<0.0100	--	<0.0100	--	<0.0100	--
Acetone	mg/l	--	--	<0.0050	--	<0.0050	--	<0.0050	--	<0.0050	--
Benzene	mg/l	0.001	--	<0.0005	--	0.0010	--	<0.0005	--	<0.0005	--
Bromodichloromethane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
Bromoform	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
Bromomethane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
Carbon Tetrachloride	mg/l	0.002	--	<0.0002	--	<0.0002	--	<0.0002	--	<0.0002	--
Chlorobenzene	mg/l	0.08	0.03	<0.0005	--	0.0008	--	0.0006	--	0.0006	--
Chloroethane	mg/l	--	--	<0.0010	--	<0.0010	--	<0.0010	--	<0.0010	--
Chloroform	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
Chloromethane	mg/l	--	--	<0.0030	--	<0.0030	--	<0.0030	--	<0.0030	--
cis-1,2-Dichloroethene	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
Dibromochloromethane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
Dichlorodifluoromethane	mg/l	--	--	<0.0010	--	<0.0010	--	<0.0010	--	<0.0010	--
Ethylbenzene	mg/l	0.14	0.0016	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
m,p-Xylenes	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	<0.0020	--	<0.0020	--	<0.0020	--	<0.0020	--
Methylene Chloride	mg/l	0.05	--	<0.0050	--	<0.0050	--	<0.0050	--	<0.0050	--
n-Hexane	mg/l	--	--	<0.0010	--	<0.0010	--	<0.0010	--	<0.0010	--
o-Xylene	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
Tetrachloroethylene	mg/l	0.01	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
Toluene	mg/l	0.06	0.024	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
trans-1,2-Dichloroethene	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
trans-1,3-Dichloropropene	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
Trichloroethene	mg/l	0.005	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
Trichlorofluoromethane	mg/l	--	--	<0.0010	--	<0.0010	--	<0.0010	--	<0.0010	--
Vinyl Chloride	mg/l	0.001	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
Xylenes, Total	mg/l	0.09	0.02	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	BH11-01	BH11-01	BH11-01	BH11-01	BH11-01	BH11-01
				23-Nov-2022	10-May-2023	29-Nov-2023	06-Dec-2023	25-Apr-2024	23-Oct-2024
				BH11-01	BH11-01	BH11-01	BH11-01	BH11-1	BH11-1
Semi-VOCs									
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	<0.0050	--	<0.0050
Styrene	mg/l	--	--	--	--	--	<0.0005	--	<0.0005
VOCs									
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	--	<0.0005	--	<0.0005
1,1,1-Trichloroethane	mg/l	--	--	--	--	--	<0.0005	--	<0.0005
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	--	<0.0005	--	<0.0005
1,1,2-Trichloroethane	mg/l	--	--	--	--	--	<0.0005	--	<0.0005
1,1-Dichloroethane	mg/l	--	--	--	--	--	<0.0005	--	<0.0005
1,1-Dichloroethylene	mg/l	0.014	--	--	--	--	<0.0005	--	<0.0005
1,2-Dibromoethane	mg/l	--	--	--	--	--	<0.0002	--	<0.0002
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	--	<0.0005	--	<0.0005
1,2-Dichloroethane	mg/l	0.005	--	--	--	--	<0.0005	--	<0.0005
1,2-Dichloroethene	mg/l	--	--	--	--	--	<0.0005	--	<0.0005
1,2-Dichloropropane	mg/l	--	--	--	--	--	<0.0005	--	<0.0005
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	<0.0005	--	<0.0005
1,3-Dichlorobenzene	mg/l	--	--	--	--	--	<0.0005	--	<0.0005
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	<0.0005	--	<0.0005
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	--	<0.0005	--	0.0009
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	<0.0050	--	<0.0050
2-Hexanone	mg/l	--	--	--	--	--	<0.0100	--	<0.0100
Acetone	mg/l	--	--	--	--	--	<0.0050	--	<0.0050
Benzene	mg/l	0.001	--	--	--	--	<0.0005	--	0.0005
Bromodichloromethane	mg/l	--	--	--	--	--	<0.0005	--	<0.0005
Bromoform	mg/l	--	--	--	--	--	<0.0005	--	<0.0005
Bromomethane	mg/l	--	--	--	--	--	<0.0005	--	<0.0005
Carbon Tetrachloride	mg/l	0.002	--	--	--	--	<0.0002	--	<0.0002
Chlorobenzene	mg/l	0.08	0.03	--	--	--	<0.0005	--	0.0010
Chloroethane	mg/l	--	--	--	--	--	<0.0010	--	<0.0010
Chloroform	mg/l	--	--	--	--	--	<0.0005	--	<0.0005
Chloromethane	mg/l	--	--	--	--	--	<0.0030	--	<0.0030
cis-1,2-Dichloroethene	mg/l	--	--	--	--	--	<0.0005	--	<0.0005
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	<0.0005	--	<0.0005
Dibromochloromethane	mg/l	--	--	--	--	--	<0.0005	--	<0.0005
Dichlorodifluoromethane	mg/l	--	--	--	--	--	<0.0010	--	<0.0010
Ethylbenzene	mg/l	0.14	0.0016	--	--	--	<0.0005	--	<0.0005
m,p-Xylenes	mg/l	--	--	--	--	--	<0.0005	--	<0.0005
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	<0.0020	--	<0.0020
Methylene Chloride	mg/l	0.05	--	--	--	--	<0.0050	--	<0.0050
n-Hexane	mg/l	--	--	--	--	--	<0.0010	--	<0.0010
o-Xylene	mg/l	--	--	--	--	--	<0.0005	--	<0.0005
Tetrachloroethylene	mg/l	0.01	--	--	--	--	<0.0005	--	<0.0005
Toluene	mg/l	0.06	0.024	--	--	--	<0.0005	--	<0.0005
trans-1,2-Dichloroethene	mg/l	--	--	--	--	--	<0.0005	--	<0.0005
trans-1,3-Dichloropropene	mg/l	--	--	--	--	--	<0.0005	--	<0.0005
Trichloroethene	mg/l	0.005	--	--	--	--	<0.0005	--	<0.0005
Trichlorofluoromethane	mg/l	--	--	--	--	--	<0.0010	--	<0.0010
Vinyl Chloride	mg/l	0.001	--	--	--	--	<0.0005	--	<0.0005
Xylenes, Total	mg/l	0.09	0.02	--	--	--	<0.0005	--	<0.0005

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D
				01-Nov-1994	12-Jun-1996	01-Nov-1996	01-Jun-1997	01-Nov-1997	01-Jun-1998	01-Nov-1998	01-Aug-1999
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	--	--	--	--	--	--	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethylene	mg/l	0.014	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	--	--	--	--	--	--
1,2-Dichloroethane	mg/l	0.005	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	--	--	--	--	--	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	--	--	--	--	--	--	--	--
Bromodichloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Bromoform	mg/l	--	--	--	--	--	--	--	--	--	--
Bromomethane	mg/l	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	mg/l	0.002	--	--	--	--	--	--	--	--	--
Chlorobenzene	mg/l	0.08	0.03	--	--	--	--	--	--	--	--
Chloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
Chloroform	mg/l	--	--	--	--	--	--	--	--	--	--
Chloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	--	--	--	--	--	--	--
m,p-Xylenes	mg/l	--	--	--	--	--	--	--	--	--	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	--	--	--	--	--	--	--	--
n-Hexane	mg/l	--	--	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	--	--	--	--	--	--	--	--
Tetrachloroethylene	mg/l	0.01	--	--	--	--	--	--	--	--	--
Toluene	mg/l	0.06	0.024	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Trichloroethene	mg/l	0.005	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	mg/l	0.001	--	--	--	--	--	--	--	--	--
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D
				01-Nov-1999	01-Jun-2000	01-Nov-2000	01-Jul-2001	01-Nov-2001	01-Jul-2002	01-Nov-2002	10-Jul-2003
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	--	--	--	--	--	--	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethylene	mg/l	0.014	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	--	--	--	--	--	--
1,2-Dichloroethane	mg/l	0.005	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	--	--	--	--	--	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	--	--	--	--	--	--	--	--
Bromodichloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Bromoform	mg/l	--	--	--	--	--	--	--	--	--	--
Bromomethane	mg/l	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	mg/l	0.002	--	--	--	--	--	--	--	--	--
Chlorobenzene	mg/l	0.08	0.03	--	--	--	--	--	--	--	--
Chloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
Chloroform	mg/l	--	--	--	--	--	--	--	--	--	--
Chloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	--	--	--	--	--	--	--
m,p-Xylenes	mg/l	--	--	--	--	--	--	--	--	--	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	--	--	--	--	--	--	--	--
n-Hexane	mg/l	--	--	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	--	--	--	--	--	--	--	--
Tetrachloroethylene	mg/l	0.01	--	--	--	--	--	--	--	--	--
Toluene	mg/l	0.06	0.024	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Trichloroethene	mg/l	0.005	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	mg/l	0.001	--	--	--	--	--	--	--	--	--
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D
				27-Dec-2003	26-Aug-2004	22-Dec-2004	28-Jun-2005	10-Dec-2005	30-Jun-2006	28-Nov-2006	29-Jun-2007
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	--	--	--	--	--	<0.0005	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	<0.0005	--
1,1,1-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	<0.0004	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	<0.0005	--
1,1,2-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	<0.0004	--
1,1-Dichloroethane	mg/l	--	--	--	--	--	--	--	--	<0.0004	--
1,1-Dichloroethylene	mg/l	0.014	--	--	--	--	--	--	--	<0.0005	--
1,2-Dibromoethane	mg/l	--	--	--	--	--	--	--	--	<0.001	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	--	--	--	--	<0.0004	--
1,2-Dichloroethane	mg/l	0.005	--	--	--	--	--	--	--	<0.0005	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--	--	--	--	--	<0.0005	--
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	--	--	--	<0.0003	--
1,3-Dichlorobenzene	mg/l	--	--	--	--	--	--	--	--	<0.0004	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	--	--	--	--	<0.0004	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	Acetone	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	--	--	--	--	--	--	<0.0005	--
Bromodichloromethane	mg/l	--	--	--	--	--	--	--	--	<0.0003	--
Bromoform	mg/l	--	--	--	--	--	--	--	--	<0.0004	--
Bromomethane	mg/l	--	--	--	--	--	--	--	--	<0.0005	--
Carbon Tetrachloride	mg/l	0.002	--	--	--	--	--	--	--	<0.0005	--
Chlorobenzene	mg/l	0.08	0.03	--	--	--	--	--	--	<0.0002	--
Chloroethane	mg/l	--	--	--	--	--	--	--	--	<0.001	--
Chloroform	mg/l	--	--	--	--	--	--	--	--	<0.0005	--
Chloromethane	mg/l	--	--	--	--	--	--	--	--	<0.001	--
cis-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	<0.0004	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	<0.0002	--
Dibromochloromethane	mg/l	--	--	--	--	--	--	--	--	<0.0003	--
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	--	--	--	--	--	<0.0005	--
m,p-Xylenes	mg/l	--	--	--	--	--	--	--	--	<0.001	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	--	--	--	--	--	--	<0.004	--
n-Hexane	mg/l	--	--	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	--	--	--	--	--	--	<0.0005	--
Tetrachloroethylene	mg/l	0.01	--	--	--	--	--	--	--	<0.0003	--
Toluene	mg/l	0.06	0.024	--	--	--	--	--	--	<0.0005	--
trans-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	<0.0004	--
trans-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	<0.0002	--
Trichloroethene	mg/l	0.005	--	--	--	--	--	--	--	<0.0003	--
Trichlorofluoromethane	mg/l	--	--	--	--	--	--	--	--	<0.0005	--
Vinyl Chloride	mg/l	0.001	--	--	--	--	--	--	--	<0.0002	--
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D
				26-Nov-2007	14-Jun-2008	26-Nov-2008	06-Jul-2009	05-Dec-2009	30-Jun-2010	03-Dec-2010	13-Jun-2011
						R-11	R-4	R-10	R-10	R - 14	S-13
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	--	--	--	<0.0005	--	<0.0005	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	<0.0005	--	<0.0005	--
1,1,1-Trichloroethane	mg/l	--	--	--	--	--	--	<0.0004	--	<0.0004	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	<0.0005	--	<0.0005	--
1,1,2-Trichloroethane	mg/l	--	--	--	--	--	--	<0.0004	--	<0.0004	--
1,1-Dichloroethane	mg/l	--	--	--	--	--	--	<0.0004	--	<0.0004	--
1,1-Dichloroethylene	mg/l	0.014	--	--	--	--	--	<0.0005	--	<0.0005	--
1,2-Dibromoethane	mg/l	--	--	--	--	--	--	<0.0010	--	<0.0010	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	--	--	<0.0004	--	<0.0004	--
1,2-Dichloroethane	mg/l	0.005	--	--	--	--	--	<0.0005	--	<0.0005	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--	--	--	<0.0005	--	<0.0005	--
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	--	<0.0003	--	<0.0003	--
1,3-Dichlorobenzene	mg/l	--	--	--	--	--	--	<0.0004	--	<0.0004	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	--	--	<0.0004	--	<0.0004	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	--	--	--	--	<0.0005	--	<0.0005	--
Bromodichloromethane	mg/l	--	--	--	--	--	--	<0.0003	--	<0.0003	--
Bromoform	mg/l	--	--	--	--	--	--	<0.0004	--	<0.0004	--
Bromomethane	mg/l	--	--	--	--	--	--	<0.0005	--	<0.0005	--
Carbon Tetrachloride	mg/l	0.002	--	--	--	--	--	<0.0005	--	<0.0005	--
Chlorobenzene	mg/l	0.08	0.03	--	--	--	--	<0.0002	--	<0.0002	--
Chloroethane	mg/l	--	--	--	--	--	--	<0.0010	--	<0.0010	--
Chloroform	mg/l	--	--	--	--	--	--	<0.0005	--	<0.0005	--
Chloromethane	mg/l	--	--	--	--	--	--	<0.0010	--	<0.0010	--
cis-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	<0.0004	--	<0.0004	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	<0.0002	--	<0.0002	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/l	--	--	--	--	--	--	<0.0003	--	<0.0003	--
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	--	--	--	<0.0005	--	<0.0005	--
m,p-Xylenes	mg/l	--	--	--	--	--	--	<0.0010	--	<0.0010	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	--	--	--	--	<0.0040	--	<0.0040	--
n-Hexane	mg/l	--	--	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	--	--	--	--	<0.0005	--	<0.0005	--
Tetrachloroethylene	mg/l	0.01	--	--	--	--	--	<0.0003	--	<0.0003	--
Toluene	mg/l	0.06	0.024	--	--	--	--	<0.0005	--	<0.0005	--
trans-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	<0.0004	--	<0.0004	--
trans-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	<0.0002	--	<0.0002	--
Trichloroethene	mg/l	0.005	--	--	--	--	--	<0.0003	--	<0.0003	--
Trichlorofluoromethane	mg/l	--	--	--	--	--	--	<0.0005	--	<0.0005	--
Vinyl Chloride	mg/l	0.001	--	--	--	--	--	<0.0002	--	<0.0002	--
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D
				29-Nov-2011	22-Jun-2012	10-Nov-2012	25-Jun-2013	21-Nov-2013	27-May-2014	26-Nov-2014	26-May-2015
				OMM-14D	S-13	S-13	S-13	S-19	A-11	R-17	OMM-14D
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	<0.0050	--	--	--
Styrene	mg/l	--	--	<0.0005	--	--	--	<0.00020	--	--	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	<0.0005	--	--	--	<0.00020	--	--	--
1,1,1-Trichloroethane	mg/l	--	--	<0.0004	--	--	--	<0.00010	--	--	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	<0.0005	--	--	--	<0.00020	--	--	--
1,1,2-Trichloroethane	mg/l	--	--	<0.0004	--	--	--	<0.00020	--	--	--
1,1-Dichloroethane	mg/l	--	--	<0.0004	--	--	--	<0.00010	--	--	--
1,1-Dichloroethylene	mg/l	0.014	--	<0.0005	--	--	--	<0.00010	--	--	--
1,2-Dibromoethane	mg/l	--	--	<0.0002	--	--	--	<0.00020	--	--	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	<0.0004	--	--	--	<0.00020	--	--	--
1,2-Dichloroethane	mg/l	0.005	--	<0.0002	--	--	--	<0.00020	--	--	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	<0.0005	--	--	--	<0.00010	--	--	--
1,3,5-Trimethylbenzene	mg/l	--	--	<0.0003	--	--	--	<0.00020	--	--	--
1,3-Dichlorobenzene	mg/l	--	--	<0.0004	--	--	--	<0.00020	--	--	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	<0.0004	--	--	--	<0.00020	--	--	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	<0.0050	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	<0.01	--	--	--
Benzene	mg/l	0.001	--	<0.0005	--	--	--	<0.00010	--	--	--
Bromodichloromethane	mg/l	--	--	<0.0003	--	--	--	<0.00010	--	--	--
Bromoform	mg/l	--	--	<0.0004	--	--	--	<0.00020	--	--	--
Bromomethane	mg/l	--	--	<0.0005	--	--	--	<0.00050	--	--	--
Carbon Tetrachloride	mg/l	0.002	--	<0.0005	--	--	--	<0.00010	--	--	--
Chlorobenzene	mg/l	0.08	0.03	<0.0002	--	--	--	<0.00010	--	--	--
Chloroethane	mg/l	--	--	<0.0002	--	--	--	<0.00020	--	--	--
Chloroform	mg/l	--	--	<0.0005	--	--	--	<0.00010	--	--	--
Chloromethane	mg/l	--	--	<0.0002	--	--	--	<0.00050	--	--	--
cis-1,2-Dichloroethene	mg/l	--	--	<0.0004	--	--	--	<0.00010	--	--	--
cis-1,2-Dichloropropene	mg/l	--	--	<0.0002	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	<0.00020	--	--	--
Dibromochloromethane	mg/l	--	--	<0.0003	--	--	--	<0.00020	--	--	--
Dichlorodifluoromethane	mg/l	--	--	<0.0005	--	--	--	<0.00050	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	<0.0005	--	--	--	<0.00010	--	--	--
m,p-Xylenes	mg/l	--	--	<0.0005	--	--	--	<0.00010	--	--	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	<0.00020	--	--	--
Methylene Chloride	mg/l	0.05	--	<0.0040	--	--	--	<0.00050	--	--	--
n-Hexane	mg/l	--	--	--	--	--	--	<0.00050	--	--	--
o-Xylene	mg/l	--	--	<0.0005	--	--	--	<0.00010	--	--	--
Tetrachloroethylene	mg/l	0.01	--	<0.0003	--	--	--	<0.00010	--	--	--
Toluene	mg/l	0.06	0.024	<0.0005	--	--	--	<0.00020	--	--	--
trans-1,2-Dichloroethene	mg/l	--	--	<0.0004	--	--	--	<0.00010	--	--	--
trans-1,3-Dichloropropene	mg/l	--	--	<0.0002	--	--	--	<0.00020	--	--	--
Trichloroethene	mg/l	0.005	--	<0.0003	--	--	--	<0.00010	--	--	--
Trichlorofluoromethane	mg/l	--	--	<0.0005	--	--	--	<0.00020	--	--	--
Vinyl Chloride	mg/l	0.001	--	<0.0002	--	--	--	<0.00020	--	--	--
Xylenes, Total	mg/l	0.09	0.02	<0.0010	--	--	--	<0.00010	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D
				29-Nov-2015	14-Jun-2016	29-Nov-2016	01-Jun-2017	17-Aug-2017	23-Nov-2017	29-Jun-2018	27-Nov-2018
				14D	OMM-14A	OMM-14D	OMM14D	OMM14	OMM-14M	OMM-14M	OMM-14D
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	<0.0050	--	<0.0050	--	--	<0.0050	--	<0.0050
Styrene	mg/l	--	--	<0.0005	--	<0.0005	--	--	<0.0005	--	<0.0005
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	<0.0005	--	<0.0005	--	--	<0.0005	--	<0.0005
1,1,1-Trichloroethane	mg/l	--	--	<0.0005	--	<0.0005	--	--	<0.0005	--	<0.0005
1,1,2,2-Tetrachloroethane	mg/l	--	--	<0.0005	--	<0.0005	--	--	<0.0005	--	<0.0005
1,1,2-Trichloroethane	mg/l	--	--	<0.0005	--	<0.0005	--	--	<0.0005	--	<0.0005
1,1-Dichloroethane	mg/l	--	--	<0.0005	--	<0.0005	--	--	<0.0005	--	<0.0005
1,1-Dichloroethylene	mg/l	0.014	--	<0.0005	--	<0.0005	--	--	<0.0005	--	<0.0005
1,2-Dibromoethane	mg/l	--	--	<0.0002	--	<0.0002	--	--	<0.0002	--	<0.0002
1,2-Dichlorobenzene	mg/l	0.2	0.003	<0.0005	--	<0.0005	--	--	<0.0005	--	<0.0005
1,2-Dichloroethane	mg/l	0.005	--	<0.0005	--	<0.0005	--	--	<0.0005	--	<0.0005
1,2-Dichloroethene	mg/l	--	--	<0.0005	--	<0.0005	--	--	<0.0005	--	<0.0005
1,2-Dichloropropane	mg/l	--	--	<0.0005	--	<0.0005	--	--	<0.0005	--	<0.0005
1,3,5-Trimethylbenzene	mg/l	--	--	<0.0005	--	<0.0005	--	--	<0.0005	--	<0.0005
1,3-Dichlorobenzene	mg/l	--	--	<0.0005	--	<0.0005	--	--	<0.0005	--	<0.0005
1,3-Dichloropropene, Total	mg/l	--	--	<0.0005	--	<0.0005	--	--	<0.0005	--	<0.0005
1,4-Dichlorobenzene	mg/l	0.005	0.001	<0.0005	--	<0.0005	--	--	<0.0005	--	<0.0005
Methyl Ethyl Ketone	mg/l	--	--	<0.0050	--	<0.0050	--	--	<0.0050	--	<0.0050
2-Hexanone	mg/l	--	--	<0.0100	--	<0.0100	--	--	<0.0100	--	<0.0100
Acetone	mg/l	--	--	<0.0050	--	<0.0050	--	--	<0.0050	--	<0.0050
Benzene	mg/l	0.001	--	<0.0005	--	<0.0005	--	--	<0.0005	--	<0.0005
Bromodichloromethane	mg/l	--	--	<0.0005	--	<0.0005	--	--	<0.0005	--	<0.0005
Bromoform	mg/l	--	--	<0.0005	--	<0.0005	--	--	<0.0005	--	<0.0005
Bromomethane	mg/l	--	--	<0.0005	--	<0.0005	--	--	<0.0005	--	<0.0005
Carbon Tetrachloride	mg/l	0.002	--	<0.0002	--	<0.0002	--	--	<0.0002	--	<0.0002
Chlorobenzene	mg/l	0.08	0.03	<0.0005	--	<0.0005	--	--	<0.0005	--	<0.0005
Chloroethane	mg/l	--	--	<0.0010	--	<0.0010	--	--	<0.0010	--	<0.0010
Chloroform	mg/l	--	--	<0.0005	--	<0.0005	--	--	<0.0005	--	<0.0005
Chloromethane	mg/l	--	--	<0.0030	--	<0.0030	--	--	<0.0030	--	<0.0030
cis-1,2-Dichloroethene	mg/l	--	--	<0.0005	--	<0.0005	--	--	<0.0005	--	<0.0005
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	<0.0005	--	<0.0005	--	--	<0.0005	--	<0.0005
Dibromochloromethane	mg/l	--	--	<0.0005	--	<0.0005	--	--	<0.0005	--	<0.0005
Dichlorodifluoromethane	mg/l	--	--	<0.0010	--	<0.0010	--	--	<0.0010	--	<0.0010
Ethylbenzene	mg/l	0.14	0.0016	<0.0005	--	<0.0005	--	--	<0.0005	--	<0.0005
m,p-Xylenes	mg/l	--	--	<0.0005	--	<0.0005	--	--	<0.0005	--	<0.0005
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	<0.0020	--	<0.0020	--	--	<0.0020	--	<0.0020
Methylene Chloride	mg/l	0.05	--	<0.0050	--	<0.0050	--	--	<0.0050	--	<0.0050
n-Hexane	mg/l	--	--	<0.0010	--	<0.0010	--	--	<0.0010	--	<0.0010
o-Xylene	mg/l	--	--	<0.0005	--	<0.0005	--	--	<0.0005	--	<0.0005
Tetrachloroethylene	mg/l	0.01	--	<0.0005	--	<0.0005	--	--	<0.0005	--	<0.0005
Toluene	mg/l	0.06	0.024	<0.0005	--	<0.0005	--	--	<0.0005	--	<0.0005
trans-1,2-Dichloroethene	mg/l	--	--	<0.0005	--	<0.0005	--	--	<0.0005	--	<0.0005
trans-1,3-Dichloropropene	mg/l	--	--	<0.0005	--	<0.0005	--	--	<0.0005	--	<0.0005
Trichloroethene	mg/l	0.005	--	<0.0005	--	<0.0005	--	--	<0.0005	--	<0.0005
Trichlorofluoromethane	mg/l	--	--	<0.0010	--	<0.0010	--	--	<0.0010	--	<0.0010
Vinyl Chloride	mg/l	0.001	--	<0.0005	--	<0.0005	--	--	<0.0005	--	<0.0005
Xylenes, Total	mg/l	0.09	0.02	<0.0005	--	<0.0005	--	--	<0.0005	--	<0.0005

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D
				19-Jun-2019	02-Dec-2019	04-Jun-2020	01-Dec-2020	08-Jun-2021	25-Nov-2021	20-Jun-2022	23-Nov-2022
				OMM-14D	OMM14D	OMM-14D	OMM-14D	OMM-14D	OMM-14D	OMM 14-D	OMM-14D
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	<0.0050	--	<0.0050	--	<0.0050	--	<0.0050
Styrene	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
1,1,1-Trichloroethane	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
1,1,2-Trichloroethane	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
1,1-Dichloroethane	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
1,1-Dichloroethylene	mg/l	0.014	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
1,2-Dibromoethane	mg/l	--	--	--	<0.0002	--	<0.0002	--	<0.0002	--	<0.0002
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
1,2-Dichloroethane	mg/l	0.005	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
1,2-Dichloroethene	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
1,2-Dichloropropane	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
1,3,5-Trimethylbenzene	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
1,3-Dichlorobenzene	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
1,3-Dichloropropene, Total	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Methyl Ethyl Ketone	mg/l	--	--	--	<0.0050	--	<0.0050	--	<0.0050	--	<0.0050
2-Hexanone	mg/l	--	--	--	<0.0100	--	<0.0100	--	<0.0100	--	<0.0100
Acetone	mg/l	--	--	--	<0.0050	--	<0.0050	--	<0.0050	--	<0.0050
Benzene	mg/l	0.001	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Bromodichloromethane	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Bromoform	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Bromomethane	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Carbon Tetrachloride	mg/l	0.002	--	--	<0.0002	--	<0.0002	--	<0.0002	--	<0.0002
Chlorobenzene	mg/l	0.08	0.03	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Chloroethane	mg/l	--	--	--	<0.0010	--	<0.0010	--	<0.0010	--	<0.0010
Chloroform	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Chloromethane	mg/l	--	--	--	<0.0030	--	<0.0030	--	<0.0030	--	<0.0030
cis-1,2-Dichloroethene	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Dibromochloromethane	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Dichlorodifluoromethane	mg/l	--	--	--	<0.0010	--	<0.0010	--	<0.0010	--	<0.0010
Ethylbenzene	mg/l	0.14	0.0016	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
m,p-Xylenes	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	<0.0020	--	<0.0020	--	<0.0020	--	<0.0020
Methylene Chloride	mg/l	0.05	--	--	<0.0050	--	<0.0050	--	<0.0050	--	<0.0050
n-Hexane	mg/l	--	--	--	<0.0010	--	<0.0010	--	<0.0010	--	<0.0010
o-Xylene	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Tetrachloroethylene	mg/l	0.01	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Toluene	mg/l	0.06	0.024	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
trans-1,2-Dichloroethene	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
trans-1,3-Dichloropropene	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Trichloroethene	mg/l	0.005	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Trichlorofluoromethane	mg/l	--	--	--	<0.0010	--	<0.0010	--	<0.0010	--	<0.0010
Vinyl Chloride	mg/l	0.001	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Xylenes, Total	mg/l	0.09	0.02	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM14D	OMM14D	OMM14D	OMM14D	OMM14D
				11-May-2023	29-Nov-2023	06-Dec-2023	25-Apr-2024	22-Oct-2024
				OMM-14D	OMM-14D	OMM-14D	OMM14 D	OMM14D
Semi-VOCs								
4-Methyl-2-pentanone	mg/l	--	--	--	--	<0.0050	--	<0.0050
Styrene	mg/l	--	--	--	--	<0.0005	--	<0.0005
VOCs								
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	<0.0005	--	<0.0005
1,1,1-Trichloroethane	mg/l	--	--	--	--	<0.0005	--	<0.0005
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	<0.0005	--	<0.0005
1,1,2-Trichloroethane	mg/l	--	--	--	--	<0.0005	--	<0.0005
1,1-Dichloroethane	mg/l	--	--	--	--	<0.0005	--	<0.0005
1,1-Dichloroethylene	mg/l	0.014	--	--	--	<0.0005	--	<0.0005
1,2-Dibromoethane	mg/l	--	--	--	--	<0.0002	--	<0.0002
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	<0.0005	--	<0.0005
1,2-Dichloroethane	mg/l	0.005	--	--	--	<0.0005	--	<0.0005
1,2-Dichloroethene	mg/l	--	--	--	--	<0.0005	--	<0.0005
1,2-Dichloropropane	mg/l	--	--	--	--	<0.0005	--	<0.0005
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	<0.0005	--	<0.0005
1,3-Dichlorobenzene	mg/l	--	--	--	--	<0.0005	--	<0.0005
1,3-Dichloropropene, Total	mg/l	--	--	--	--	<0.0005	--	<0.0005
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	<0.0005	--	<0.0005
Methyl Ethyl Ketone	mg/l	--	--	--	--	<0.0050	--	<0.0050
2-Hexanone	mg/l	--	--	--	--	<0.0100	--	<0.0100
Acetone	mg/l	--	--	--	--	<0.0050	--	<0.0050
Benzene	mg/l	0.001	--	--	--	<0.0005	--	<0.0005
Bromodichloromethane	mg/l	--	--	--	--	<0.0005	--	<0.0005
Bromoform	mg/l	--	--	--	--	<0.0005	--	<0.0005
Bromomethane	mg/l	--	--	--	--	<0.0005	--	<0.0005
Carbon Tetrachloride	mg/l	0.002	--	--	--	<0.0002	--	<0.0002
Chlorobenzene	mg/l	0.08	0.03	--	--	<0.0005	--	<0.0005
Chloroethane	mg/l	--	--	--	--	<0.0010	--	<0.0010
Chloroform	mg/l	--	--	--	--	<0.0005	--	<0.0005
Chloromethane	mg/l	--	--	--	--	<0.0030	--	<0.0030
cis-1,2-Dichloroethene	mg/l	--	--	--	--	<0.0005	--	<0.0005
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	<0.0005	--	<0.0005
Dibromochloromethane	mg/l	--	--	--	--	<0.0005	--	<0.0005
Dichlorodifluoromethane	mg/l	--	--	--	--	<0.0010	--	<0.0010
Ethylbenzene	mg/l	0.14	0.0016	--	--	<0.0005	--	<0.0005
m,p-Xylenes	mg/l	--	--	--	--	<0.0005	--	<0.0005
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	<0.0020	--	<0.0020
Methylene Chloride	mg/l	0.05	--	--	--	<0.0050	--	<0.0050
n-Hexane	mg/l	--	--	--	--	<0.0010	--	<0.0010
o-Xylene	mg/l	--	--	--	--	<0.0005	--	<0.0005
Tetrachloroethylene	mg/l	0.01	--	--	--	<0.0005	--	<0.0005
Toluene	mg/l	0.06	0.024	--	--	<0.0005	--	<0.0005
trans-1,2-Dichloroethene	mg/l	--	--	--	--	<0.0005	--	<0.0005
trans-1,3-Dichloropropene	mg/l	--	--	--	--	<0.0005	--	<0.0005
Trichloroethene	mg/l	0.005	--	--	--	<0.0005	--	<0.0005
Trichlorofluoromethane	mg/l	--	--	--	--	<0.0010	--	<0.0010
Vinyl Chloride	mg/l	0.001	--	--	--	<0.0005	--	<0.0005
Xylenes, Total	mg/l	0.09	0.02	--	--	<0.0005	--	<0.0005

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M
				01-Nov-1994	12-Jun-1996	26-Nov-1996	01-Jun-1997	01-Nov-1997	01-Jun-1998	01-Nov-1998	01-Aug-1999
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	--	--	--	--	--	--	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethylene	mg/l	0.014	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	--	--	--	--	--	--
1,2-Dichloroethane	mg/l	0.005	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	--	--	--	--	--	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	--	--	--	--	--	--	--	--
Bromodichloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Bromoform	mg/l	--	--	--	--	--	--	--	--	--	--
Bromomethane	mg/l	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	mg/l	0.002	--	--	--	--	--	--	--	--	--
Chlorobenzene	mg/l	0.08	0.03	--	--	--	--	--	--	--	--
Chloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
Chloroform	mg/l	--	--	--	--	--	--	--	--	--	--
Chloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	--	--	--	--	--	--	--
m,p-Xylenes	mg/l	--	--	--	--	--	--	--	--	--	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	--	--	--	--	--	--	--	--
n-Hexane	mg/l	--	--	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	--	--	--	--	--	--	--	--
Tetrachloroethylene	mg/l	0.01	--	--	--	--	--	--	--	--	--
Toluene	mg/l	0.06	0.024	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Trichloroethene	mg/l	0.005	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	mg/l	0.001	--	--	--	--	--	--	--	--	--
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M
				01-Nov-1999	01-Jun-2000	01-Nov-2000	01-Jul-2001	01-Nov-2001	01-Jul-2002	01-Nov-2002	10-Jul-2003
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	--	--	--	--	--	--	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethylene	mg/l	0.014	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	--	--	--	--	--	--
1,2-Dichloroethane	mg/l	0.005	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	--	--	--	--	--	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	--	--	--	--	--	--	--	--
Bromodichloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Bromoform	mg/l	--	--	--	--	--	--	--	--	--	--
Bromomethane	mg/l	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	mg/l	0.002	--	--	--	--	--	--	--	--	--
Chlorobenzene	mg/l	0.08	0.03	--	--	--	--	--	--	--	--
Chloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
Chloroform	mg/l	--	--	--	--	--	--	--	--	--	--
Chloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	--	--	--	--	--	--	--
m,p-Xylenes	mg/l	--	--	--	--	--	--	--	--	--	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	--	--	--	--	--	--	--	--
n-Hexane	mg/l	--	--	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	--	--	--	--	--	--	--	--
Tetrachloroethylene	mg/l	0.01	--	--	--	--	--	--	--	--	--
Toluene	mg/l	0.06	0.024	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Trichloroethene	mg/l	0.005	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	mg/l	0.001	--	--	--	--	--	--	--	--	--
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M
				27-Dec-2003	26-Aug-2004	22-Dec-2004	21-Jun-2005	10-Dec-2005	30-Jun-2006	28-Nov-2006	29-Jun-2007
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	--	--	--	--	--	<0.0005	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	<0.0005	--
1,1,1-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	<0.0004	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	<0.0005	--
1,1,2-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	<0.0004	--
1,1-Dichloroethane	mg/l	--	--	--	--	--	--	--	--	<0.0004	--
1,1-Dichloroethylene	mg/l	0.014	--	--	--	--	--	--	--	<0.0005	--
1,2-Dibromoethane	mg/l	--	--	--	--	--	--	--	--	<0.001	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	--	--	--	--	<0.0004	--
1,2-Dichloroethane	mg/l	0.005	--	--	--	--	--	--	--	<0.0005	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--	--	--	--	--	<0.0005	--
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	--	--	--	<0.0003	--
1,3-Dichlorobenzene	mg/l	--	--	--	--	--	--	--	--	<0.0004	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	--	--	--	--	<0.0004	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	--	--	--	--	--	--	<0.0005	--
Bromodichloromethane	mg/l	--	--	--	--	--	--	--	--	<0.0003	--
Bromoform	mg/l	--	--	--	--	--	--	--	--	<0.0004	--
Bromomethane	mg/l	--	--	--	--	--	--	--	--	<0.0005	--
Carbon Tetrachloride	mg/l	0.002	--	--	--	--	--	--	--	<0.0005	--
Chlorobenzene	mg/l	0.08	0.03	--	--	--	--	--	--	<0.0002	--
Chloroethane	mg/l	--	--	--	--	--	--	--	--	<0.001	--
Chloroform	mg/l	--	--	--	--	--	--	--	--	<0.0005	--
Chloromethane	mg/l	--	--	--	--	--	--	--	--	<0.001	--
cis-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	<0.0004	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	<0.0002	--
Dibromochloromethane	mg/l	--	--	--	--	--	--	--	--	<0.0003	--
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	--	--	--	--	--	<0.0005	--
m,p-Xylenes	mg/l	--	--	--	--	--	--	--	--	<0.001	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	--	--	--	--	--	--	<0.004	--
n-Hexane	mg/l	--	--	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	--	--	--	--	--	--	<0.0005	--
Tetrachloroethylene	mg/l	0.01	--	--	--	--	--	--	--	<0.0003	--
Toluene	mg/l	0.06	0.024	--	--	--	--	--	--	<0.0005	--
trans-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	<0.0004	--
trans-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	<0.0002	--
Trichloroethene	mg/l	0.005	--	--	--	--	--	--	--	<0.0003	--
Trichlorofluoromethane	mg/l	--	--	--	--	--	--	--	--	<0.0005	--
Vinyl Chloride	mg/l	0.001	--	--	--	--	--	--	--	<0.0002	--
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M
				26-Nov-2007	14-Jun-2008	26-Nov-2008	06-Jul-2009	05-Dec-2009	30-Jun-2010	03-Dec-2010	13-Jun-2011
						R-12	R-5	R-11	R-11	R - 15	S-14
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	--	--	--	--	--	--	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethylene	mg/l	0.014	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	--	--	--	--	--	--
1,2-Dichloroethane	mg/l	0.005	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	--	--	--	--	--	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	--	--	--	--	--	--	--	--
Bromodichloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Bromoform	mg/l	--	--	--	--	--	--	--	--	--	--
Bromomethane	mg/l	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	mg/l	0.002	--	--	--	--	--	--	--	--	--
Chlorobenzene	mg/l	0.08	0.03	--	--	--	--	--	--	--	--
Chloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
Chloroform	mg/l	--	--	--	--	--	--	--	--	--	--
Chloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	--	--	--	--	--	--	--
m,p-Xylenes	mg/l	--	--	--	--	--	--	--	--	--	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	--	--	--	--	--	--	--	--
n-Hexane	mg/l	--	--	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	--	--	--	--	--	--	--	--
Tetrachloroethylene	mg/l	0.01	--	--	--	--	--	--	--	--	--
Toluene	mg/l	0.06	0.024	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Trichloroethene	mg/l	0.005	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	mg/l	0.001	--	--	--	--	--	--	--	--	--
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M
				24-Nov-2011	22-Jun-2012	10-Nov-2012	25-Jun-2013	21-Nov-2013	27-May-2014	26-Nov-2014	26-May-2015
				OMM-14M	S-14	S-14	S-14	S-20	A-12	S-18	OMM-14M
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	<0.0050	--	--	--
Styrene	mg/l	--	--	--	--	--	--	<0.00020	--	--	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	<0.00020	--	--	--
1,1,1-Trichloroethane	mg/l	--	--	--	--	--	--	<0.00010	--	--	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	<0.00020	--	--	--
1,1,2-Trichloroethane	mg/l	--	--	--	--	--	--	<0.00020	--	--	--
1,1-Dichloroethane	mg/l	--	--	--	--	--	--	<0.00010	--	--	--
1,1-Dichloroethylene	mg/l	0.014	--	--	--	--	--	<0.00010	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	--	--	--	<0.00020	--	--	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	--	--	<0.00020	--	--	--
1,2-Dichloroethane	mg/l	0.005	--	--	--	--	--	<0.00020	--	--	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--	--	--	<0.00010	--	--	--
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	--	<0.00020	--	--	--
1,3-Dichlorobenzene	mg/l	--	--	--	--	--	--	<0.00020	--	--	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	--	--	<0.00020	--	--	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	<0.0050	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	<0.01	--	--	--
Benzene	mg/l	0.001	--	--	--	--	--	<0.00010	--	--	--
Bromodichloromethane	mg/l	--	--	--	--	--	--	<0.00010	--	--	--
Bromoform	mg/l	--	--	--	--	--	--	<0.00020	--	--	--
Bromomethane	mg/l	--	--	--	--	--	--	<0.00050	--	--	--
Carbon Tetrachloride	mg/l	0.002	--	--	--	--	--	<0.00010	--	--	--
Chlorobenzene	mg/l	0.08	0.03	--	--	--	--	<0.00010	--	--	--
Chloroethane	mg/l	--	--	--	--	--	--	<0.00020	--	--	--
Chloroform	mg/l	--	--	--	--	--	--	<0.00010	--	--	--
Chloromethane	mg/l	--	--	--	--	--	--	<0.00050	--	--	--
cis-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	<0.00010	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	<0.00020	--	--	--
Dibromochloromethane	mg/l	--	--	--	--	--	--	<0.00020	--	--	--
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	<0.00050	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	--	--	--	<0.00010	--	--	--
m,p-Xylenes	mg/l	--	--	--	--	--	--	<0.00010	--	--	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	<0.00020	--	--	--
Methylene Chloride	mg/l	0.05	--	--	--	--	--	<0.00050	--	--	--
n-Hexane	mg/l	--	--	--	--	--	--	<0.00050	--	--	--
o-Xylene	mg/l	--	--	--	--	--	--	<0.00010	--	--	--
Tetrachloroethylene	mg/l	0.01	--	--	--	--	--	<0.00010	--	--	--
Toluene	mg/l	0.06	0.024	--	--	--	--	0.00024	--	--	--
trans-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	<0.00010	--	--	--
trans-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	<0.00020	--	--	--
Trichloroethene	mg/l	0.005	--	--	--	--	--	<0.00010	--	--	--
Trichlorofluoromethane	mg/l	--	--	--	--	--	--	<0.00020	--	--	--
Vinyl Chloride	mg/l	0.001	--	--	--	--	--	<0.00020	--	--	--
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	<0.00010	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M
				29-Nov-2015	14-Jun-2016	30-Nov-2016	01-Jun-2017	23-Nov-2017	29-Jun-2018	27-Nov-2018	19-Jun-2019
				14M	OMM-14B	OMM-14M	OMM14M	OMM-14D	OMM-14D	OMM-14M	OMM-14M
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	--	--	--	--	--	--	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethylene	mg/l	0.014	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	--	--	--	--	--	--
1,2-Dichloroethane	mg/l	0.005	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	--	--	--	--	--	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	--	--	--	--	--	--	--	--
Bromodichloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Bromoform	mg/l	--	--	--	--	--	--	--	--	--	--
Bromomethane	mg/l	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	mg/l	0.002	--	--	--	--	--	--	--	--	--
Chlorobenzene	mg/l	0.08	0.03	--	--	--	--	--	--	--	--
Chloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
Chloroform	mg/l	--	--	--	--	--	--	--	--	--	--
Chloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	--	--	--	--	--	--	--
m,p-Xylenes	mg/l	--	--	--	--	--	--	--	--	--	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	--	--	--	--	--	--	--	--
n-Hexane	mg/l	--	--	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	--	--	--	--	--	--	--	--
Tetrachloroethylene	mg/l	0.01	--	--	--	--	--	--	--	--	--
Toluene	mg/l	0.06	0.024	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Trichloroethene	mg/l	0.005	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	mg/l	0.001	--	--	--	--	--	--	--	--	--
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M	OMM14M
				02-Dec-2019	04-Jun-2020	01-Dec-2020	08-Jun-2021	25-Nov-2021	20-Jun-2022	23-Nov-2022	11-May-2023
				OMM14M	OMM-14M	OMM-14M	OMM-14M	OMM-14M	OMM-14-M	OMM-14M	OMM-14M
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	--	--	--	--	--	--	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethylene	mg/l	0.014	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	--	--	--	--	--	--
1,2-Dichloroethane	mg/l	0.005	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	--	--	--	--	--	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	--	--	--	--	--	--	--	--
Bromodichloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Bromoform	mg/l	--	--	--	--	--	--	--	--	--	--
Bromomethane	mg/l	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	mg/l	0.002	--	--	--	--	--	--	--	--	--
Chlorobenzene	mg/l	0.08	0.03	--	--	--	--	--	--	--	--
Chloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
Chloroform	mg/l	--	--	--	--	--	--	--	--	--	--
Chloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	--	--	--	--	--	--	--
m,p-Xylenes	mg/l	--	--	--	--	--	--	--	--	--	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	--	--	--	--	--	--	--	--
n-Hexane	mg/l	--	--	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	--	--	--	--	--	--	--	--
Tetrachloroethylene	mg/l	0.01	--	--	--	--	--	--	--	--	--
Toluene	mg/l	0.06	0.024	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Trichloroethene	mg/l	0.005	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	mg/l	0.001	--	--	--	--	--	--	--	--	--
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM14M	OMM14M	OMM14M	OMM14M
				29-Nov-2023	06-Dec-2023	25-Apr-2024	22-Oct-2024
				OMM-14M	OMM-14M	OMM14 M	OMM14M
Semi-VOCs							
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	<0.0050
Styrene	mg/l	--	--	--	--	--	<0.0005
VOCs							
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	--	<0.0005
1,1,1-Trichloroethane	mg/l	--	--	--	--	--	<0.0005
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	--	<0.0005
1,1,2-Trichloroethane	mg/l	--	--	--	--	--	<0.0005
1,1-Dichloroethane	mg/l	--	--	--	--	--	<0.0005
1,1-Dichloroethylene	mg/l	0.014	--	--	--	--	<0.0005
1,2-Dibromoethane	mg/l	--	--	--	--	--	<0.0002
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	--	<0.0005
1,2-Dichloroethane	mg/l	0.005	--	--	--	--	<0.0005
1,2-Dichloroethene	mg/l	--	--	--	--	--	<0.0005
1,2-Dichloropropane	mg/l	--	--	--	--	--	<0.0005
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	<0.0005
1,3-Dichlorobenzene	mg/l	--	--	--	--	--	<0.0005
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	<0.0005
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	--	<0.0005
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	<0.0050
2-Hexanone	mg/l	--	--	--	--	--	<0.0100
Acetone	mg/l	--	--	--	--	--	<0.0050
Benzene	mg/l	0.001	--	--	--	--	<0.0005
Bromodichloromethane	mg/l	--	--	--	--	--	<0.0005
Bromoform	mg/l	--	--	--	--	--	<0.0005
Bromomethane	mg/l	--	--	--	--	--	<0.0005
Carbon Tetrachloride	mg/l	0.002	--	--	--	--	<0.0002
Chlorobenzene	mg/l	0.08	0.03	--	--	--	<0.0005
Chloroethane	mg/l	--	--	--	--	--	<0.0010
Chloroform	mg/l	--	--	--	--	--	<0.0005
Chloromethane	mg/l	--	--	--	--	--	<0.0030
cis-1,2-Dichloroethene	mg/l	--	--	--	--	--	<0.0005
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	<0.0005
Dibromochloromethane	mg/l	--	--	--	--	--	<0.0005
Dichlorodifluoromethane	mg/l	--	--	--	--	--	<0.0010
Ethylbenzene	mg/l	0.14	0.0016	--	--	--	<0.0005
m,p-Xylenes	mg/l	--	--	--	--	--	<0.0005
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	<0.0020
Methylene Chloride	mg/l	0.05	--	--	--	--	<0.0050
n-Hexane	mg/l	--	--	--	--	--	<0.0010
o-Xylene	mg/l	--	--	--	--	--	<0.0005
Tetrachloroethylene	mg/l	0.01	--	--	--	--	<0.0005
Toluene	mg/l	0.06	0.024	--	--	--	<0.0005
trans-1,2-Dichloroethene	mg/l	--	--	--	--	--	<0.0005
trans-1,3-Dichloropropene	mg/l	--	--	--	--	--	<0.0005
Trichloroethene	mg/l	0.005	--	--	--	--	<0.0005
Trichlorofluoromethane	mg/l	--	--	--	--	--	<0.0010
Vinyl Chloride	mg/l	0.001	--	--	--	--	<0.0005
Xylenes, Total	mg/l	0.09	0.02	--	--	--	<0.0005

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S
				01-Nov-1994	12-Jun-1996	26-Nov-1996	01-Jun-1997	01-Nov-1997	01-Jun-1998	01-Nov-1998	01-Aug-1999
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	--	--	--	--	--	--	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethylene	mg/l	0.014	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	--	--	--	--	--	--
1,2-Dichloroethane	mg/l	0.005	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	--	--	--	--	--	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	--	--	--	--	--	--	--	--
Bromodichloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Bromoform	mg/l	--	--	--	--	--	--	--	--	--	--
Bromomethane	mg/l	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	mg/l	0.002	--	--	--	--	--	--	--	--	--
Chlorobenzene	mg/l	0.08	0.03	--	--	--	--	--	--	--	--
Chloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
Chloroform	mg/l	--	--	--	--	--	--	--	--	--	--
Chloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	--	--	--	--	--	--	--
m,p-Xylenes	mg/l	--	--	--	--	--	--	--	--	--	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	--	--	--	--	--	--	--	--
n-Hexane	mg/l	--	--	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	--	--	--	--	--	--	--	--
Tetrachloroethylene	mg/l	0.01	--	--	--	--	--	--	--	--	--
Toluene	mg/l	0.06	0.024	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Trichloroethene	mg/l	0.005	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	mg/l	0.001	--	--	--	--	--	--	--	--	--
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S
				01-Nov-1999	01-Jun-2000	01-Nov-2000	01-Jul-2001	01-Nov-2001	01-Jul-2002	01-Nov-2002	10-Jul-2003
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	--	--	--	--	--	--	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethylene	mg/l	0.014	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	--	--	--	--	--	--
1,2-Dichloroethane	mg/l	0.005	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	--	--	--	--	--	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	--	--	--	--	--	--	--	--
Bromodichloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Bromoform	mg/l	--	--	--	--	--	--	--	--	--	--
Bromomethane	mg/l	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	mg/l	0.002	--	--	--	--	--	--	--	--	--
Chlorobenzene	mg/l	0.08	0.03	--	--	--	--	--	--	--	--
Chloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
Chloroform	mg/l	--	--	--	--	--	--	--	--	--	--
Chloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	--	--	--	--	--	--	--
m,p-Xylenes	mg/l	--	--	--	--	--	--	--	--	--	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	--	--	--	--	--	--	--	--
n-Hexane	mg/l	--	--	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	--	--	--	--	--	--	--	--
Tetrachloroethylene	mg/l	0.01	--	--	--	--	--	--	--	--	--
Toluene	mg/l	0.06	0.024	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Trichloroethene	mg/l	0.005	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	mg/l	0.001	--	--	--	--	--	--	--	--	--
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S
				27-Dec-2003	26-Aug-2004	22-Dec-2004	28-Jun-2005	10-Dec-2005	30-Jun-2006	28-Nov-2006	29-Jun-2007
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	--	--	--	--	--	<0.0005	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	<0.0005	--
1,1,1-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	<0.0004	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	<0.0005	--
1,1,2-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	<0.0004	--
1,1-Dichloroethane	mg/l	--	--	--	--	--	--	--	--	<0.0004	--
1,1-Dichloroethylene	mg/l	0.014	--	--	--	--	--	--	--	<0.0005	--
1,2-Dibromoethane	mg/l	--	--	--	--	--	--	--	--	<0.001	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	--	--	--	--	<0.0004	--
1,2-Dichloroethane	mg/l	0.005	--	--	--	--	--	--	--	<0.0005	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--	--	--	--	--	<0.0005	--
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	--	--	--	<0.0003	--
1,3-Dichlorobenzene	mg/l	--	--	--	--	--	--	--	--	<0.0004	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	--	--	--	--	<0.0004	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	Acetone	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	--	--	--	--	--	--	<0.0005	--
Bromodichloromethane	mg/l	--	--	--	--	--	--	--	--	<0.0003	--
Bromoform	mg/l	--	Bromoform	--	--	--	--	--	--	<0.0004	--
Bromomethane	mg/l	--	--	--	--	--	--	--	--	<0.0005	--
Carbon Tetrachloride	mg/l	0.002	--	--	--	--	--	--	--	<0.0005	--
Chlorobenzene	mg/l	0.08	0.03	--	--	--	--	--	--	<0.0002	--
Chloroethane	mg/l	--	--	--	--	--	--	--	--	<0.001	--
Chloroform	mg/l	--	--	--	--	--	--	--	--	<0.0005	--
Chloromethane	mg/l	--	--	--	--	--	--	--	--	<0.001	--
cis-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	<0.0004	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	<0.0002	--
Dibromochloromethane	mg/l	--	--	--	--	--	--	--	--	<0.0003	--
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	--	--	--	--	--	<0.0005	--
m,p-Xylenes	mg/l	--	--	--	--	--	--	--	--	<0.001	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	--	--	--	--	--	--	<0.004	--
n-Hexane	mg/l	--	--	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	--	--	--	--	--	--	<0.0005	--
Tetrachloroethylene	mg/l	0.01	--	--	--	--	--	--	--	<0.0003	--
Toluene	mg/l	0.06	0.024	--	--	--	--	--	--	<0.0005	--
trans-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	<0.0004	--
trans-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	<0.0002	--
Trichloroethene	mg/l	0.005	--	--	--	--	--	--	--	<0.0003	--
Trichlorofluoromethane	mg/l	--	--	--	--	--	--	--	--	<0.0005	--
Vinyl Chloride	mg/l	0.001	--	--	--	--	--	--	--	<0.0002	--
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S
				26-Nov-2007	14-Jun-2008	26-Nov-2008	06-Jul-2009	05-Dec-2009	30-Jun-2010	03-Dec-2010	13-Jun-2011
						R-13	R-6	R-12	R-12	R - 16	S-15
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	<0.0005	--	<0.0005	--	--	--	--	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	<0.0005	--	<0.0005	--	--	--	--	--
1,1,1-Trichloroethane	mg/l	--	--	<0.0004	--	<0.0004	--	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	<0.0005	--	<0.0005	--	--	--	--	--
1,1,2-Trichloroethane	mg/l	--	--	<0.0004	--	<0.0004	--	--	--	--	--
1,1-Dichloroethane	mg/l	--	--	<0.0004	--	<0.0004	--	--	--	--	--
1,1-Dichloroethylene	mg/l	0.014	--	<0.0005	--	<0.0005	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	<0.001	--	<0.0010	--	--	--	--	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	<0.0004	--	<0.0004	--	--	--	--	--
1,2-Dichloroethane	mg/l	0.005	--	<0.0005	--	<0.0005	--	--	--	--	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	<0.0005	--	<0.0005	--	--	--	--	--
1,3,5-Trimethylbenzene	mg/l	--	--	<0.0003	--	<0.0003	--	--	--	--	--
1,3-Dichlorobenzene	mg/l	--	--	<0.0004	--	<0.0004	--	--	--	--	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	<0.0004	--	<0.0004	--	--	--	--	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	<0.0005	--	<0.0005	--	--	--	--	--
Bromodichloromethane	mg/l	--	--	<0.0003	--	<0.0003	--	--	--	--	--
Bromoform	mg/l	--	--	<0.0004	--	<0.0004	--	--	--	--	--
Bromomethane	mg/l	--	--	<0.0005	--	<0.0005	--	--	--	--	--
Carbon Tetrachloride	mg/l	0.002	--	<0.0005	--	<0.0005	--	--	--	--	--
Chlorobenzene	mg/l	0.08	0.03	<0.0002	--	<0.0002	--	--	--	--	--
Chloroethane	mg/l	--	--	<0.001	--	<0.0010	--	--	--	--	--
Chloroform	mg/l	--	--	<0.0005	--	<0.0005	--	--	--	--	--
Chloromethane	mg/l	--	--	<0.001	--	<0.0010	--	--	--	--	--
cis-1,2-Dichloroethene	mg/l	--	--	<0.0004	--	<0.0004	--	--	--	--	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	<0.0002	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	<0.0002	--	--	--	--	--	--	--
Dibromochloromethane	mg/l	--	--	<0.0003	--	<0.0003	--	--	--	--	--
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	<0.0005	--	<0.0005	--	--	--	--	--
m,p-Xylenes	mg/l	--	--	<0.001	--	<0.0010	--	--	--	--	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	<0.004	--	<0.0040	--	--	--	--	--
n-Hexane	mg/l	--	--	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	<0.0005	--	<0.0005	--	--	--	--	--
Tetrachloroethylene	mg/l	0.01	--	<0.0003	--	<0.0003	--	--	--	--	--
Toluene	mg/l	0.06	0.024	<0.0005	--	<0.0005	--	--	--	--	--
trans-1,2-Dichloroethene	mg/l	--	--	<0.0004	--	<0.0004	--	--	--	--	--
trans-1,3-Dichloropropene	mg/l	--	--	<0.0002	--	<0.0002	--	--	--	--	--
Trichloroethene	mg/l	0.005	--	<0.0003	--	<0.0003	--	--	--	--	--
Trichlorofluoromethane	mg/l	--	--	<0.0005	--	<0.0005	--	--	--	--	--
Vinyl Chloride	mg/l	0.001	--	<0.0002	--	<0.0002	--	--	--	--	--
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S
				24-Nov-2011	23-Jun-2012	11-Nov-2012	25-Jun-2013	21-Nov-2013	27-May-2014	26-Nov-2014	26-May-2015
				OMM-14S	S-15	S-15	S-15	S-21	A-13	S-19	OMM-14S
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	<0.0050	--	<0.0050	--	<0.0050	--
Styrene	mg/l	--	--	--	--	<0.00020	--	<0.00020	--	<0.00020	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	<0.00020	--	<0.00020	--	<0.00020	--
1,1,1-Trichloroethane	mg/l	--	--	--	--	<0.00010	--	<0.00010	--	<0.00010	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	<0.00020	--	<0.00020	--	<0.00020	--
1,1,2-Trichloroethane	mg/l	--	--	--	--	<0.00020	--	<0.00020	--	<0.00020	--
1,1-Dichloroethane	mg/l	--	--	--	--	<0.00010	--	<0.00010	--	<0.00010	--
1,1-Dichloroethylene	mg/l	0.014	--	--	--	<0.00010	--	<0.00010	--	<0.00010	--
1,2-Dibromoethane	mg/l	--	--	--	--	<0.00020	--	<0.00020	--	<0.00020	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	<0.00020	--	<0.00020	--	<0.00020	--
1,2-Dichloroethane	mg/l	0.005	--	--	--	<0.00020	--	<0.00020	--	<0.00020	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--	<0.00010	--	<0.00010	--	<0.00010	--
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	<0.00020	--	<0.00020	--	<0.00020	--
1,3-Dichlorobenzene	mg/l	--	--	--	--	<0.00020	--	<0.00020	--	<0.00020	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	<0.00028	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	<0.00020	--	<0.00020	--	<0.00020	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	<0.0050	--	<0.0050	--	<0.0050	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	<0.01	--	<0.01	--	<0.01	--
Benzene	mg/l	0.001	--	--	--	<0.00010	--	<0.00010	--	<0.00010	--
Bromodichloromethane	mg/l	--	--	--	--	0.00011	--	<0.00010	--	<0.00010	--
Bromoform	mg/l	--	--	--	--	<0.00020	--	<0.00020	--	<0.00020	--
Bromomethane	mg/l	--	--	--	--	<0.00050	--	<0.00050	--	<0.00050	--
Carbon Tetrachloride	mg/l	0.002	--	--	--	<0.00010	--	<0.00010	--	<0.00010	--
Chlorobenzene	mg/l	0.08	0.03	--	--	<0.00010	--	<0.00010	--	<0.00010	--
Chloroethane	mg/l	--	--	--	--	<0.00020	--	<0.00020	--	<0.00020	--
Chloroform	mg/l	--	--	--	--	0.00017	--	<0.00010	--	<0.00010	--
Chloromethane	mg/l	--	--	--	--	<0.00050	--	<0.00050	--	<0.00050	--
cis-1,2-Dichloroethene	mg/l	--	--	--	--	<0.00010	--	<0.00010	--	<0.00010	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	<0.00020	--	<0.00020	--	<0.00020	--
Dibromochloromethane	mg/l	--	--	--	--	<0.00020	--	<0.00020	--	<0.00020	--
Dichlorodifluoromethane	mg/l	--	--	--	--	<0.00050	--	<0.00050	--	<0.00050	--
Ethylbenzene	mg/l	0.14	0.0016	--	--	<0.00010	--	<0.00010	--	<0.00010	--
m,p-Xylenes	mg/l	--	--	--	--	<0.00010	--	<0.00010	--	<0.00010	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	<0.00020	--	<0.00020	--	<0.00020	--
Methylene Chloride	mg/l	0.05	--	--	--	<0.00050	--	<0.00050	--	<0.00050	--
n-Hexane	mg/l	--	--	--	--	<0.00050	--	<0.00050	--	<0.00050	--
o-Xylene	mg/l	--	--	--	--	<0.00010	--	<0.00010	--	<0.00010	--
Tetrachloroethylene	mg/l	0.01	--	--	--	<0.00010	--	<0.00010	--	<0.00010	--
Toluene	mg/l	0.06	0.024	--	--	<0.00020	--	<0.00020	--	<0.00020	--
trans-1,2-Dichloroethene	mg/l	--	--	--	--	<0.00010	--	<0.00010	--	<0.00010	--
trans-1,3-Dichloropropene	mg/l	--	--	--	--	<0.00020	--	<0.00020	--	<0.00020	--
Trichloroethene	mg/l	0.005	--	--	--	<0.00010	--	<0.00010	--	<0.00010	--
Trichlorofluoromethane	mg/l	--	--	--	--	<0.00020	--	<0.00020	--	<0.00020	--
Vinyl Chloride	mg/l	0.001	--	--	--	<0.00020	--	<0.00020	--	<0.00020	--
Xylenes, Total	mg/l	0.09	0.02	--	--	<0.00010	--	<0.00010	--	<0.00010	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S
				29-Nov-2015	14-Jun-2016	30-Nov-2016	01-Jun-2017	23-Nov-2017	29-Jun-2018	27-Nov-2018	19-Jun-2019
				14S	OMM-14C	OMM-14S	OMM14S	OMM-14S	OMM-14S	OMM-14S	OMM-14S
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	--	--	--	--	--	--	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethylene	mg/l	0.014	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	--	--	--	--	--	--
1,2-Dichloroethane	mg/l	0.005	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	--	--	--	--	--	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	--	--	--	--	--	--	--	--
Bromodichloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Bromoform	mg/l	--	--	--	--	--	--	--	--	--	--
Bromomethane	mg/l	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	mg/l	0.002	--	--	--	--	--	--	--	--	--
Chlorobenzene	mg/l	0.08	0.03	--	--	--	--	--	--	--	--
Chloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
Chloroform	mg/l	--	--	--	--	--	--	--	--	--	--
Chloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	--	--	--	--	--	--	--
m,p-Xylenes	mg/l	--	--	--	--	--	--	--	--	--	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	--	--	--	--	--	--	--	--
n-Hexane	mg/l	--	--	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	--	--	--	--	--	--	--	--
Tetrachloroethylene	mg/l	0.01	--	--	--	--	--	--	--	--	--
Toluene	mg/l	0.06	0.024	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Trichloroethene	mg/l	0.005	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	mg/l	0.001	--	--	--	--	--	--	--	--	--
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S	OMM14S
				02-Dec-2019	04-Jun-2020	01-Dec-2020	08-Jun-2021	25-Nov-2021	20-Jun-2022	23-Nov-2022	11-May-2023
				OMM14S	OMM-14S	OMM-14S	OMM-14S	OMM-14S	OMM 14-S	OMM-14S	OMM-14S
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	--	--	--	--	--	--	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethylene	mg/l	0.014	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	--	--	--	--	--	--
1,2-Dichloroethane	mg/l	0.005	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	--	--	--	--	--	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	--	--	--	--	--	--	--	--
Bromodichloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Bromoform	mg/l	--	--	--	--	--	--	--	--	--	--
Bromomethane	mg/l	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	mg/l	0.002	--	--	--	--	--	--	--	--	--
Chlorobenzene	mg/l	0.08	0.03	--	--	--	--	--	--	--	--
Chloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
Chloroform	mg/l	--	--	--	--	--	--	--	--	--	--
Chloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	--	--	--	--	--	--	--
m,p-Xylenes	mg/l	--	--	--	--	--	--	--	--	--	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	--	--	--	--	--	--	--	--
n-Hexane	mg/l	--	--	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	--	--	--	--	--	--	--	--
Tetrachloroethylene	mg/l	0.01	--	--	--	--	--	--	--	--	--
Toluene	mg/l	0.06	0.024	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Trichloroethene	mg/l	0.005	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	mg/l	0.001	--	--	--	--	--	--	--	--	--
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM14S	OMM14S	OMM14S	OMM14S
				29-Nov-2023	06-Dec-2023	25-Apr-2024	22-Oct-2024
				OMM-14S	OMM-14S	OMM14 S	OMM14S
Semi-VOCs							
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	<0.0050
Styrene	mg/l	--	--	--	--	--	<0.0005
VOCs							
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	--	<0.0005
1,1,1-Trichloroethane	mg/l	--	--	--	--	--	<0.0005
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	--	<0.0005
1,1,2-Trichloroethane	mg/l	--	--	--	--	--	<0.0005
1,1-Dichloroethane	mg/l	--	--	--	--	--	<0.0005
1,1-Dichloroethylene	mg/l	0.014	--	--	--	--	<0.0005
1,2-Dibromoethane	mg/l	--	--	--	--	--	<0.0002
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	--	<0.0005
1,2-Dichloroethane	mg/l	0.005	--	--	--	--	<0.0005
1,2-Dichloroethene	mg/l	--	--	--	--	--	<0.0005
1,2-Dichloropropane	mg/l	--	--	--	--	--	<0.0005
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	<0.0005
1,3-Dichlorobenzene	mg/l	--	--	--	--	--	<0.0005
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	<0.0005
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	--	<0.0005
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	<0.0050
2-Hexanone	mg/l	--	--	--	--	--	<0.0100
Acetone	mg/l	--	--	--	--	--	<0.0050
Benzene	mg/l	0.001	--	--	--	--	<0.0005
Bromodichloromethane	mg/l	--	--	--	--	--	<0.0005
Bromoform	mg/l	--	--	--	--	--	<0.0005
Bromomethane	mg/l	--	--	--	--	--	<0.0005
Carbon Tetrachloride	mg/l	0.002	--	--	--	--	<0.0002
Chlorobenzene	mg/l	0.08	0.03	--	--	--	<0.0005
Chloroethane	mg/l	--	--	--	--	--	<0.0010
Chloroform	mg/l	--	--	--	--	--	<0.0005
Chloromethane	mg/l	--	--	--	--	--	<0.0030
cis-1,2-Dichloroethene	mg/l	--	--	--	--	--	<0.0005
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	<0.0005
Dibromochloromethane	mg/l	--	--	--	--	--	<0.0005
Dichlorodifluoromethane	mg/l	--	--	--	--	--	<0.0010
Ethylbenzene	mg/l	0.14	0.0016	--	--	--	<0.0005
m,p-Xylenes	mg/l	--	--	--	--	--	<0.0005
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	<0.0020
Methylene Chloride	mg/l	0.05	--	--	--	--	<0.0050
n-Hexane	mg/l	--	--	--	--	--	<0.0010
o-Xylene	mg/l	--	--	--	--	--	<0.0005
Tetrachloroethylene	mg/l	0.01	--	--	--	--	<0.0005
Toluene	mg/l	0.06	0.024	--	--	--	<0.0005
trans-1,2-Dichloroethene	mg/l	--	--	--	--	--	<0.0005
trans-1,3-Dichloropropene	mg/l	--	--	--	--	--	<0.0005
Trichloroethene	mg/l	0.005	--	--	--	--	<0.0005
Trichlorofluoromethane	mg/l	--	--	--	--	--	<0.0010
Vinyl Chloride	mg/l	0.001	--	--	--	--	<0.0005
Xylenes, Total	mg/l	0.09	0.02	--	--	--	<0.0005

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM15	OMM15	OMM15	OMM15	OMM15	OMM15	OMM15	OMM15
				01-Nov-2001	01-Jul-2002	01-Nov-2002	10-Jul-2003	27-Dec-2003	26-Aug-2004	21-Dec-2004	21-Jun-2005
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	--	--	--	--	--	--	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethylene	mg/l	0.014	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	--	--	--	--	--	--
1,2-Dichloroethane	mg/l	0.005	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	--	--	--	--	--	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	--	--	--	--	--	--	--	--
Bromodichloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Bromoform	mg/l	--	--	--	--	--	--	--	--	--	--
Bromomethane	mg/l	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	mg/l	0.002	--	--	--	--	--	--	--	--	--
Chlorobenzene	mg/l	0.08	0.03	--	--	--	--	--	--	--	--
Chloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
Chloroform	mg/l	--	--	--	--	--	--	--	--	--	--
Chloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	--	--	--	--	--	--	--
m,p-Xylenes	mg/l	--	--	--	--	--	--	--	--	--	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	--	--	--	--	--	--	--	--
n-Hexane	mg/l	--	--	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	--	--	--	--	--	--	--	--
Tetrachloroethylene	mg/l	0.01	--	--	--	--	--	--	--	--	--
Toluene	mg/l	0.06	0.024	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Trichloroethene	mg/l	0.005	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	mg/l	0.001	--	--	--	--	--	--	--	--	--
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM15	OMM15	OMM15	OMM15	OMM15	OMM15	OMM15	OMM15
				10-Dec-2005	30-Jun-2006	28-Nov-2006	29-Jun-2007	26-Nov-2007	30-Jun-2008	26-Nov-2008	06-Jul-2009
										R-1	R-8
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--
1,1,1-Trichloroethane	mg/l	--	--	--	--	<0.0004	--	<0.0004	--	<0.0004	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--
1,1,2-Trichloroethane	mg/l	--	--	--	--	<0.0004	--	<0.0004	--	<0.0004	--
1,1-Dichloroethane	mg/l	--	--	--	--	<0.0004	--	<0.0004	--	<0.0004	--
1,1-Dichloroethylene	mg/l	0.014	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--
1,2-Dibromoethane	mg/l	--	--	--	--	<0.001	--	<0.001	--	<0.0010	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	<0.0004	--	<0.0004	--	<0.0004	--
1,2-Dichloroethane	mg/l	0.005	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	<0.0003	--	<0.0003	--	<0.0003	--
1,3-Dichlorobenzene	mg/l	--	--	--	--	<0.0004	--	<0.0004	--	<0.0004	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	<0.0004	--	<0.0004	--	<0.0004	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--
Bromodichloromethane	mg/l	--	--	--	--	<0.0003	--	<0.0003	--	<0.0003	--
Bromoform	mg/l	--	--	--	--	<0.0004	--	<0.0004	--	<0.0004	--
Bromomethane	mg/l	--	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--
Carbon Tetrachloride	mg/l	0.002	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--
Chlorobenzene	mg/l	0.08	0.03	--	--	<0.0002	--	<0.0002	--	<0.0002	--
Chloroethane	mg/l	--	--	--	--	<0.001	--	<0.001	--	<0.0010	--
Chloroform	mg/l	--	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--
Chloromethane	mg/l	--	--	--	--	<0.001	--	<0.001	--	<0.0010	--
cis-1,2-Dichloroethene	mg/l	--	--	--	--	<0.0004	--	<0.0004	--	<0.0004	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	<0.0002	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	<0.0002	--	<0.0002	--	--	--
Dibromochloromethane	mg/l	--	--	--	--	<0.0003	--	<0.0003	--	<0.0003	--
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	--	<0.0005	--	<0.0005	--	<0.0005	--
m,p-Xylenes	mg/l	--	--	--	--	<0.001	--	<0.001	--	<0.0010	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	--	--	<0.004	--	<0.004	--	<0.0040	--
n-Hexane	mg/l	--	--	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--
Tetrachloroethylene	mg/l	0.01	--	--	--	<0.0003	--	<0.0003	--	<0.0003	--
Toluene	mg/l	0.06	0.024	--	--	<0.0005	--	<0.0005	--	<0.0005	--
trans-1,2-Dichloroethene	mg/l	--	--	--	--	<0.0004	--	<0.0004	--	<0.0004	--
trans-1,3-Dichloropropene	mg/l	--	--	--	--	<0.0002	--	<0.0002	--	<0.0002	--
Trichloroethene	mg/l	0.005	--	--	--	<0.0003	--	<0.0003	--	<0.0003	--
Trichlorofluoromethane	mg/l	--	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--
Vinyl Chloride	mg/l	0.001	--	--	--	<0.0002	--	<0.0002	--	<0.0002	--
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM15	OMM15	OMM15	OMM15	OMM15	OMM15	OMM15	OMM15
				05-Dec-2009 R-1	30-Jun-2010 R-1	03-Dec-2010 R - 10	15-Jun-2011 S-18	30-Nov-2011 OMM-15	22-Jun-2012 S-9	10-Nov-2012 S-1	25-Jun-2013 ⁽⁷⁾ S-10
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--	<0.0050	--
Styrene	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.00020	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.00020	--
1,1,1-Trichloroethane	mg/l	--	--	<0.0004	--	<0.0004	--	<0.0004	--	<0.00010	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.00020	--
1,1,2-Trichloroethane	mg/l	--	--	<0.0004	--	<0.0004	--	<0.0004	--	<0.00020	--
1,1-Dichloroethane	mg/l	--	--	<0.0004	--	<0.0004	--	<0.0004	--	<0.00010	--
1,1-Dichloroethylene	mg/l	0.014	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.00010	--
1,2-Dibromoethane	mg/l	--	--	<0.0010	--	<0.0010	--	<0.0002	--	<0.00020	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	<0.0004	--	<0.0004	--	<0.0004	--	<0.00020	--
1,2-Dichloroethane	mg/l	0.005	--	<0.0005	--	<0.0005	--	<0.0002	--	<0.00020	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.00010	--
1,3,5-Trimethylbenzene	mg/l	--	--	<0.0003	--	<0.0003	--	<0.0003	--	<0.00020	--
1,3-Dichlorobenzene	mg/l	--	--	<0.0004	--	<0.0004	--	<0.0004	--	<0.00020	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	<0.0004	--	<0.0004	--	<0.0004	--	<0.00020	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--	<0.0050	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--	<0.01	--
Benzene	mg/l	0.001	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.00010	--
Bromodichloromethane	mg/l	--	--	<0.0003	--	<0.0003	--	<0.0003	--	<0.00010	--
Bromoform	mg/l	--	--	<0.0004	--	<0.0004	--	<0.0004	--	<0.00020	--
Bromomethane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.00050	--
Carbon Tetrachloride	mg/l	0.002	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.00010	--
Chlorobenzene	mg/l	0.08	0.03	<0.0002	--	<0.0002	--	<0.0002	--	<0.00010	--
Chloroethane	mg/l	--	--	<0.0010	--	<0.0010	--	<0.0002	--	<0.00020	--
Chloroform	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.00010	--
Chloromethane	mg/l	--	--	<0.0010	--	<0.0010	--	<0.0002	--	<0.00050	--
cis-1,2-Dichloroethene	mg/l	--	--	<0.0004	--	<0.0004	--	<0.0004	--	<0.00010	--
cis-1,2-Dichloropropene	mg/l	--	--	<0.0002	--	<0.0002	--	<0.0002	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	<0.00020	--
Dibromochloromethane	mg/l	--	--	<0.0003	--	<0.0003	--	<0.0003	--	<0.00020	--
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	<0.0005	--	<0.00050	--
Ethylbenzene	mg/l	0.14	0.0016	<0.0005	--	<0.0005	--	<0.0005	--	<0.00010	--
m,p-Xylenes	mg/l	--	--	<0.0010	--	<0.0010	--	<0.0005	--	<0.00010	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--	<0.00020	--
Methylene Chloride	mg/l	0.05	--	<0.0040	--	<0.0040	--	<0.0040	--	<0.00050	--
n-Hexane	mg/l	--	--	--	--	--	--	--	--	<0.00050	--
o-Xylene	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.00010	--
Tetrachloroethylene	mg/l	0.01	--	<0.0003	--	<0.0003	--	<0.0003	--	<0.00010	--
Toluene	mg/l	0.06	0.024	<0.0005	--	<0.0005	--	<0.0005	--	<0.00020	--
trans-1,2-Dichloroethene	mg/l	--	--	<0.0004	--	<0.0004	--	<0.0004	--	<0.00010	--
trans-1,3-Dichloropropene	mg/l	--	--	<0.0002	--	<0.0002	--	<0.0002	--	<0.00020	--
Trichloroethene	mg/l	0.005	--	<0.0003	--	<0.0003	--	<0.0003	--	<0.00010	--
Trichlorofluoromethane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.00020	--
Vinyl Chloride	mg/l	0.001	--	<0.0002	--	<0.0002	--	<0.0002	--	<0.00020	--
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	<0.0010	--	<0.00010	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM15	OMM15	OMM15	OMM15	OMM15	OMM15	OMM15	OMM15
				20-Nov-2013 S-9	28-May-2014 A-19	25-Nov-2014 R-2	29-May-2015 OMM-15	30-Nov-2015 15	14-Jun-2016 OMM-15	29-Nov-2016 OMM-15	01-Jun-2017 OMM15
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	<0.0050	--	<0.0050	--	<0.0050	--	<0.0050	--
Styrene	mg/l	--	--	<0.00020	--	<0.00020	--	<0.0005	--	<0.0005	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	<0.00020	--	<0.00020	--	<0.0005	--	<0.0005	--
1,1,1-Trichloroethane	mg/l	--	--	<0.00010	--	<0.00010	--	<0.0005	--	<0.0005	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	<0.00020	--	<0.00020	--	<0.0005	--	<0.0005	--
1,1,2-Trichloroethane	mg/l	--	--	<0.00020	--	<0.00020	--	<0.0005	--	<0.0005	--
1,1-Dichloroethane	mg/l	--	--	<0.00010	--	<0.00010	--	<0.0005	--	<0.0005	--
1,1-Dichloroethylene	mg/l	0.014	--	<0.00010	--	<0.00010	--	<0.0005	--	<0.0005	--
1,2-Dibromoethane	mg/l	--	--	<0.00020	--	<0.00020	--	<0.0002	--	<0.0002	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	<0.00020	--	<0.00020	--	<0.0005	--	<0.0005	--
1,2-Dichloroethane	mg/l	0.005	--	<0.00020	--	<0.00020	--	<0.0005	--	<0.0005	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	<0.0005	--	<0.0005	--
1,2-Dichloropropane	mg/l	--	--	<0.00010	--	<0.00010	--	<0.0005	--	<0.0005	--
1,3,5-Trimethylbenzene	mg/l	--	--	<0.00020	--	<0.00020	--	<0.0005	--	<0.0005	--
1,3-Dichlorobenzene	mg/l	--	--	<0.00020	--	<0.00020	--	<0.0005	--	<0.0005	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	<0.00028	--	<0.0005	--	<0.0005	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	<0.00020	--	<0.00020	--	<0.0005	--	<0.0005	--
Methyl Ethyl Ketone	mg/l	--	--	<0.0050	--	<0.0050	--	<0.0050	--	<0.0050	--
2-Hexanone	mg/l	--	--	--	--	--	--	<0.0100	--	<0.0100	--
Acetone	mg/l	--	--	<0.01	--	<0.01	--	<0.0050	--	<0.0050	--
Benzene	mg/l	0.001	--	<0.00010	--	<0.00010	--	<0.0005	--	<0.0005	--
Bromodichloromethane	mg/l	--	--	<0.00010	--	<0.00010	--	<0.0005	--	<0.0005	--
Bromoform	mg/l	--	--	<0.00020	--	<0.00020	--	<0.0005	--	<0.0005	--
Bromomethane	mg/l	--	--	<0.00050	--	<0.00050	--	<0.0005	--	<0.0005	--
Carbon Tetrachloride	mg/l	0.002	--	<0.00010	--	<0.00010	--	<0.0002	--	<0.0002	--
Chlorobenzene	mg/l	0.08	0.03	<0.00010	--	<0.00010	--	<0.0005	--	<0.0005	--
Chloroethane	mg/l	--	--	<0.00020	--	<0.00020	--	<0.0010	--	<0.0010	--
Chloroform	mg/l	--	--	<0.00010	--	<0.00010	--	<0.0005	--	<0.0005	--
Chloromethane	mg/l	--	--	<0.00050	--	<0.00050	--	<0.0030	--	<0.0030	--
cis-1,2-Dichloroethene	mg/l	--	--	<0.00010	--	<0.00010	--	<0.0005	--	<0.0005	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	<0.00020	--	<0.00020	--	<0.0005	--	<0.0005	--
Dibromochloromethane	mg/l	--	--	<0.00020	--	<0.00020	--	<0.0005	--	<0.0005	--
Dichlorodifluoromethane	mg/l	--	--	<0.00050	--	<0.00050	--	<0.0010	--	<0.0010	--
Ethylbenzene	mg/l	0.14	0.0016	<0.00010	--	<0.00010	--	<0.0005	--	<0.0005	--
m,p-Xylenes	mg/l	--	--	<0.00010	--	<0.00010	--	<0.0005	--	<0.0005	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	<0.00020	--	<0.00020	--	<0.0020	--	<0.0020	--
Methylene Chloride	mg/l	0.05	--	<0.00050	--	<0.00050	--	<0.0050	--	<0.0050	--
n-Hexane	mg/l	--	--	<0.00050	--	<0.00050	--	<0.0010	--	<0.0010	--
o-Xylene	mg/l	--	--	<0.00010	--	<0.00010	--	<0.0005	--	<0.0005	--
Tetrachloroethylene	mg/l	0.01	--	<0.00010	--	<0.00010	--	<0.0005	--	<0.0005	--
Toluene	mg/l	0.06	0.024	<0.00020	--	<0.00020	--	<0.0005	--	<0.0005	--
trans-1,2-Dichloroethene	mg/l	--	--	<0.00010	--	<0.00010	--	<0.0005	--	<0.0005	--
trans-1,3-Dichloropropene	mg/l	--	--	<0.00020	--	<0.00020	--	<0.0005	--	<0.0005	--
Trichloroethene	mg/l	0.005	--	<0.00010	--	<0.00010	--	<0.0005	--	<0.0005	--
Trichlorofluoromethane	mg/l	--	--	<0.00020	--	<0.00020	--	<0.0010	--	<0.0010	--
Vinyl Chloride	mg/l	0.001	--	<0.00020	--	<0.00020	--	<0.0005	--	<0.0005	--
Xylenes, Total	mg/l	0.09	0.02	<0.00010	--	<0.00010	--	<0.0005	--	<0.0005	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM15	OMM15	OMM15	OMM15	OMM15	OMM15	OMM15	OMM15
				22-Nov-2017	28-Jun-2018	26-Nov-2018	18-Jun-2019	02-Dec-2019	04-Jun-2020	30-Nov-2020	08-Jun-2021
				OMM-15	OMM-15	OMM-15	OMM-15	OMM15	OMM-15	OMM-15	OMM-15
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	<0.0050	--	<0.0050	--	<0.0050	--	<0.0050	--
Styrene	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
1,1,1-Trichloroethane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
1,1,2-Trichloroethane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
1,1-Dichloroethane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
1,1-Dichloroethylene	mg/l	0.014	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
1,2-Dibromoethane	mg/l	--	--	<0.0002	--	<0.0002	--	<0.0002	--	<0.0002	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
1,2-Dichloroethane	mg/l	0.005	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
1,2-Dichloroethene	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
1,2-Dichloropropane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
1,3,5-Trimethylbenzene	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
1,3-Dichlorobenzene	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
1,3-Dichloropropene, Total	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
Methyl Ethyl Ketone	mg/l	--	--	<0.0050	--	<0.0050	--	<0.0050	--	<0.0050	--
2-Hexanone	mg/l	--	--	<0.0100	--	<0.0100	--	<0.0100	--	<0.0100	--
Acetone	mg/l	--	--	<0.0050	--	<0.0050	--	<0.0050	--	<0.0050	--
Benzene	mg/l	0.001	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
Bromodichloromethane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
Bromoform	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
Bromomethane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
Carbon Tetrachloride	mg/l	0.002	--	<0.0002	--	<0.0002	--	<0.0002	--	<0.0002	--
Chlorobenzene	mg/l	0.08	0.03	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
Chloroethane	mg/l	--	--	<0.0010	--	<0.0010	--	<0.0010	--	<0.0010	--
Chloroform	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
Chloromethane	mg/l	--	--	<0.0030	--	<0.0030	--	<0.0030	--	<0.0030	--
cis-1,2-Dichloroethene	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
Dibromochloromethane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
Dichlorodifluoromethane	mg/l	--	--	<0.0010	--	<0.0010	--	<0.0010	--	<0.0010	--
Ethylbenzene	mg/l	0.14	0.0016	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
m,p-Xylenes	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	<0.0020	--	<0.0020	--	<0.0020	--	<0.0020	--
Methylene Chloride	mg/l	0.05	--	<0.0050	--	<0.0050	--	<0.0050	--	<0.0050	--
n-Hexane	mg/l	--	--	<0.0010	--	<0.0010	--	<0.0010	--	<0.0010	--
o-Xylene	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
Tetrachloroethylene	mg/l	0.01	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
Toluene	mg/l	0.06	0.024	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
trans-1,2-Dichloroethene	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
trans-1,3-Dichloropropene	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
Trichloroethene	mg/l	0.005	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
Trichlorofluoromethane	mg/l	--	--	<0.0010	--	<0.0010	--	<0.0010	--	<0.0010	--
Vinyl Chloride	mg/l	0.001	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
Xylenes, Total	mg/l	0.09	0.02	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM15	OMM15	OMM15	OMM15	OMM15	OMM15	OMM15	OMM15
				25-Nov-2021 OMM-15	21-Jun-2022 OMM 15	23-Nov-2022 OMM-15	11-May-2023 OMM-15	29-Nov-2023 OMM-15	06-Dec-2023 OMM-15	25-Apr-2024 OMM - 15	22-Oct-2024 ⁽⁸⁾ OMM-15
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	<0.0050	--	<0.0050	--	--	<0.0050	--	--
Styrene	mg/l	--	--	<0.0005	--	<0.0005	--	--	<0.0005	--	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	<0.0005	--	<0.0005	--	--	<0.0005	--	--
1,1,1-Trichloroethane	mg/l	--	--	<0.0005	--	<0.0005	--	--	<0.0005	--	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	<0.0005	--	<0.0005	--	--	<0.0005	--	--
1,1,2-Trichloroethane	mg/l	--	--	<0.0005	--	<0.0005	--	--	<0.0005	--	--
1,1-Dichloroethane	mg/l	--	--	<0.0005	--	<0.0005	--	--	<0.0005	--	--
1,1-Dichloroethylene	mg/l	0.014	--	<0.0005	--	<0.0005	--	--	<0.0005	--	--
1,2-Dibromoethane	mg/l	--	--	<0.0002	--	<0.0002	--	--	<0.0002	--	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	<0.0005	--	<0.0005	--	--	<0.0005	--	--
1,2-Dichloroethane	mg/l	0.005	--	<0.0005	--	<0.0005	--	--	<0.0005	--	--
1,2-Dichloroethene	mg/l	--	--	<0.0005	--	<0.0005	--	--	<0.0005	--	--
1,2-Dichloropropane	mg/l	--	--	<0.0005	--	<0.0005	--	--	<0.0005	--	--
1,3,5-Trimethylbenzene	mg/l	--	--	<0.0005	--	<0.0005	--	--	<0.0005	--	--
1,3-Dichlorobenzene	mg/l	--	--	<0.0005	--	<0.0005	--	--	<0.0005	--	--
1,3-Dichloropropene, Total	mg/l	--	--	<0.0005	--	<0.0005	--	--	<0.0005	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	<0.0005	--	<0.0005	--	--	<0.0005	--	--
Methyl Ethyl Ketone	mg/l	--	--	<0.0050	--	<0.0050	--	--	<0.0050	--	--
2-Hexanone	mg/l	--	--	<0.0100	--	<0.0100	--	--	<0.0100	--	--
Acetone	mg/l	--	--	<0.0050	--	<0.0050	--	--	<0.0050	--	--
Benzene	mg/l	0.001	--	<0.0005	--	<0.0005	--	--	<0.0005	--	--
Bromodichloromethane	mg/l	--	--	<0.0005	--	<0.0005	--	--	<0.0005	--	--
Bromoform	mg/l	--	--	<0.0005	--	<0.0005	--	--	<0.0005	--	--
Bromomethane	mg/l	--	--	<0.0005	--	<0.0005	--	--	<0.0005	--	--
Carbon Tetrachloride	mg/l	0.002	--	<0.0002	--	<0.0002	--	--	<0.0002	--	--
Chlorobenzene	mg/l	0.08	0.03	<0.0005	--	<0.0005	--	--	<0.0005	--	--
Chloroethane	mg/l	--	--	<0.0010	--	<0.0010	--	--	<0.0010	--	--
Chloroform	mg/l	--	--	<0.0005	--	<0.0005	--	--	<0.0005	--	--
Chloromethane	mg/l	--	--	<0.0030	--	<0.0030	--	--	<0.0030	--	--
cis-1,2-Dichloroethene	mg/l	--	--	<0.0005	--	<0.0005	--	--	<0.0005	--	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	<0.0005	--	<0.0005	--	--	<0.0005	--	--
Dibromochloromethane	mg/l	--	--	<0.0005	--	<0.0005	--	--	<0.0005	--	--
Dichlorodifluoromethane	mg/l	--	--	<0.0010	--	<0.0010	--	--	<0.0010	--	--
Ethylbenzene	mg/l	0.14	0.0016	<0.0005	--	<0.0005	--	--	<0.0005	--	--
m,p-Xylenes	mg/l	--	--	<0.0005	--	<0.0005	--	--	<0.0005	--	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	<0.0020	--	<0.0020	--	--	<0.0020	--	--
Methylene Chloride	mg/l	0.05	--	<0.0050	--	<0.0050	--	--	<0.0050	--	--
n-Hexane	mg/l	--	--	<0.0010	--	<0.0010	--	--	<0.0010	--	--
o-Xylene	mg/l	--	--	<0.0005	--	<0.0005	--	--	<0.0005	--	--
Tetrachloroethylene	mg/l	0.01	--	<0.0005	--	<0.0005	--	--	<0.0005	--	--
Toluene	mg/l	0.06	0.024	<0.0005	--	<0.0005	--	--	<0.0005	--	--
trans-1,2-Dichloroethene	mg/l	--	--	<0.0005	--	<0.0005	--	--	<0.0005	--	--
trans-1,3-Dichloropropene	mg/l	--	--	<0.0005	--	<0.0005	--	--	<0.0005	--	--
Trichloroethene	mg/l	0.005	--	<0.0005	--	<0.0005	--	--	<0.0005	--	--
Trichlorofluoromethane	mg/l	--	--	<0.0010	--	<0.0010	--	--	<0.0010	--	--
Vinyl Chloride	mg/l	0.001	--	<0.0005	--	<0.0005	--	--	<0.0005	--	--
Xylenes, Total	mg/l	0.09	0.02	<0.0005	--	<0.0005	--	--	<0.0005	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5
				01-Jan-1990	01-Mar-1990	01-Dec-1990	01-Nov-1991	01-Jun-1992	01-Dec-1992	01-Sep-1993	01-May-1994
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/l	--	--	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	--	--	--	--	--	--	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethylene	mg/l	0.014	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	--	--	--	--	--	--
1,2-Dichloroethane	mg/l	0.005	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	--	--	--	--	--	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	--	--	--	--	--	--	--	--
Bromodichloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Bromoform	mg/l	--	--	--	--	--	--	--	--	--	--
Bromomethane	mg/l	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	mg/l	0.002	--	--	--	--	--	--	--	--	--
Chlorobenzene	mg/l	0.08	0.03	--	--	--	--	--	--	--	--
Chloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
Chloroform	mg/l	--	--	--	--	--	--	--	--	--	--
Chloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	--	--	--	--	--	--	--
m,p-Xylenes	mg/l	--	--	--	--	--	--	--	--	--	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	--	--	--	--	--	--	--	--
n-Hexane	mg/l	--	--	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	--	--	--	--	--	--	--	--
Tetrachloroethylene	mg/l	0.01	--	--	--	--	--	--	--	--	--
Toluene	mg/l	0.06	0.024	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Trichloroethene	mg/l	0.005	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	mg/l	0.001	--	--	--	--	--	--	--	--	--
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5
				01-Nov-1994	01-Jun-1995	12-Jun-1996	01-Jun-1997	01-Nov-1997	01-Jun-1998	01-Nov-1998	01-Aug-1999
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/l	--	--	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	--	--	--	--	--	--	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethylene	mg/l	0.014	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	--	--	--	--	--	--
1,2-Dichloroethane	mg/l	0.005	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	--	--	--	--	--	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	--	--	--	--	--	--	--	--
Bromodichloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Bromoform	mg/l	--	--	--	--	--	--	--	--	--	--
Bromomethane	mg/l	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	mg/l	0.002	--	--	--	--	--	--	--	--	--
Chlorobenzene	mg/l	0.08	0.03	--	--	--	--	--	--	--	--
Chloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
Chloroform	mg/l	--	--	--	--	--	--	--	--	--	--
Chloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	--	--	--	--	--	--	--
m,p-Xylenes	mg/l	--	--	--	--	--	--	--	--	--	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	--	--	--	--	--	--	--	--
n-Hexane	mg/l	--	--	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	--	--	--	--	--	--	--	--
Tetrachloroethylene	mg/l	0.01	--	--	--	--	--	--	--	--	--
Toluene	mg/l	0.06	0.024	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Trichloroethene	mg/l	0.005	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	mg/l	0.001	--	--	--	--	--	--	--	--	--
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5
				01-Nov-1999	01-Jun-2000	01-Jul-2001	01-Nov-2001	01-Jul-2002	01-Nov-2002	10-Jul-2003	27-Dec-2003
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/l	--	--	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	--	--	--	--	--	--	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethylene	mg/l	0.014	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	--	--	--	--	--	--
1,2-Dichloroethane	mg/l	0.005	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	--	--	--	--	--	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	--	--	--	--	--	--	--	--
Bromodichloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Bromoform	mg/l	--	--	--	--	--	--	--	--	--	--
Bromomethane	mg/l	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	mg/l	0.002	--	--	--	--	--	--	--	--	--
Chlorobenzene	mg/l	0.08	0.03	--	--	--	--	--	--	--	--
Chloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
Chloroform	mg/l	--	--	--	--	--	--	--	--	--	--
Chloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	--	--	--	--	--	--	--
m,p-Xylenes	mg/l	--	--	--	--	--	--	--	--	--	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	--	--	--	--	--	--	--	--
n-Hexane	mg/l	--	--	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	--	--	--	--	--	--	--	--
Tetrachloroethylene	mg/l	0.01	--	--	--	--	--	--	--	--	--
Toluene	mg/l	0.06	0.024	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Trichloroethene	mg/l	0.005	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	mg/l	0.001	--	--	--	--	--	--	--	--	--
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5
				26-Aug-2004	22-Dec-2004	21-Jun-2005	09-Dec-2005	30-Jun-2006	28-Nov-2006	29-Jun-2007	26-Nov-2007
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/l	--	--	--	--	<0.0007	--	--	--	--	--
Styrene	mg/l	--	--	--	--	<0.0006	--	--	<0.0005	--	<0.0005
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	<0.0001	--	--	<0.0005	--	<0.0005
1,1,1-Trichloroethane	mg/l	--	--	--	--	<0.0001	--	--	<0.0004	--	<0.0004
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	<0.0004	--	--	<0.0005	--	<0.0005
1,1,2-Trichloroethane	mg/l	--	--	--	--	<0.0001	--	--	<0.0004	--	<0.0004
1,1-Dichloroethane	mg/l	--	--	--	--	<0.0001	--	--	<0.0004	--	0.0008
1,1-Dichloroethylene	mg/l	0.014	--	--	--	<0.0001	--	--	<0.0005	--	<0.0005
1,2,4-Trichlorobenzene	mg/l	--	--	--	--	<0.0002	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	--	<0.0001	--	--	<0.001	--	<0.001
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	<0.0001	--	--	<0.0004	--	<0.0004
1,2-Dichloroethane	mg/l	0.005	--	--	--	<0.0001	--	--	<0.0005	--	<0.0005
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--	<0.0001	--	--	<0.0005	--	<0.0005
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	--	--	<0.0003	--	<0.0003
1,3-Dichlorobenzene	mg/l	--	--	--	--	<0.0001	--	--	<0.0004	--	<0.0004
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	<0.0002	--	--	<0.0004	--	<0.0004
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	--	--	<0.0005	--	--	<0.0005	--	<0.0005
Bromodichloromethane	mg/l	--	--	--	--	<0.0001	--	--	<0.0003	--	<0.0003
Bromoform	mg/l	--	--	--	--	<0.0001	--	--	<0.0004	--	<0.0004
Bromomethane	mg/l	--	--	--	--	<0.002	--	--	<0.0005	--	<0.0005
Carbon Tetrachloride	mg/l	0.002	--	--	--	<0.0002	--	--	<0.0005	--	<0.0005
Chlorobenzene	mg/l	0.08	0.03	--	--	<0.0002	--	--	<0.0002	--	<0.0002
Chloroethane	mg/l	--	--	--	--	--	--	--	<0.001	--	0.005
Chloroform	mg/l	--	--	--	--	<0.0003	--	--	<0.0005	--	<0.0005
Chloromethane	mg/l	--	--	--	--	--	--	--	<0.001	--	<0.001
cis-1,2-Dichloroethene	mg/l	--	--	--	--	<0.0001	--	--	<0.0004	--	<0.0004
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	<0.0001	--	--	<0.0002	--	<0.0002
Dibromochloromethane	mg/l	--	--	--	--	<0.0001	--	--	<0.0003	--	<0.0003
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	--	<0.0005	--	--	<0.0005	--	<0.0005
m,p-Xylenes	mg/l	--	--	--	--	<0.001	--	--	<0.001	--	<0.001
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	--	--	<0.0003	--	--	<0.004	--	<0.004
n-Hexane	mg/l	--	--	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	--	--	<0.0005	--	--	<0.0005	--	<0.0005
Tetrachloroethylene	mg/l	0.01	--	--	--	<0.0002	--	--	0.0004	--	<0.0003
Toluene	mg/l	0.06	0.024	--	--	<0.0005	--	--	<0.0005	--	<0.0005
trans-1,2-Dichloroethene	mg/l	--	--	--	--	<0.0001	--	--	<0.0004	--	<0.0004
trans-1,3-Dichloropropene	mg/l	--	--	--	--	<0.0001	--	--	<0.0002	--	<0.0002
Trichloroethene	mg/l	0.005	--	--	--	<0.0001	--	--	<0.0003	--	<0.0003
Trichlorofluoromethane	mg/l	--	--	--	--	--	--	--	<0.0005	--	<0.0005
Vinyl Chloride	mg/l	0.001	--	--	--	<0.0002	--	--	<0.0002	--	<0.0002
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5
				13-Jun-2008	26-Nov-2008	06-Jul-2009	08-Dec-2009	30-Jun-2010	30-Nov-2010	13-Jun-2011	24-Nov-2011
					R-6	R-13	R-3	R-3	R-1	S-6	OMM-5
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/l	--	--	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	<0.0005	--	<0.0005	--	--	--	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	<0.0005	--	<0.0005	--	--	--	--
1,1,1-Trichloroethane	mg/l	--	--	--	<0.0004	--	<0.0004	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	<0.0005	--	<0.0005	--	--	--	--
1,1,2-Trichloroethane	mg/l	--	--	--	<0.0004	--	<0.0004	--	--	--	--
1,1-Dichloroethane	mg/l	--	--	--	0.0010	--	<0.0004	--	--	--	--
1,1-Dichloroethylene	mg/l	0.014	--	--	<0.0005	--	<0.0005	--	--	--	--
1,2,4-Trichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	<0.0010	--	<0.0010	--	--	--	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	<0.0004	--	<0.0004	--	--	--	--
1,2-Dichloroethane	mg/l	0.005	--	--	<0.0005	--	<0.0005	--	--	--	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	<0.0005	--	<0.0005	--	--	--	--
1,3,5-Trimethylbenzene	mg/l	--	--	--	<0.0003	--	<0.0003	--	--	--	--
1,3-Dichlorobenzene	mg/l	--	--	--	<0.0004	--	<0.0004	--	--	--	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	<0.0004	--	<0.0004	--	--	--	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	--	<0.0005	--	<0.0005	--	--	--	--
Bromodichloromethane	mg/l	--	--	--	<0.0003	--	<0.0003	--	--	--	--
Bromoform	mg/l	--	--	--	<0.0004	--	<0.0004	--	--	--	--
Bromomethane	mg/l	--	--	--	<0.0005	--	<0.0005	--	--	--	--
Carbon Tetrachloride	mg/l	0.002	--	--	<0.0005	--	<0.0005	--	--	--	--
Chlorobenzene	mg/l	0.08	0.03	--	<0.0002	--	<0.0002	--	--	--	--
Chloroethane	mg/l	--	--	--	<0.0010	--	<0.0010	--	--	--	--
Chloroform	mg/l	--	--	--	<0.0005	--	<0.0005	--	--	--	--
Chloromethane	mg/l	--	--	--	<0.0010	--	<0.0010	--	--	--	--
cis-1,2-Dichloroethene	mg/l	--	--	--	0.0005	--	<0.0004	--	--	--	--
cis-1,2-Dichloropropene	mg/l	--	--	--	<0.0002	--	<0.0002	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/l	--	--	--	<0.0003	--	<0.0003	--	--	--	--
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	<0.0005	--	<0.0005	--	--	--	--
m,p-Xylenes	mg/l	--	--	--	<0.0010	--	<0.0010	--	--	--	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	--	<0.0040	--	<0.0040	--	--	--	--
n-Hexane	mg/l	--	--	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	--	<0.0005	--	<0.0005	--	--	--	--
Tetrachloroethylene	mg/l	0.01	--	--	<0.0003	--	<0.0003	--	--	--	--
Toluene	mg/l	0.06	0.024	--	<0.0005	--	<0.0005	--	--	--	--
trans-1,2-Dichloroethene	mg/l	--	--	--	<0.0004	--	<0.0004	--	--	--	--
trans-1,3-Dichloropropene	mg/l	--	--	--	<0.0002	--	<0.0002	--	--	--	--
Trichloroethene	mg/l	0.005	--	--	<0.0003	--	<0.0003	--	--	--	--
Trichlorofluoromethane	mg/l	--	--	--	<0.0005	--	<0.0005	--	--	--	--
Vinyl Chloride	mg/l	0.001	--	--	<0.0002	--	<0.0002	--	--	--	--
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5
				22-Jun-2012	10-Nov-2012	25-Jun-2013	20-Nov-2013	27-May-2014	25-Nov-2014	26-May-2015	30-Nov-2015
				S-3	S-5	S-4	S-5	A-3	R-5	OMM-5	5
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/l	--	--	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	--	--	--	--	--	--	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethylene	mg/l	0.014	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	--	--	--	--	--	--
1,2-Dichloroethane	mg/l	0.005	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	--	--	--	--	--	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	--	--	--	--	--	--	--	--
Bromodichloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Bromoform	mg/l	--	--	--	--	--	--	--	--	--	--
Bromomethane	mg/l	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	mg/l	0.002	--	--	--	--	--	--	--	--	--
Chlorobenzene	mg/l	0.08	0.03	--	--	--	--	--	--	--	--
Chloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
Chloroform	mg/l	--	--	--	--	--	--	--	--	--	--
Chloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	--	--	--	--	--	--	--
m,p-Xylenes	mg/l	--	--	--	--	--	--	--	--	--	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	--	--	--	--	--	--	--	--
n-Hexane	mg/l	--	--	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	--	--	--	--	--	--	--	--
Tetrachloroethylene	mg/l	0.01	--	--	--	--	--	--	--	--	--
Toluene	mg/l	0.06	0.024	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Trichloroethene	mg/l	0.005	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	mg/l	0.001	--	--	--	--	--	--	--	--	--
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5
				14-Jun-2016	29-Nov-2016	01-Jun-2017	22-Nov-2017	28-Jun-2018	26-Nov-2018	18-Jun-2019	29-Nov-2019
				OMM-5	OMM-5	OMM5	OMM-5	OMM-5	OMM-5	OMM-5	OMM5
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/l	--	--	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	--	--	--	--	--	--	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethylene	mg/l	0.014	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	--	--	--	--	--	--
1,2-Dichloroethane	mg/l	0.005	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	--	--	--	--	--	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	--	--	--	--	--	--	--	--
Bromodichloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Bromoform	mg/l	--	--	--	--	--	--	--	--	--	--
Bromomethane	mg/l	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	mg/l	0.002	--	--	--	--	--	--	--	--	--
Chlorobenzene	mg/l	0.08	0.03	--	--	--	--	--	--	--	--
Chloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
Chloroform	mg/l	--	--	--	--	--	--	--	--	--	--
Chloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	--	--	--	--	--	--	--
m,p-Xylenes	mg/l	--	--	--	--	--	--	--	--	--	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	--	--	--	--	--	--	--	--
n-Hexane	mg/l	--	--	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	--	--	--	--	--	--	--	--
Tetrachloroethylene	mg/l	0.01	--	--	--	--	--	--	--	--	--
Toluene	mg/l	0.06	0.024	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Trichloroethene	mg/l	0.005	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	mg/l	0.001	--	--	--	--	--	--	--	--	--
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5	OMM5
				04-Jun-2020	30-Nov-2020	08-Jun-2021	25-Nov-2021	20-Jun-2022	23-Nov-2022	23-Nov-2022	23-Nov-2022
				OMM-5	OMM-5	OMM-5	OMM-5	OMM-5	OMM-5	Dup-2	OMM5
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/l	--	--	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	--	--	--	--	--	--	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethylene	mg/l	0.014	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	--	--	--	--	--	--
1,2-Dichloroethane	mg/l	0.005	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	--	--	--	--	--	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	--	--	--	--	--	--	--	--
Bromodichloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Bromoform	mg/l	--	--	--	--	--	--	--	--	--	--
Bromomethane	mg/l	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	mg/l	0.002	--	--	--	--	--	--	--	--	--
Chlorobenzene	mg/l	0.08	0.03	--	--	--	--	--	--	--	--
Chloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
Chloroform	mg/l	--	--	--	--	--	--	--	--	--	--
Chloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	--	--	--	--	--	--	--
m,p-Xylenes	mg/l	--	--	--	--	--	--	--	--	--	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	--	--	--	--	--	--	--	--
n-Hexane	mg/l	--	--	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	--	--	--	--	--	--	--	--
Tetrachloroethylene	mg/l	0.01	--	--	--	--	--	--	--	--	--
Toluene	mg/l	0.06	0.024	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Trichloroethene	mg/l	0.005	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	mg/l	0.001	--	--	--	--	--	--	--	--	--
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM5	OMM5	OMM5	OMM5	OMM5
				10-May-2023	29-Nov-2023	06-Dec-2023	25-Apr-2024	22-Oct-2024
				OMM-5	OMM-5	OMM-5	OMM - 5	OMM5
Semi-VOCs								
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	<0.0050
Naphthalene	mg/l	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	--	--	--	<0.0005
VOCs								
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	<0.0005
1,1,1-Trichloroethane	mg/l	--	--	--	--	--	--	<0.0005
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	<0.0005
1,1,2-Trichloroethane	mg/l	--	--	--	--	--	--	<0.0005
1,1-Dichloroethane	mg/l	--	--	--	--	--	--	<0.0005
1,1-Dichloroethylene	mg/l	0.014	--	--	--	--	--	<0.0005
1,2,4-Trichlorobenzene	mg/l	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	--	--	--	<0.0002
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	--	--	<0.0005
1,2-Dichloroethane	mg/l	0.005	--	--	--	--	--	<0.0005
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	<0.0005
1,2-Dichloropropane	mg/l	--	--	--	--	--	--	<0.0005
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	--	<0.0005
1,3-Dichlorobenzene	mg/l	--	--	--	--	--	--	<0.0005
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	<0.0005
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	--	--	<0.0005
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	<0.0050
2-Hexanone	mg/l	--	--	--	--	--	--	<0.0100
Acetone	mg/l	--	--	--	--	--	--	<0.0050
Benzene	mg/l	0.001	--	--	--	--	--	<0.0005
Bromodichloromethane	mg/l	--	--	--	--	--	--	<0.0005
Bromoform	mg/l	--	--	--	--	--	--	<0.0005
Bromomethane	mg/l	--	--	--	--	--	--	<0.0005
Carbon Tetrachloride	mg/l	0.002	--	--	--	--	--	<0.0002
Chlorobenzene	mg/l	0.08	0.03	--	--	--	--	<0.0005
Chloroethane	mg/l	--	--	--	--	--	--	<0.0010
Chloroform	mg/l	--	--	--	--	--	--	<0.0005
Chloromethane	mg/l	--	--	--	--	--	--	<0.0030
cis-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	<0.0005
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	<0.0005
Dibromochloromethane	mg/l	--	--	--	--	--	--	<0.0005
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	<0.0010
Ethylbenzene	mg/l	0.14	0.0016	--	--	--	--	<0.0005
m,p-Xylenes	mg/l	--	--	--	--	--	--	<0.0005
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	<0.0020
Methylene Chloride	mg/l	0.05	--	--	--	--	--	<0.0050
n-Hexane	mg/l	--	--	--	--	--	--	<0.0010
o-Xylene	mg/l	--	--	--	--	--	--	<0.0005
Tetrachloroethylene	mg/l	0.01	--	--	--	--	--	<0.0005
Toluene	mg/l	0.06	0.024	--	--	--	--	<0.0005
trans-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	<0.0005
trans-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	<0.0005
Trichloroethene	mg/l	0.005	--	--	--	--	--	<0.0005
Trichlorofluoromethane	mg/l	--	--	--	--	--	--	<0.0010
Vinyl Chloride	mg/l	0.001	--	--	--	--	--	<0.0005
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	<0.0005

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6
				01-Jan-1990	01-Mar-1990	01-Dec-1990	01-Nov-1991	01-Jun-1992	01-Dec-1992	01-Sep-1993	01-May-1994
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/l	--	--	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	--	--	--	--	--	--	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethylene	mg/l	0.014	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	--	--	--	--	--	--
1,2-Dichloroethane	mg/l	0.005	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	--	--	--	--	--	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	--	--	--	--	--	--	--	--
Bromodichloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Bromoform	mg/l	--	--	--	--	--	--	--	--	--	--
Bromomethane	mg/l	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	mg/l	0.002	--	--	--	--	--	--	--	--	--
Chlorobenzene	mg/l	0.08	0.03	--	--	--	--	--	--	--	--
Chloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
Chloroform	mg/l	--	--	--	--	--	--	--	--	--	--
Chloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	--	--	--	--	--	--	--
m,p-Xylenes	mg/l	--	--	--	--	--	--	--	--	--	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	--	--	--	--	--	--	--	--
n-Hexane	mg/l	--	--	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	--	--	--	--	--	--	--	--
Tetrachloroethylene	mg/l	0.01	--	--	--	--	--	--	--	--	--
Toluene	mg/l	0.06	0.024	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Trichloroethene	mg/l	0.005	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	mg/l	0.001	--	--	--	--	--	--	--	--	--
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6
				01-Nov-1994	01-Jun-1995	12-Jun-1996	26-Nov-1996	01-Jun-1997	01-Nov-1997	01-Jun-1998	01-Nov-1998
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/l	--	--	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	--	--	--	--	--	--	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethylene	mg/l	0.014	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	--	--	--	--	--	--
1,2-Dichloroethane	mg/l	0.005	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	--	--	--	--	--	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	--	--	--	--	--	--	--	--
Bromodichloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Bromoform	mg/l	--	--	--	--	--	--	--	--	--	--
Bromomethane	mg/l	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	mg/l	0.002	--	--	--	--	--	--	--	--	--
Chlorobenzene	mg/l	0.08	0.03	--	--	--	--	--	--	--	--
Chloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
Chloroform	mg/l	--	--	--	--	--	--	--	--	--	--
Chloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	--	--	--	--	--	--	--
m,p-Xylenes	mg/l	--	--	--	--	--	--	--	--	--	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	--	--	--	--	--	--	--	--
n-Hexane	mg/l	--	--	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	--	--	--	--	--	--	--	--
Tetrachloroethylene	mg/l	0.01	--	--	--	--	--	--	--	--	--
Toluene	mg/l	0.06	0.024	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Trichloroethene	mg/l	0.005	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	mg/l	0.001	--	--	--	--	--	--	--	--	--
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6
				01-Aug-1999	01-Nov-1999	01-Jun-2000	01-Nov-2000	01-Jul-2001	01-Nov-2001	01-Jul-2002	01-Nov-2002
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/l	--	--	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	--	--	--	--	--	--	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethylene	mg/l	0.014	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	--	--	--	--	--	--
1,2-Dichloroethane	mg/l	0.005	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	--	--	--	--	--	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	--	--	--	--	--	--	--	--
Bromodichloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Bromoform	mg/l	--	--	--	--	--	--	--	--	--	--
Bromomethane	mg/l	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	mg/l	0.002	--	--	--	--	--	--	--	--	--
Chlorobenzene	mg/l	0.08	0.03	--	--	--	--	--	--	--	--
Chloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
Chloroform	mg/l	--	--	--	--	--	--	--	--	--	--
Chloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	--	--	--	--	--	--	--
m,p-Xylenes	mg/l	--	--	--	--	--	--	--	--	--	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	--	--	--	--	--	--	--	--
n-Hexane	mg/l	--	--	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	--	--	--	--	--	--	--	--
Tetrachloroethylene	mg/l	0.01	--	--	--	--	--	--	--	--	--
Toluene	mg/l	0.06	0.024	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Trichloroethene	mg/l	0.005	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	mg/l	0.001	--	--	--	--	--	--	--	--	--
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6
				10-Jul-2003	27-Dec-2003	26-Aug-2004	22-Dec-2004	21-Jun-2005	09-Dec-2005	30-Jun-2006	28-Nov-2006
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/l	--	--	--	--	--	--	<0.0007	--	--	--
Styrene	mg/l	--	--	--	--	--	--	<0.0006	--	--	<0.0005
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	<0.0001	--	--	<0.0005
1,1,1-Trichloroethane	mg/l	--	--	--	--	--	--	<0.0001	--	--	<0.0004
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	<0.0004	--	--	<0.0005
1,1,2-Trichloroethane	mg/l	--	--	--	--	--	--	<0.0001	--	--	<0.0004
1,1-Dichloroethane	mg/l	--	--	--	--	--	--	<0.0001	--	--	<0.0004
1,1-Dichloroethylene	mg/l	0.014	--	--	--	--	--	<0.0001	--	--	<0.0005
1,2,4-Trichlorobenzene	mg/l	--	--	--	--	--	--	<0.0002	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	--	--	--	<0.0001	--	--	<0.001
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	--	--	<0.0001	--	--	<0.0004
1,2-Dichloroethane	mg/l	0.005	--	--	--	--	--	<0.0001	--	--	<0.0005
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--	--	--	<0.0001	--	--	<0.0005
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	--	--	--	--	<0.0003
1,3-Dichlorobenzene	mg/l	--	--	--	--	--	--	<0.0001	--	--	<0.0004
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	--	--	<0.0002	--	--	<0.0004
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	--	--	--	--	<0.0005	--	--	<0.0005
Bromodichloromethane	mg/l	--	--	--	--	--	--	<0.0001	--	--	<0.0003
Bromoform	mg/l	--	--	--	--	--	--	<0.0001	--	--	<0.0004
Bromomethane	mg/l	--	--	--	--	--	--	<0.002	--	--	<0.0005
Carbon Tetrachloride	mg/l	0.002	--	--	--	--	--	<0.0002	--	--	<0.0005
Chlorobenzene	mg/l	0.08	0.03	--	--	--	--	<0.0002	--	--	<0.0002
Chloroethane	mg/l	--	--	--	--	--	--	--	--	--	<0.001
Chloroform	mg/l	--	--	--	--	--	--	<0.0003	--	--	<0.0005
Chloromethane	mg/l	--	--	--	--	--	--	--	--	--	<0.001
cis-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	<0.0001	--	--	<0.0004
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	<0.0001	--	--	<0.0002
Dibromochloromethane	mg/l	--	--	--	--	--	--	<0.0001	--	--	<0.0003
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	--	--	--	<0.0005	--	--	<0.0005
m,p-Xylenes	mg/l	--	--	--	--	--	--	<0.001	--	--	<0.001
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	--	--	--	--	<0.0003	--	--	<0.004
n-Hexane	mg/l	--	--	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	--	--	--	--	<0.0005	--	--	<0.0005
Tetrachloroethylene	mg/l	0.01	--	--	--	--	--	<0.0002	--	--	<0.0003
Toluene	mg/l	0.06	0.024	--	--	--	--	<0.0005	--	--	<0.0005
trans-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	<0.0001	--	--	<0.0004
trans-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	<0.0001	--	--	<0.0002
Trichloroethene	mg/l	0.005	--	--	--	--	--	<0.0001	--	--	<0.0003
Trichlorofluoromethane	mg/l	--	--	--	--	--	--	--	--	--	<0.0005
Vinyl Chloride	mg/l	0.001	--	--	--	--	--	<0.0002	--	--	<0.0002
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6
				29-Jun-2007	26-Nov-2007	13-Jun-2008	26-Nov-2008	06-Jul-2009	08-Dec-2009	30-Jun-2010 ⁽³⁾	30-Nov-2010
							R-7	R-14	R-6	R-4	R-2
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/l	--	--	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	--
1,1,1-Trichloroethane	mg/l	--	--	--	<0.0004	--	<0.0004	--	<0.0004	--	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	--
1,1,2-Trichloroethane	mg/l	--	--	--	<0.0004	--	<0.0004	--	<0.0004	--	--
1,1-Dichloroethane	mg/l	--	--	--	<0.0004	--	<0.0004	--	<0.0004	--	--
1,1-Dichloroethylene	mg/l	0.014	--	--	<0.0005	--	<0.0005	--	<0.0005	--	--
1,2,4-Trichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	<0.001	--	<0.0010	--	<0.0010	--	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	<0.0004	--	<0.0004	--	<0.0004	--	--
1,2-Dichloroethane	mg/l	0.005	--	--	<0.0005	--	<0.0005	--	<0.0005	--	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	--
1,3,5-Trimethylbenzene	mg/l	--	--	--	<0.0003	--	<0.0003	--	<0.0003	--	--
1,3-Dichlorobenzene	mg/l	--	--	--	<0.0004	--	<0.0004	--	<0.0004	--	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	<0.0004	--	<0.0004	--	<0.0004	--	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	--	<0.0005	--	<0.0005	--	<0.0005	--	--
Bromodichloromethane	mg/l	--	--	--	<0.0003	--	<0.0003	--	<0.0003	--	--
Bromoform	mg/l	--	--	--	<0.0004	--	<0.0004	--	<0.0004	--	--
Bromomethane	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	--
Carbon Tetrachloride	mg/l	0.002	--	--	<0.0005	--	<0.0005	--	<0.0005	--	--
Chlorobenzene	mg/l	0.08	0.03	--	<0.0002	--	<0.0002	--	<0.0002	--	--
Chloroethane	mg/l	--	--	--	<0.001	--	<0.0010	--	<0.0010	--	--
Chloroform	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	--
Chloromethane	mg/l	--	--	--	<0.001	--	<0.0010	--	<0.0010	--	--
cis-1,2-Dichloroethene	mg/l	--	--	--	<0.0004	--	<0.0004	--	<0.0004	--	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	<0.0002	--	<0.0002	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	<0.0002	--	--	--	--	--	--
Dibromochloromethane	mg/l	--	--	--	<0.0003	--	<0.0003	--	<0.0003	--	--
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	<0.0005	--	<0.0005	--	<0.0005	--	--
m,p-Xylenes	mg/l	--	--	--	<0.001	--	<0.0010	--	<0.0010	--	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	--	<0.004	--	<0.0040	--	<0.0040	--	--
n-Hexane	mg/l	--	--	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	--
Tetrachloroethylene	mg/l	0.01	--	--	<0.0003	--	<0.0003	--	<0.0003	--	--
Toluene	mg/l	0.06	0.024	--	<0.0005	--	<0.0005	--	<0.0005	--	--
trans-1,2-Dichloroethene	mg/l	--	--	--	<0.0004	--	<0.0004	--	<0.0004	--	--
trans-1,3-Dichloropropene	mg/l	--	--	--	<0.0002	--	<0.0002	--	<0.0002	--	--
Trichloroethene	mg/l	0.005	--	--	<0.0003	--	<0.0003	--	<0.0003	--	--
Trichlorofluoromethane	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	--
Vinyl Chloride	mg/l	0.001	--	--	<0.0002	--	<0.0002	--	<0.0002	--	--
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6
				13-Jun-2011 S-3	24-Nov-2011 ⁽³⁾ OMM-6	22-Jun-2012 S-4	10-Nov-2012 S-4	25-Jun-2013 S-2	20-Nov-2013 S-3	27-May-2014 A-4	25-Nov-2014 R-6
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/l	--	--	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	--	--	--	--	--	--	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethylene	mg/l	0.014	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	--	--	--	--	--	--
1,2-Dichloroethane	mg/l	0.005	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	--	--	--	--	--	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	--	--	--	--	--	--	--	--
Bromodichloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Bromoform	mg/l	--	--	--	--	--	--	--	--	--	--
Bromomethane	mg/l	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	mg/l	0.002	--	--	--	--	--	--	--	--	--
Chlorobenzene	mg/l	0.08	0.03	--	--	--	--	--	--	--	--
Chloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
Chloroform	mg/l	--	--	--	--	--	--	--	--	--	--
Chloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	--	--	--	--	--	--	--
m,p-Xylenes	mg/l	--	--	--	--	--	--	--	--	--	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	--	--	--	--	--	--	--	--
n-Hexane	mg/l	--	--	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	--	--	--	--	--	--	--	--
Tetrachloroethylene	mg/l	0.01	--	--	--	--	--	--	--	--	--
Toluene	mg/l	0.06	0.024	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Trichloroethene	mg/l	0.005	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	mg/l	0.001	--	--	--	--	--	--	--	--	--
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6
				26-May-2015	30-Nov-2015	14-Jun-2016	29-Nov-2016	01-Jun-2017	22-Nov-2017	28-Jun-2018	26-Nov-2018
				OMM-6	6	OMM-6	OMM-6	OMM6	OMM-6	OMM-6	OMM-6
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/l	--	--	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	--	--	--	--	--	--	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethylene	mg/l	0.014	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	--	--	--	--	--	--
1,2-Dichloroethane	mg/l	0.005	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	--	--	--	--	--	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	--	--	--	--	--	--	--	--
Bromodichloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Bromoform	mg/l	--	--	--	--	--	--	--	--	--	--
Bromomethane	mg/l	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	mg/l	0.002	--	--	--	--	--	--	--	--	--
Chlorobenzene	mg/l	0.08	0.03	--	--	--	--	--	--	--	--
Chloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
Chloroform	mg/l	--	--	--	--	--	--	--	--	--	--
Chloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	--	--	--	--	--	--	--
m,p-Xylenes	mg/l	--	--	--	--	--	--	--	--	--	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	--	--	--	--	--	--	--	--
n-Hexane	mg/l	--	--	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	--	--	--	--	--	--	--	--
Tetrachloroethylene	mg/l	0.01	--	--	--	--	--	--	--	--	--
Toluene	mg/l	0.06	0.024	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Trichloroethene	mg/l	0.005	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	mg/l	0.001	--	--	--	--	--	--	--	--	--
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6	OMM6
				18-Jun-2019	29-Nov-2019	04-Jun-2020	30-Nov-2020	08-Jun-2021	25-Nov-2021	20-Jun-2022	23-Nov-2022
				OMM-6	OMM6	OMM-6	OMM-6	OMM-6	OMM-6	OMM-6	OMM-6
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/l	--	--	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	--	--	--	--	--	--	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethylene	mg/l	0.014	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	--	--	--	--	--	--
1,2-Dichloroethane	mg/l	0.005	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	--	--	--	--	--	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	--	--	--	--	--	--	--	--
Bromodichloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Bromoform	mg/l	--	--	--	--	--	--	--	--	--	--
Bromomethane	mg/l	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	mg/l	0.002	--	--	--	--	--	--	--	--	--
Chlorobenzene	mg/l	0.08	0.03	--	--	--	--	--	--	--	--
Chloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
Chloroform	mg/l	--	--	--	--	--	--	--	--	--	--
Chloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	--	--	--	--	--	--	--
m,p-Xylenes	mg/l	--	--	--	--	--	--	--	--	--	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	--	--	--	--	--	--	--	--
n-Hexane	mg/l	--	--	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	--	--	--	--	--	--	--	--
Tetrachloroethylene	mg/l	0.01	--	--	--	--	--	--	--	--	--
Toluene	mg/l	0.06	0.024	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Trichloroethene	mg/l	0.005	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	mg/l	0.001	--	--	--	--	--	--	--	--	--
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM6	OMM6	OMM6	OMM6	OMM6
				10-May-2023	29-Nov-2023	06-Dec-2023	25-Apr-2024	23-Oct-2024
OMM-6								
OMM-6								
OMM-6								
OMM - 6								
OMM6								
Semi-VOCs								
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	<0.0050
Naphthalene	mg/l	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	--	--	--	<0.0005
VOCs								
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	<0.0005
1,1,1-Trichloroethane	mg/l	--	--	--	--	--	--	<0.0005
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	<0.0005
1,1,2-Trichloroethane	mg/l	--	--	--	--	--	--	<0.0005
1,1-Dichloroethane	mg/l	--	--	--	--	--	--	<0.0005
1,1-Dichloroethylene	mg/l	0.014	--	--	--	--	--	<0.0005
1,2,4-Trichlorobenzene	mg/l	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	--	--	--	<0.0002
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	--	--	<0.0005
1,2-Dichloroethane	mg/l	0.005	--	--	--	--	--	<0.0005
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	<0.0005
1,2-Dichloropropane	mg/l	--	--	--	--	--	--	<0.0005
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	--	<0.0005
1,3-Dichlorobenzene	mg/l	--	--	--	--	--	--	<0.0005
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	<0.0005
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	--	--	<0.0005
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	<0.0050
2-Hexanone	mg/l	--	--	--	--	--	--	<0.0100
Acetone	mg/l	--	--	--	--	--	--	<0.0050
Benzene	mg/l	0.001	--	--	--	--	--	<0.0005
Bromodichloromethane	mg/l	--	--	--	--	--	--	<0.0005
Bromoform	mg/l	--	--	--	--	--	--	<0.0005
Bromomethane	mg/l	--	--	--	--	--	--	<0.0005
Carbon Tetrachloride	mg/l	0.002	--	--	--	--	--	<0.0002
Chlorobenzene	mg/l	0.08	0.03	--	--	--	--	<0.0005
Chloroethane	mg/l	--	--	--	--	--	--	<0.0010
Chloroform	mg/l	--	--	--	--	--	--	<0.0005
Chloromethane	mg/l	--	--	--	--	--	--	<0.0030
cis-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	<0.0005
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	<0.0005
Dibromochloromethane	mg/l	--	--	--	--	--	--	<0.0005
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	<0.0010
Ethylbenzene	mg/l	0.14	0.0016	--	--	--	--	<0.0005
m,p-Xylenes	mg/l	--	--	--	--	--	--	<0.0005
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	<0.0020
Methylene Chloride	mg/l	0.05	--	--	--	--	--	<0.0050
n-Hexane	mg/l	--	--	--	--	--	--	<0.0010
o-Xylene	mg/l	--	--	--	--	--	--	<0.0005
Tetrachloroethylene	mg/l	0.01	--	--	--	--	--	<0.0005
Toluene	mg/l	0.06	0.024	--	--	--	--	<0.0005
trans-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	<0.0005
trans-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	<0.0005
Trichloroethene	mg/l	0.005	--	--	--	--	--	<0.0005
Trichlorofluoromethane	mg/l	--	--	--	--	--	--	<0.0010
Vinyl Chloride	mg/l	0.001	--	--	--	--	--	<0.0005
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	<0.0005

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7
				01-Jan-1990	01-Mar-1990	01-Dec-1990	01-Nov-1991	01-Jun-1992	01-Dec-1992	01-Sep-1993	01-May-1994
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/l	--	--	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	--	--	--	--	--	--	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethylene	mg/l	0.014	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	--	--	--	--	--	--
1,2-Dichloroethane	mg/l	0.005	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	--	--	--	--	--	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	--	--	--	--	--	--	--	--
Bromodichloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Bromoform	mg/l	--	--	--	--	--	--	--	--	--	--
Bromomethane	mg/l	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	mg/l	0.002	--	--	--	--	--	--	--	--	--
Chlorobenzene	mg/l	0.08	0.03	--	--	--	--	--	--	--	--
Chloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
Chloroform	mg/l	--	--	--	--	--	--	--	--	--	--
Chloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	--	--	--	--	--	--	--
m,p-Xylenes	mg/l	--	--	--	--	--	--	--	--	--	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	--	--	--	--	--	--	--	--
n-Hexane	mg/l	--	--	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	--	--	--	--	--	--	--	--
Tetrachloroethylene	mg/l	0.01	--	--	--	--	--	--	--	--	--
Toluene	mg/l	0.06	0.024	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Trichloroethene	mg/l	0.005	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	mg/l	0.001	--	--	--	--	--	--	--	--	--
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7
				01-Nov-1994	01-Jun-1995	12-Jun-1996	26-Nov-1996	01-Jun-1997	01-Nov-1997	01-Jun-1998	01-Nov-1998
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/l	--	--	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	--	--	--	--	--	--	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethylene	mg/l	0.014	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	--	--	--	--	--	--
1,2-Dichloroethane	mg/l	0.005	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	--	--	--	--	--	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	--	--	--	--	--	--	--	--
Bromodichloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Bromoform	mg/l	--	--	--	--	--	--	--	--	--	--
Bromomethane	mg/l	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	mg/l	0.002	--	--	--	--	--	--	--	--	--
Chlorobenzene	mg/l	0.08	0.03	--	--	--	--	--	--	--	--
Chloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
Chloroform	mg/l	--	--	--	--	--	--	--	--	--	--
Chloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	--	--	--	--	--	--	--
m,p-Xylenes	mg/l	--	--	--	--	--	--	--	--	--	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	--	--	--	--	--	--	--	--
n-Hexane	mg/l	--	--	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	--	--	--	--	--	--	--	--
Tetrachloroethylene	mg/l	0.01	--	--	--	--	--	--	--	--	--
Toluene	mg/l	0.06	0.024	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Trichloroethene	mg/l	0.005	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	mg/l	0.001	--	--	--	--	--	--	--	--	--
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7
				01-Aug-1999	01-Nov-1999	01-Jun-2000	01-Nov-2000	01-Jul-2001	01-Nov-2001	01-Jul-2002	01-Nov-2002
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/l	--	--	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	--	--	--	--	--	--	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethylene	mg/l	0.014	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	--	--	--	--	--	--
1,2-Dichloroethane	mg/l	0.005	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	--	--	--	--	--	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	--	--	--	--	--	--	--	--
Bromodichloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Bromoform	mg/l	--	--	--	--	--	--	--	--	--	--
Bromomethane	mg/l	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	mg/l	0.002	--	--	--	--	--	--	--	--	--
Chlorobenzene	mg/l	0.08	0.03	--	--	--	--	--	--	--	--
Chloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
Chloroform	mg/l	--	--	--	--	--	--	--	--	--	--
Chloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	--	--	--	--	--	--	--
m,p-Xylenes	mg/l	--	--	--	--	--	--	--	--	--	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	--	--	--	--	--	--	--	--
n-Hexane	mg/l	--	--	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	--	--	--	--	--	--	--	--
Tetrachloroethylene	mg/l	0.01	--	--	--	--	--	--	--	--	--
Toluene	mg/l	0.06	0.024	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Trichloroethene	mg/l	0.005	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	mg/l	0.001	--	--	--	--	--	--	--	--	--
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7
				10-Jul-2003	27-Dec-2003	26-Aug-2004	22-Dec-2004	21-Jun-2005	09-Dec-2005	30-Jun-2006	28-Nov-2006
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/l	--	--	--	--	--	--	<0.0007	--	--	--
Styrene	mg/l	--	--	--	--	--	--	<0.0006	--	--	<0.0005
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	<0.0001	--	--	<0.0005
1,1,1-Trichloroethane	mg/l	--	--	--	--	--	--	<0.0001	--	--	<0.0004
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	<0.0004	--	--	<0.0005
1,1,2-Trichloroethane	mg/l	--	--	--	--	--	--	<0.0001	--	--	<0.0004
1,1-Dichloroethane	mg/l	--	--	--	--	--	--	0.0006	--	--	0.0009
1,1-Dichloroethylene	mg/l	0.014	--	--	--	--	--	<0.0001	--	--	<0.0005
1,2,4-Trichlorobenzene	mg/l	--	--	--	--	--	--	<0.0002	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	--	--	--	<0.0001	--	--	<0.001
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	--	--	<0.0001	--	--	<0.0004
1,2-Dichloroethane	mg/l	0.005	--	--	--	--	--	<0.0001	--	--	<0.0005
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--	--	--	<0.0001	--	--	<0.0005
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	--	--	--	--	<0.0003
1,3-Dichlorobenzene	mg/l	--	--	--	--	--	--	<0.0001	--	--	<0.0004
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	--	--	<0.0002	--	--	<0.0004
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	--	--	--	--	0.0006	--	--	<0.0005
Bromodichloromethane	mg/l	--	--	--	--	--	--	<0.0001	--	--	<0.0003
Bromoform	mg/l	--	--	--	--	--	--	<0.0001	--	--	<0.0004
Bromomethane	mg/l	--	--	--	--	--	--	<0.002	--	--	<0.0005
Carbon Tetrachloride	mg/l	0.002	--	--	--	--	--	<0.0002	--	--	<0.0005
Chlorobenzene	mg/l	0.08	0.03	--	--	--	--	<0.0002	--	--	<0.0002
Chloroethane	mg/l	--	--	--	--	--	--	--	--	--	0.0024
Chloroform	mg/l	--	--	--	--	--	--	<0.0003	--	--	<0.0005
Chloromethane	mg/l	--	--	--	--	--	--	--	--	--	<0.001
cis-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	0.0002	--	--	<0.0004
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	<0.0001	--	--	<0.0002
Dibromochloromethane	mg/l	--	--	--	--	--	--	<0.0001	--	--	<0.0003
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	--	--	--	<0.0005	--	--	<0.0005
m,p-Xylenes	mg/l	--	--	--	--	--	--	<0.001	--	--	<0.001
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	--	--	--	--	<0.0003	--	--	<0.004
n-Hexane	mg/l	--	--	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	--	--	--	--	<0.0005	--	--	<0.0005
Tetrachloroethylene	mg/l	0.01	--	--	--	--	--	<0.0002	--	--	<0.0003
Toluene	mg/l	0.06	0.024	--	--	--	--	<0.0005	--	--	<0.0005
trans-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	<0.0001	--	--	<0.0004
trans-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	<0.0001	--	--	<0.0002
Trichloroethene	mg/l	0.005	--	--	--	--	--	<0.0001	--	--	<0.0003
Trichlorofluoromethane	mg/l	--	--	--	--	--	--	--	--	--	<0.0005
Vinyl Chloride	mg/l	0.001	--	--	--	--	--	<0.0002	--	--	<0.0002
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7
				29-Jun-2007	26-Nov-2007	13-Jun-2008	26-Nov-2008	06-Jul-2009	08-Dec-2009	30-Jun-2010	30-Nov-2010
							R-8	R-15	R-5	R-5	R-3
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/l	--	--	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
1,1,1-Trichloroethane	mg/l	--	--	--	<0.0004	--	<0.0004	--	<0.0004	--	<0.0004
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
1,1,2-Trichloroethane	mg/l	--	--	--	<0.0004	--	<0.0004	--	<0.0004	--	<0.0004
1,1-Dichloroethane	mg/l	--	--	--	<0.0004	--	0.0018	--	<0.0004	--	0.0007
1,1-Dichloroethylene	mg/l	0.014	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
1,2,4-Trichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	<0.001	--	<0.0010	--	<0.0010	--	<0.0010
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	<0.0004	--	<0.0004	--	<0.0004	--	<0.0004
1,2-Dichloroethane	mg/l	0.005	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
1,3,5-Trimethylbenzene	mg/l	--	--	--	<0.0003	--	<0.0003	--	<0.0003	--	<0.0003
1,3-Dichlorobenzene	mg/l	--	--	--	<0.0004	--	<0.0004	--	<0.0004	--	<0.0004
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	<0.0004	--	<0.0004	--	<0.0004	--	<0.0004
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Bromodichloromethane	mg/l	--	--	--	<0.0003	--	<0.0003	--	<0.0003	--	<0.0003
Bromoform	mg/l	--	--	--	<0.0004	--	<0.0004	--	<0.0004	--	<0.0004
Bromomethane	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Carbon Tetrachloride	mg/l	0.002	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Chlorobenzene	mg/l	0.08	0.03	--	<0.0002	--	<0.0002	--	<0.0002	--	<0.0002
Chloroethane	mg/l	--	--	--	<0.001	--	<0.0010	--	<0.0010	--	<0.0010
Chloroform	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Chloromethane	mg/l	--	--	--	<0.001	--	<0.0010	--	<0.0010	--	<0.0010
cis-1,2-Dichloroethene	mg/l	--	--	--	<0.0004	--	0.0006	--	<0.0004	--	<0.0004
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	<0.0002	--	<0.0002	--	<0.0002
cis-1,3-Dichloropropene	mg/l	--	--	--	<0.0002	--	--	--	--	--	--
Dibromochloromethane	mg/l	--	--	--	<0.0003	--	<0.0003	--	<0.0003	--	<0.0003
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
m,p-Xylenes	mg/l	--	--	--	<0.001	--	<0.0010	--	<0.0010	--	<0.0010
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	--	<0.004	--	<0.0040	--	<0.0040	--	<0.0040
n-Hexane	mg/l	--	--	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Tetrachloroethylene	mg/l	0.01	--	--	<0.0003	--	<0.0003	--	<0.0003	--	<0.0003
Toluene	mg/l	0.06	0.024	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
trans-1,2-Dichloroethene	mg/l	--	--	--	<0.0004	--	<0.0004	--	<0.0004	--	<0.0004
trans-1,3-Dichloropropene	mg/l	--	--	--	<0.0002	--	<0.0002	--	<0.0002	--	<0.0002
Trichloroethene	mg/l	0.005	--	--	<0.0003	--	<0.0003	--	<0.0003	--	<0.0003
Trichlorofluoromethane	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Vinyl Chloride	mg/l	0.001	--	--	<0.0002	--	<0.0002	--	<0.0002	--	<0.0002
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7
				13-Jun-2011	29-Nov-2011	22-Jun-2012	10-Nov-2012	25-Jun-2013	20-Nov-2013	27-May-2014	25-Nov-2014
				S-4	OMM-7	S-5	S-6	S-5	S-2	A-5	R-7
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	<0.0050	--	<0.0050	--	<0.0050
Naphthalene	mg/l	--	--	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	<0.0005	--	<0.00020	--	<0.00020	--	<0.00020
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	<0.0005	--	<0.00020	--	<0.00020	--	<0.00020
1,1,1-Trichloroethane	mg/l	--	--	--	<0.0004	--	<0.00010	--	<0.00010	--	<0.00010
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	<0.0005	--	<0.00020	--	<0.00020	--	<0.00020
1,1,2-Trichloroethane	mg/l	--	--	--	<0.0004	--	<0.00020	--	<0.00020	--	<0.00020
1,1-Dichloroethane	mg/l	--	--	--	0.0018	--	0.0011	--	0.0014	--	0.00098
1,1-Dichloroethylene	mg/l	0.014	--	--	<0.0005	--	<0.00010	--	<0.00010	--	<0.00010
1,2,4-Trichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	<0.0002	--	<0.00020	--	<0.00020	--	<0.00020
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	<0.0004	--	<0.00020	--	<0.00020	--	<0.00020
1,2-Dichloroethane	mg/l	0.005	--	--	<0.0002	--	<0.00020	--	<0.00020	--	<0.00020
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	<0.0005	--	<0.00010	--	<0.00010	--	<0.00010
1,3,5-Trimethylbenzene	mg/l	--	--	--	<0.0003	--	<0.00020	--	<0.00020	--	<0.00020
1,3-Dichlorobenzene	mg/l	--	--	--	<0.0004	--	<0.00020	--	<0.00020	--	<0.00020
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	<0.00028
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	<0.0004	--	<0.00020	--	<0.00020	--	<0.00020
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	<0.0050	--	<0.0050	--	<0.0050
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	<0.01	--	<0.01	--	<0.01
Benzene	mg/l	0.001	--	--	<0.0005	--	0.00013	--	<0.00010	--	0.00021
Bromodichloromethane	mg/l	--	--	--	<0.0003	--	<0.00010	--	<0.00010	--	<0.00010
Bromoform	mg/l	--	--	--	<0.0004	--	<0.00020	--	<0.00020	--	<0.00020
Bromomethane	mg/l	--	--	--	<0.0005	--	<0.00050	--	<0.00050	--	<0.00050
Carbon Tetrachloride	mg/l	0.002	--	--	<0.0005	--	<0.00010	--	<0.00010	--	<0.00010
Chlorobenzene	mg/l	0.08	0.03	--	0.0002	--	0.00013	--	0.00019	--	0.00019
Chloroethane	mg/l	--	--	--	0.0015	--	0.0011	--	0.0013	--	0.00085
Chloroform	mg/l	--	--	--	<0.0005	--	<0.00010	--	<0.00010	--	<0.00010
Chloromethane	mg/l	--	--	--	<0.0002	--	<0.00050	--	<0.00050	--	<0.00050
cis-1,2-Dichloroethene	mg/l	--	--	--	0.0007	--	0.00036	--	0.00040	--	0.00037
cis-1,2-Dichloropropene	mg/l	--	--	--	<0.0002	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	<0.00020	--	<0.00020	--	<0.00020
Dibromochloromethane	mg/l	--	--	--	<0.0003	--	<0.00020	--	<0.00020	--	<0.00020
Dichlorodifluoromethane	mg/l	--	--	--	<0.0005	--	<0.00050	--	<0.00050	--	<0.00050
Ethylbenzene	mg/l	0.14	0.0016	--	<0.0005	--	<0.00010	--	<0.00010	--	<0.00010
m,p-Xylenes	mg/l	--	--	--	<0.0005	--	<0.00010	--	<0.00010	--	<0.00010
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	<0.00020	--	<0.00020	--	<0.00020
Methylene Chloride	mg/l	0.05	--	--	<0.0040	--	<0.00050	--	<0.00050	--	<0.00050
n-Hexane	mg/l	--	--	--	--	--	<0.00050	--	<0.00050	--	<0.00050
o-Xylene	mg/l	--	--	--	<0.0005	--	<0.00010	--	<0.00010	--	<0.00010
Tetrachloroethylene	mg/l	0.01	--	--	<0.0003	--	<0.00010	--	<0.00010	--	<0.00010
Toluene	mg/l	0.06	0.024	--	<0.0005	--	<0.00020	--	<0.00020	--	<0.00020
trans-1,2-Dichloroethene	mg/l	--	--	--	<0.0004	--	<0.00010	--	<0.00010	--	<0.00010
trans-1,3-Dichloropropene	mg/l	--	--	--	<0.0002	--	<0.00020	--	<0.00020	--	<0.00020
Trichloroethene	mg/l	0.005	--	--	<0.0003	--	0.00013	--	0.00017	--	<0.00010
Trichlorofluoromethane	mg/l	--	--	--	<0.0005	--	<0.00020	--	<0.00020	--	<0.00020
Vinyl Chloride	mg/l	0.001	--	--	<0.0002	--	<0.00020	--	<0.00020	--	<0.00020
Xylenes, Total	mg/l	0.09	0.02	--	<0.0010	--	<0.00010	--	<0.00010	--	<0.00010

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7
				26-May-2015	30-Nov-2015	14-Jun-2016	29-Nov-2016	01-Jun-2017	22-Nov-2017	28-Jun-2018	26-Nov-2018
				OMM-7	7	OMM-7	OMM-7	OMM7	OMM-7	OMM-7	OMM-7
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	<0.0050	--	<0.0050	--	<0.0050	--	<0.0050
Naphthalene	mg/l	--	--	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
1,1,1-Trichloroethane	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
1,1,2-Trichloroethane	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
1,1-Dichloroethane	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
1,1-Dichloroethylene	mg/l	0.014	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
1,2,4-Trichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	<0.0002	--	<0.0002	--	<0.0002	--	<0.0002
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
1,2-Dichloroethane	mg/l	0.005	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
1,2-Dichloroethene	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
1,2-Dichloropropane	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
1,3,5-Trimethylbenzene	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
1,3-Dichlorobenzene	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
1,3-Dichloropropene, Total	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Methyl Ethyl Ketone	mg/l	--	--	--	<0.0050	--	<0.0050	--	<0.0050	--	<0.0050
2-Hexanone	mg/l	--	--	--	<0.0100	--	<0.0100	--	<0.0100	--	<0.0100
Acetone	mg/l	--	--	--	<0.0050	--	<0.0050	--	<0.0050	--	<0.0050
Benzene	mg/l	0.001	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Bromodichloromethane	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Bromoform	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Bromomethane	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Carbon Tetrachloride	mg/l	0.002	--	--	<0.0002	--	<0.0002	--	<0.0002	--	<0.0002
Chlorobenzene	mg/l	0.08	0.03	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Chloroethane	mg/l	--	--	--	<0.0010	--	<0.0010	--	<0.0010	--	<0.0010
Chloroform	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Chloromethane	mg/l	--	--	--	<0.0030	--	<0.0030	--	<0.0030	--	<0.0030
cis-1,2-Dichloroethene	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Dibromochloromethane	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Dichlorodifluoromethane	mg/l	--	--	--	<0.0010	--	<0.0010	--	<0.0010	--	<0.0010
Ethylbenzene	mg/l	0.14	0.0016	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
m,p-Xylenes	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	<0.0020	--	<0.0020	--	<0.0020	--	<0.0020
Methylene Chloride	mg/l	0.05	--	--	<0.0050	--	<0.0050	--	<0.0050	--	<0.0050
n-Hexane	mg/l	--	--	--	<0.0010	--	<0.0010	--	<0.0010	--	<0.0010
o-Xylene	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Tetrachloroethylene	mg/l	0.01	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Toluene	mg/l	0.06	0.024	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
trans-1,2-Dichloroethene	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
trans-1,3-Dichloropropene	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Trichloroethene	mg/l	0.005	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Trichlorofluoromethane	mg/l	--	--	--	<0.0010	--	<0.0010	--	<0.0010	--	<0.0010
Vinyl Chloride	mg/l	0.001	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Xylenes, Total	mg/l	0.09	0.02	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7	OMM7
				18-Jun-2019	29-Nov-2019	04-Jun-2020	30-Nov-2020	08-Jun-2021	25-Nov-2021	20-Jun-2022	23-Nov-2022
				OMM-7	OMM7	OMM-7	OMM-7	OMM-7	OMM-7	OMM-7	OMM-7
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	<0.0050	--	<0.0050	--	<0.0050	--	<0.0050
Naphthalene	mg/l	--	--	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
1,1,1-Trichloroethane	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
1,1,2-Trichloroethane	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
1,1-Dichloroethane	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
1,1-Dichloroethylene	mg/l	0.014	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
1,2,4-Trichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	<0.0002	--	<0.0002	--	<0.0002	--	<0.0002
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
1,2-Dichloroethane	mg/l	0.005	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
1,2-Dichloroethene	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
1,2-Dichloropropane	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
1,3,5-Trimethylbenzene	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
1,3-Dichlorobenzene	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
1,3-Dichloropropene, Total	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Methyl Ethyl Ketone	mg/l	--	--	--	<0.0050	--	<0.0050	--	<0.0050	--	<0.0050
2-Hexanone	mg/l	--	--	--	<0.0100	--	<0.0100	--	<0.0100	--	<0.0100
Acetone	mg/l	--	--	--	<0.0050	--	<0.0050	--	<0.0050	--	<0.0050
Benzene	mg/l	0.001	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Bromodichloromethane	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Bromoform	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Bromomethane	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Carbon Tetrachloride	mg/l	0.002	--	--	<0.0002	--	<0.0002	--	<0.0002	--	<0.0002
Chlorobenzene	mg/l	0.08	0.03	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Chloroethane	mg/l	--	--	--	<0.0010	--	<0.0010	--	<0.0010	--	<0.0010
Chloroform	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Chloromethane	mg/l	--	--	--	<0.0030	--	<0.0030	--	<0.0030	--	<0.0030
cis-1,2-Dichloroethene	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Dibromochloromethane	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Dichlorodifluoromethane	mg/l	--	--	--	<0.0010	--	<0.0010	--	<0.0010	--	<0.0010
Ethylbenzene	mg/l	0.14	0.0016	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
m,p-Xylenes	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	<0.0020	--	<0.0020	--	<0.0020	--	<0.0020
Methylene Chloride	mg/l	0.05	--	--	<0.0050	--	<0.0050	--	<0.0050	--	<0.0050
n-Hexane	mg/l	--	--	--	<0.0010	--	<0.0010	--	<0.0010	--	<0.0010
o-Xylene	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Tetrachloroethylene	mg/l	0.01	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Toluene	mg/l	0.06	0.024	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
trans-1,2-Dichloroethene	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
trans-1,3-Dichloropropene	mg/l	--	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Trichloroethene	mg/l	0.005	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Trichlorofluoromethane	mg/l	--	--	--	<0.0010	--	<0.0010	--	<0.0010	--	<0.0010
Vinyl Chloride	mg/l	0.001	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005
Xylenes, Total	mg/l	0.09	0.02	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM7	OMM7	OMM7	OMM7	OMM7
				10-May-2023	29-Nov-2023	06-Dec-2023	25-Apr-2024	23-Oct-2024
				OMM-7	OMM-7	OMM-7	OMM - 7	OMM7
Semi-VOCs								
4-Methyl-2-pentanone	mg/l	--	--	--	--	<0.0050	--	<0.0050
Naphthalene	mg/l	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	--	<0.0005	--	<0.0005
VOCs								
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	<0.0005	--	<0.0005
1,1,1-Trichloroethane	mg/l	--	--	--	--	<0.0005	--	<0.0005
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	<0.0005	--	<0.0005
1,1,2-Trichloroethane	mg/l	--	--	--	--	<0.0005	--	<0.0005
1,1-Dichloroethane	mg/l	--	--	--	--	<0.0005	--	<0.0005
1,1-Dichloroethylene	mg/l	0.014	--	--	--	<0.0005	--	<0.0005
1,2,4-Trichlorobenzene	mg/l	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	--	<0.0002	--	<0.0002
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	<0.0005	--	<0.0005
1,2-Dichloroethane	mg/l	0.005	--	--	--	<0.0005	--	<0.0005
1,2-Dichloroethene	mg/l	--	--	--	--	<0.0005	--	<0.0005
1,2-Dichloropropane	mg/l	--	--	--	--	<0.0005	--	<0.0005
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	<0.0005	--	<0.0005
1,3-Dichlorobenzene	mg/l	--	--	--	--	<0.0005	--	<0.0005
1,3-Dichloropropene, Total	mg/l	--	--	--	--	<0.0005	--	<0.0005
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	<0.0005	--	<0.0005
Methyl Ethyl Ketone	mg/l	--	--	--	--	<0.0050	--	<0.0050
2-Hexanone	mg/l	--	--	--	--	<0.0100	--	<0.0100
Acetone	mg/l	--	--	--	--	<0.0050	--	<0.0050
Benzene	mg/l	0.001	--	--	--	<0.0005	--	<0.0005
Bromodichloromethane	mg/l	--	--	--	--	<0.0005	--	<0.0005
Bromoform	mg/l	--	--	--	--	<0.0005	--	<0.0005
Bromomethane	mg/l	--	--	--	--	<0.0005	--	<0.0005
Carbon Tetrachloride	mg/l	0.002	--	--	--	<0.0002	--	<0.0002
Chlorobenzene	mg/l	0.08	0.03	--	--	<0.0005	--	<0.0005
Chloroethane	mg/l	--	--	--	--	<0.0010	--	<0.0010
Chloroform	mg/l	--	--	--	--	<0.0005	--	<0.0005
Chloromethane	mg/l	--	--	--	--	<0.0030	--	<0.0030
cis-1,2-Dichloroethene	mg/l	--	--	--	--	<0.0005	--	<0.0005
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	<0.0005	--	<0.0005
Dibromochloromethane	mg/l	--	--	--	--	<0.0005	--	<0.0005
Dichlorodifluoromethane	mg/l	--	--	--	--	<0.0010	--	<0.0010
Ethylbenzene	mg/l	0.14	0.0016	--	--	<0.0005	--	<0.0005
m,p-Xylenes	mg/l	--	--	--	--	<0.0005	--	<0.0005
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	<0.0020	--	<0.0020
Methylene Chloride	mg/l	0.05	--	--	--	<0.0050	--	<0.0050
n-Hexane	mg/l	--	--	--	--	<0.0010	--	<0.0010
o-Xylene	mg/l	--	--	--	--	<0.0005	--	<0.0005
Tetrachloroethylene	mg/l	0.01	--	--	--	<0.0005	--	<0.0005
Toluene	mg/l	0.06	0.024	--	--	<0.0005	--	<0.0005
trans-1,2-Dichloroethene	mg/l	--	--	--	--	<0.0005	--	<0.0005
trans-1,3-Dichloropropene	mg/l	--	--	--	--	<0.0005	--	<0.0005
Trichloroethene	mg/l	0.005	--	--	--	<0.0005	--	<0.0005
Trichlorofluoromethane	mg/l	--	--	--	--	<0.0010	--	<0.0010
Vinyl Chloride	mg/l	0.001	--	--	--	<0.0005	--	<0.0005
Xylenes, Total	mg/l	0.09	0.02	--	--	<0.0005	--	<0.0005

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8
				01-Jan-1990	01-Dec-1990	01-Nov-1991	01-Jun-1992	01-Dec-1992	01-Sep-1993	01-May-1994	01-Nov-1994
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/l	--	--	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	--	--	--	--	--	--	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethylene	mg/l	0.014	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	--	--	--	--	--	--
1,2-Dichloroethane	mg/l	0.005	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	--	--	--	--	--	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	--	--	--	--	--	--	--	--
Bromodichloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Bromoform	mg/l	--	--	--	--	--	--	--	--	--	--
Bromomethane	mg/l	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	mg/l	0.002	--	--	--	--	--	--	--	--	--
Chlorobenzene	mg/l	0.08	0.03	--	--	--	--	--	--	--	--
Chloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
Chloroform	mg/l	--	--	--	--	--	--	--	--	--	--
Chloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	--	--	--	--	--	--	--
m,p-Xylenes	mg/l	--	--	--	--	--	--	--	--	--	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	--	--	--	--	--	--	--	--
n-Hexane	mg/l	--	--	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	--	--	--	--	--	--	--	--
Tetrachloroethylene	mg/l	0.01	--	--	--	--	--	--	--	--	--
Toluene	mg/l	0.06	0.024	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Trichloroethene	mg/l	0.005	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	mg/l	0.001	--	--	--	--	--	--	--	--	--
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8
				01-Jun-1995	12-Jun-1996	26-Nov-1996	01-Jun-1997	01-Nov-1997	01-Jun-1998	01-Nov-1998	01-Aug-1999
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/l	--	--	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	--	--	--	--	--	--	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethylene	mg/l	0.014	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	--	--	--	--	--	--
1,2-Dichloroethane	mg/l	0.005	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	--	--	--	--	--	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	--	--	--	--	--	--	--	--
Bromodichloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Bromoform	mg/l	--	--	--	--	--	--	--	--	--	--
Bromomethane	mg/l	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	mg/l	0.002	--	--	--	--	--	--	--	--	--
Chlorobenzene	mg/l	0.08	0.03	--	--	--	--	--	--	--	--
Chloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
Chloroform	mg/l	--	--	--	--	--	--	--	--	--	--
Chloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	--	--	--	--	--	--	--
m,p-Xylenes	mg/l	--	--	--	--	--	--	--	--	--	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	--	--	--	--	--	--	--	--
n-Hexane	mg/l	--	--	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	--	--	--	--	--	--	--	--
Tetrachloroethylene	mg/l	0.01	--	--	--	--	--	--	--	--	--
Toluene	mg/l	0.06	0.024	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Trichloroethene	mg/l	0.005	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	mg/l	0.001	--	--	--	--	--	--	--	--	--
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8
				01-Nov-1999	01-Jun-2000	01-Nov-2000	01-Jul-2001	01-Nov-2001	01-Jul-2002	01-Nov-2002	10-Jul-2003
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/l	--	--	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	--	--	--	--	--	--	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,1-Dichloroethylene	mg/l	0.014	--	--	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	--	--	--	--	--	--
1,2-Dichloroethane	mg/l	0.005	--	--	--	--	--	--	--	--	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	--	--	--	--	--	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	--	--	--	--	--	--	--	--
Bromodichloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Bromoform	mg/l	--	--	--	--	--	--	--	--	--	--
Bromomethane	mg/l	--	--	--	--	--	--	--	--	--	--
Carbon Tetrachloride	mg/l	0.002	--	--	--	--	--	--	--	--	--
Chlorobenzene	mg/l	0.08	0.03	--	--	--	--	--	--	--	--
Chloroethane	mg/l	--	--	--	--	--	--	--	--	--	--
Chloroform	mg/l	--	--	--	--	--	--	--	--	--	--
Chloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	--	--	--	--	--	--	--
m,p-Xylenes	mg/l	--	--	--	--	--	--	--	--	--	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	--	--	--	--	--	--	--	--
n-Hexane	mg/l	--	--	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	--	--	--	--	--	--	--	--
Tetrachloroethylene	mg/l	0.01	--	--	--	--	--	--	--	--	--
Toluene	mg/l	0.06	0.024	--	--	--	--	--	--	--	--
trans-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
Trichloroethene	mg/l	0.005	--	--	--	--	--	--	--	--	--
Trichlorofluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Vinyl Chloride	mg/l	0.001	--	--	--	--	--	--	--	--	--
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8
				27-Dec-2003	26-Aug-2004	22-Dec-2004	21-Jun-2005	09-Dec-2005	30-Jun-2006	28-Nov-2006	29-Jun-2007
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/l	--	--	--	--	--	<0.0007	--	--	--	--
Styrene	mg/l	--	--	--	--	--	<0.0006	--	--	<0.0005	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	--	<0.0001	--	--	<0.0005	--
1,1,1-Trichloroethane	mg/l	--	--	--	--	--	<0.0001	--	--	<0.0004	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	--	<0.0004	--	--	<0.0005	--
1,1,2-Trichloroethane	mg/l	--	--	--	--	--	<0.0001	--	--	<0.0004	--
1,1-Dichloroethane	mg/l	--	--	--	--	--	<0.0001	--	--	<0.0004	--
1,1-Dichloroethylene	mg/l	0.014	--	--	--	--	<0.0001	--	--	<0.0005	--
1,2,4-Trichlorobenzene	mg/l	--	--	--	--	--	<0.0002	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	--	--	<0.0001	--	--	<0.001	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	--	<0.0001	--	--	<0.0004	--
1,2-Dichloroethane	mg/l	0.005	--	--	--	--	<0.0001	--	--	<0.0005	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--	--	<0.0001	--	--	<0.0005	--
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	--	--	--	<0.0003	--
1,3-Dichlorobenzene	mg/l	--	--	--	--	--	<0.0001	--	--	<0.0004	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	--	<0.0002	--	--	<0.0004	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	--	--	--	<0.0005	--	--	<0.0005	--
Bromodichloromethane	mg/l	--	--	--	--	--	<0.0001	--	--	<0.0003	--
Bromoform	mg/l	--	--	--	--	--	<0.0001	--	--	<0.0004	--
Bromomethane	mg/l	--	--	--	--	--	<0.002	--	--	<0.0005	--
Carbon Tetrachloride	mg/l	0.002	--	--	--	--	<0.0002	--	--	<0.0005	--
Chlorobenzene	mg/l	0.08	0.03	--	--	--	<0.0002	--	--	<0.0002	--
Chloroethane	mg/l	--	--	--	--	--	--	--	--	<0.001	--
Chloroform	mg/l	--	--	--	--	--	<0.0003	--	--	<0.0005	--
Chloromethane	mg/l	--	--	--	--	--	--	--	--	<0.001	--
cis-1,2-Dichloroethene	mg/l	--	--	--	--	--	<0.0001	--	--	<0.0004	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	<0.0001	--	--	<0.0002	--
Dibromochloromethane	mg/l	--	--	--	--	--	<0.0001	--	--	<0.0003	--
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	--	--	<0.0005	--	--	<0.0005	--
m,p-Xylenes	mg/l	--	--	--	--	--	<0.001	--	--	<0.001	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	--	--	--	<0.0003	--	--	<0.004	--
n-Hexane	mg/l	--	--	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	--	--	--	<0.0005	--	--	<0.0005	--
Tetrachloroethylene	mg/l	0.01	--	--	--	--	<0.0002	--	--	0.0004	--
Toluene	mg/l	0.06	0.024	--	--	--	<0.0005	--	--	<0.0005	--
trans-1,2-Dichloroethene	mg/l	--	--	--	--	--	<0.0001	--	--	<0.0004	--
trans-1,3-Dichloropropene	mg/l	--	--	--	--	--	<0.0001	--	--	<0.0002	--
Trichloroethene	mg/l	0.005	--	--	--	--	<0.0001	--	--	<0.0003	--
Trichlorofluoromethane	mg/l	--	--	--	--	--	--	--	--	<0.0005	--
Vinyl Chloride	mg/l	0.001	--	--	--	--	<0.0002	--	--	<0.0002	--
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8
				26-Nov-2007	13-Jun-2008	26-Nov-2008	06-Jul-2009	08-Dec-2009	30-Jun-2010	30-Nov-2010	13-Jun-2011
						R-5	R-16	R-7	R-6	R- 4	S-7
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--	--	--
Naphthalene	mg/l	--	--	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	<0.0005	--	<0.0005	--	--	--	<0.0005	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	<0.0005	--	<0.0005	--	--	--	<0.0005	--
1,1,1-Trichloroethane	mg/l	--	--	<0.0004	--	<0.0004	--	--	--	<0.0004	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	<0.0005	--	<0.0005	--	--	--	<0.0005	--
1,1,2-Trichloroethane	mg/l	--	--	<0.0004	--	<0.0004	--	--	--	<0.0004	--
1,1-Dichloroethane	mg/l	--	--	<0.0004	--	<0.0004	--	--	--	<0.0004	--
1,1-Dichloroethylene	mg/l	0.014	--	<0.0005	--	<0.0005	--	--	--	<0.0005	--
1,2,4-Trichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	<0.001	--	<0.0010	--	--	--	<0.0010	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	<0.0004	--	<0.0004	--	--	--	<0.0004	--
1,2-Dichloroethane	mg/l	0.005	--	<0.0005	--	<0.0005	--	--	--	<0.0005	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	<0.0005	--	<0.0005	--	--	--	<0.0005	--
1,3,5-Trimethylbenzene	mg/l	--	--	<0.0003	--	<0.0003	--	--	--	<0.0003	--
1,3-Dichlorobenzene	mg/l	--	--	<0.0004	--	<0.0004	--	--	--	<0.0004	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	<0.0004	--	<0.0004	--	--	--	<0.0004	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	<0.0005	--	<0.0005	--	--	--	<0.0005	--
Bromodichloromethane	mg/l	--	--	<0.0003	--	<0.0003	--	--	--	<0.0003	--
Bromoform	mg/l	--	--	<0.0004	--	<0.0004	--	--	--	<0.0004	--
Bromomethane	mg/l	--	--	<0.0005	--	<0.0005	--	--	--	<0.0005	--
Carbon Tetrachloride	mg/l	0.002	--	<0.0005	--	<0.0005	--	--	--	<0.0005	--
Chlorobenzene	mg/l	0.08	0.03	<0.0002	--	<0.0002	--	--	--	<0.0002	--
Chloroethane	mg/l	--	--	<0.001	--	<0.0010	--	--	--	<0.0010	--
Chloroform	mg/l	--	--	<0.0005	--	<0.0005	--	--	--	<0.0005	--
Chloromethane	mg/l	--	--	<0.001	--	<0.0010	--	--	--	<0.0010	--
cis-1,2-Dichloroethene	mg/l	--	--	<0.0004	--	<0.0004	--	--	--	<0.0004	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	<0.0002	--	--	--	<0.0002	--
cis-1,3-Dichloropropene	mg/l	--	--	<0.0002	--	--	--	--	--	--	--
Dibromochloromethane	mg/l	--	--	<0.0003	--	<0.0003	--	--	--	<0.0003	--
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	<0.0005	--	<0.0005	--	--	--	<0.0005	--
m,p-Xylenes	mg/l	--	--	<0.001	--	<0.0010	--	--	--	<0.0010	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	<0.004	--	<0.0040	--	--	--	<0.0040	--
n-Hexane	mg/l	--	--	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	<0.0005	--	<0.0005	--	--	--	<0.0005	--
Tetrachloroethylene	mg/l	0.01	--	<0.0003	--	<0.0003	--	--	--	<0.0003	--
Toluene	mg/l	0.06	0.024	<0.0005	--	<0.0005	--	--	--	<0.0005	--
trans-1,2-Dichloroethene	mg/l	--	--	<0.0004	--	<0.0004	--	--	--	<0.0004	--
trans-1,3-Dichloropropene	mg/l	--	--	<0.0002	--	<0.0002	--	--	--	<0.0002	--
Trichloroethene	mg/l	0.005	--	<0.0003	--	<0.0003	--	--	--	<0.0003	--
Trichlorofluoromethane	mg/l	--	--	<0.0005	--	<0.0005	--	--	--	<0.0005	--
Vinyl Chloride	mg/l	0.001	--	<0.0002	--	<0.0002	--	--	--	<0.0002	--
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8
				29-Nov-2011	22-Jun-2012	10-Nov-2012	25-Jun-2013	20-Nov-2013	27-May-2014	25-Nov-2014	26-May-2015
				OMM-8	S-1	S-9	S-6	S-6	A-6	R-10	OMM-8
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	--	--	<0.0050	--	<0.0050	--	<0.0050	--
Naphthalene	mg/l	--	--	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	<0.0005	--	<0.00020	--	<0.00020	--	<0.00020	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	<0.0005	--	<0.00020	--	<0.00020	--	<0.00020	--
1,1,1-Trichloroethane	mg/l	--	--	<0.0004	--	<0.00010	--	<0.00010	--	<0.00010	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	<0.0005	--	<0.00020	--	<0.00020	--	<0.00020	--
1,1,2-Trichloroethane	mg/l	--	--	<0.0004	--	<0.00020	--	<0.00020	--	<0.00020	--
1,1-Dichloroethane	mg/l	--	--	<0.0004	--	<0.00010	--	<0.00010	--	<0.00010	--
1,1-Dichloroethylene	mg/l	0.014	--	<0.0005	--	<0.00010	--	<0.00010	--	<0.00010	--
1,2,4-Trichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	<0.0002	--	<0.00020	--	<0.00020	--	<0.00020	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	<0.0004	--	<0.00020	--	<0.00020	--	<0.00020	--
1,2-Dichloroethane	mg/l	0.005	--	<0.0002	--	<0.00020	--	<0.00020	--	<0.00020	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	<0.0005	--	<0.00010	--	<0.00010	--	<0.00010	--
1,3,5-Trimethylbenzene	mg/l	--	--	<0.0003	--	<0.00020	--	<0.00020	--	<0.00020	--
1,3-Dichlorobenzene	mg/l	--	--	<0.0004	--	<0.00020	--	<0.00020	--	<0.00020	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--	<0.00028	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	<0.0004	--	<0.00020	--	<0.00020	--	<0.00020	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	<0.0050	--	<0.0050	--	<0.0050	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	<0.01	--	<0.01	--	<0.01	--
Benzene	mg/l	0.001	--	<0.0005	--	<0.00010	--	<0.00010	--	<0.00010	--
Bromodichloromethane	mg/l	--	--	<0.0003	--	<0.00010	--	<0.00010	--	<0.00010	--
Bromoform	mg/l	--	--	<0.0004	--	<0.00020	--	<0.00020	--	<0.00020	--
Bromomethane	mg/l	--	--	<0.0005	--	<0.00050	--	<0.00050	--	<0.00050	--
Carbon Tetrachloride	mg/l	0.002	--	<0.0005	--	<0.00010	--	<0.00010	--	<0.00010	--
Chlorobenzene	mg/l	0.08	0.03	<0.0002	--	<0.00010	--	<0.00010	--	<0.00010	--
Chloroethane	mg/l	--	--	<0.0002	--	<0.00020	--	<0.00020	--	<0.00020	--
Chloroform	mg/l	--	--	<0.0005	--	<0.00010	--	<0.00010	--	<0.00010	--
Chloromethane	mg/l	--	--	<0.0002	--	<0.00050	--	<0.00050	--	<0.00050	--
cis-1,2-Dichloroethene	mg/l	--	--	<0.0004	--	<0.00010	--	<0.00010	--	<0.00010	--
cis-1,2-Dichloropropene	mg/l	--	--	<0.0002	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	<0.00020	--	<0.00020	--	<0.00020	--
Dibromochloromethane	mg/l	--	--	<0.0003	--	<0.00020	--	<0.00020	--	<0.00020	--
Dichlorodifluoromethane	mg/l	--	--	<0.0005	--	<0.00050	--	<0.00050	--	<0.00050	--
Ethylbenzene	mg/l	0.14	0.0016	<0.0005	--	<0.00010	--	<0.00010	--	<0.00010	--
m,p-Xylenes	mg/l	--	--	<0.0005	--	<0.00010	--	<0.00010	--	<0.00010	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	<0.00020	--	<0.00020	--	<0.00020	--
Methylene Chloride	mg/l	0.05	--	<0.0040	--	<0.00050	--	<0.00050	--	<0.00050	--
n-Hexane	mg/l	--	--	--	--	<0.00050	--	<0.00050	--	<0.00050	--
o-Xylene	mg/l	--	--	<0.0005	--	<0.00010	--	<0.00010	--	<0.00010	--
Tetrachloroethylene	mg/l	0.01	--	<0.0003	--	<0.00010	--	<0.00010	--	<0.00010	--
Toluene	mg/l	0.06	0.024	<0.0005	--	<0.00020	--	<0.00020	--	<0.00020	--
trans-1,2-Dichloroethene	mg/l	--	--	<0.0004	--	<0.00010	--	<0.00010	--	<0.00010	--
trans-1,3-Dichloropropene	mg/l	--	--	<0.0002	--	<0.00020	--	<0.00020	--	<0.00020	--
Trichloroethene	mg/l	0.005	--	<0.0003	--	<0.00010	--	<0.00010	--	<0.00010	--
Trichlorofluoromethane	mg/l	--	--	<0.0005	--	<0.00020	--	<0.00020	--	<0.00020	--
Vinyl Chloride	mg/l	0.001	--	<0.0002	--	<0.00020	--	<0.00020	--	<0.00020	--
Xylenes, Total	mg/l	0.09	0.02	<0.0010	--	<0.00010	--	<0.00010	--	<0.00010	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8
				30-Nov-2015	14-Jun-2016	29-Nov-2016	01-Jun-2017	22-Nov-2017	28-Jun-2018	26-Nov-2018	18-Jun-2019
				8	OMM-8	OMM-8	OMM8	OMM-8	OMM-8	OMM-8	OMM-8
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	<0.0050	--	<0.0050	--	<0.0050	--	<0.0050	--
Naphthalene	mg/l	--	--	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
1,1,1-Trichloroethane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
1,1,2-Trichloroethane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
1,1-Dichloroethane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
1,1-Dichloroethylene	mg/l	0.014	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
1,2,4-Trichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	<0.0002	--	<0.0002	--	<0.0002	--	<0.0002	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
1,2-Dichloroethane	mg/l	0.005	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
1,2-Dichloroethene	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
1,2-Dichloropropane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
1,3,5-Trimethylbenzene	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
1,3-Dichlorobenzene	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
1,3-Dichloropropene, Total	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
Methyl Ethyl Ketone	mg/l	--	--	<0.0050	--	<0.0050	--	<0.0050	--	<0.0050	--
2-Hexanone	mg/l	--	--	<0.0100	--	<0.0100	--	<0.0100	--	<0.0100	--
Acetone	mg/l	--	--	<0.0050	--	<0.0050	--	<0.0050	--	<0.0050	--
Benzene	mg/l	0.001	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
Bromodichloromethane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
Bromoform	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
Bromomethane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
Carbon Tetrachloride	mg/l	0.002	--	<0.0002	--	<0.0002	--	<0.0002	--	<0.0002	--
Chlorobenzene	mg/l	0.08	0.03	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
Chloroethane	mg/l	--	--	<0.0010	--	<0.0010	--	<0.0010	--	<0.0010	--
Chloroform	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
Chloromethane	mg/l	--	--	<0.0030	--	<0.0030	--	<0.0030	--	<0.0030	--
cis-1,2-Dichloroethene	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
Dibromochloromethane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
Dichlorodifluoromethane	mg/l	--	--	<0.0010	--	<0.0010	--	<0.0010	--	<0.0010	--
Ethylbenzene	mg/l	0.14	0.0016	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
m,p-Xylenes	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	<0.0020	--	<0.0020	--	<0.0020	--	<0.0020	--
Methylene Chloride	mg/l	0.05	--	<0.0050	--	<0.0050	--	<0.0050	--	<0.0050	--
n-Hexane	mg/l	--	--	<0.0010	--	<0.0010	--	<0.0010	--	<0.0010	--
o-Xylene	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
Tetrachloroethylene	mg/l	0.01	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
Toluene	mg/l	0.06	0.024	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
trans-1,2-Dichloroethene	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
trans-1,3-Dichloropropene	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
Trichloroethene	mg/l	0.005	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
Trichlorofluoromethane	mg/l	--	--	<0.0010	--	<0.0010	--	<0.0010	--	<0.0010	--
Vinyl Chloride	mg/l	0.001	--	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--
Xylenes, Total	mg/l	0.09	0.02	<0.0005	--	<0.0005	--	<0.0005	--	<0.0005	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8
				29-Nov-2019	04-Jun-2020	30-Nov-2020	08-Jun-2021	25-Nov-2021	20-Jun-2022	23-Nov-2022	23-Nov-2022
				OMM8	OMM-8	OMM-8	OMM-8	OMM-8	OMM-8	OMM8	OMM-8
Semi-VOCs											
4-Methyl-2-pentanone	mg/l	--	--	<0.0050	--	<0.0050	--	<0.0050	--	--	<0.0050
Naphthalene	mg/l	--	--	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	--	<0.0005
VOCs											
1,1,1,2-Tetrachloroethane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	--	<0.0005
1,1,1-Trichloroethane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	--	<0.0005
1,1,2,2-Tetrachloroethane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	--	<0.0005
1,1,2-Trichloroethane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	--	<0.0005
1,1-Dichloroethane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	--	<0.0005
1,1-Dichloroethylene	mg/l	0.014	--	<0.0005	--	<0.0005	--	<0.0005	--	--	<0.0005
1,2,4-Trichlorobenzene	mg/l	--	--	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	<0.0002	--	<0.0002	--	<0.0002	--	--	<0.0002
1,2-Dichlorobenzene	mg/l	0.2	0.003	<0.0005	--	<0.0005	--	<0.0005	--	--	<0.0005
1,2-Dichloroethane	mg/l	0.005	--	<0.0005	--	<0.0005	--	<0.0005	--	--	<0.0005
1,2-Dichloroethene	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	--	<0.0005
1,2-Dichloropropane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	--	<0.0005
1,3,5-Trimethylbenzene	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	--	<0.0005
1,3-Dichlorobenzene	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	--	<0.0005
1,3-Dichloropropene, Total	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	--	<0.0005
1,4-Dichlorobenzene	mg/l	0.005	0.001	<0.0005	--	<0.0005	--	<0.0005	--	--	<0.0005
Methyl Ethyl Ketone	mg/l	--	--	<0.0050	--	<0.0050	--	<0.0050	--	--	<0.0050
2-Hexanone	mg/l	--	--	<0.0100	--	<0.0100	--	<0.0100	--	--	<0.0100
Acetone	mg/l	--	--	<0.0050	--	<0.0050	--	<0.0050	--	--	<0.0050
Benzene	mg/l	0.001	--	<0.0005	--	<0.0005	--	<0.0005	--	--	<0.0005
Bromodichloromethane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	--	<0.0005
Bromoform	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	--	<0.0005
Bromomethane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	--	<0.0005
Carbon Tetrachloride	mg/l	0.002	--	<0.0002	--	<0.0002	--	<0.0002	--	--	<0.0002
Chlorobenzene	mg/l	0.08	0.03	<0.0005	--	<0.0005	--	<0.0005	--	--	<0.0005
Chloroethane	mg/l	--	--	<0.0010	--	<0.0010	--	<0.0010	--	--	<0.0010
Chloroform	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	--	<0.0005
Chloromethane	mg/l	--	--	<0.0030	--	<0.0030	--	<0.0030	--	--	<0.0030
cis-1,2-Dichloroethene	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	--	<0.0005
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	--	<0.0005
Dibromochloromethane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	--	<0.0005
Dichlorodifluoromethane	mg/l	--	--	<0.0010	--	<0.0010	--	<0.0010	--	--	<0.0010
Ethylbenzene	mg/l	0.14	0.0016	<0.0005	--	<0.0005	--	<0.0005	--	--	<0.0005
m,p-Xylenes	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	--	<0.0005
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	<0.0020	--	<0.0020	--	<0.0020	--	--	<0.0020
Methylene Chloride	mg/l	0.05	--	<0.0050	--	<0.0050	--	<0.0050	--	--	<0.0050
n-Hexane	mg/l	--	--	<0.0010	--	<0.0010	--	<0.0010	--	--	<0.0010
o-Xylene	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	--	<0.0005
Tetrachloroethylene	mg/l	0.01	--	<0.0005	--	<0.0005	--	<0.0005	--	--	<0.0005
Toluene	mg/l	0.06	0.024	<0.0005	--	<0.0005	--	<0.0005	--	--	<0.0005
trans-1,2-Dichloroethene	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	--	<0.0005
trans-1,3-Dichloropropene	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--	--	<0.0005
Trichloroethene	mg/l	0.005	--	<0.0005	--	<0.0005	--	<0.0005	--	--	<0.0005
Trichlorofluoromethane	mg/l	--	--	<0.0010	--	<0.0010	--	<0.0010	--	--	<0.0010
Vinyl Chloride	mg/l	0.001	--	<0.0005	--	<0.0005	--	<0.0005	--	--	<0.0005
Xylenes, Total	mg/l	0.09	0.02	<0.0005	--	<0.0005	--	<0.0005	--	--	<0.0005

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM8	OMM8	OMM8	OMM8	OMM8	OMM8
				23-Nov-2022	10-May-2023	29-Nov-2023	06-Dec-2023	25-Apr-2024	23-Oct-2024
				Dup-1	OMM-8	OMM-8	OMM-8	OMM - 8	OMM8
Semi-VOCs									
4-Methyl-2-pentanone	mg/l	--	--	<0.0050	--	--	<0.0050	--	<0.0050
Naphthalene	mg/l	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	<0.0005	--	--	<0.0005	--	<0.0005
VOCs									
1,1,1,2-Tetrachloroethane	mg/l	--	--	<0.0005	--	--	<0.0005	--	<0.0005
1,1,1-Trichloroethane	mg/l	--	--	<0.0005	--	--	<0.0005	--	<0.0005
1,1,2,2-Tetrachloroethane	mg/l	--	--	<0.0005	--	--	<0.0005	--	<0.0005
1,1,2-Trichloroethane	mg/l	--	--	<0.0005	--	--	<0.0005	--	<0.0005
1,1-Dichloroethane	mg/l	--	--	<0.0005	--	--	<0.0005	--	<0.0005
1,1-Dichloroethylene	mg/l	0.014	--	<0.0005	--	--	<0.0005	--	<0.0005
1,2,4-Trichlorobenzene	mg/l	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	<0.0002	--	--	<0.0002	--	<0.0002
1,2-Dichlorobenzene	mg/l	0.2	0.003	<0.0005	--	--	<0.0005	--	<0.0005
1,2-Dichloroethane	mg/l	0.005	--	<0.0005	--	--	<0.0005	--	<0.0005
1,2-Dichloroethene	mg/l	--	--	<0.0005	--	--	<0.0005	--	<0.0005
1,2-Dichloropropane	mg/l	--	--	<0.0005	--	--	<0.0005	--	<0.0005
1,3,5-Trimethylbenzene	mg/l	--	--	<0.0005	--	--	<0.0005	--	<0.0005
1,3-Dichlorobenzene	mg/l	--	--	<0.0005	--	--	<0.0005	--	<0.0005
1,3-Dichloropropene, Total	mg/l	--	--	<0.0005	--	--	<0.0005	--	<0.0005
1,4-Dichlorobenzene	mg/l	0.005	0.001	<0.0005	--	--	<0.0005	--	<0.0005
Methyl Ethyl Ketone	mg/l	--	--	<0.0050	--	--	<0.0050	--	<0.0050
2-Hexanone	mg/l	--	--	<0.0100	--	--	<0.0100	--	<0.0100
Acetone	mg/l	--	--	<0.0050	--	--	<0.0050	--	<0.0050
Benzene	mg/l	0.001	--	<0.0005	--	--	<0.0005	--	<0.0005
Bromodichloromethane	mg/l	--	--	<0.0005	--	--	<0.0005	--	<0.0005
Bromoform	mg/l	--	--	<0.0005	--	--	<0.0005	--	<0.0005
Bromomethane	mg/l	--	--	<0.0005	--	--	<0.0005	--	<0.0005
Carbon Tetrachloride	mg/l	0.002	--	<0.0002	--	--	<0.0002	--	<0.0002
Chlorobenzene	mg/l	0.08	0.03	<0.0005	--	--	<0.0005	--	<0.0005
Chloroethane	mg/l	--	--	<0.0010	--	--	<0.0010	--	<0.0010
Chloroform	mg/l	--	--	<0.0005	--	--	<0.0005	--	<0.0005
Chloromethane	mg/l	--	--	<0.0030	--	--	<0.0030	--	<0.0030
cis-1,2-Dichloroethene	mg/l	--	--	<0.0005	--	--	<0.0005	--	<0.0005
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	<0.0005	--	--	<0.0005	--	<0.0005
Dibromochloromethane	mg/l	--	--	<0.0005	--	--	<0.0005	--	<0.0005
Dichlorodifluoromethane	mg/l	--	--	<0.0010	--	--	<0.0010	--	<0.0010
Ethylbenzene	mg/l	0.14	0.0016	<0.0005	--	--	<0.0005	--	<0.0005
m,p-Xylenes	mg/l	--	--	<0.0005	--	--	<0.0005	--	<0.0005
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	<0.0020	--	--	<0.0020	--	<0.0020
Methylene Chloride	mg/l	0.05	--	<0.0050	--	--	<0.0050	--	<0.0050
n-Hexane	mg/l	--	--	<0.0010	--	--	<0.0010	--	<0.0010
o-Xylene	mg/l	--	--	<0.0005	--	--	<0.0005	--	<0.0005
Tetrachloroethylene	mg/l	0.01	--	<0.0005	--	--	<0.0005	--	<0.0005
Toluene	mg/l	0.06	0.024	<0.0005	--	--	<0.0005	--	<0.0005
trans-1,2-Dichloroethene	mg/l	--	--	<0.0005	--	--	<0.0005	--	<0.0005
trans-1,3-Dichloropropene	mg/l	--	--	<0.0005	--	--	<0.0005	--	<0.0005
Trichloroethene	mg/l	0.005	--	<0.0005	--	--	<0.0005	--	<0.0005
Trichlorofluoromethane	mg/l	--	--	<0.0010	--	--	<0.0010	--	<0.0010
Vinyl Chloride	mg/l	0.001	--	<0.0005	--	--	<0.0005	--	<0.0005
Xylenes, Total	mg/l	0.09	0.02	<0.0005	--	--	<0.0005	--	<0.0005

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM9	OMM9	OMM9	OMM9	OMM9	OMM9
				01-Jan-1990	01-Nov-1990	01-Dec-1990	01-Jun-1992	01-Dec-1992	01-Sep-1993
Semi-VOCs									
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--
Naphthalene	mg/l	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	--	--	--	--	--
VOCs									
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	mg/l	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	mg/l	--	--	--	--	--	--	--	--
1,1-Dichloroethane	mg/l	--	--	--	--	--	--	--	--
1,1-Dichloroethylene	mg/l	0.014	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	mg/l	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	--	--	--	--
1,2-Dichloroethane	mg/l	0.005	--	--	--	--	--	--	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	mg/l	--	--	--	--	--	--	--	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	--	--	--	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	--	--	--	--	--	--
Bromodichloromethane	mg/l	--	--	--	--	--	--	--	--
Bromoform	mg/l	--	--	--	--	--	--	--	--
Bromomethane	mg/l	--	--	--	--	--	--	--	--
Carbon Tetrachloride	mg/l	0.002	--	--	--	--	--	--	--
Chlorobenzene	mg/l	0.08	0.03	--	--	--	--	--	--
Chloroethane	mg/l	--	--	--	--	--	--	--	--
Chloroform	mg/l	--	--	--	--	--	--	--	--
Chloromethane	mg/l	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM9	OMM9	OMM9	OMM9	OMM9	OMM9
				01-Jan-1990	01-Nov-1990	01-Dec-1990	01-Jun-1992	01-Dec-1992	01-Sep-1993
cis-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/l	--	--	--	--	--	--	--	--
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	--	--	--	--	--
m,p-Xylenes	mg/l	--	--	--	--	--	--	--	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	--	--	--	--	--	--
n-Hexane	mg/l	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	--	--	--	--	--	--
Tetrachloroethylene	mg/l	0.01	--	--	--	--	--	--	--
Toluene	mg/l	0.06	0.024	--	--	--	--	--	--
trans-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--
Trichloroethene	mg/l	0.005	--	--	--	--	--	--	--
Trichlorofluoromethane	mg/l	--	--	--	--	--	--	--	--
Vinyl Chloride	mg/l	0.001	--	--	--	--	--	--	--
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM9	OMM9
				01-May-1994	01-Nov-1994
Semi-VOCs					
4-Methyl-2-pentanone	mg/l	--	--	--	--
Naphthalene	mg/l	--	--	--	--
Styrene	mg/l	--	--	--	--
VOCs					
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--
1,1,1-Trichloroethane	mg/l	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--
1,1,2-Trichloroethane	mg/l	--	--	--	--
1,1-Dichloroethane	mg/l	--	--	--	--
1,1-Dichloroethylene	mg/l	0.014	--	--	--
1,2,4-Trichlorobenzene	mg/l	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--
1,2-Dichloroethane	mg/l	0.005	--	--	--
1,2-Dichloroethene	mg/l	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--
1,3,5-Trimethylbenzene	mg/l	--	--	--	--
1,3-Dichlorobenzene	mg/l	--	--	--	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--
Methyl Ethyl Ketone	mg/l	--	--	--	--
2-Hexanone	mg/l	--	--	--	--
Acetone	mg/l	--	--	--	--
Benzene	mg/l	0.001	--	--	--
Bromodichloromethane	mg/l	--	--	--	--
Bromoform	mg/l	--	--	--	--
Bromomethane	mg/l	--	--	--	--
Carbon Tetrachloride	mg/l	0.002	--	--	--
Chlorobenzene	mg/l	0.08	0.03	--	--
Chloroethane	mg/l	--	--	--	--
Chloroform	mg/l	--	--	--	--
Chloromethane	mg/l	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM9	OMM9
				01-May-1994	01-Nov-1994
cis-1,2-Dichloroethene	mg/l	--	--	--	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--
Dibromochloromethane	mg/l	--	--	--	--
Dichlorodifluoromethane	mg/l	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	--
m,p-Xylenes	mg/l	--	--	--	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--
Methylene Chloride	mg/l	0.05	--	--	--
n-Hexane	mg/l	--	--	--	--
o-Xylene	mg/l	--	--	--	--
Tetrachloroethylene	mg/l	0.01	--	--	--
Toluene	mg/l	0.06	0.024	--	--
trans-1,2-Dichloroethene	mg/l	--	--	--	--
trans-1,3-Dichloropropene	mg/l	--	--	--	--
Trichloroethene	mg/l	0.005	--	--	--
Trichlorofluoromethane	mg/l	--	--	--	--
Vinyl Chloride	mg/l	0.001	--	--	--
Xylenes, Total	mg/l	0.09	0.02	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM9	OMM9	OMM9	OMM9	OMM9	OMM9
				01-Jun-1995	12-Jun-1996	26-Nov-1996	01-Jun-1997	01-Nov-1997	01-Jun-1998
Semi-VOCs									
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--
Naphthalene	mg/l	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	--	--	--	--	--
VOCs									
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	mg/l	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	mg/l	--	--	--	--	--	--	--	--
1,1-Dichloroethane	mg/l	--	--	--	--	--	--	--	--
1,1-Dichloroethylene	mg/l	0.014	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	mg/l	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	--	--	--	--
1,2-Dichloroethane	mg/l	0.005	--	--	--	--	--	--	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	mg/l	--	--	--	--	--	--	--	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	--	--	--	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	--	--	--	--	--	--
Bromodichloromethane	mg/l	--	--	--	--	--	--	--	--
Bromoform	mg/l	--	--	--	--	--	--	--	--
Bromomethane	mg/l	--	--	--	--	--	--	--	--
Carbon Tetrachloride	mg/l	0.002	--	--	--	--	--	--	--
Chlorobenzene	mg/l	0.08	0.03	--	--	--	--	--	--
Chloroethane	mg/l	--	--	--	--	--	--	--	--
Chloroform	mg/l	--	--	--	--	--	--	--	--
Chloromethane	mg/l	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM9	OMM9	OMM9	OMM9	OMM9	OMM9
				01-Jun-1995	12-Jun-1996	26-Nov-1996	01-Jun-1997	01-Nov-1997	01-Jun-1998
cis-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/l	--	--	--	--	--	--	--	--
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	--	--	--	--	--
m,p-Xylenes	mg/l	--	--	--	--	--	--	--	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	--	--	--	--	--	--
n-Hexane	mg/l	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	--	--	--	--	--	--
Tetrachloroethylene	mg/l	0.01	--	--	--	--	--	--	--
Toluene	mg/l	0.06	0.024	--	--	--	--	--	--
trans-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--
Trichloroethene	mg/l	0.005	--	--	--	--	--	--	--
Trichlorofluoromethane	mg/l	--	--	--	--	--	--	--	--
Vinyl Chloride	mg/l	0.001	--	--	--	--	--	--	--
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM9 01-Nov-1998	OMM9 01-Aug-1999
Semi-VOCs					
4-Methyl-2-pentanone	mg/l	--	--	--	--
Naphthalene	mg/l	--	--	--	--
Styrene	mg/l	--	--	--	--
VOCs					
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--
1,1,1-Trichloroethane	mg/l	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--
1,1,2-Trichloroethane	mg/l	--	--	--	--
1,1-Dichloroethane	mg/l	--	--	--	--
1,1-Dichloroethylene	mg/l	0.014	--	--	--
1,2,4-Trichlorobenzene	mg/l	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--
1,2-Dichloroethane	mg/l	0.005	--	--	--
1,2-Dichloroethene	mg/l	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--
1,3,5-Trimethylbenzene	mg/l	--	--	--	--
1,3-Dichlorobenzene	mg/l	--	--	--	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--
Methyl Ethyl Ketone	mg/l	--	--	--	--
2-Hexanone	mg/l	--	--	--	--
Acetone	mg/l	--	--	--	--
Benzene	mg/l	0.001	--	--	--
Bromodichloromethane	mg/l	--	--	--	--
Bromoform	mg/l	--	--	--	--
Bromomethane	mg/l	--	--	--	--
Carbon Tetrachloride	mg/l	0.002	--	--	--
Chlorobenzene	mg/l	0.08	0.03	--	--
Chloroethane	mg/l	--	--	--	--
Chloroform	mg/l	--	--	--	--
Chloromethane	mg/l	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM9 01-Nov-1998	OMM9 01-Aug-1999
cis-1,2-Dichloroethene	mg/l	--	--	--	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--
Dibromochloromethane	mg/l	--	--	--	--
Dichlorodifluoromethane	mg/l	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	--
m,p-Xylenes	mg/l	--	--	--	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--
Methylene Chloride	mg/l	0.05	--	--	--
n-Hexane	mg/l	--	--	--	--
o-Xylene	mg/l	--	--	--	--
Tetrachloroethylene	mg/l	0.01	--	--	--
Toluene	mg/l	0.06	0.024	--	--
trans-1,2-Dichloroethene	mg/l	--	--	--	--
trans-1,3-Dichloropropene	mg/l	--	--	--	--
Trichloroethene	mg/l	0.005	--	--	--
Trichlorofluoromethane	mg/l	--	--	--	--
Vinyl Chloride	mg/l	0.001	--	--	--
Xylenes, Total	mg/l	0.09	0.02	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM9	OMM9	OMM9	OMM9	OMM9	OMM9
				01-Nov-1999	01-Jun-2000	01-Nov-2000	01-Jul-2001	01-Nov-2001	01-Jul-2002
Semi-VOCs									
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--
Naphthalene	mg/l	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	--	--	--	--	--
VOCs									
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	mg/l	--	--	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	mg/l	--	--	--	--	--	--	--	--
1,1-Dichloroethane	mg/l	--	--	--	--	--	--	--	--
1,1-Dichloroethylene	mg/l	0.014	--	--	--	--	--	--	--
1,2,4-Trichlorobenzene	mg/l	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	--	--	--	--	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	--	--	--	--
1,2-Dichloroethane	mg/l	0.005	--	--	--	--	--	--	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--	--	--	--	--
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	mg/l	--	--	--	--	--	--	--	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	--	--	--	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	--	--	--	--	--	--
Bromodichloromethane	mg/l	--	--	--	--	--	--	--	--
Bromoform	mg/l	--	--	--	--	--	--	--	--
Bromomethane	mg/l	--	--	--	--	--	--	--	--
Carbon Tetrachloride	mg/l	0.002	--	--	--	--	--	--	--
Chlorobenzene	mg/l	0.08	0.03	--	--	--	--	--	--
Chloroethane	mg/l	--	--	--	--	--	--	--	--
Chloroform	mg/l	--	--	--	--	--	--	--	--
Chloromethane	mg/l	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM9	OMM9	OMM9	OMM9	OMM9	OMM9
				01-Nov-1999	01-Jun-2000	01-Nov-2000	01-Jul-2001	01-Nov-2001	01-Jul-2002
cis-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/l	--	--	--	--	--	--	--	--
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	--	--	--	--	--
m,p-Xylenes	mg/l	--	--	--	--	--	--	--	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	--	--	--	--	--	--
n-Hexane	mg/l	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	--	--	--	--	--	--
Tetrachloroethylene	mg/l	0.01	--	--	--	--	--	--	--
Toluene	mg/l	0.06	0.024	--	--	--	--	--	--
trans-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--
trans-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--
Trichloroethene	mg/l	0.005	--	--	--	--	--	--	--
Trichlorofluoromethane	mg/l	--	--	--	--	--	--	--	--
Vinyl Chloride	mg/l	0.001	--	--	--	--	--	--	--
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM9	OMM9	OMM9	OMM9	OMM9	OMM9
				01-Nov-2002	10-Jul-2003	27-Dec-2003	26-Aug-2004	22-Dec-2004	21-Jun-2005
Semi-VOCs									
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--
Naphthalene	mg/l	--	--	--	--	--	--	--	<0.0007
Styrene	mg/l	--	--	--	--	--	--	--	<0.0006
VOCs									
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	<0.0001
1,1,1-Trichloroethane	mg/l	--	--	--	--	--	--	--	<0.0001
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	--	--	--	<0.0004
1,1,2-Trichloroethane	mg/l	--	--	--	--	--	--	--	<0.0001
1,1-Dichloroethane	mg/l	--	--	--	--	--	--	--	<0.0001
1,1-Dichloroethylene	mg/l	0.014	--	--	--	--	--	--	<0.0001
1,2,4-Trichlorobenzene	mg/l	--	--	--	--	--	--	--	<0.0002
1,2-Dibromoethane	mg/l	--	--	--	--	--	--	--	<0.0001
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	--	--	--	<0.0001
1,2-Dichloroethane	mg/l	0.005	--	--	--	--	--	--	<0.0001
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--	--	--	--	<0.0001
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	--	--	--	--
1,3-Dichlorobenzene	mg/l	--	--	--	--	--	--	--	<0.0001
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	--	--	--	<0.0002
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	--	--	--	--	--	<0.0005
Bromodichloromethane	mg/l	--	--	--	--	--	--	--	<0.0001
Bromoform	mg/l	--	--	--	--	--	--	--	<0.0001
Bromomethane	mg/l	--	--	--	--	--	--	--	<0.002
Carbon Tetrachloride	mg/l	0.002	--	--	--	--	--	--	<0.0002
Chlorobenzene	mg/l	0.08	0.03	--	--	--	--	--	<0.0002
Chloroethane	mg/l	--	--	--	--	--	--	--	--
Chloroform	mg/l	--	--	--	--	--	--	--	<0.0003
Chloromethane	mg/l	--	--	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM9	OMM9	OMM9	OMM9	OMM9	OMM9
				01-Nov-2002	10-Jul-2003	27-Dec-2003	26-Aug-2004	22-Dec-2004	21-Jun-2005
cis-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	<0.0001
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	<0.0001
Dibromochloromethane	mg/l	--	--	--	--	--	--	--	<0.0001
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	--	--	--	--	<0.0005
m,p-Xylenes	mg/l	--	--	--	--	--	--	--	<0.001
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	--	--	--	--	--	<0.0003
n-Hexane	mg/l	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	--	--	--	--	--	<0.0005
Tetrachloroethylene	mg/l	0.01	--	--	--	--	--	--	<0.0002
Toluene	mg/l	0.06	0.024	--	--	--	--	--	<0.0005
trans-1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	<0.0001
trans-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	<0.0001
Trichloroethene	mg/l	0.005	--	--	--	--	--	--	<0.0001
Trichlorofluoromethane	mg/l	--	--	--	--	--	--	--	--
Vinyl Chloride	mg/l	0.001	--	--	--	--	--	--	<0.0002
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM9	OMM9	OMM9	OMM9	OMM9	OMM9
				10-Dec-2005	30-Jun-2006	28-Nov-2006	29-Jun-2007	28-Nov-2007	13-Jun-2008
Semi-VOCs									
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--
Naphthalene	mg/l	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	--	--	<0.0005	--	<0.0005	--
VOCs									
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	--	<0.0005	--	<0.0005	--
1,1,1-Trichloroethane	mg/l	--	--	--	--	<0.0004	--	<0.0004	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	--	<0.0005	--	<0.0005	--
1,1,2-Trichloroethane	mg/l	--	--	--	--	<0.0004	--	<0.0004	--
1,1-Dichloroethane	mg/l	--	--	--	--	<0.0004	--	<0.0004	--
1,1-Dichloroethylene	mg/l	0.014	--	--	--	<0.0005	--	<0.0005	--
1,2,4-Trichlorobenzene	mg/l	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	--	<0.001	--	<0.001	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	--	<0.0004	--	<0.0004	--
1,2-Dichloroethane	mg/l	0.005	--	--	--	<0.0005	--	<0.0005	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	--	--	<0.0005	--	<0.0005	--
1,3,5-Trimethylbenzene	mg/l	--	--	--	--	<0.0003	--	<0.0003	--
1,3-Dichlorobenzene	mg/l	--	--	--	--	<0.0004	--	<0.0004	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	--	<0.0004	--	<0.0004	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	--	--	<0.0005	--	<0.0005	--
Bromodichloromethane	mg/l	--	--	--	--	<0.0003	--	<0.0003	--
Bromoform	mg/l	--	--	--	--	<0.0004	--	<0.0004	--
Bromomethane	mg/l	--	--	--	--	<0.0005	--	<0.0005	--
Carbon Tetrachloride	mg/l	0.002	--	--	--	<0.0005	--	<0.0005	--
Chlorobenzene	mg/l	0.08	0.03	--	--	<0.0002	--	<0.0002	--
Chloroethane	mg/l	--	--	--	--	<0.001	--	<0.001	--
Chloroform	mg/l	--	--	--	--	<0.0005	--	<0.0005	--
Chloromethane	mg/l	--	--	--	--	<0.001	--	<0.001	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM9	OMM9	OMM9	OMM9	OMM9	OMM9
				10-Dec-2005	30-Jun-2006	28-Nov-2006	29-Jun-2007	28-Nov-2007	13-Jun-2008
cis-1,2-Dichloroethene	mg/l	--	--	--	--	<0.0004	--	<0.0004	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	<0.0002	--	<0.0002	--
Dibromochloromethane	mg/l	--	--	--	--	<0.0003	--	<0.0003	--
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	--	--	<0.0005	--	<0.0005	--
m,p-Xylenes	mg/l	--	--	--	--	<0.001	--	<0.001	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	--	--	<0.004	--	<0.004	--
n-Hexane	mg/l	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	--	--	<0.0005	--	<0.0005	--
Tetrachloroethylene	mg/l	0.01	--	--	--	<0.0003	--	<0.0003	--
Toluene	mg/l	0.06	0.024	--	--	<0.0005	--	<0.0005	--
trans-1,2-Dichloroethene	mg/l	--	--	--	--	<0.0004	--	<0.0004	--
trans-1,3-Dichloropropene	mg/l	--	--	--	--	<0.0002	--	<0.0002	--
Trichloroethene	mg/l	0.005	--	--	--	<0.0003	--	<0.0003	--
Trichlorofluoromethane	mg/l	--	--	--	--	<0.0005	--	<0.0005	--
Vinyl Chloride	mg/l	0.001	--	--	--	<0.0002	--	<0.0002	--
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM9	OMM9	OMM9	OMM9	OMM9	OMM9
				26-Nov-2008	06-Jul-2009	08-Dec-2009	30-Jun-2010	30-Nov-2010	13-Jun-2011
				R-9	R-12	R-8	R-7	R- 5	S-8
Semi-VOCs									
4-Methyl-2-pentanone	mg/l	--	--	--	--	--	--	--	--
Naphthalene	mg/l	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	<0.0005	--	--	--	<0.0005	--
VOCs									
1,1,1,2-Tetrachloroethane	mg/l	--	--	<0.0005	--	--	--	<0.0005	--
1,1,1-Trichloroethane	mg/l	--	--	<0.0004	--	--	--	<0.0004	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	<0.0005	--	--	--	<0.0005	--
1,1,2-Trichloroethane	mg/l	--	--	<0.0004	--	--	--	<0.0004	--
1,1-Dichloroethane	mg/l	--	--	<0.0004	--	--	--	<0.0004	--
1,1-Dichloroethylene	mg/l	0.014	--	<0.0005	--	--	--	<0.0005	--
1,2,4-Trichlorobenzene	mg/l	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	<0.0010	--	--	--	<0.0010	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	<0.0004	--	--	--	<0.0004	--
1,2-Dichloroethane	mg/l	0.005	--	<0.0005	--	--	--	<0.0005	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	<0.0005	--	--	--	<0.0005	--
1,3,5-Trimethylbenzene	mg/l	--	--	<0.0003	--	--	--	<0.0003	--
1,3-Dichlorobenzene	mg/l	--	--	<0.0004	--	--	--	<0.0004	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	<0.0004	--	--	--	<0.0004	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	--	--	--	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	--	--	--	--
Benzene	mg/l	0.001	--	<0.0005	--	--	--	<0.0005	--
Bromodichloromethane	mg/l	--	--	<0.0003	--	--	--	<0.0003	--
Bromoform	mg/l	--	--	<0.0004	--	--	--	<0.0004	--
Bromomethane	mg/l	--	--	<0.0005	--	--	--	<0.0005	--
Carbon Tetrachloride	mg/l	0.002	--	<0.0005	--	--	--	<0.0005	--
Chlorobenzene	mg/l	0.08	0.03	<0.0002	--	--	--	<0.0002	--
Chloroethane	mg/l	--	--	<0.0010	--	--	--	<0.0010	--
Chloroform	mg/l	--	--	<0.0005	--	--	--	<0.0005	--
Chloromethane	mg/l	--	--	<0.0010	--	--	--	<0.0010	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM9	OMM9	OMM9	OMM9	OMM9	OMM9
				26-Nov-2008	06-Jul-2009	08-Dec-2009	30-Jun-2010	30-Nov-2010	13-Jun-2011
				R-9	R-12	R-8	R-7	R- 5	S-8
cis-1,2-Dichloroethene	mg/l	--	--	<0.0004	--	--	--	<0.0004	--
cis-1,2-Dichloropropene	mg/l	--	--	<0.0002	--	--	--	<0.0002	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	--	--	--	--
Dibromochloromethane	mg/l	--	--	<0.0003	--	--	--	<0.0003	--
Dichlorodifluoromethane	mg/l	--	--	--	--	--	--	--	--
Ethylbenzene	mg/l	0.14	0.0016	<0.0005	--	--	--	<0.0005	--
m,p-Xylenes	mg/l	--	--	<0.0010	--	--	--	<0.0010	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	--	--	--	--
Methylene Chloride	mg/l	0.05	--	<0.0040	--	--	--	<0.0040	--
n-Hexane	mg/l	--	--	--	--	--	--	--	--
o-Xylene	mg/l	--	--	<0.0005	--	--	--	<0.0005	--
Tetrachloroethylene	mg/l	0.01	--	<0.0003	--	--	--	<0.0003	--
Toluene	mg/l	0.06	0.024	<0.0005	--	--	--	<0.0005	--
trans-1,2-Dichloroethene	mg/l	--	--	<0.0004	--	--	--	<0.0004	--
trans-1,3-Dichloropropene	mg/l	--	--	<0.0002	--	--	--	<0.0002	--
Trichloroethene	mg/l	0.005	--	<0.0003	--	--	--	<0.0003	--
Trichlorofluoromethane	mg/l	--	--	<0.0005	--	--	--	<0.0005	--
Vinyl Chloride	mg/l	0.001	--	<0.0002	--	--	--	<0.0002	--
Xylenes, Total	mg/l	0.09	0.02	--	--	--	--	--	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM9	OMM9	OMM9	OMM9	OMM9	OMM9
				29-Nov-2011	22-Jun-2012	10-Nov-2012	25-Jun-2013	20-Nov-2013	27-May-2014
				OMM-9	S-7	S-10	S-7	S-7	A-8
Semi-VOCs									
4-Methyl-2-pentanone	mg/l	--	--	--	--	<0.0050	--	<0.0050	--
Naphthalene	mg/l	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	<0.0005	--	<0.00020	--	<0.00020	--
VOCs									
1,1,1,2-Tetrachloroethane	mg/l	--	--	<0.0005	--	<0.00020	--	<0.00020	--
1,1,1-Trichloroethane	mg/l	--	--	<0.0004	--	<0.00010	--	<0.00010	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	<0.0005	--	<0.00020	--	<0.00020	--
1,1,2-Trichloroethane	mg/l	--	--	<0.0004	--	<0.00020	--	<0.00020	--
1,1-Dichloroethane	mg/l	--	--	<0.0004	--	<0.00010	--	<0.00010	--
1,1-Dichloroethylene	mg/l	0.014	--	<0.0005	--	<0.00010	--	<0.00010	--
1,2,4-Trichlorobenzene	mg/l	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	<0.0002	--	<0.00020	--	<0.00020	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	<0.0004	--	<0.00020	--	<0.00020	--
1,2-Dichloroethane	mg/l	0.005	--	<0.0002	--	<0.00020	--	<0.00020	--
1,2-Dichloroethene	mg/l	--	--	--	--	--	--	--	--
1,2-Dichloropropane	mg/l	--	--	<0.0005	--	<0.00010	--	<0.00010	--
1,3,5-Trimethylbenzene	mg/l	--	--	<0.0003	--	<0.00020	--	<0.00020	--
1,3-Dichlorobenzene	mg/l	--	--	<0.0004	--	<0.00020	--	<0.00020	--
1,3-Dichloropropene, Total	mg/l	--	--	--	--	--	--	--	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	<0.0004	--	<0.00020	--	<0.00020	--
Methyl Ethyl Ketone	mg/l	--	--	--	--	<0.0050	--	<0.0050	--
2-Hexanone	mg/l	--	--	--	--	--	--	--	--
Acetone	mg/l	--	--	--	--	<0.01	--	<0.01	--
Benzene	mg/l	0.001	--	<0.0005	--	<0.00010	--	<0.00010	--
Bromodichloromethane	mg/l	--	--	<0.0003	--	<0.00010	--	<0.00010	--
Bromoform	mg/l	--	--	<0.0004	--	<0.00020	--	<0.00020	--
Bromomethane	mg/l	--	--	<0.0005	--	<0.00050	--	<0.00050	--
Carbon Tetrachloride	mg/l	0.002	--	<0.0005	--	<0.00010	--	<0.00010	--
Chlorobenzene	mg/l	0.08	0.03	<0.0002	--	<0.00010	--	<0.00010	--
Chloroethane	mg/l	--	--	<0.0002	--	<0.00020	--	<0.00020	--
Chloroform	mg/l	--	--	<0.0005	--	<0.00010	--	<0.00010	--
Chloromethane	mg/l	--	--	<0.0002	--	<0.00050	--	<0.00050	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM9	OMM9	OMM9	OMM9	OMM9	OMM9
				29-Nov-2011	22-Jun-2012	10-Nov-2012	25-Jun-2013	20-Nov-2013	27-May-2014
				OMM-9	S-7	S-10	S-7	S-7	A-8
cis-1,2-Dichloroethene	mg/l	--	--	<0.0004	--	<0.00010	--	<0.00010	--
cis-1,2-Dichloropropene	mg/l	--	--	<0.0002	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	--	<0.00020	--	<0.00020	--
Dibromochloromethane	mg/l	--	--	<0.0003	--	<0.00020	--	<0.00020	--
Dichlorodifluoromethane	mg/l	--	--	<0.0005	--	<0.00050	--	<0.00050	--
Ethylbenzene	mg/l	0.14	0.0016	<0.0005	--	<0.00010	--	<0.00010	--
m,p-Xylenes	mg/l	--	--	<0.0005	--	<0.00010	--	<0.00010	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	--	<0.00020	--	<0.00020	--
Methylene Chloride	mg/l	0.05	--	<0.0040	--	<0.00050	--	<0.00050	--
n-Hexane	mg/l	--	--	--	--	<0.00050	--	<0.00050	--
o-Xylene	mg/l	--	--	<0.0005	--	<0.00010	--	<0.00010	--
Tetrachloroethylene	mg/l	0.01	--	<0.0003	--	<0.00010	--	<0.00010	--
Toluene	mg/l	0.06	0.024	<0.0005	--	<0.00020	--	<0.00020	--
trans-1,2-Dichloroethene	mg/l	--	--	<0.0004	--	<0.00010	--	<0.00010	--
trans-1,3-Dichloropropene	mg/l	--	--	<0.0002	--	<0.00020	--	<0.00020	--
Trichloroethene	mg/l	0.005	--	<0.0003	--	<0.00010	--	<0.00010	--
Trichlorofluoromethane	mg/l	--	--	<0.0005	--	<0.00020	--	<0.00020	--
Vinyl Chloride	mg/l	0.001	--	<0.0002	--	<0.00020	--	<0.00020	--
Xylenes, Total	mg/l	0.09	0.02	<0.0010	--	<0.00010	--	<0.00010	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM9	OMM9	OMM9	OMM9	OMM9	OMM9
				25-Nov-2014	26-May-2015	30-Nov-2015	14-Jun-2016	29-Nov-2016	01-Jun-2017
				R-11	OMM-9	9	OMM-9	OMM-9	OMM9
Semi-VOCs									
4-Methyl-2-pentanone	mg/l	--	--	<0.0050	--	<0.0050	--	<0.0050	--
Naphthalene	mg/l	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	<0.00020	--	<0.0005	--	<0.0005	--
VOCs									
1,1,1,2-Tetrachloroethane	mg/l	--	--	<0.00020	--	<0.0005	--	<0.0005	--
1,1,1-Trichloroethane	mg/l	--	--	<0.00010	--	<0.0005	--	<0.0005	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	<0.00020	--	<0.0005	--	<0.0005	--
1,1,2-Trichloroethane	mg/l	--	--	<0.00020	--	<0.0005	--	<0.0005	--
1,1-Dichloroethane	mg/l	--	--	<0.00010	--	<0.0005	--	<0.0005	--
1,1-Dichloroethylene	mg/l	0.014	--	<0.00010	--	<0.0005	--	<0.0005	--
1,2,4-Trichlorobenzene	mg/l	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	<0.00020	--	<0.0002	--	<0.0002	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	<0.00020	--	<0.0005	--	<0.0005	--
1,2-Dichloroethane	mg/l	0.005	--	<0.00020	--	<0.0005	--	<0.0005	--
1,2-Dichloroethene	mg/l	--	--	--	--	<0.0005	--	<0.0005	--
1,2-Dichloropropane	mg/l	--	--	<0.00010	--	<0.0005	--	<0.0005	--
1,3,5-Trimethylbenzene	mg/l	--	--	<0.00020	--	<0.0005	--	<0.0005	--
1,3-Dichlorobenzene	mg/l	--	--	<0.00020	--	<0.0005	--	<0.0005	--
1,3-Dichloropropene, Total	mg/l	--	--	<0.00028	--	<0.0005	--	<0.0005	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	<0.00020	--	<0.0005	--	<0.0005	--
Methyl Ethyl Ketone	mg/l	--	--	<0.0050	--	<0.0050	--	<0.0050	--
2-Hexanone	mg/l	--	--	--	--	<0.0100	--	<0.0100	--
Acetone	mg/l	--	--	<0.01	--	<0.0050	--	<0.0050	--
Benzene	mg/l	0.001	--	<0.00010	--	<0.0005	--	<0.0005	--
Bromodichloromethane	mg/l	--	--	<0.00010	--	<0.0005	--	<0.0005	--
Bromoform	mg/l	--	--	<0.00020	--	<0.0005	--	<0.0005	--
Bromomethane	mg/l	--	--	<0.00050	--	<0.0005	--	<0.0005	--
Carbon Tetrachloride	mg/l	0.002	--	<0.00010	--	<0.0002	--	<0.0002	--
Chlorobenzene	mg/l	0.08	0.03	<0.00010	--	<0.0005	--	<0.0005	--
Chloroethane	mg/l	--	--	<0.00020	--	<0.0010	--	<0.0010	--
Chloroform	mg/l	--	--	<0.00010	--	<0.0005	--	<0.0005	--
Chloromethane	mg/l	--	--	<0.00050	--	<0.0030	--	<0.0030	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM9	OMM9	OMM9	OMM9	OMM9	OMM9
				25-Nov-2014	26-May-2015	30-Nov-2015	14-Jun-2016	29-Nov-2016	01-Jun-2017
				R-11	OMM-9	9	OMM-9	OMM-9	OMM9
cis-1,2-Dichloroethene	mg/l	--	--	<0.00010	--	<0.0005	--	<0.0005	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	<0.00020	--	<0.0005	--	<0.0005	--
Dibromochloromethane	mg/l	--	--	<0.00020	--	<0.0005	--	<0.0005	--
Dichlorodifluoromethane	mg/l	--	--	<0.00050	--	<0.0010	--	<0.0010	--
Ethylbenzene	mg/l	0.14	0.0016	<0.00010	--	<0.0005	--	<0.0005	--
m,p-Xylenes	mg/l	--	--	<0.00010	--	<0.0005	--	<0.0005	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	<0.00020	--	<0.0020	--	<0.0020	--
Methylene Chloride	mg/l	0.05	--	<0.00050	--	<0.0050	--	<0.0050	--
n-Hexane	mg/l	--	--	<0.00050	--	<0.0010	--	<0.0010	--
o-Xylene	mg/l	--	--	<0.00010	--	<0.0005	--	<0.0005	--
Tetrachloroethylene	mg/l	0.01	--	<0.00010	--	<0.0005	--	<0.0005	--
Toluene	mg/l	0.06	0.024	<0.00020	--	<0.0005	--	<0.0005	--
trans-1,2-Dichloroethene	mg/l	--	--	<0.00010	--	<0.0005	--	<0.0005	--
trans-1,3-Dichloropropene	mg/l	--	--	<0.00020	--	<0.0005	--	<0.0005	--
Trichloroethene	mg/l	0.005	--	<0.00010	--	<0.0005	--	<0.0005	--
Trichlorofluoromethane	mg/l	--	--	<0.00020	--	<0.0010	--	<0.0010	--
Vinyl Chloride	mg/l	0.001	--	<0.00020	--	<0.0005	--	<0.0005	--
Xylenes, Total	mg/l	0.09	0.02	<0.00010	--	<0.0005	--	<0.0005	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM9	OMM9	OMM9	OMM9	OMM9	OMM9
				22-Nov-2017	28-Jun-2018	26-Nov-2018	18-Jun-2019	02-Dec-2019	04-Jun-2020
				OMM-9	OMM-9	OMM-9	OMM-9	OMM9	OMM-9
Semi-VOCs									
4-Methyl-2-pentanone	mg/l	--	--	<0.0050	--	--	--	<0.0050	--
Naphthalene	mg/l	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	<0.0005	--	--	--	<0.0005	--
VOCs									
1,1,1,2-Tetrachloroethane	mg/l	--	--	<0.0005	--	--	--	<0.0005	--
1,1,1-Trichloroethane	mg/l	--	--	<0.0005	--	--	--	<0.0005	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	<0.0005	--	--	--	<0.0005	--
1,1,2-Trichloroethane	mg/l	--	--	<0.0005	--	--	--	<0.0005	--
1,1-Dichloroethane	mg/l	--	--	<0.0005	--	--	--	<0.0005	--
1,1-Dichloroethylene	mg/l	0.014	--	<0.0005	--	--	--	<0.0005	--
1,2,4-Trichlorobenzene	mg/l	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	<0.0002	--	--	--	<0.0002	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	<0.0005	--	--	--	<0.0005	--
1,2-Dichloroethane	mg/l	0.005	--	<0.0005	--	--	--	<0.0005	--
1,2-Dichloroethene	mg/l	--	--	<0.0005	--	--	--	<0.0005	--
1,2-Dichloropropane	mg/l	--	--	<0.0005	--	--	--	<0.0005	--
1,3,5-Trimethylbenzene	mg/l	--	--	<0.0005	--	--	--	<0.0005	--
1,3-Dichlorobenzene	mg/l	--	--	<0.0005	--	--	--	<0.0005	--
1,3-Dichloropropene, Total	mg/l	--	--	<0.0005	--	--	--	<0.0005	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	<0.0005	--	--	--	<0.0005	--
Methyl Ethyl Ketone	mg/l	--	--	<0.0050	--	--	--	<0.0050	--
2-Hexanone	mg/l	--	--	<0.0100	--	--	--	<0.0100	--
Acetone	mg/l	--	--	<0.0050	--	--	--	<0.0050	--
Benzene	mg/l	0.001	--	<0.0005	--	--	--	<0.0005	--
Bromodichloromethane	mg/l	--	--	<0.0005	--	--	--	<0.0005	--
Bromoform	mg/l	--	--	<0.0005	--	--	--	<0.0005	--
Bromomethane	mg/l	--	--	<0.0005	--	--	--	<0.0005	--
Carbon Tetrachloride	mg/l	0.002	--	<0.0002	--	--	--	<0.0002	--
Chlorobenzene	mg/l	0.08	0.03	<0.0005	--	--	--	<0.0005	--
Chloroethane	mg/l	--	--	<0.0010	--	--	--	<0.0010	--
Chloroform	mg/l	--	--	<0.0005	--	--	--	<0.0005	--
Chloromethane	mg/l	--	--	<0.0030	--	--	--	<0.0030	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM9	OMM9	OMM9	OMM9	OMM9	OMM9
				22-Nov-2017	28-Jun-2018	26-Nov-2018	18-Jun-2019	02-Dec-2019	04-Jun-2020
				OMM-9	OMM-9	OMM-9	OMM-9	OMM-9	OMM-9
cis-1,2-Dichloroethene	mg/l	--	--	<0.0005	--	--	--	<0.0005	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	<0.0005	--	--	--	<0.0005	--
Dibromochloromethane	mg/l	--	--	<0.0005	--	--	--	<0.0005	--
Dichlorodifluoromethane	mg/l	--	--	<0.0010	--	--	--	<0.0010	--
Ethylbenzene	mg/l	0.14	0.0016	<0.0005	--	--	--	<0.0005	--
m,p-Xylenes	mg/l	--	--	<0.0005	--	--	--	<0.0005	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	<0.0020	--	--	--	<0.0020	--
Methylene Chloride	mg/l	0.05	--	<0.0050	--	--	--	<0.0050	--
n-Hexane	mg/l	--	--	<0.0010	--	--	--	<0.0010	--
o-Xylene	mg/l	--	--	<0.0005	--	--	--	<0.0005	--
Tetrachloroethylene	mg/l	0.01	--	<0.0005	--	--	--	<0.0005	--
Toluene	mg/l	0.06	0.024	<0.0005	--	--	--	<0.0005	--
trans-1,2-Dichloroethene	mg/l	--	--	<0.0005	--	--	--	<0.0005	--
trans-1,3-Dichloropropene	mg/l	--	--	<0.0005	--	--	--	<0.0005	--
Trichloroethene	mg/l	0.005	--	<0.0005	--	--	--	<0.0005	--
Trichlorofluoromethane	mg/l	--	--	<0.0010	--	--	--	<0.0010	--
Vinyl Chloride	mg/l	0.001	--	<0.0005	--	--	--	<0.0005	--
Xylenes, Total	mg/l	0.09	0.02	<0.0005	--	--	--	<0.0005	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM9	OMM9	OMM9	OMM9	OMM9	OMM9
				30-Nov-2020	08-Jun-2021	25-Nov-2021	20-Jun-2022	23-Nov-2022	10-May-2023
				OMM-9	OMM-9	OMM-9	OMM-9	OMM-9	OMM-9
Semi-VOCs									
4-Methyl-2-pentanone	mg/l	--	--	<0.0050	--	<0.0050	--	<0.0050	--
Naphthalene	mg/l	--	--	--	--	--	--	--	--
Styrene	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--
VOCs									
1,1,1,2-Tetrachloroethane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--
1,1,1-Trichloroethane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--
1,1,2,2-Tetrachloroethane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--
1,1,2-Trichloroethane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--
1,1-Dichloroethane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--
1,1-Dichloroethylene	mg/l	0.014	--	<0.0005	--	<0.0005	--	<0.0005	--
1,2,4-Trichlorobenzene	mg/l	--	--	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	<0.0002	--	<0.0002	--	<0.0002	--
1,2-Dichlorobenzene	mg/l	0.2	0.003	<0.0005	--	<0.0005	--	<0.0005	--
1,2-Dichloroethane	mg/l	0.005	--	<0.0005	--	<0.0005	--	<0.0005	--
1,2-Dichloroethene	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--
1,2-Dichloropropane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--
1,3,5-Trimethylbenzene	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--
1,3-Dichlorobenzene	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--
1,3-Dichloropropene, Total	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--
1,4-Dichlorobenzene	mg/l	0.005	0.001	<0.0005	--	<0.0005	--	<0.0005	--
Methyl Ethyl Ketone	mg/l	--	--	<0.0050	--	<0.0050	--	<0.0050	--
2-Hexanone	mg/l	--	--	<0.0100	--	<0.0100	--	<0.0100	--
Acetone	mg/l	--	--	<0.0050	--	<0.0050	--	<0.0050	--
Benzene	mg/l	0.001	--	<0.0005	--	<0.0005	--	<0.0005	--
Bromodichloromethane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--
Bromoform	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--
Bromomethane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--
Carbon Tetrachloride	mg/l	0.002	--	<0.0002	--	<0.0002	--	<0.0002	--
Chlorobenzene	mg/l	0.08	0.03	<0.0005	--	<0.0005	--	<0.0005	--
Chloroethane	mg/l	--	--	<0.0010	--	<0.0010	--	<0.0010	--
Chloroform	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--
Chloromethane	mg/l	--	--	<0.0030	--	<0.0030	--	<0.0030	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM9	OMM9	OMM9	OMM9	OMM9	OMM9
				30-Nov-2020	08-Jun-2021	25-Nov-2021	20-Jun-2022	23-Nov-2022	10-May-2023
				OMM-9	OMM-9	OMM-9	OMM-9	OMM-9	OMM-9
cis-1,2-Dichloroethene	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--
Dibromochloromethane	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--
Dichlorodifluoromethane	mg/l	--	--	<0.0010	--	<0.0010	--	<0.0010	--
Ethylbenzene	mg/l	0.14	0.0016	<0.0005	--	<0.0005	--	<0.0005	--
m,p-Xylenes	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	<0.0020	--	<0.0020	--	<0.0020	--
Methylene Chloride	mg/l	0.05	--	<0.0050	--	<0.0050	--	<0.0050	--
n-Hexane	mg/l	--	--	<0.0010	--	<0.0010	--	<0.0010	--
o-Xylene	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--
Tetrachloroethylene	mg/l	0.01	--	<0.0005	--	<0.0005	--	<0.0005	--
Toluene	mg/l	0.06	0.024	<0.0005	--	<0.0005	--	<0.0005	--
trans-1,2-Dichloroethene	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--
trans-1,3-Dichloropropene	mg/l	--	--	<0.0005	--	<0.0005	--	<0.0005	--
Trichloroethene	mg/l	0.005	--	<0.0005	--	<0.0005	--	<0.0005	--
Trichlorofluoromethane	mg/l	--	--	<0.0010	--	<0.0010	--	<0.0010	--
Vinyl Chloride	mg/l	0.001	--	<0.0005	--	<0.0005	--	<0.0005	--
Xylenes, Total	mg/l	0.09	0.02	<0.0005	--	<0.0005	--	<0.0005	--

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM9	OMM9	OMM9	OMM9
				29-Nov-2023	06-Dec-2023	25-Apr-2024	22-Oct-2024
				OMM-9	OMM-9	OMM - 9	OMM9
Semi-VOCs							
4-Methyl-2-pentanone	mg/l	--	--	--	<0.0050	--	<0.0050
Naphthalene	mg/l	--	--	--	--	--	--
Styrene	mg/l	--	--	--	<0.0005	--	<0.0005
VOCs							
1,1,1,2-Tetrachloroethane	mg/l	--	--	--	<0.0005	--	<0.0005
1,1,1-Trichloroethane	mg/l	--	--	--	<0.0005	--	<0.0005
1,1,2,2-Tetrachloroethane	mg/l	--	--	--	<0.0005	--	<0.0005
1,1,2-Trichloroethane	mg/l	--	--	--	<0.0005	--	<0.0005
1,1-Dichloroethane	mg/l	--	--	--	<0.0005	--	<0.0005
1,1-Dichloroethylene	mg/l	0.014	--	--	<0.0005	--	<0.0005
1,2,4-Trichlorobenzene	mg/l	--	--	--	--	--	--
1,2-Dibromoethane	mg/l	--	--	--	<0.0002	--	<0.0002
1,2-Dichlorobenzene	mg/l	0.2	0.003	--	<0.0005	--	<0.0005
1,2-Dichloroethane	mg/l	0.005	--	--	<0.0005	--	<0.0005
1,2-Dichloroethene	mg/l	--	--	--	<0.0005	--	<0.0005
1,2-Dichloropropane	mg/l	--	--	--	<0.0005	--	<0.0005
1,3,5-Trimethylbenzene	mg/l	--	--	--	<0.0005	--	<0.0005
1,3-Dichlorobenzene	mg/l	--	--	--	<0.0005	--	<0.0005
1,3-Dichloropropene, Total	mg/l	--	--	--	<0.0005	--	<0.0005
1,4-Dichlorobenzene	mg/l	0.005	0.001	--	<0.0005	--	<0.0005
Methyl Ethyl Ketone	mg/l	--	--	--	<0.0050	--	<0.0050
2-Hexanone	mg/l	--	--	--	<0.0100	--	<0.0100
Acetone	mg/l	--	--	--	<0.0050	--	<0.0050
Benzene	mg/l	0.001	--	--	<0.0005	--	<0.0005
Bromodichloromethane	mg/l	--	--	--	<0.0005	--	<0.0005
Bromoform	mg/l	--	--	--	<0.0005	--	<0.0005
Bromomethane	mg/l	--	--	--	<0.0005	--	<0.0005
Carbon Tetrachloride	mg/l	0.002	--	--	<0.0002	--	<0.0002
Chlorobenzene	mg/l	0.08	0.03	--	<0.0005	--	<0.0005
Chloroethane	mg/l	--	--	--	<0.0010	--	<0.0010
Chloroform	mg/l	--	--	--	<0.0005	--	<0.0005
Chloromethane	mg/l	--	--	--	<0.0030	--	<0.0030

Parameter	Unit	ODWQS(169/03)- Health ⁽¹⁾	ODWQS- AO ⁽²⁾	OMM9 29-Nov-2023	OMM9 06-Dec-2023	OMM9 25-Apr-2024	OMM9 22-Oct-2024
				OMM-9	OMM-9	OMM - 9	OMM9
cis-1,2-Dichloroethene	mg/l	--	--	--	<0.0005	--	<0.0005
cis-1,2-Dichloropropene	mg/l	--	--	--	--	--	--
cis-1,3-Dichloropropene	mg/l	--	--	--	<0.0005	--	<0.0005
Dibromochloromethane	mg/l	--	--	--	<0.0005	--	<0.0005
Dichlorodifluoromethane	mg/l	--	--	--	<0.0010	--	<0.0010
Ethylbenzene	mg/l	0.14	0.0016	--	<0.0005	--	<0.0005
m,p-Xylenes	mg/l	--	--	--	<0.0005	--	<0.0005
Methyl tert-Butyl Ether (MTBE)	mg/l	--	0.015	--	<0.0020	--	<0.0020
Methylene Chloride	mg/l	0.05	--	--	<0.0050	--	<0.0050
n-Hexane	mg/l	--	--	--	<0.0010	--	<0.0010
o-Xylene	mg/l	--	--	--	<0.0005	--	<0.0005
Tetrachloroethylene	mg/l	0.01	--	--	<0.0005	--	<0.0005
Toluene	mg/l	0.06	0.024	--	<0.0005	--	<0.0005
trans-1,2-Dichloroethene	mg/l	--	--	--	<0.0005	--	<0.0005
trans-1,3-Dichloropropene	mg/l	--	--	--	<0.0005	--	<0.0005
Trichloroethene	mg/l	0.005	--	--	<0.0005	--	<0.0005
Trichlorofluoromethane	mg/l	--	--	--	<0.0010	--	<0.0010
Vinyl Chloride	mg/l	0.001	--	--	<0.0005	--	<0.0005
Xylenes, Total	mg/l	0.09	0.02	--	<0.0005	--	<0.0005

Footnotes:	
	Tables should be read in conjunction with the accompanying document.
<	Indicates parameter not detected above laboratory method detection limit.
>	Indicates parameter detected above equipment analytical range.
--	Chemical not analyzed or criteria not defined.
Value	Parameter is greater than ODWQS(169/03)-Health
Value	Parameter is greater than ODWQS-AO
(1)	Ontario Drinking Water Quality Standards - Health Based Standards (June 2003, revised January 2020).
(2)	Ontario Drinking Water Quality Standards - Aesthetic Objectives. Aesthetic Objectives are established for parameters that may impair the taste, odour or colour of water or which may interfere with good water quality control practices. For certain parameters, both aesthetic objectives and health-related MACs have been derived (June 2003, revised July 2017).
(3)	Arsenic MRL elevated due to matrix interference.
(4)	Metal Analysis:RDL of Cu was adjusted due to high concentration of Barium.
(5)	Metal Analysis:RDL of Copper was adjusted due to high concentration of Barium.
(6)	Field conductivity not measured during sampling session.
(7)	The reported concentrations for general chemistry and metal parameters originally assigned to OMM15 were reassigned to OMM2, and vice versa, for the June 2013 monitoring session. This reassignment was made based on a review of field notes and historical data. Parameters measured in the field were not reassigned.
(8)	Sample was inadvertently missed. No sample was collected.

Parameter	Unit	PWQO ⁽¹⁾	S1	S1	S1	S1	S1	S1	S1	S1
			01-Nov-1991	01-Jul-1992	01-Dec-1992	01-May-1994	01-Jan-1995	01-Dec-1995	25-Jun-1996	25-Nov-1996
General Chemistry										
Alkalinity (Total as CaCO3)	mg/l	-- ⁽²⁾	305	570	820	143	205	193	347	204
Ammonia, unionized	ug/l	20	--	--	--	--	--	--	--	--
Ammonia Nitrogen	ug/l	--	--	--	--	<100	510	150	270	180
Biochemical Oxygen Demand, 5 Day	ug/l	--	50800	8400	18000	3500	7600	1000	3000	3000
Chemical Oxygen Demand	ug/l	--	13000	134000	60000	44000	204000	18000	27000	20000
Chloride	ug/l	--	31000	196000	140000	11000	13000	23000	12500	22000
Conductivity	uS/cm	--	810	--	--	320	477	426	678	474
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	--	--
Dissolved Organic Carbon	ug/l	--	--	--	--	--	--	--	--	--
Dissolved Oxygen (Field)	mg/l	-- ⁽³⁾	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	ug/l	--	362000	445000	659000	146000	190000	198000	317000	206000
Nitrate as N	ug/l	--	<100	240	<100	360	<100	200	400	<100
Nitrite as N	ug/l	--	--	--	--	240	<100	<100	<100	<100
Nitrogen, Total Kjeldahl	ug/l	--	11200	6160	8700	280	2020	820	790	690
pH (Field)	-	6.5 - 8.5	6.85	--	--	7.34	7.1	7.82	7.49	8.26
Phosphorus	ug/l	-- ⁽⁴⁾	--	--	--	260	1700	<100	260	360
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--
Sulphate	ug/l	--	38000	26000	15000	--	15000	11000	10000	14000
Temperature (Field)	deg c	-- ⁽⁵⁾	--	--	--	--	--	--	--	--
Total Dissolved Solids	ug/l	--	--	--	--	--	--	--	--	--
Total Suspended Solids	ug/l	--	--	--	--	--	--	--	--	--
Metals										
Arsenic	ug/l	100 ⁽⁶⁾	<50	--	--	--	3	<100	<100	<1
Barium	ug/l	--	80	--	--	--	165	45	102	35
Boron	ug/l	200 ⁽⁷⁾	--	--	--	--	--	--	--	--
Cadmium	ug/l	0.2 ⁽⁶⁾	<4	--	--	0.2	0.9	0.1	0.4	0.1
Calcium	ug/l	--	--	--	--	--	--	--	--	--
Chromium	ug/l	-- ⁽⁸⁾	<10	--	--	13	<10	<10	<10	10
Copper	ug/l	5	<10	--	--	6.4	8.3	4.4	7.2	5.4
Iron	ug/l	300	6450	--	600	9000	8900	1280	1100	2720
Lead	ug/l	-- ⁽⁹⁾	<40	--	--	--	6.8	0.3	<0.2	<0.2
Magnesium	ug/l	--	--	--	--	--	--	--	--	--
Manganese	ug/l	--	--	--	--	--	--	--	--	--
Mercury, dissolved	ug/l	0.2 ⁽¹⁰⁾	--	--	--	--	--	--	--	<0.1
Potassium	ug/l	--	--	--	--	--	--	--	--	--
Sodium	ug/l	--	20000	--	--	8000	10000	16000	12900	14300
Zinc	ug/l	30 ⁽⁶⁾	<10	--	--	102	75	<10	74	<10
Phenols										
Phenolics, Total Recoverable	ug/l	1 ⁽¹¹⁾	<2	43	5	<2	11	2	<1	<5

Parameter	Unit	PWQO ⁽¹⁾	S1	S1	S1	S1	S1	S1	S1	S1
			01-Jun-1997	01-Nov-1997	01-Jun-1998	01-Nov-1998	01-Nov-1999	01-Jun-2000	01-Nov-2000	01-Aug-2001
General Chemistry										
Alkalinity (Total as CaCO3)	mg/l	-- ⁽²⁾	187	180	184	190	129	76	226	215
Ammonia, unionized	ug/l	20	--	--	--	--	--	--	--	--
Ammonia Nitrogen	ug/l	--	<10	--	60	70	90	--	--	130
Biochemical Oxygen Demand, 5 Day	ug/l	--	2000	4000	15000	<1000	<1000	<1000	11000	3000
Chemical Oxygen Demand	ug/l	--	24000	21000	70000	59000	19000	10200	--	42000
Chloride	ug/l	--	9700	--	12500	7500	8900	14200	17200	21200
Conductivity	uS/cm	--	369	381	352	378	262	--	--	447
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	--	--
Dissolved Organic Carbon	ug/l	--	--	--	--	--	--	--	--	--
Dissolved Oxygen (Field)	mg/l	-- ⁽³⁾	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	ug/l	--	226000	203000	165000	213000	131000	167000	226000	217000
Nitrate as N	ug/l	--	<100	<100	<100	100	--	--	--	<100
Nitrite as N	ug/l	--	<100	<100	<100	<100	--	--	--	<100
Nitrogen, Total Kjeldahl	ug/l	--	900	920	3280	910	--	--	--	1310
pH (Field)	-	6.5 - 8.5	7.57	7.37	7.21	7.36	--	8.02	8.03	7.84
Phosphorus	ug/l	-- ⁽⁴⁾	130	--	360	40	--	--	--	80
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--
Sulphate	ug/l	--	1000	9000	4000	1000	--	3000	2000	1000
Temperature (Field)	deg c	-- ⁽⁵⁾	--	--	--	--	--	--	--	--
Total Dissolved Solids	ug/l	--	--	--	--	--	--	--	--	272000
Total Suspended Solids	ug/l	--	--	--	--	--	--	--	--	30000
Metals										
Arsenic	ug/l	100 ⁽⁶⁾	<1	<1	<1	<0.1	<1	--	--	1
Barium	ug/l	--	18	40	47	32	20	27	30	60
Boron	ug/l	200 ⁽⁷⁾	--	--	--	--	--	--	--	70
Cadmium	ug/l	0.2 ⁽⁶⁾	<0.1	<0.1	0.2	<0.1	<0.1	--	--	<0.1
Calcium	ug/l	--	--	--	--	--	--	--	--	--
Chromium	ug/l	-- ⁽⁸⁾	<10	<10	10	10	<10	--	--	<10
Copper	ug/l	5	14.9	1.9	3.8	<0.5	<0.5	--	--	1
Iron	ug/l	300	2010	4510	3500	630	340	1340	1670	4100
Lead	ug/l	-- ⁽⁹⁾	0.3	<0.2	0.2	<0.2	<0.2	--	--	1.5
Magnesium	ug/l	--	--	--	--	--	--	--	--	--
Manganese	ug/l	--	--	--	--	--	--	--	--	--
Mercury, dissolved	ug/l	0.2 ⁽¹⁰⁾	<0.1	<0.1	<0.1	<100	<0.1	--	--	<0.1
Potassium	ug/l	--	--	--	--	--	--	--	--	--
Sodium	ug/l	--	8800	14200	11000	10100	--	12400	13200	19300
Zinc	ug/l	30 ⁽⁶⁾	<10	<10	30	20	--	--	--	<10
Phenols										
Phenolics, Total Recoverable	ug/l	1 ⁽¹¹⁾	<1	1	<1	6	--	--	--	32

Parameter	Unit	PWQO ⁽¹⁾	S1	S1	S1	S1	S1	S1	S1	S1
			01-Nov-2001	01-Jul-2002	01-Nov-2002	09-Jul-2003	25-Nov-2003	01-Sep-2004	24-Jun-2005	30-Jun-2006
General Chemistry										
Alkalinity (Total as CaCO3)	mg/l	-- ⁽²⁾	195	112	170	171	168	159	138	100
Ammonia, unionized	ug/l	20	--	--	--	--	--	--	0.57	0.37
Ammonia Nitrogen	ug/l	--	790	50	430	2600	30	620	30	40
Biochemical Oxygen Demand, 5 Day	ug/l	--	3000	1000	117000	66000	3000	152000	<3000	1000
Chemical Oxygen Demand	ug/l	--	24000	36000	121000	222000	21000	846000	54000	22000
Chloride	ug/l	--	23800	11100	79700	54200	34500	30000	20300	19000
Conductivity	uS/cm	--	433	260	670	476	453	819	438	555
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	--	--
Dissolved Organic Carbon	ug/l	--	--	11800	13700	34900	10000	35500	14100	7900
Dissolved Oxygen (Field)	mg/l	-- ⁽³⁾	--	3.5	5.27	--	--	--	30	10.28
Hardness, Calcium Carbonate	ug/l	--	209000	121000	251000	182000	165000	143000	148000	108000
Nitrate as N	ug/l	--	100	<10	<10	<100	200	200	<100	<100
Nitrite as N	ug/l	--	<100	<10	<10	<100	<100	<100	<100	<100
Nitrogen, Total Kjeldahl	ug/l	--	1800	1100	8690	5860	730	20000	2810	650
pH (Field)	-	6.5 - 8.5	8.51	5.7	7.42	--	<0.005	--	7.69	7.5
Phosphorus	ug/l	-- ⁽⁴⁾	130	130	1520	1490	70	8440	50	100
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	0.689	--
Sulphate	ug/l	--	5000	2000	53000	1000	9000	2000	2000	2000
Temperature (Field)	deg c	-- ⁽⁵⁾	--	--	--	--	--	--	20	16
Total Dissolved Solids	ug/l	--	278000	130000	390000	317000	219000	210000	175000	168000
Total Suspended Solids	ug/l	--	20000	11000	1130000	148000	20000	219000	3000	50000
Metals										
Arsenic	ug/l	100 ⁽⁶⁾	<1	1	<1	<1	1	1	<1	<1
Barium	ug/l	--	20	15	145	99	37	126	10	10
Boron	ug/l	200 ⁽⁷⁾	<10	20	170	76	15	290	<5	10
Cadmium	ug/l	0.2 ⁽⁶⁾	<0.1	<0.1	<0.1	0.1	<0.1	<5	<0.1	0.2
Calcium	ug/l	--	--	--	--	--	--	--	37300	25000
Chromium	ug/l	-- ⁽⁸⁾	<10	<10	20	3	1	9	<2	<1
Copper	ug/l	5	1.4	0.7	9	4	16	74	45	<1
Iron	ug/l	300	890	1280	9290	4070	521	2910	393	480
Lead	ug/l	-- ⁽⁹⁾	<0.2	1	9.6	2.4	1.5	<20	<0.2	<1
Magnesium	ug/l	--	--	--	--	--	--	--	13200	11000
Manganese	ug/l	--	--	--	--	--	--	--	--	30
Mercury, dissolved	ug/l	0.2 ⁽¹⁰⁾	<0.1	<0.1	0.1	--	<0.1	0.2	<0.06	<0.1
Potassium	ug/l	--	--	--	--	--	--	--	1400	<1000
Sodium	ug/l	--	14100	8900	42900	44400	17100	30700	19200	11000
Zinc	ug/l	30 ⁽⁶⁾	<10	<10	110	30	<5	150	14	<10
Phenols										
Phenolics, Total Recoverable	ug/l	1 ⁽¹¹⁾	<1	<1	<1	54	<1	44	<1	3

Parameter	Unit	PWQO ⁽¹⁾	S1	S1	S1	S1	S1	S1	S1
			28-Nov-2006	29-Jun-2007	27-Nov-2007	13-Jun-2008	25-Nov-2008	07-Jul-2009	06-Dec-2009
							W-1	W-3	W-3
General Chemistry									
Alkalinity (Total as CaCO ₃)	mg/l	-- ⁽²⁾	178	223	206	133	177	135	198
Ammonia, unionized	ug/l	20	<0.04	<20	<20	1.08	2.52	0.7	<0.02
Ammonia Nitrogen	ug/l	--	<20	290	30	270	1300	120	<20
Biochemical Oxygen Demand, 5 Day	ug/l	--	3000	8000	2000	4000	4000	3000	4000
Chemical Oxygen Demand	ug/l	--	21000	22000	22000	37000	18000	26000	25000
Chloride	ug/l	--	18000	49000	31000	28000	27000	23000	27000
Conductivity	uS/cm	--	499	405	290	343	428	338	450
Conductivity (Field)	uS/cm	--	--	--	--	--	420	425	500
Dissolved Organic Carbon	ug/l	--	6900	15400	12200	11300	6000	7900	7300
Dissolved Oxygen (Field)	mg/l	-- ⁽³⁾	8.92	8.42	10	11.21	12.10	9.03	9.11
Hardness, Calcium Carbonate	ug/l	--	187000	219000	194000	145000	179000	139000	191000
Nitrate as N	ug/l	--	<100	<100	<100	<100	<100	<100	<100
Nitrite as N	ug/l	--	<100	<100	<100	<100	<100	<100	<100
Nitrogen, Total Kjeldahl	ug/l	--	850	1190	820	1530	1400	930	450
pH (Field)	-	6.5 - 8.5	7.3	7.3	7.2	7.2	7.3	7.2	7.1
Phosphorus	ug/l	-- ⁽⁴⁾	200	210	80	190	130	140	40
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--
Sulphate	ug/l	--	13000	2000	2000	2000	4000	4000	4000
Temperature (Field)	deg c	-- ⁽⁵⁾	2	13	1	14	2	19	2
Total Dissolved Solids	ug/l	--	263000	370000	309000	223000	278000	220000	293000
Total Suspended Solids	ug/l	--	19000	45000	8000	7000	18000	13000	6000
Metals									
Arsenic	ug/l	100 ⁽⁶⁾	<1	1	<1	<1	<1	<1	<1
Barium	ug/l	--	30	40	30	20	30	20	20
Boron	ug/l	200 ⁽⁷⁾	<10	20	<10	<10	10	20	10
Cadmium	ug/l	0.2 ⁽⁶⁾	<0.1	0.2	1.6	<0.1	<0.1	<0.1	0.3
Calcium	ug/l	--	47000	58000	53000	35000	47000	36000	50000
Chromium	ug/l	-- ⁽⁸⁾	<1	4	2	<1	<1	2	<1
Copper	ug/l	5	1	1	1	<1	<1	<1	<1
Iron	ug/l	300	880	3870	590	1820	8490	1870	360
Lead	ug/l	-- ⁽⁹⁾	<1	<1	<1	<1	<1	<1	<1
Magnesium	ug/l	--	17000	18000	15000	14000	15000	12000	16000
Manganese	ug/l	--	290	1080	170	270	510	220	50
Mercury, dissolved	ug/l	0.2 ⁽¹⁰⁾	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Potassium	ug/l	--	5000	4000	5000	3000	2000	2000	4000
Sodium	ug/l	--	11000	29000	18000	15000	13000	14000	14000
Zinc	ug/l	30 ⁽⁶⁾	<10	<10	400	<10	<10	<10	<10
Phenols									
Phenolics, Total Recoverable	ug/l	1 ⁽¹¹⁾	<1	<1	6	3	<1	1	<1

Parameter	Unit	PWQO ⁽¹⁾	S2	S2	S2	S2	S2	S2	S2	S2
			01-Nov-1991	01-Jul-1992	01-Dec-1992	01-May-1994	01-Jan-1995	01-Dec-1995	25-Jun-1996	25-Nov-1996
General Chemistry										
Alkalinity (Total as CaCO3)	mg/l	-- ⁽²⁾	305	398	352	245	540	383	-- ⁽¹²⁾	263
Ammonia, unionized	ug/l	20	--	--	--	--	--	--	--	--
Ammonia Nitrogen	ug/l	--	--	--	--	<100	1100	5060	490	330
Biochemical Oxygen Demand, 5 Day	ug/l	--	50800	8100	17000	4600	8700	8000	--	2000
Chemical Oxygen Demand	ug/l	--	13000	79000	29000	41000	152000	38000	--	18000
Chloride	ug/l	--	31000	19700	13000	21000	11000	17000	--	20900
Conductivity	uS/cm	--	810	--	--	528	1225	604	--	566
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	--	--
Dissolved Organic Carbon	ug/l	--	--	--	--	--	--	--	--	--
Dissolved Oxygen (Field)	mg/l	-- ⁽³⁾	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	ug/l	--	362000	390000	617000	229000	446000	380000	--	264000
Nitrate as N	ug/l	--	<100	--	4770	300	<100	800	--	<100
Nitrite as N	ug/l	--	<100	--	4770	300	<100	800	--	<100
Nitrogen, Total Kjeldahl	ug/l	--	11200	240	4400	6720	7090	1510	--	920
pH (Field)	-	6.5 - 8.5	6.85	--	--	6.97	6.95	7.79	--	7.75
Phosphorus	ug/l	-- ⁽⁴⁾	--	13	--	170	400	160	--	170
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--
Sulphate	ug/l	--	38000	--	255000	--	23000	--	--	15000
Temperature (Field)	deg c	-- ⁽⁵⁾	--	--	--	--	--	--	--	--
Total Dissolved Solids	ug/l	--	--	--	--	--	--	--	--	--
Total Suspended Solids	ug/l	--	--	--	--	--	--	--	--	--
Metals										
Arsenic	ug/l	100 ⁽⁶⁾	<50	--	--	--	2	11	--	<1
Barium	ug/l	--	--	--	--	--	--	--	--	62
Boron	ug/l	200 ⁽⁷⁾	--	--	--	--	--	--	--	--
Cadmium	ug/l	0.2 ⁽⁶⁾	<4	--	--	<0.1	0.6	0.5	--	0.3
Calcium	ug/l	--	--	--	--	--	--	--	--	--
Chromium	ug/l	-- ⁽⁸⁾	<10	--	--	<10	<10	<10	--	10
Copper	ug/l	5	<10	--	--	1.9	11.1	13	--	5
Iron	ug/l	300	6450	--	780	11700	51200	240	--	2080
Lead	ug/l	-- ⁽⁹⁾	--	--	--	--	--	--	--	<0.2
Magnesium	ug/l	--	--	--	--	--	--	--	--	--
Manganese	ug/l	--	--	--	--	--	--	--	--	--
Mercury, dissolved	ug/l	0.2 ⁽¹⁰⁾	--	--	--	--	--	--	--	<0.1
Potassium	ug/l	--	--	--	--	--	--	--	--	--
Sodium	ug/l	--	20000	--	--	18000	43000	16000	--	14900
Zinc	ug/l	30 ⁽⁶⁾	<10	--	--	16	152	55	--	40
Phenols										
Phenolics, Total Recoverable	ug/l	1 ⁽¹¹⁾	<2	13	2	<2	<1	9	--	<5

Parameter	Unit	PWQO ⁽¹⁾	S2	S2	S2	S2	S2	S2	S2	S2
			01-Jun-1997	01-Nov-1997	01-Jun-1998	01-Nov-1998	01-Nov-1999	01-Jun-2000	01-Nov-2000	01-Aug-2001
General Chemistry										
Alkalinity (Total as CaCO3)	mg/l	-- ⁽²⁾	248	190	356	189	180	371	396	349
Ammonia, unionized	ug/l	20	--	--	--	--	--	--	--	--
Ammonia Nitrogen	ug/l	--	30	--	570	990	500	--	--	2360
Biochemical Oxygen Demand, 5 Day	ug/l	--	<1000	3000	6000	3000	<1000	<1000	<1000	1000
Chemical Oxygen Demand	ug/l	--	14000	24000	25000	26000	10000	8600	--	17000
Chloride	ug/l	--	15600	--	19300	17600	10800	21800	22600	26200
Conductivity	uS/cm	--	473	398	687	701	362	--	--	663
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	--	--
Dissolved Organic Carbon	ug/l	--	--	--	--	--	--	--	--	--
Dissolved Oxygen (Field)	mg/l	-- ⁽³⁾	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	ug/l	--	308000	210000	363000	407000	190000	210000	398000	358000
Nitrate as N	ug/l	--	<100	<100	<100	200	--	--	--	100
Nitrite as N	ug/l	--	<100	<100	<100	<100	--	--	--	<100
Nitrogen, Total Kjeldahl	ug/l	--	1620	1090	1770	1450	--	--	--	2780
pH (Field)	-	6.5 - 8.5	8.05	7.84	7.39	7.19	--	7.94	7.7	7.87
Phosphorus	ug/l	-- ⁽⁴⁾	80	--	50	80	--	--	--	90
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--
Sulphate	ug/l	--	5000	10000	12000	6000	--	1000	5000	3000
Temperature (Field)	deg c	-- ⁽⁵⁾	--	--	--	--	--	--	--	--
Total Dissolved Solids	ug/l	--	--	--	--	--	--	--	--	410000
Total Suspended Solids	ug/l	--	--	--	--	--	--	--	--	30000
Metals										
Arsenic	ug/l	100 ⁽⁶⁾	<1	<1	2	0.1	<1	--	--	2
Barium	ug/l	--	57	53	125	140	65	91	125	135
Boron	ug/l	200 ⁽⁷⁾	--	--	--	--	--	--	--	130
Cadmium	ug/l	0.2 ⁽⁶⁾	<1	<0.1	<0.1	<0.1	0.2	--	--	<0.1
Calcium	ug/l	--	--	--	--	--	--	--	--	--
Chromium	ug/l	-- ⁽⁸⁾	<10	<10	<10	10	<10	--	--	<10
Copper	ug/l	5	21.4	1.1	2.6	0.8	2	--	--	0.5
Iron	ug/l	300	1520	6310	7260	10300	1360	3840	14200	14200
Lead	ug/l	-- ⁽⁹⁾	0.3	<0.2	<0.2	<0.2	0.2	--	--	0.7
Magnesium	ug/l	--	--	--	--	--	--	--	--	--
Manganese	ug/l	--	--	--	--	--	--	--	--	--
Mercury, dissolved	ug/l	0.2 ⁽¹⁰⁾	<0.1	<0.1	<0.1	<100	<0.1	--	--	<0.1
Potassium	ug/l	--	--	--	--	--	--	--	--	--
Sodium	ug/l	--	11900	15000	22400	19700	--	16200	18600	20500
Zinc	ug/l	30 ⁽⁶⁾	20	20	50	60	--	--	--	30
Phenols										
Phenolics, Total Recoverable	ug/l	1 ⁽¹¹⁾	<1	2	<1	18	--	--	--	5

Parameter	Unit	PWQO ⁽¹⁾	S2	S2	S2	S2	S2	S2	S2	S2
			01-Nov-2001	01-Jul-2002	01-Nov-2002	09-Jul-2003	25-Nov-2003	01-Sep-2004	12-Dec-2004	24-Jun-2005
General Chemistry										
Alkalinity (Total as CaCO3)	mg/l	-- ⁽²⁾	157	198	254	303	180	228	230	187
Ammonia, unionized	ug/l	20	--	--	--	--	--	--	--	3.21
Ammonia Nitrogen	ug/l	--	830	980	740	780	130	230	230	240
Biochemical Oxygen Demand, 5 Day	ug/l	--	2000	<1000	1000	3000	<1000	2000	<1000	<3000
Chemical Oxygen Demand	ug/l	--	21000	40000	28000	45000	21000	39000	31000	56000
Chloride	ug/l	--	23800	15700	59800	61700	30800	22100	62200	27300
Conductivity	uS/cm	--	441	416	753	729	472	511	636	469
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	--	--
Dissolved Organic Carbon	ug/l	--	--	12900	7900	12300	8000	8500	7700	15900
Dissolved Oxygen (Field)	mg/l	-- ⁽³⁾	--	4.5	7.93	--	--	--	--	5
Hardness, Calcium Carbonate	ug/l	--	213000	203000	301000	286000	176000	202000	241000	191000
Nitrate as N	ug/l	--	100	100	400	300	200	300	100	200
Nitrite as N	ug/l	--	<100	<10	<10	1200	<100	<100	<100	<100
Nitrogen, Total Kjeldahl	ug/l	--	1820	2230	1300	2530	670	1130	1520	2650
pH (Field)	-	6.5 - 8.5	8.51	7.53	7.61	--	--	--	--	7.63
Phosphorus	ug/l	-- ⁽⁴⁾	100	160	90	780	50	110	580	40
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	0.637
Sulphate	ug/l	--	6000	2000	50000	9000	9000	4000	61800	2000
Temperature (Field)	deg c	-- ⁽⁵⁾	--	--	--	--	--	--	--	17
Total Dissolved Solids	ug/l	--	304000	184000	384000	470000	228000	270000	334000	230000
Total Suspended Solids	ug/l	--	11000	14000	5000	4000	6000	4000	31000	3000
Metals										
Arsenic	ug/l	100 ⁽⁶⁾	<1	<1	<1	<1	1	<1	1	<1
Barium	ug/l	--	25	55	80	71	32	53	43	36
Boron	ug/l	200 ⁽⁷⁾	10	100	100	64	11	95	15	88
Cadmium	ug/l	0.2 ⁽⁶⁾	<0.1	<0.1	<0.1	0.1	<0.1	<5	<5	<0.1
Calcium	ug/l	--	--	--	--	--	--	--	--	50700
Chromium	ug/l	-- ⁽⁸⁾	<10	<10	<10	<0.2	<1	2	<2	<2
Copper	ug/l	5	1.9	1.5	<2	4	21	43	<2	<2
Iron	ug/l	300	1030	4430	2720	708	352	2290	6680	807
Lead	ug/l	-- ⁽⁹⁾	<0.2	0.2	0.8	1	1	<20	<20	<0.2
Magnesium	ug/l	--	--	--	--	--	--	--	--	15700
Manganese	ug/l	--	--	--	--	--	--	--	--	--
Mercury, dissolved	ug/l	0.2 ⁽¹⁰⁾	<0.1	<0.1	<0.1	--	<0.1	<0.1	<0.06	<0.06
Potassium	ug/l	--	--	--	--	--	--	--	--	3000
Sodium	ug/l	--	14400	2600	38900	33100	17900	31900	37800	20300
Zinc	ug/l	30 ⁽⁶⁾	<10	10	20	10	<5	38	<5	8
Phenols										
Phenolics, Total Recoverable	ug/l	1 ⁽¹¹⁾	<1	<1	<1	<1	<1	<1	11	<1

Appendix D-III Surface Water 2024
Surface Water Monitor S2

Parameter	Unit	PWQO ⁽¹⁾	S2	S2	S2	S2	S2	S2
			28-Nov-2006	27-Nov-2007	13-Jun-2008	25-Nov-2008	07-Jul-2009	06-Dec-2009
						W-5	W-2	W-2
General Chemistry								
Alkalinity (Total as CaCO3)	mg/l	-- ⁽²⁾	309	229	191	210	133	231
Ammonia, unionized	ug/l	20	1.51	<20	8.64	0.12	0.87	1.35
Ammonia Nitrogen	ug/l	--	570	390	550	50	110	590
Biochemical Oxygen Demand, 5 Day	ug/l	--	<1000	<1000	<1000	5000	5000	2000
Chemical Oxygen Demand	ug/l	--	12000	12000	13000	28000	25000	15000
Chloride	ug/l	--	22000	25000	21000	30000	23000	23000
Conductivity	uS/cm	--	580	425	435	495	336	516
Conductivity (Field)	uS/cm	--	--	--	--	425	590	635
Dissolved Organic Carbon	ug/l	--	4000	7300	7200	8400	7900	5700
Dissolved Oxygen (Field)	mg/l	-- ⁽³⁾	10.71	10.77	10.72	11.42	8.81	7.81
Hardness, Calcium Carbonate	ug/l	--	306000	227000	204000	217000	146000	231000
Nitrate as N	ug/l	--	130	<100	<100	<100	<100	<100
Nitrite as N	ug/l	--	<100	<100	<100	<100	<100	<100
Nitrogen, Total Kjeldahl	ug/l	--	690	730	1140	980	930	700
pH (Field)	-	6.5 - 8.5	7.4	7.3	7.8	7.4	7.4	7.3
Phosphorus	ug/l	-- ⁽⁴⁾	20	70	70	100	130	60
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--
Sulphate	ug/l	--	24000	11000	5000	5000	4000	12000
Temperature (Field)	deg c	-- ⁽⁵⁾	3	2	14	2	17	4
Total Dissolved Solids	ug/l	--	428000	336000	283000	322000	218000	335000
Total Suspended Solids	ug/l	--	8000	4000	8000	26000	8000	13000
Metals								
Arsenic	ug/l	100 ⁽⁶⁾	<1	<1	<1	<1	<1	<1
Barium	ug/l	--	100	50	60	40	20	70
Boron	ug/l	200 ⁽⁷⁾	120	40	40	<10	20	40
Cadmium	ug/l	0.2 ⁽⁶⁾	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Calcium	ug/l	--	93000	68000	62000	59000	37000	71000
Chromium	ug/l	-- ⁽⁸⁾	<1	2	<1	2	1	<1
Copper	ug/l	5	<1	<1	<1	<1	<1	<1
Iron	ug/l	300	3420	2330	2920	1110	1910	5110
Lead	ug/l	-- ⁽⁹⁾	<1	<1	<1	<1	<1	<1
Magnesium	ug/l	--	18000	14000	12000	17000	13000	13000
Manganese	ug/l	--	590	530	590	120	220	890
Mercury, dissolved	ug/l	0.2 ⁽¹⁰⁾	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Potassium	ug/l	--	5000	4000	4000	4000	2000	3000
Sodium	ug/l	--	19000	14000	15000	17000	14000	13000
Zinc	ug/l	30 ⁽⁶⁾	60	20	<10	<10	<10	<10
Phenols								
Phenolics, Total Recoverable	ug/l	1 ⁽¹¹⁾	<1	<1	<1	<1	1	<1

Parameter	Unit	PWQO ⁽¹⁾	S3	S3	S3	S3	S3	S3	S3	S3	S3	
			01-Jul-2002	01-Nov-2002	09-Jul-2003	25-Nov-2003	01-Sep-2004	24-Jun-2005	30-Jun-2006	28-Nov-2006	29-Jun-2007	
General Chemistry												
Alkalinity (Total as CaCO3)	mg/l	-- ⁽²⁾	110	159	101	158		137	138	100	177	167
Ammonia, unionized	ug/l	20	--	--	--	--	--	--	1.05	<0.2	<20	<20
Ammonia Nitrogen	ug/l	--	280	330	100	50	<10	50	<20	<20	<20	100
Biochemical Oxygen Demand, 5 Day	ug/l	--	32000	4000	39000	3000	15000	48000	<1000	2000	7000	
Bromide	ug/l	--	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	ug/l	--	43000	52000	745000	109000	65000	60000	25000	28000	34000	
Chloride	ug/l	--	11200	75100	51600	32600	22200	35000	20000	19000	49000	
Chloride, dissolved	ug/l	--	--	--	--	--	--	--	--	--	--	--
Conductivity	uS/cm	--	236	642	347	441	347	445	535	510	470	
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	--	--	--	--
Dissolved Organic Carbon	ug/l	--	14300	9400	22700	8000	9200	12500	7500	6700	14900	
Dissolved Oxygen (Field)	mg/l	-- ⁽³⁾	6.5	3.15	--	--	--	20	9.94	9.98	9.28	
Fluoride	ug/l	--	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	ug/l	--	133000	223000	157000	184000	121000	141000	105000	185000	156000	
Nitrate as N	ug/l	--	<10	100	<100	200	200	<100	<100	<100	<100	610
Nitrite as N	ug/l	--	<10	<10	<100	<100	<100	<100	<100	<100	<100	<100
Nitrogen, Total Kjeldahl	ug/l	--	6270	2010	8900	3840	2000	2210	870	1320	2570	
Nitrogen, Nitrate-Nitrite	ug/l	--	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	6.5 - 8.5	9.72	7.25	--	--	--	7.67	7.4	7.2	7.3	
Phosphorus	ug/l	-- ⁽⁴⁾	1590	290	200	670	390	260	80	260	290	
Phosphorus, Total Orthophosphate	ug/l	--	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	0.688	--	--	--	--
Sulphate	ug/l	--	2000	51000	3000	10000	1000	<1000	2000	29000	3000	
Sulphate, dissolved	ug/l	--	--	--	--	--	--	--	--	--	--	--
Temperature (Field)	deg c	-- ⁽⁵⁾	--	--	--	--	--	22	20	1	15	
Total Dissolved Solids	ug/l	--	146000	354000	260000	225000	176000	186000	168000	261000	311000	
Total Suspended Solids	ug/l	--	293000	84000	684000	206000	98000	166000	4000	10000	68000	
Metals												
Antimony	ug/l	20	--	--	--	--	--	--	--	--	--	--
Arsenic	ug/l	100 ⁽⁶⁾	<1	<1	1	1	1	1	<1	<1	<1	<1
Barium	ug/l	--	40	75	74	59	32	19	10	30	30	
Beryllium	ug/l	-- ⁽¹³⁾	--	--	--	--	--	--	--	--	--	--
Boron	ug/l	200 ⁽⁷⁾	40	30	87	11	117	25	10	<10	10	
Cadmium	ug/l	0.2 ⁽⁶⁾	<0.1	<0.1	0.3	0.3	<5	0.2	<0.1	<0.1	0.7	
Calcium	ug/l	--	--	--	--	--	--	31600	24000	46000	36000	
Chromium	ug/l	-- ⁽⁸⁾	<10	10	7	2	2	<2	<1	<1	2	
Cobalt	ug/l	0.9	--	--	--	--	--	--	--	--	--	--
Copper	ug/l	5	4.3	2	6	17	55	59	2	<1	2	
Iron	ug/l	300	3960	2240	5280	26	4000	2000	500	760	980	
Lead	ug/l	-- ⁽⁹⁾	2.5	3.1	11.6	6.3	<20	0.6	<1	<1	<1	
Magnesium	ug/l	--	--	--	--	--	--	15200	11000	17000	16000	
Manganese	ug/l	--	--	--	--	--	--	--	20	300	90	
Mercury, dissolved	ug/l	0.2 ⁽¹⁰⁾	<0.1	<0.1	--	<0.1	<0.1	<0.06	<0.1	<0.1	<0.1	
Molybdenum	ug/l	40	--	--	--	--	--	--	--	--	--	--
Nickel	ug/l	25	--	--	--	--	--	--	--	--	--	--
Potassium	ug/l	--	--	--	--	--	--	3000	<1000	4000	3000	
Selenium	ug/l	100	--	--	--	--	--	--	--	--	--	--
Silver	ug/l	0.1	--	--	--	--	--	--	--	--	--	--
Sodium	ug/l	--	11500	42000	40100	23500	24900	18800	11000	11000	25000	
Thallium	ug/l	0.3 ⁽¹⁴⁾	--	--	--	--	--	--	--	--	--	--
Tungsten	ug/l	30 ⁽¹⁵⁾	--	--	--	--	--	--	--	--	--	--
Uranium	ug/l	5 ⁽⁷⁾	--	--	--	--	--	--	--	--	--	--
Vanadium	ug/l	6	--	--	--	--	--	--	--	--	--	--
Zinc	ug/l	30 ⁽⁶⁾	30	30	90	57	75	25	<10	<10	<10	
Zirconium	ug/l	4 ⁽⁷⁾	--	--	--	--	--	--	--	--	--	--
Phenols												
Phenolics, Total Recoverable	ug/l	1 ⁽¹¹⁾	<1	<1	<1	<1	3	4	4	<1	<1	

Appendix D-III Surface Water 2024
Surface Water Monitor S3

Parameter	Unit	PWQO ⁽¹⁾	S3	S3	S3	S3	S3	S3	S3	S3	S3
			27-Nov-2007	13-Jun-2008	25-Nov-2008	07-Jul-2009	06-Dec-2009	11-Jun-2010	03-Dec-2010	13-Jun-2011	30-Nov-2011
			W-2		W-2	W-4	W-6	W-2	W - 2	W-3	S-3
General Chemistry											
Alkalinity (Total as CaCO ₃)	mg/l	-- ⁽²⁾	206	134	196	107	198	148	156	92	73
Ammonia, unionized	ug/l	20	<20	1.73	0.06	0.27	0.03	0.12	<0.04	<0.23	0.1
Ammonia Nitrogen	ug/l	--	<20	320	50	30	20	20	<20	<20	20
Biochemical Oxygen Demand, 5 Day	ug/l	--	2000	6000	14000	2000	2000	3000	7000	2000	2000
Bromide	ug/l	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	ug/l	--	17000	29000	30000	28000	15000	40000	30000	40000	20000
Chloride	ug/l	--	31000	29000	29000	23000	26000	57000	58000	42000	21000
Chloride, dissolved	ug/l	--	--	--	--	--	--	--	--	--	--
Conductivity	uS/cm	--	400	346	469	284	454	461	486	316	229
Conductivity (Field)	uS/cm	--	--	--	380	460	535	605	585	615	891
Dissolved Organic Carbon	ug/l	--	11300	11000	9000	9000	7400	11500	5800	9000	5000
Dissolved Oxygen (Field)	mg/l	-- ⁽³⁾	5.88	6.98	7.82	5.11	4.39	3.77	8.60	3.62	5.49
Fluoride	ug/l	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	ug/l	--	197000	143000	201000	117000	191000	179000	161000	104000	80000
Nitrate as N	ug/l	--	<100	<100	<100	<100	<100	<100	<100	<100	120
Nitrite as N	ug/l	--	<100	<100	<100	<100	<100	<100	<100	<100	<100
Nitrogen, Total Kjeldahl	ug/l	--	640	1530	1110	800	640	1550	1130	660	660
Nitrogen, Nitrate-Nitrite	ug/l	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	6.5 - 8.5	7.2	7.3	7.1	7.3	7.2	7.2	7.4	7.5	7.67
Phosphorus	ug/l	-- ⁽⁴⁾	50	330	160	110	60	130	40	50	60
Phosphorus, Total Orthophosphate	ug/l	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--
Sulphate	ug/l	--	2000	2000	5000	3000	4000	4000	8000	5000	8000
Sulphate, dissolved	ug/l	--	--	--	--	--	--	--	--	--	--
Temperature (Field)	deg c	-- ⁽⁵⁾	1	15	1	22	2	20	1	19	3.1
Total Dissolved Solids	ug/l	--	311000	225000	305000	185000	295000	300000	316000	205000	149000
Total Suspended Solids	ug/l	--	3000	19000	38000	7000	6000	13000	10000	42000	11000
Metals											
Antimony	ug/l	20	--	--	--	--	--	--	--	--	--
Arsenic	ug/l	100 ⁽⁶⁾	<1	<1	<1	<1	<1	<1	<1	<1	<1
Barium	ug/l	--	30	40	40	10	20	20	20	<10	30
Beryllium	ug/l	-- ⁽¹³⁾	--	--	--	--	--	--	--	--	--
Boron	ug/l	200 ⁽⁷⁾	<10	<10	<10	<10	<10	<10	<10	<10	10
Cadmium	ug/l	0.2 ⁽⁶⁾	0.3	<0.1	0.5	0.2	<0.1	<0.1	<0.1	<0.1	<0.1
Calcium	ug/l	--	54000	34000	54000	27000	50000	42000	43000	17000	19000
Chromium	ug/l	-- ⁽⁸⁾	2	<1	1	1	<1	<1	2	<1	4
Cobalt	ug/l	0.9	--	--	--	--	--	--	--	--	--
Copper	ug/l	5	<1	1	2	<1	<1	<1	<1	<1	2
Iron	ug/l	300	470	4130	940	540	360	500	480	450	920
Lead	ug/l	-- ⁽⁹⁾	<1	<1	<1	<1	<1	<1	<1	<1	<1
Magnesium	ug/l	--	15000	14000	16000	12000	16000	18000	13000	15000	8000
Manganese	ug/l	--	210	370	110	80	50	60	80	30	90
Mercury, dissolved	ug/l	0.2 ⁽¹⁰⁾	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Molybdenum	ug/l	40	--	--	--	--	--	--	--	--	--
Nickel	ug/l	25	--	--	--	--	--	--	--	--	--
Potassium	ug/l	--	5000	3000	3000	1000	4000	1000	3000	<1000	3000
Selenium	ug/l	100	--	--	--	--	--	--	--	--	--
Silver	ug/l	0.1	--	--	--	--	--	--	--	--	--
Sodium	ug/l	--	17000	17000	16000	12000	13000	28000	27000	18000	12000
Thallium	ug/l	0.3 ⁽¹⁴⁾	--	--	--	--	--	--	--	--	--
Tungsten	ug/l	30 ⁽¹⁵⁾	--	--	--	--	--	--	--	--	--
Uranium	ug/l	5 ⁽⁷⁾	--	--	--	--	--	--	--	--	--
Vanadium	ug/l	6	--	--	--	--	--	--	--	--	--
Zinc	ug/l	30 ⁽⁶⁾	<10	<10	<10	<10	<10	<10	<10	<10	10
Zirconium	ug/l	4 ⁽⁷⁾	--	--	--	--	--	--	--	--	--
Phenols											
Phenolics, Total Recoverable	ug/l	1 ⁽¹¹⁾	<1	3	<1	2	<1	<1	<1	--	--

Parameter	Unit	PWQO ⁽¹⁾	S3	S3	S3	S3	S3	S3	S3	S3	S3
			23-Jun-2012 W-3	11-Nov-2012 W-5	24-Jun-2013 W-3	21-Nov-2013 W-5	27-May-2014 S-3	26-Nov-2014 W-1	29-May-2015 S-3	30-Nov-2015 W-3	14-Jun-2016 SW-3
General Chemistry											
Alkalinity (Total as CaCO3)	mg/l	-- ⁽²⁾	100	150	99	170	130	160	139	160	111
Ammonia, unionized	ug/l	20	<0.53	<0.11	1.59	7.32	1.46	<0.11	1.42	0.16	6.51
Ammonia Nitrogen	ug/l	--	<50	<50	130	4100	120	<50	120	40	190
Biochemical Oxygen Demand, 5 Day	ug/l	--	<2000	3000	<2000	4000	13000	<2000	6000 ⁽¹⁶⁾	2000	<2000
Bromide	ug/l	--	--	--	--	--	--	--	<100	--	--
Chemical Oxygen Demand	ug/l	--	32000	27000	37000	25000	96000	19000	35000	19000	39000
Chloride	ug/l	--	20000	28000	--	--	--	--	74000	42000	63000
Chloride, dissolved	ug/l	--	--	--	33000	30000	61000	34000	--	--	--
Conductivity	uS/cm	--	--	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	595	640	585	575	446	410	476	540	351
Dissolved Organic Carbon	ug/l	--	7400	8100	12000	8900	8500	6400	11400	7400	14700
Dissolved Oxygen (Field)	mg/l	-- ⁽³⁾	2.99	4.21	5.44	4.04	2.53	3.92	2.98	3.87	2.31
Fluoride	ug/l	--	--	--	--	--	--	--	<100	--	--
Hardness, Calcium Carbonate	ug/l	--	--	--	--	630000	--	--	175000	154000	134000
Nitrate as N	ug/l	--	<100	<100	<100	<100	<100	<100	<100	<100	<100
Nitrite as N	ug/l	--	<10	<10	<10	<10	<10	<10	<50	<50	<50
Nitrogen, Total Kjeldahl	ug/l	--	660	1300	1000	900	2000	760	900	600	2300
Nitrogen, Nitrate-Nitrite	ug/l	--	<100	<100	<100	<100	<100	<100	--	--	--
pH (Field)	-	6.5 - 8.5	7.4	7.4	7.4	7.3	7.49	7.4	7.48	7.7	8.14
Phosphorus	ug/l	-- ⁽⁴⁾	120	120	110	58	340	90	150	30	140
Phosphorus, Total Orthophosphate	ug/l	--	--	--	--	--	--	--	<200	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--
Sulphate	ug/l	--	--	--	--	--	--	--	3000	--	--
Sulphate, dissolved	ug/l	--	--	--	--	34000	--	--	--	--	--
Temperature (Field)	deg c	-- ⁽⁵⁾	21	1	23	1	20.1	1	20.0	0	14.2
Total Dissolved Solids	ug/l	--	152000	202000	174000	242000	258000	234000	274000	250000	236000
Total Suspended Solids	ug/l	--	28000	<10000	11000	<10000	48000	19000	18000	7000	43000
Metals											
Antimony	ug/l	20	--	--	--	--	--	--	--	--	--
Arsenic	ug/l	100 ⁽⁶⁾	<1.0	<1.0	<1.0	<1	<1.0	<1	<1	<1	<1
Barium	ug/l	--	32	38	15	26	30	24	27	19	39
Beryllium	ug/l	-- ⁽¹³⁾	--	--	--	--	--	--	--	--	--
Boron	ug/l	200 ⁽⁷⁾	19	18	11	<10	56	<10	15	11	68
Cadmium	ug/l	0.2 ⁽⁶⁾	<0.10	0.15	<0.10	<0.1	<0.10	<0.1	<0.1	<0.1	0.1
Calcium	ug/l	--	34000	52000	27000	50000	47000	49000	42900	41300	29000
Chromium	ug/l	-- ⁽⁸⁾	<5.0	<5.0	<5.0	<5	<5.0	<5	2	<1	<1
Cobalt	ug/l	0.9	--	--	--	--	--	--	--	--	--
Copper	ug/l	5	<1.0	2.0	<1.0	<1	1.1	1	<0.5	<0.5	1.7
Iron	ug/l	300	1600	270	310	280	1300	500	836	338	1380
Lead	ug/l	-- ⁽⁹⁾	<0.50	<0.50	<0.50	<0.5	<0.50	<0.5	<0.1	0.1	0.7
Magnesium	ug/l	--	8600	12000	14000	14000	17000	14000	16600	12200	14900
Manganese	ug/l	--	120	67	14	33	210	300	66	85	123
Mercury, dissolved	ug/l	0.2 ⁽¹⁰⁾	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.1	<0.1	<0.1
Molybdenum	ug/l	40	--	--	--	--	--	--	--	--	--
Nickel	ug/l	25	--	--	--	--	--	--	--	--	--
Potassium	ug/l	--	940	8400	600	2800	3400	3600	3590	3410	2170
Selenium	ug/l	100	--	--	--	--	--	--	--	--	--
Silver	ug/l	0.1	--	--	--	--	--	--	--	--	--
Sodium	ug/l	--	9800	14000	16000	15000	29000	17000	30600	19200	31000
Thallium	ug/l	0.3 ⁽¹⁴⁾	--	--	--	--	--	--	--	--	--
Tungsten	ug/l	30 ⁽¹⁵⁾	--	--	--	--	--	--	--	--	--
Uranium	ug/l	5 ⁽⁷⁾	--	--	--	--	--	--	--	--	--
Vanadium	ug/l	6	--	--	--	--	--	--	--	--	--
Zinc	ug/l	30 ⁽⁶⁾	<5.0	6.0	<5.0	<5	7.5	7	6	12	19
Zirconium	ug/l	4 ⁽⁷⁾	--	--	--	--	--	--	--	--	--
Phenols											
Phenolics, Total Recoverable	ug/l	1 ⁽¹¹⁾	--	--	--	--	--	--	--	--	--

Appendix D-III Surface Water 2024
Surface Water Monitor S3

Parameter	Unit	PWQO ⁽¹⁾	S3	S3	S3	S3	S3	S3	S3
			29-Nov-2016	02-Jun-2017	23-Nov-2017	28-Jun-2018	27-Nov-2018	18-Jun-2019	28-Nov-2019
			S-3	S-3	SW-3	SW-3	S3	S-4	S-3
General Chemistry									
Alkalinity (Total as CaCO ₃)	mg/l	-- ⁽²⁾	115	127	188	179	181	134	120
Ammonia, unionized	ug/l	20	0.27	0.47	0.34	1.95	1.31	2.28	0.36
Ammonia Nitrogen	ug/l	--	80	60	170	250	190	70	80
Biochemical Oxygen Demand, 5 Day	ug/l	--	7000	2000	21000	<2000	2000	3000	3000
Bromide	ug/l	--	<100	--	--	--	--	<100	<100
Chemical Oxygen Demand	ug/l	--	55000	35000	36000	537000	22000	17000	14000
Chloride	ug/l	--	29000	39000	44000	60000	208000	60000	72000
Chloride, dissolved	ug/l	--	--	--	--	--	--	--	--
Conductivity	uS/cm	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	381	395	461	475	926	720	830
Dissolved Organic Carbon	ug/l	--	7600	7400	7500	79200	6800	6600	5300
Dissolved Oxygen (Field)	mg/l	-- ⁽³⁾	2.98	2.11	3.75	1.40	3.81	1.03	2.91
Fluoride	ug/l	--	300	--	--	--	--	<100	<100
Hardness, Calcium Carbonate	ug/l	--	121000	136000	174000	180000	204000	171000	175000
Nitrate as N	ug/l	--	<100	<100	<100	<100	200	<100	100
Nitrite as N	ug/l	--	<50	<50	<50	<50	<50	<50	<50
Nitrogen, Total Kjeldahl	ug/l	--	2800	500	1500	7400	800	600	300
Nitrogen, Nitrate-Nitrite	ug/l	--	--	--	--	--	--	--	--
pH (Field)	-	6.5 - 8.5	7.61	7.3	7.36	7.32	7.91	7.90	7.7
Phosphorus	ug/l	-- ⁽⁴⁾	410	10	280	1340	80	40	70
Phosphorus, Total Orthophosphate	ug/l	--	<200	--	--	--	--	<200	<200
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--
Sulphate	ug/l	--	8000	3000	4000	4000	9000	4000	7000
Sulphate, dissolved	ug/l	--	--	--	--	--	--	--	--
Temperature (Field)	deg c	-- ⁽⁵⁾	0.3	20	0.6	19.3	0.4	20.9	1.1
Total Dissolved Solids	ug/l	--	182000	204000	242000	338000	512000	270000	244000
Total Suspended Solids	ug/l	--	51000	2000	71000	132000	<2000	7000	5000
Metals									
Antimony	ug/l	20	<0.5	--	--	--	--	<0.5	<0.5
Arsenic	ug/l	100 ⁽⁶⁾	<1	<1	<1	2	<1	<1	<1
Barium	ug/l	--	61	10	82	612	42	97	32
Beryllium	ug/l	-- ⁽¹³⁾	<0.5	--	--	--	--	<0.5	<0.5
Boron	ug/l	200 ⁽⁷⁾	12	22	55	30	11	78	24
Cadmium	ug/l	0.2 ⁽⁶⁾	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Calcium	ug/l	--	33200	31800	44300	40100	50100	39500	47000
Chromium	ug/l	-- ⁽⁸⁾	2	<1	4	8	<1	<1	2
Cobalt	ug/l	0.9	0.8	--	--	--	--	<0.5	0.7
Copper	ug/l	5	<0.5	<0.5	2.6	6.1	2.3	1.2	2.3
Iron	ug/l	300	2310	341	4290	8230	932	626	1220
Lead	ug/l	-- ⁽⁹⁾	2.5	0.5	2.4	3.6	0.4	0.2	0.8
Magnesium	ug/l	--	9230	13600	15400	19300	19100	17600	13900
Manganese	ug/l	--	180	12	135	586	576	69	99
Mercury, dissolved	ug/l	0.2 ⁽¹⁰⁾	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Molybdenum	ug/l	40	<0.5	--	--	--	--	<0.5	<0.5
Nickel	ug/l	25	<1	--	--	--	--	<1	1
Potassium	ug/l	--	6940	1060	7120	6060	5910	1860	7970
Selenium	ug/l	100	<1	--	--	--	--	<1	<1
Silver	ug/l	0.1	<0.1	--	--	--	--	0.4	<0.1
Sodium	ug/l	--	13900	18400	20400	24600	86100	33200	30500
Thallium	ug/l	0.3 ⁽¹⁴⁾	<0.1	--	--	--	--	<0.1	<0.1
Tungsten	ug/l	30 ⁽¹⁵⁾	<10	--	--	--	--	<10	<10
Uranium	ug/l	5 ⁽⁷⁾	<0.1	--	--	--	--	0.3	0.5
Vanadium	ug/l	6	2.1	--	--	--	--	<0.5	2.4
Zinc	ug/l	30 ⁽⁶⁾	12	16	19	39	11	28	15
Zirconium	ug/l	4 ⁽⁷⁾	<1	--	--	--	--	<1	<1
Phenols									
Phenolics, Total Recoverable	ug/l	1 ⁽¹¹⁾	--	--	--	--	--	--	--

Appendix D-III Surface Water 2024
Surface Water Monitor S4

Parameter	Unit	PWQO ⁽¹⁾	S4	S4	S4	S4	S4	S4	S4	S4	S4
			01-Jul-2002	01-Nov-2002	09-Jul-2003	25-Nov-2003	01-Sep-2004	24-Jun-2005	30-Jun-2006	28-Nov-2006	29-Jun-2007
General Chemistry											
Alkalinity (Total as CaCO3)	mg/l	-- ⁽²⁾	112	184	78	146	132	117	101	147	157
Ammonia, unionized	ug/l	20	--	--	--	--	--	0.66	0.42	0.07	<20
Ammonia Nitrogen	ug/l	--	420	610	770	310	<10	30	40	40	60
Biochemical Oxygen Demand, 5 Day	ug/l	--	51000	10000	93000	6000	5000	116000	<1000	2000	8000
Bromide	ug/l	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	ug/l	--	58000	120000	1455000	295000	53000	58000	26000	25000	36000
Chloride	ug/l	--	11100	79200	51800	33300	21600	26500	18000	17000	51000
Chloride, dissolved	ug/l	--	--	--	--	--	--	--	--	--	--
Conductivity	uS/cm	--	252	700	321	424	343	430	485	505	490
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	--	--	--
Dissolved Organic Carbon	ug/l	--	24500	12300	25400	9000	9300	14400	9000	5400	15600
Dissolved Oxygen (Field)	mg/l	-- ⁽³⁾	5.5	1.47	-- ⁽¹⁸⁾	-- ⁽¹⁸⁾	-- ⁽¹⁸⁾	15	9.66	9.82	8.99
Fluoride	ug/l	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	ug/l	--	178000	257000	583000	161000	119000	123000	105000	148000	157000
Nitrate as N	ug/l	--	<10	200	<100	200	200	100	<100	<100	930
Nitrite as N	ug/l	--	<10	<10	<100	<100	<100	<100	<100	<100	<100
Nitrogen, Total Kjeldahl	ug/l	--	12500	3740	52200	4690	1480	2750	840	980	2230
Nitrogen, Nitrate-Nitrite	ug/l	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	6.5 - 8.5	9.66	7.12	-- ⁽¹⁸⁾	-- ⁽¹⁸⁾	-- ⁽¹⁸⁾	7.69	7.4	7.3	7.2
Phosphorus	ug/l	-- ⁽⁴⁾	3400	720	5650	1950	320	90	70	150	240
Phosphorus, Total Orthophosphate	ug/l	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	0.658	--	--	--
Sulphate	ug/l	--	2000	53000	2000	8000	2000	3000	2000	14000	3000
Temperature (Field)	deg c	-- ⁽⁵⁾	--	--	--	--	--	22	21	0	15
Total Dissolved Solids	ug/l	--	170000	384000	255000	209000	169000	158000	168000	224000	303000
Total Suspended Solids	ug/l	--	647000	568000	1740000	225000	26000	2500000	7000	13000	61000
Metals											
Antimony	ug/l	20	--	--	--	--	--	--	--	--	--
Arsenic	ug/l	100 ⁽⁶⁾	1	<1	5	1	1	2	<1	<1	<1
Barium	ug/l	--	85	125	1150	70	25	304	10	30	30
Beryllium	ug/l	-- ⁽¹³⁾	--	--	--	--	--	--	--	--	--
Boron	ug/l	200 ⁽⁷⁾	40	40	220	29	18	178	10	10	20
Cadmium	ug/l	0.2 ⁽⁶⁾	0.2	<0.1	10	0.1	<5	1.2	<0.1	<0.1	<0.1
Calcium	ug/l	--	--	--	--	--	--	27300	24000	38000	35000
Chromium	ug/l	-- ⁽⁸⁾	<10	30	10	3	1	43	<1	<1	3
Cobalt	ug/l	0.9	--	--	--	--	--	--	--	--	--
Copper	ug/l	5	12.1	7	133	23	52	113	<1	<1	1
Iron	ug/l	300	8910	10700	145000	121	2040	319	420	580	1280
Lead	ug/l	-- ⁽⁹⁾	9.4	6.7	427	3.9	<20	16.4	<1	<1	<1
Magnesium	ug/l	--	--	--	--	--	--	13400	11000	13000	17000
Manganese	ug/l	--	--	--	--	--	--	--	30	340	100
Mercury, dissolved	ug/l	0.2 ⁽¹⁰⁾	<0.1	<0.1	<0.1	<0.1	<0.1	0.14	<0.1	<0.1	<0.1
Molybdenum	ug/l	40	--	--	--	--	--	--	--	--	--
Nickel	ug/l	25	--	--	--	--	--	--	--	--	--
Potassium	ug/l	--	--	--	--	--	--	13700	<1000	5000	3000
Selenium	ug/l	100	--	--	--	--	--	--	--	--	--
Silver	ug/l	0.1	--	--	--	--	--	--	--	--	--
Sodium	ug/l	--	12400	45300	44600	23400	24500	16800	11000	9000	25000
Thallium	ug/l	0.3 ⁽¹⁴⁾	--	--	--	--	--	--	--	--	--
Tungsten	ug/l	30 ⁽¹⁵⁾	--	--	--	--	--	--	--	--	--
Uranium	ug/l	5 ⁽⁷⁾	--	--	--	--	--	--	--	--	--
Vanadium	ug/l	6	--	--	--	--	--	--	--	--	--
Zinc	ug/l	30 ⁽⁶⁾	70	60	2810	29	117	457	<10	<10	<10
Zirconium	ug/l	4 ⁽⁷⁾	--	--	--	--	--	--	--	--	--
Phenols											
Phenolics, Total Recoverable	ug/l	1 ⁽¹¹⁾	<1	<1	<1	<1	3	2	<1	<1	<1

Appendix D-III Surface Water 2024
Surface Water Monitor S4

Parameter	Unit	PWQO ⁽¹⁾	S4	S4	S4	S4	S4	S4	S4	S4	S4
			27-Nov-2007	13-Jun-2008	25-Nov-2008	07-Jul-2009	06-Dec-2009	11-Jun-2010	03-Dec-2010	13-Jun-2011	30-Nov-2011
					W-3	W-5	W-5	W-3	W - 3	W-2	S-4
General Chemistry											
Alkalinity (Total as CaCO ₃)	mg/l	-- ⁽²⁾	206	124	194	108	198	148	163	91	53
Ammonia, unionized	ug/l	20	<20	1.16	0.03	<0.24	<0.02	<0.17	<0.06	<0.23	0.15
Ammonia Nitrogen	ug/l	--	30	270	30	<20	<20	<20	<20	<20	90
Biochemical Oxygen Demand, 5 Day	ug/l	--	3000	11000	15000	3000	3000	2000	8000	4000	2000
Bromide	ug/l	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	ug/l	--	23000	39000	30000	23000	25000	30000	40000	30000	40000
Chloride	ug/l	--	31000	28000	29000	23000	28000	57000	57000	43000	20000
Chloride, dissolved	ug/l	--	--	--	--	--	--	--	--	--	--
Conductivity	uS/cm	--	310	332	468	285	452	460	504	312	244
Conductivity (Field)	uS/cm	--	--	--	490	400	495	625	535	605	905
Dissolved Organic Carbon	ug/l	--	11300	14900	9600	8800	7800	11000	6800	8700	9300
Dissolved Oxygen (Field)	mg/l	-- ⁽³⁾	6.89	7.42	8.11	5.42	4.66	3.8	4.69	4.1	5.83
Fluoride	ug/l	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	ug/l	--	203000	144000	210000	117000	193000	182000	168000	106000	93000
Nitrate as N	ug/l	--	<100	<100	120	<100	<100	<100	<100	<100	2060
Nitrite as N	ug/l	--	<100	<100	<100	<100	<100	<100	<100	<100	<100
Nitrogen, Total Kjeldahl	ug/l	--	880	1950	900	670	580	1030	1110	810	790
Nitrogen, Nitrate-Nitrite	ug/l	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	6.5 - 8.5	7.1	7.2	7.0	7.4	7.1	7.3	7.5	7.5	7.21
Phosphorus	ug/l	-- ⁽⁴⁾	110	240	240	90	50	40	80	40	70
Phosphorus, Total Orthophosphate	ug/l	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--
Sulphate	ug/l	--	2000	4000	6000	3000	4000	4000	8000	5000	23000
Temperature (Field)	deg c	-- ⁽⁵⁾	1	15	1	23	2	21	1	19	3.0
Total Dissolved Solids	ug/l	--	311000	216000	304000	185000	294000	299000	328000	203000	159000
Total Suspended Solids	ug/l	--	20000	73000	46000	7000	8000	3000	32000	87000	14000
Metals											
Antimony	ug/l	20	--	--	--	--	--	--	--	--	--
Arsenic	ug/l	100 ⁽⁶⁾	<1	<1	<1	<1	<1	<1	<1	<1	<1
Barium	ug/l	--	30	20	40	10	20	20	30	10	30
Beryllium	ug/l	-- ⁽¹³⁾	--	--	--	--	--	--	--	--	--
Boron	ug/l	200 ⁽⁷⁾	<10	<10	<10	<10	<10	<10	<10	<10	50
Cadmium	ug/l	0.2 ⁽⁶⁾	0.4	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Calcium	ug/l	--	55000	33000	56000	27000	51000	43000	44000	16000	24000
Chromium	ug/l	-- ⁽⁸⁾	5	<1	1	1	<1	<1	2	<1	3
Cobalt	ug/l	0.9	--	--	--	--	--	--	--	--	--
Copper	ug/l	5	<1	<1	<1	<1	<1	<1	1	<1	3
Iron	ug/l	300	970	790	900	530	370	470	630	570	700
Lead	ug/l	-- ⁽⁹⁾	<1	<1	<1	<1	<1	<1	<1	<1	<1
Magnesium	ug/l	--	16000	15000	17000	12000	16000	18000	14000	16000	8000
Manganese	ug/l	--	190	140	110	70	50	40	80	30	50
Mercury, dissolved	ug/l	0.2 ⁽¹⁰⁾	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Molybdenum	ug/l	40	--	--	--	--	--	--	--	--	--
Nickel	ug/l	25	--	--	--	--	--	--	--	--	--
Potassium	ug/l	--	5000	2000	4000	1000	4000	1000	3000	<1000	3000
Selenium	ug/l	100	--	--	--	--	--	--	--	--	--
Silver	ug/l	0.1	--	--	--	--	--	--	--	--	--
Sodium	ug/l	--	20000	16000	16000	12000	14000	28000	27000	17000	11000
Thallium	ug/l	0.3 ⁽¹⁴⁾	--	--	--	--	--	--	--	--	--
Tungsten	ug/l	30 ⁽¹⁵⁾	--	--	--	--	--	--	--	--	--
Uranium	ug/l	5 ⁽⁷⁾	--	--	--	--	--	--	--	--	--
Vanadium	ug/l	6	--	--	--	--	--	--	--	--	--
Zinc	ug/l	30 ⁽⁶⁾	<10	<10	<10	<10	<10	<10	<10	<10	30
Zirconium	ug/l	4 ⁽⁷⁾	--	--	--	--	--	--	--	--	--
Phenols											
Phenolics, Total Recoverable	ug/l	1 ⁽¹¹⁾	1	7	<1	1	<1	<1	<1	--	--

Appendix D-III Surface Water 2024
Surface Water Monitor S4

Parameter	Unit	PWQO ⁽¹⁾	S4	S4	S4	S4	S4	S4	S4	S4	S4
			23-Jun-2012	11-Nov-2012	24-Jun-2013	21-Nov-2013	27-May-2014	26-Nov-2014	29-May-2015	30-Nov-2015	14-Jun-2016
			W-4	W-4	W-4	W-3	S-4	W-2	S-4	W-4	SW-4
General Chemistry											
Alkalinity (Total as CaCO ₃)	mg/l	-- ⁽²⁾	100	160	100	170	100	160	140	158	105
Ammonia, unionized	ug/l	20	<0.57	<0.1	1.95	<0.1	1.69	<0.13	1.13	0.29	4.27
Ammonia Nitrogen	ug/l	--	<50	<50	160	<50	110	<50	70	90	110
Biochemical Oxygen Demand, 5 Day	ug/l	--	<2000	4000	<2000	4000	11000	<2000	5000 ⁽¹⁶⁾	2000	<2000
Bromide	ug/l	--	--	--	--	--	--	--	<100	--	--
Chemical Oxygen Demand	ug/l	--	37000	34000	48000	26000	59000	17000	52000	21000	38000
Chloride	ug/l	--	20000	28000	--	--	--	--	75000	42000	57000
Chloride, dissolved	ug/l	--	--	--	33000	30000	60000	34000	--	--	--
Conductivity	uS/cm	--	--	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	615	605	610	580	395	505	309	510	311
Dissolved Organic Carbon	ug/l	--	7100	8000	11000	8900	8400	6300	13400	6900	13600
Dissolved Oxygen (Field)	mg/l	-- ⁽³⁾	3.01	4.31	5.55	3.99	2.95	3.96	3.04	3.99	3.26
Fluoride	ug/l	--	--	--	--	--	--	--	<100	--	--
Hardness, Calcium Carbonate	ug/l	--	--	--	--	--	--	--	165000	159000	138000
Nitrate as N	ug/l	--	<100	<100	<100	<100	<100	<100	<100	<100	<100
Nitrite as N	ug/l	--	<10	<10	<10	<10	<10	<10	<50	<50	<50
Nitrogen, Total Kjeldahl	ug/l	--	860	1200	1200	720	2400	670	1200	800	1600
Nitrogen, Nitrate-Nitrite	ug/l	--	<100	<100	<100	<100	<100	<100	--	--	--
pH (Field)	-	6.5 - 8.5	7.4	7.3	7.4	7.4	7.58	7.5	7.60	7.6	8.22
Phosphorus	ug/l	-- ⁽⁴⁾	120	100	130	52	450	70	230	140	150
Phosphorus, Total Orthophosphate	ug/l	--	--	--	--	--	--	--	<200	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--
Sulphate	ug/l	--	--	--	--	--	--	--	2000	--	--
Temperature (Field)	deg c	-- ⁽⁵⁾	22	2	23	0	20.5	0	20.6	0	13.5
Total Dissolved Solids	ug/l	--	138000	216000	180000	252000	236000	220000	276000	232000	198000
Total Suspended Solids	ug/l	--	<10000	<10000	10000	<10000	<10000	17000	11000	18000	100000
Metals											
Antimony	ug/l	20	--	--	--	--	--	--	--	--	--
Arsenic	ug/l	100 ⁽⁶⁾	<1.0	<1.0	<1.0	<1	<1.0	<1	<1	<1	<1
Barium	ug/l	--	41	37	16	25	14	25	24	20	46
Beryllium	ug/l	-- ⁽¹³⁾	--	--	--	--	--	--	--	--	--
Boron	ug/l	200 ⁽⁷⁾	17	17	15	<10	10	<10	11	10	105
Cadmium	ug/l	0.2 ⁽⁶⁾	<0.10	0.25	<0.10	<0.1	<0.10	<0.1	<0.1	<0.1	<0.1
Calcium	ug/l	--	34000	51000	26000	55000	29000	49000	39600	42900	28500
Chromium	ug/l	-- ⁽⁸⁾	<5.0	<5.0	<5.0	<5	<5.0	<5	<1	<1	<1
Cobalt	ug/l	0.9	--	--	--	--	--	--	--	--	--
Copper	ug/l	5	1.6	1.8	<1.0	<1	<1.0	<1	<0.5	<0.5	<0.5
Iron	ug/l	300	1900	270	320	290	220	530	1140	388	935
Lead	ug/l	-- ⁽⁹⁾	<0.50	<0.50	<0.50	<0.5	<0.50	<0.5	0.1	0.1	0.5
Magnesium	ug/l	--	9000	12000	14000	15000	16000	14000	16000	12500	16300
Manganese	ug/l	--	130	78	35	33	29	290	85	62	105
Mercury, dissolved	ug/l	0.2 ⁽¹⁰⁾	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.1	<0.1	<0.1
Molybdenum	ug/l	40	--	--	--	--	--	--	--	--	--
Nickel	ug/l	25	--	--	--	--	--	--	--	--	--
Potassium	ug/l	--	980	8200	1500	2900	2900	3500	3430	3450	3960
Selenium	ug/l	100	--	--	--	--	--	--	--	--	--
Silver	ug/l	0.1	--	--	--	--	--	--	--	--	--
Sodium	ug/l	--	10000	14000	16000	16000	29000	17000	29500	19500	30600
Thallium	ug/l	0.3 ⁽¹⁴⁾	--	--	--	--	--	--	--	--	--
Tungsten	ug/l	30 ⁽¹⁵⁾	--	--	--	--	--	--	--	--	--
Uranium	ug/l	5 ⁽⁷⁾	--	--	--	--	--	--	--	--	--
Vanadium	ug/l	6	--	--	--	--	--	--	--	--	--
Zinc	ug/l	30 ⁽⁶⁾	<5.0	11	6.7	<5	8.0	7	9	14	20
Zirconium	ug/l	4 ⁽⁷⁾	--	--	--	--	--	--	--	--	--
Phenols											
Phenolics, Total Recoverable	ug/l	1 ⁽¹¹⁾	--	--	--	--	--	--	--	--	--

Appendix D-III Surface Water 2024
Surface Water Monitor S4

Parameter	Unit	PWQO ⁽¹⁾	S4
			29-Nov-2016
			S-4
General Chemistry			
Alkalinity (Total as CaCO3)	mg/l	-- ⁽²⁾	163
Ammonia, unionized	ug/l	20	0.48
Ammonia Nitrogen	ug/l	--	140
Biochemical Oxygen Demand, 5 Day	ug/l	--	12000
Bromide	ug/l	--	<100
Chemical Oxygen Demand	ug/l	--	68000
Chloride	ug/l	--	41000
Chloride, dissolved	ug/l	--	--
Conductivity	uS/cm	--	--
Conductivity (Field)	uS/cm	--	412
Dissolved Organic Carbon	ug/l	--	8100
Dissolved Oxygen (Field)	mg/l	-- ⁽³⁾	5.27
Fluoride	ug/l	--	<100
Hardness, Calcium Carbonate	ug/l	--	177000
Nitrate as N	ug/l	--	<100
Nitrite as N	ug/l	--	<50
Nitrogen, Total Kjeldahl	ug/l	--	1600
Nitrogen, Nitrate-Nitrite	ug/l	--	--
pH (Field)	-	6.5 - 8.5	7.61
Phosphorus	ug/l	-- ⁽⁴⁾	180
Phosphorus, Total Orthophosphate	ug/l	--	<200
Sodium Adsorption Ratio	-	--	--
Sulphate	ug/l	--	3000
Temperature (Field)	deg c	-- ⁽⁵⁾	0.3
Total Dissolved Solids	ug/l	--	238000
Total Suspended Solids	ug/l	--	51000
Metals			
Antimony	ug/l	20	<0.5
Arsenic	ug/l	100 ⁽⁶⁾	<1
Barium	ug/l	--	33
Beryllium	ug/l	-- ⁽¹³⁾	<0.5
Boron	ug/l	200 ⁽⁷⁾	10
Cadmium	ug/l	0.2 ⁽⁶⁾	<0.1
Calcium	ug/l	--	49000
Chromium	ug/l	-- ⁽⁸⁾	1
Cobalt	ug/l	0.9	<0.5
Copper	ug/l	5	<0.5
Iron	ug/l	300	972
Lead	ug/l	-- ⁽⁹⁾	1.2
Magnesium	ug/l	--	13200
Manganese	ug/l	--	1060
Mercury, dissolved	ug/l	0.2 ⁽¹⁰⁾	<0.1
Molybdenum	ug/l	40	<0.5
Nickel	ug/l	25	<1
Potassium	ug/l	--	6310
Selenium	ug/l	100	<1
Silver	ug/l	0.1	<0.1
Sodium	ug/l	--	24100
Thallium	ug/l	0.3 ⁽¹⁴⁾	<0.1
Tungsten	ug/l	30 ⁽¹⁵⁾	<10
Uranium	ug/l	5 ⁽⁷⁾	0.5
Vanadium	ug/l	6	2.0
Zinc	ug/l	30 ⁽⁶⁾	13
Zirconium	ug/l	4 ⁽⁷⁾	<1
Phenols			
Phenolics, Total Recoverable	ug/l	1 ⁽¹¹⁾	--

Appendix D-III Surface Water 2024
Surface Water Monitor S4

Parameter	Unit	PWQO ⁽¹⁾	S4	S4	S4	S4	S4	S4
			02-Jun-2017	23-Nov-2017	28-Jun-2018 ⁽¹⁷⁾	27-Nov-2018	18-Jun-2019	28-Nov-2019
			S-4	SW-4	S4	S4	S-3	S-4
General Chemistry								
Alkalinity (Total as CaCO3)	mg/l	-- ⁽²⁾	126	220	--	149	120	137
Ammonia, unionized	ug/l	20	0.53	0.16	--	1.3	4.45	0.4
Ammonia Nitrogen	ug/l	--	50	220	--	200	120	90
Biochemical Oxygen Demand, 5 Day	ug/l	--	4000	34000	--	2000	18000	4000
Bromide	ug/l	--	--	--	--	--	<100	<100
Chemical Oxygen Demand	ug/l	--	35000	49000	--	30000	45000	20000
Chloride	ug/l	--	40000	60000	--	195000	60000	64000
Chloride, dissolved	ug/l	--	--	--	--	--	--	--
Conductivity	uS/cm	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	325	510	--	826.8	416	795
Dissolved Organic Carbon	ug/l	--	7700	11900	--	5800	9600	7500
Dissolved Oxygen (Field)	mg/l	-- ⁽³⁾	2.04	2.15	--	2.99	2.08	2.49
Fluoride	ug/l	--	--	--	--	--	<100	<100
Hardness, Calcium Carbonate	ug/l	--	135000	232000	--	165000	168000	172000
Nitrate as N	ug/l	--	<100	100	--	200	<100	100
Nitrite as N	ug/l	--	<50	<50	--	<50	<50	<50
Nitrogen, Total Kjeldahl	ug/l	--	600	3000	--	700	2200	300
Nitrogen, Nitrate-Nitrite	ug/l	--	--	--	--	--	--	--
pH (Field)	-	6.5 - 8.5	7.4	6.95	--	7.89	7.90	7.7
Phosphorus	ug/l	-- ⁽⁴⁾	20	290	--	90	310	90
Phosphorus, Total Orthophosphate	ug/l	--	--	--	--	--	<200	<200
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--
Sulphate	ug/l	--	2000	9000	--	9000	11000	7000
Temperature (Field)	deg c	-- ⁽⁵⁾	21	0.1	--	0.3	22.8	0.9
Total Dissolved Solids	ug/l	--	206000	302000	--	416000	266000	268000
Total Suspended Solids	ug/l	--	6000	21000	--	13000	38000	2000
Metals								
Antimony	ug/l	20	--	--	--	--	<0.5	<0.5
Arsenic	ug/l	100 ⁽⁶⁾	<1	<1	--	<1	<1	<1
Barium	ug/l	--	8	65	--	42	21	27
Beryllium	ug/l	-- ⁽¹³⁾	--	--	--	--	<0.5	<0.5
Boron	ug/l	200 ⁽⁷⁾	15	16	--	10	11	<10
Cadmium	ug/l	0.2 ⁽⁶⁾	<0.1	<0.1	--	<0.1	<0.1	<0.1
Calcium	ug/l	--	31000	58000	--	40800	39800	46800
Chromium	ug/l	-- ⁽⁸⁾	<1	3	--	2	<1	1
Cobalt	ug/l	0.9	--	--	--	--	<0.5	<0.5
Copper	ug/l	5	<0.5	2.2	--	3.6	0.7	1.6
Iron	ug/l	300	291	2900	--	1090	419	644
Lead	ug/l	-- ⁽⁹⁾	0.3	1.7	--	0.5	0.2	0.3
Magnesium	ug/l	--	13800	21000	--	15400	16700	13300
Manganese	ug/l	--	10	1130	--	475	40	96
Mercury, dissolved	ug/l	0.2 ⁽¹⁰⁾	<0.1	<0.1	--	<0.1	<0.1	<0.1
Molybdenum	ug/l	40	--	--	--	--	<0.5	<0.5
Nickel	ug/l	25	--	--	--	--	<1	<1
Potassium	ug/l	--	957	5440	--	5940	1750	7620
Selenium	ug/l	100	--	--	--	--	<1	<1
Silver	ug/l	0.1	--	--	--	--	0.3	<0.1
Sodium	ug/l	--	16900	22800	--	79100	27700	26400
Thallium	ug/l	0.3 ⁽¹⁴⁾	--	--	--	--	<0.1	<0.1
Tungsten	ug/l	30 ⁽¹⁵⁾	--	--	--	--	<10	<10
Uranium	ug/l	5 ⁽⁷⁾	--	--	--	--	0.3	0.4
Vanadium	ug/l	6	--	--	--	--	0.8	1.2
Zinc	ug/l	30 ⁽⁶⁾	14	16	--	14	11	10
Zirconium	ug/l	4 ⁽⁷⁾	--	--	--	--	<1	<1
Phenols								
Phenolics, Total Recoverable	ug/l	1 ⁽¹¹⁾	--	--	--	--	--	--

Appendix D-III Surface Water 2024
Surface Water Monitor S5

Parameter	Unit	PWQO ⁽¹⁾	S5	S5	S5	S5	S5	S5	S5	S5	S5
			01-Jul-2002	01-Nov-2002	09-Jul-2003	25-Nov-2003	01-Sep-2004	24-Jun-2005	30-Jun-2006	28-Nov-2006	29-Jun-2007
General Chemistry											
Alkalinity (Total as CaCO3)	mg/l	-- ⁽²⁾	100	157	139	124	137	109	100	145	158
Ammonia, unionized	ug/l	20	--	--	--	--	--	0.74	0.46	0.11	<20
Ammonia Nitrogen	ug/l	--	90	40	620	50	<10	120	40	70	60
Biochemical Oxygen Demand, 5 Day	ug/l	--	20000	22000	122000	5000	14000	262000	3000	3000	6000
Bromide	ug/l	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	ug/l	--	52000	>150000	4290000	78000	49000	75000	27000	24000	32000
Chloride	ug/l	--	11500	82900	51600	11000	24500	15100	20000	17000	50000
Chloride, dissolved	ug/l	--	--	--	--	--	--	--	--	--	--
Conductivity	uS/cm	--	233	671	414	353	348	305	485	600	610
Conductivity (Field)	uS/cm	--	--	--	--	--	--	--	--	--	--
Dissolved Organic Carbon	ug/l	--	16900	9500	20800	11000	9300	14900	8000	6700	15600
Dissolved Oxygen (Field)	mg/l	-- ⁽³⁾	8	7.52	--	--	--	10	9.79	10	9.89
Fluoride	ug/l	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	ug/l	--	106000	249000	472000	141000	119000	98000	108000	146000	151000
Nitrate as N	ug/l	--	<10	300	<100	100	<100	100	<100	<100	610
Nitrite as N	ug/l	--	<10	<10	<100	<100	<100	<100	<100	<100	<100
Nitrogen, Total Kjeldahl	ug/l	--	11600	3300	78100	2220	1590	3320	900	1350	1520
Nitrogen, Nitrate-Nitrite	ug/l	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	6.5 - 8.5	9.77	7.64	--	--	--	7.13	7.5	7.3	7
Phosphorus	ug/l	-- ⁽⁴⁾	1850	450	10700	360	290	90	150	210	140
Phosphorus, Total Orthophosphate	ug/l	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	0.567	--	--	--
Sulphate	ug/l	--	2000	58000	1000	29000	2000	4000	2000	6000	4000
Temperature (Field)	deg c	-- ⁽⁵⁾	--	--	--	--	--	22	19	0	14
Total Dissolved Solids	ug/l	--	178000	384000	305000	174000	178000	130000	167000	220000	303000
Total Suspended Solids	ug/l	--	148000	998000	2280000	64000	31000	11000000	<2000	10000	53000
Metals											
Antimony	ug/l	20	--	--	--	--	--	--	--	--	--
Arsenic	ug/l	100 ⁽⁶⁾	<1	<1	4	1	<1	4	<1	<1	<1
Barium	ug/l	--	20	95	728	44	28	1070	10	20	20
Beryllium	ug/l	-- ⁽¹³⁾	--	--	--	--	--	--	--	--	--
Boron	ug/l	200 ⁽⁷⁾	20	40	307	17	31	168	10	10	20
Cadmium	ug/l	0.2 ⁽⁶⁾	<0.1	<0.1	9.2	0.4	<5	2.5	<0.1	<0.1	1.5
Calcium	ug/l	--	--	--	--	--	--	21300	25000	37000	34000
Chromium	ug/l	-- ⁽⁸⁾	<10	20	8	<1	2	142	<1	<1	4
Cobalt	ug/l	0.9	--	--	--	--	--	--	--	--	--
Copper	ug/l	5	2.5	8	148	16	72	229	2	<1	3
Iron	ug/l	300	1840	6390	59900	1310	3360	345	490	480	1050
Lead	ug/l	-- ⁽⁹⁾	4.2	1.1	408	2.7	<20	114	<1	<1	<1
Magnesium	ug/l	--	--	--	--	--	--	10900	11000	13000	16000
Manganese	ug/l	--	--	--	--	--	--	--	30	300	90
Mercury, dissolved	ug/l	0.2 ⁽¹⁰⁾	<0.1	<0.1	--	0.4	<0.1	0.37	<0.1	<0.1	<0.1
Molybdenum	ug/l	40	--	--	--	--	--	--	--	--	--
Nickel	ug/l	25	--	--	--	--	--	--	--	--	--
Potassium	ug/l	--	--	--	--	--	--	16800	<1000	5000	3000
Selenium	ug/l	100	--	--	--	--	--	--	--	--	--
Silver	ug/l	0.1	--	--	--	--	--	--	--	--	--
Sodium	ug/l	--	10200	47500	44600	8400	27100	12900	11000	9000	25000
Thallium	ug/l	0.3 ⁽¹⁴⁾	--	--	--	--	--	--	--	--	--
Tungsten	ug/l	30 ⁽¹⁵⁾	--	--	--	--	--	--	--	--	--
Uranium	ug/l	5 ⁽⁷⁾	--	--	--	--	--	--	--	--	--
Vanadium	ug/l	6	--	--	--	--	--	--	--	--	--
Zinc	ug/l	30 ⁽⁶⁾	30	100	1490	17	130	2340	10	<10	<10
Zirconium	ug/l	4 ⁽⁷⁾	--	--	--	--	--	--	--	--	--
Phenols											
Phenolics, Total Recoverable	ug/l	1 ⁽¹¹⁾	<1	<1	<1	<1	3	2	4	<1	<1

Appendix D-III Surface Water 2024
Surface Water Monitor S5

Parameter	Unit	PWQO ⁽¹⁾	S5	S5	S5	S5	S5	S5	S5	S5	S5
			27-Nov-2007	13-Jun-2008	25-Nov-2008	07-Jul-2009	06-Dec-2009	11-Jun-2010	03-Dec-2010	13-Jun-2011	30-Nov-2011 ⁽¹⁹⁾
					W-4	W-6	W-4	W-1	W - 4	W-1	S-5
General Chemistry											
Alkalinity (Total as CaCO ₃)	mg/l	-- ⁽²⁾	207	125	196	107	199	149	162	91	76
Ammonia, unionized	ug/l	20	<20	1.57	0.04	<0.19	0.04	0.26	<0.07	0.2	0.21
Ammonia Nitrogen	ug/l	--	<20	290	20	<20	30	30	<20	20	130
Biochemical Oxygen Demand, 5 Day	ug/l	--	2000	7000	13000	5000	3000	6000	10000	4000	12000
Bromide	ug/l	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	ug/l	--	17000	38000	33000	30000	30000	33000	40000	45000	95000
Chloride	ug/l	--	33000	28000	30000	23000	26000	56000	59000	43000	30000
Chloride, dissolved	ug/l	--	--	--	--	--	--	--	--	--	--
Conductivity	uS/cm	--	335	332	469	285	451	463	510	316	314
Conductivity (Field)	uS/cm	--	--	--	460	410	455	610	600	580	891
Dissolved Organic Carbon	ug/l	--	11300	15500	9100	8600	7900	11200	6800	9000	11100
Dissolved Oxygen (Field)	mg/l	-- ⁽³⁾	6.91	7.38	7.99	5.38	4.96	4.11	4.48	3.69	6.01
Fluoride	ug/l	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	ug/l	--	208000	135000	201000	117000	196000	184000	158000	104000	120000
Nitrate as N	ug/l	--	110	<100	<100	<100	<100	<100	<100	<100	<100
Nitrite as N	ug/l	--	<100	<100	<100	<100	<100	<100	<100	<100	<100
Nitrogen, Total Kjeldahl	ug/l	--	760	2480	900	720	1180	1610	920	810	11200
Nitrogen, Nitrate-Nitrite	ug/l	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	6.5 - 8.5	7.1	7.3	7.3	7.3	7.1	7.4	7.6	7.4	7.18
Phosphorus	ug/l	-- ⁽⁴⁾	60	280	200	90	80	130	50	60	980
Phosphorus, Total Orthophosphate	ug/l	--	--	--	--	--	--	--	--	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--
Sulphate	ug/l	--	2000	3000	5000	3000	4000	4000	8000	5000	29000
Temperature (Field)	deg c	-- ⁽⁵⁾	1	15	1	23	2	18	1	20	3.1
Total Dissolved Solids	ug/l	--	315000	216000	305000	185000	293000	301000	332000	205000	204000
Total Suspended Solids	ug/l	--	6000	17000	42000	8000	15000	32000	12000	61000	142000
Metals											
Antimony	ug/l	20	--	--	--	--	--	--	--	--	--
Arsenic	ug/l	100 ⁽⁶⁾	<1	<1	<1	<1	<1	<1	<1	<1	<1
Barium	ug/l	--	30	20	40	20	20	20	30	<10	30
Beryllium	ug/l	-- ⁽¹³⁾	--	--	--	--	--	--	--	--	--
Boron	ug/l	200 ⁽⁷⁾	<10	<10	<10	10	10	<10	<10	<10	40
Cadmium	ug/l	0.2 ⁽⁶⁾	0.1	1.3	0.1	0.2	0.1	<0.1	<0.1	<0.1	<0.1
Calcium	ug/l	--	57000	31000	54000	27000	52000	44000	42000	17000	30000
Chromium	ug/l	-- ⁽⁸⁾	2	<1	<1	2	<1	<1	2	<1	3
Cobalt	ug/l	0.9	--	--	--	--	--	--	--	--	--
Copper	ug/l	5	<1	2	1	<1	<1	<1	<1	<1	2
Iron	ug/l	300	470	730	920	1010	390	450	430	440	200
Lead	ug/l	-- ⁽⁹⁾	<1	<1	<1	<1	<1	<1	<1	<1	<1
Magnesium	ug/l	--	16000	14000	16000	12000	16000	18000	13000	15000	11000
Manganese	ug/l	--	190	130	110	80	70	40	70	30	30
Mercury, dissolved	ug/l	0.2 ⁽¹⁰⁾	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Molybdenum	ug/l	40	--	--	--	--	--	--	--	--	--
Nickel	ug/l	25	--	--	--	--	--	--	--	--	--
Potassium	ug/l	--	5000	2000	3000	1000	4000	1000	3000	<1000	8000
Selenium	ug/l	100	--	--	--	--	--	--	--	--	--
Silver	ug/l	0.1	--	--	--	--	--	--	--	--	--
Sodium	ug/l	--	18000	16000	16000	12000	14000	29000	29000	17000	15000
Thallium	ug/l	0.3 ⁽¹⁴⁾	--	--	--	--	--	--	--	--	--
Tungsten	ug/l	30 ⁽¹⁵⁾	--	--	--	--	--	--	--	--	--
Uranium	ug/l	5 ⁽⁷⁾	--	--	--	--	--	--	--	--	--
Vanadium	ug/l	6	--	--	--	--	--	--	--	--	--
Zinc	ug/l	30 ⁽⁶⁾	160	10	<10	<10	<10	<10	<10	<10	<10
Zirconium	ug/l	4 ⁽⁷⁾	--	--	--	--	--	--	--	--	--
Phenols											
Phenolics, Total Recoverable	ug/l	1 ⁽¹¹⁾	1	6	<1	2	<1	<1	<1	--	--

Appendix D-III Surface Water 2024
Surface Water Monitor S5

Parameter	Unit	PWQO ⁽¹⁾	S5	S5	S5	S5	S5	S5	S5	S5	S5
			23-Jun-2012	11-Nov-2012	24-Jun-2013	21-Nov-2013	27-May-2014	26-Nov-2014	29-May-2015	30-Nov-2015	14-Jun-2016
			W-5	W-3	W-5	W-4	S-5	W-3	S-5	W-5	SW-5
General Chemistry											
Alkalinity (Total as CaCO ₃)	mg/l	-- ⁽²⁾	100	160	100	170	130	160	125	161	176
Ammonia, unionized	ug/l	20	<0.71	<0.1	1.71	<0.1	0.18	<0.08	0.19	0.21	0.2
Ammonia Nitrogen	ug/l	--	<50	<50	140	<50	64	<50	70	50	70
Biochemical Oxygen Demand, 5 Day	ug/l	--	2000	3000	<2000	5000	8000	<2000	3000 ⁽¹⁶⁾	4000	<2000
Bromide	ug/l	--	--	--	--	--	--	--	<100	--	--
Chemical Oxygen Demand	ug/l	--	35000	23000	43000	28000	35000	13000	35000	22000	60000
Chloride	ug/l	--	19000	28000	--	--	--	--	74000	42000	3000
Chloride, dissolved	ug/l	--	--	--	33000	30000	58000	34000	--	--	--
Conductivity	uS/cm	--	--	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	600	610	600	590	454	600	508	495	302
Dissolved Organic Carbon	ug/l	--	7200	8000	12000	8800	9700	6200	11700	8000	19600
Dissolved Oxygen (Field)	mg/l	-- ⁽³⁾	2.88	4.20	5.52	4.01	1.09	3.88	1.10	4.88	1.11
Fluoride	ug/l	--	--	--	--	--	--	--	<100	--	--
Hardness, Calcium Carbonate	ug/l	--	--	--	--	--	--	--	158000	193000	181000
Nitrate as N	ug/l	--	<100	<100	<100	<100	<100	<100	<100	<100	<100
Nitrite as N	ug/l	--	<10	<10	<10	<10	<10	<10	<50	<50	<50
Nitrogen, Total Kjeldahl	ug/l	--	1100	990	1800	710	1700	580	1700	800	1200
Nitrogen, Nitrate-Nitrite	ug/l	--	<100	<100	<100	<100	<100	<100	--	--	--
pH (Field)	-	6.5 - 8.5	7.5	7.3	7.4	7.4	6.90	7.3	6.84	7.7	7.14
Phosphorus	ug/l	-- ⁽⁴⁾	130	84	110	62	250	51	260	40	100
Phosphorus, Total Orthophosphate	ug/l	--	--	--	--	--	--	--	<200	--	--
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--	--	--
Sulphate	ug/l	--	--	--	--	--	--	--	5000	--	--
Temperature (Field)	deg c	-- ⁽⁵⁾	22	2	23	0	18.2	0	19.9	0	11.4
Total Dissolved Solids	ug/l	--	128000	226000	178000	254000	278000	236000	232000	240000	196000
Total Suspended Solids	ug/l	--	11000	<10000	14000	<10000	<10000	<10000	5000	22000	12000
Metals											
Antimony	ug/l	20	--	--	--	--	--	--	--	--	--
Arsenic	ug/l	100 ⁽⁶⁾	<1.0	<1.0	<1.0	<1	<1.0	<1	<1	<1	<1
Barium	ug/l	--	35	38	17	27	19	24	19	21	45
Beryllium	ug/l	-- ⁽¹³⁾	--	--	--	--	--	--	--	--	--
Boron	ug/l	200 ⁽⁷⁾	18	18	11	11	11	<10	11	10	127
Cadmium	ug/l	0.2 ⁽⁶⁾	<0.10	0.16	<0.10	<0.1	<0.10	<0.1	<0.1	<0.1	<0.1
Calcium	ug/l	--	35000	55000	28000	52000	39000	48000	37800	54300	49900
Chromium	ug/l	-- ⁽⁸⁾	<5.0	<5.1	<5.0	<5	<5.0	<5	<1	<1	<1
Cobalt	ug/l	0.9	--	--	--	--	--	--	--	--	--
Copper	ug/l	5	2.3	2.0	<1.0	<1	<1.0	<1	<0.5	<0.5	<0.5
Iron	ug/l	300	1700	200	380	350	450	420	585	372	1510
Lead	ug/l	-- ⁽⁹⁾	<0.50	<0.50	<0.50	<0.5	<0.50	<0.5	0.1	0.1	0.5
Magnesium	ug/l	--	9000	12000	15000	14000	18000	13000	15500	13900	13700
Manganese	ug/l	--	130	38	16	27	70	300	20	94	464
Mercury, dissolved	ug/l	0.2 ⁽¹⁰⁾	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.1	<0.1	<0.1
Molybdenum	ug/l	40	--	--	--	--	--	--	--	--	--
Nickel	ug/l	25	--	--	--	--	--	--	--	--	--
Potassium	ug/l	--	980	8700	650	3000	3300	3300	3270	3750	2440
Selenium	ug/l	100	--	--	--	--	--	--	--	--	--
Silver	ug/l	0.1	--	--	--	--	--	--	--	--	--
Sodium	ug/l	--	10000	15000	17000	16000	31000	16000	29200	24400	11100
Thallium	ug/l	0.3 ⁽¹⁴⁾	--	--	--	--	--	--	--	--	--
Tungsten	ug/l	30 ⁽¹⁵⁾	--	--	--	--	--	--	--	--	--
Uranium	ug/l	5 ⁽⁷⁾	--	--	--	--	--	--	--	--	--
Vanadium	ug/l	6	--	--	--	--	--	--	--	--	--
Zinc	ug/l	30 ⁽⁶⁾	5.7	7.5	6.2	<5	10	5	<5	13	15
Zirconium	ug/l	4 ⁽⁷⁾	--	--	--	--	--	--	--	--	--
Phenols											
Phenolics, Total Recoverable	ug/l	1 ⁽¹¹⁾	--	--	--	--	--	--	--	--	--

Appendix D-III Surface Water 2024
Surface Water Monitor S5

Parameter	Unit	PWQO ⁽¹⁾	S5	S5	S5	S5	S5	S5	S5
			29-Nov-2016	02-Jun-2017	23-Nov-2017 ⁽¹⁷⁾	28-Jun-2018	27-Nov-2018	18-Jun-2019	28-Nov-2019
			S-5	S-5	SW-5	SW-5	S5	S-5	S-5
General Chemistry									
Alkalinity (Total as CaCO ₃)	mg/l	-- ⁽²⁾	194	127	--	126	71	159	123
Ammonia, unionized	ug/l	20	0.23	0.8	--	2.06	4.17	3.06	0.27
Ammonia Nitrogen	ug/l	--	90	60	--	420	580	100	60
Biochemical Oxygen Demand, 5 Day	ug/l	--	22000	<2000	--	13000	8000	7000	3000
Bromide	ug/l	--	<100	--	--	--	--	<100	<100
Chemical Oxygen Demand	ug/l	--	122000	35000	--	58000	34000	50000	16000
Chloride	ug/l	--	53000	40000	--	62000	53000	47000	73000
Chloride, dissolved	ug/l	--	--	--	--	--	--	--	--
Conductivity	uS/cm	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	639	310	--	630	422.8	397	540
Dissolved Organic Carbon	ug/l	--	9600	8300	--	18900	8000	10700	5200
Dissolved Oxygen (Field)	mg/l	-- ⁽³⁾	5.29	1.88	--	1.45	3.09	0.59	2.77
Fluoride	ug/l	--	100	--	--	--	--	<100	<100
Hardness, Calcium Carbonate	ug/l	--	205000	141000	--	123000	88000	208000	160000
Nitrate as N	ug/l	--	<100	<100	--	<100	200	<100	<100
Nitrite as N	ug/l	--	<50	<50	--	<50	<50	<50	<50
Nitrogen, Total Kjeldahl	ug/l	--	5500	500	--	2000	1700	2300	400
Nitrogen, Nitrate-Nitrite	ug/l	--	--	--	--	--	--	--	--
pH (Field)	-	6.5 - 8.5	7.49	7.5	--	7.12	7.94	7.94	7.7
Phosphorus	ug/l	-- ⁽⁴⁾	490	20	--	180	380	410	80
Phosphorus, Total Orthophosphate	ug/l	--	<200	--	--	--	--	<200	<200
Sodium Adsorption Ratio	-	--	--	--	--	--	--	--	--
Sulphate	ug/l	--	4000	2000	--	1000	4000	2000	6000
Temperature (Field)	deg c	-- ⁽⁵⁾	0.1	21	--	19.2	0.1	18.8	1.0
Total Dissolved Solids	ug/l	--	288000	200000	--	242000	126000	262000	254000
Total Suspended Solids	ug/l	--	202000	3000	--	51000	15000	60000	<2000
Metals									
Antimony	ug/l	20	<0.5	--	--	--	--	<0.5	<0.5
Arsenic	ug/l	100 ⁽⁶⁾	<1	<1	--	<1	<1	<1	<1
Barium	ug/l	--	62	8	--	19	28	26	25
Beryllium	ug/l	-- ⁽¹³⁾	<0.5	--	--	--	--	<0.5	<0.5
Boron	ug/l	200 ⁽⁷⁾	12	13	--	18	22	19	<10
Cadmium	ug/l	0.2 ⁽⁶⁾	<0.1	<0.1	--	<0.1	<0.1	<0.1	<0.1
Calcium	ug/l	--	56300	31500	--	25200	22600	50700	43600
Chromium	ug/l	-- ⁽⁸⁾	4	<1	--	<1	3	<1	1
Cobalt	ug/l	0.9	1.1	--	--	--	--	0.6	<0.5
Copper	ug/l	5	<0.5	<0.5	--	<0.5	10.5	1.0	1.4
Iron	ug/l	300	2530	340	--	1430	802	4000	554
Lead	ug/l	-- ⁽⁹⁾	3.5	0.1	--	<0.1	2.2	0.5	0.4
Magnesium	ug/l	--	15600	15200	--	14700	7640	19700	12500
Manganese	ug/l	--	690	13	--	121	115	270	40
Mercury, dissolved	ug/l	0.2 ⁽¹⁰⁾	<0.1	<0.1	--	<0.1	<0.1	<0.1	<0.1
Molybdenum	ug/l	40	0.5	--	--	--	--	<0.5	<0.5
Nickel	ug/l	25	2	--	--	--	--	<1	<1
Potassium	ug/l	--	6600	1020	--	1530	9730	945	6640
Selenium	ug/l	100	<1	--	--	--	--	<1	<1
Silver	ug/l	0.1	<0.1	--	--	--	--	0.4	<0.1
Sodium	ug/l	--	28300	18700	--	22700	20500	29800	28400
Thallium	ug/l	0.3 ⁽¹⁴⁾	<0.1	--	--	--	--	<0.1	<0.1
Tungsten	ug/l	30 ⁽¹⁵⁾	<10	--	--	--	--	<10	<10
Uranium	ug/l	5 ⁽⁷⁾	0.9	--	--	--	--	0.2	0.4
Vanadium	ug/l	6	4.9	--	--	--	--	1.5	1.2
Zinc	ug/l	30 ⁽⁶⁾	28	6	--	6	82	9	11
Zirconium	ug/l	4 ⁽⁷⁾	<1	--	--	--	--	<1	<1
Phenols									
Phenolics, Total Recoverable	ug/l	1 ⁽¹¹⁾	--	--	--	--	--	--	--

Parameter	Unit	PWQO ⁽¹⁾	S6	S6	S6	S6	S6	S6	S6	S6	S6
			30-Jun-2006	28-Nov-2006	29-Jun-2007	27-Nov-2007	13-Jun-2008	25-Nov-2008	07-Jul-2009	06-Dec-2009	11-Jun-2010
								W-6	W-1	W-1	W-4
General Chemistry											
Alkalinity (Total as CaCO3)	mg/l	-- ⁽²⁾	160	172	128	117	186	191	138	177	212
Ammonia, unionized	ug/l	20	1.91	1.02	<20	<20	8.01	0.11	0.44	0.03	2.27
Ammonia Nitrogen	ug/l	--	280	1140	80	30	280	50	70	20	230
Biochemical Oxygen Demand, 5 Day	ug/l	--	2000	<1000	2000	<1000	<1000	4000	3000	2000	2000
Bromide	ug/l	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	ug/l	--	24000	15000	13000	5000	7000	25000	24000	15000	15000
Chloride	ug/l	--	21000	16000	24000	16000	21000	27000	25000	24000	47000
Chloride, dissolved	ug/l	--	--	--	--	--	--	--	--	--	--
Conductivity	uS/cm	--	505	635	380	410	431	454	350	417	552
Conductivity (Field)	uS/cm	--	--	--	--	--	--	515	605	695	585
Dissolved Organic Carbon	ug/l	--	7700	6200	8100	6200	7700	6900	7900	6600	8000
Dissolved Oxygen (Field)	mg/l	-- ⁽³⁾	9.81	8.62	8.92	10.29	6.71	10.40	8.02	6.88	6.19
Fluoride	ug/l	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	ug/l	--	161000	175000	149000	130000	197000	199000	153000	184000	241000
Nitrate as N	ug/l	--	130	130	<100	<100	190	<100	<100	<100	280
Nitrite as N	ug/l	--	<100	<100	<100	<100	<100	<100	<100	<100	<100
Nitrogen, Total Kjeldahl	ug/l	--	960	1670	550	330	1290	890	720	450	930
Nitrogen, Nitrate-Nitrite	ug/l	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	6.5 - 8.5	7.4	7	7	7.3	8	7.4	7.3	7.2	7.4
Phenols, Total	ug/l	1 ⁽¹¹⁾	--	--	--	--	--	--	--	--	--
Phosphorus	ug/l	-- ⁽⁴⁾	90	50	60	30	80	70	100	30	70
Phosphorus, Total Orthophosphate	ug/l	--	--	--	--	--	--	--	--	--	--
Sulphate	ug/l	--	3000	34000	17000	18000	5000	6000	6000	8000	8000
Temperature (Field)	deg c	-- ⁽⁵⁾	15	1	12	2	16	1	17	3	20
Total Dissolved Solids	ug/l	--	239000	281000	235000	202000	280000	295000	228000	271000	359000
Total Suspended Solids	ug/l	--	10000	17000	3000	5000	13000	12000	24000	8000	5000
Metals											
Antimony	ug/l	20	--	--	--	--	--	--	--	--	--
Arsenic	ug/l	100 ⁽⁶⁾	<1	<1	<1	<1	<1	<1	<1	<1	<1
Barium	ug/l	--	30	70	30	40	90	40	30	30	60
Beryllium	ug/l	-- ⁽¹³⁾	--	--	--	--	--	--	--	--	--
Boron	ug/l	200 ⁽⁷⁾	80	130	30	10	50	10	30	20	50
Cadmium	ug/l	0.2 ⁽⁶⁾	1.7	<0.1	1.6	<0.1	<0.1	<0.1	1.4	0.6	<0.1
Calcium	ug/l	--	43000	52000	43000	39000	59000	55000	40000	49000	70000
Chromium	ug/l	-- ⁽⁸⁾	<1	2	3	1	<1	<1	1	<1	1
Cobalt	ug/l	0.9	--	--	--	--	--	--	--	--	--
Copper	ug/l	5	1	2	2	1	<1	<1	<1	<1	<1
Iron	ug/l	300	850	3980	680	670	1720	1220	1190	490	870
Lead	ug/l	-- ⁽⁹⁾	<1	<1	<1	<1	<1	<1	<1	<1	<1
Lead, dissolved	ug/l	-- ⁽⁹⁾	--	--	--	--	--	--	--	--	--
Magnesium	ug/l	--	13000	11000	10000	8000	12000	15000	13000	15000	16000
Manganese	ug/l	--	120	310	100	240	400	170	160	40	440
Mercury, dissolved	ug/l	0.2 ⁽¹⁰⁾	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Molybdenum	ug/l	40	--	--	--	--	--	--	--	--	--
Nickel	ug/l	25	--	--	--	--	--	--	--	--	--
Potassium	ug/l	--	1000	3000	3000	3000	3000	4000	2000	4000	4000
Selenium	ug/l	100	--	--	--	--	--	--	--	--	--
Silver	ug/l	0.1	--	--	--	--	--	--	--	--	--
Sodium	ug/l	--	13000	15000	13000	8000	14000	15000	14000	14000	24000
Thallium	ug/l	0.3 ⁽¹⁴⁾	--	--	--	--	--	--	--	--	--
Tungsten	ug/l	30 ⁽¹⁵⁾	--	--	--	--	--	--	--	--	--
Uranium	ug/l	5 ⁽⁷⁾	--	--	--	--	--	--	--	--	--
Vanadium	ug/l	6	--	--	--	--	--	--	--	--	--
Zinc	ug/l	30 ⁽⁶⁾	<10	<10	<10	<10	<10	<10	<10	<10	<10
Zirconium	ug/l	4 ⁽⁷⁾	--	--	--	--	--	--	--	--	--
Phenols											
Phenolics, Total Recoverable	ug/l	1 ⁽¹¹⁾	<1	<1	<1	<1	<1	<1	<1	<1	<1

Parameter	Unit	PWQO ⁽¹⁾	S6	S6	S6	S6	S6	S6	S6	S6	S6
			03-Dec-2010	13-Jun-2011	30-Nov-2011	23-Jun-2012	11-Nov-2012	24-Jun-2013	21-Nov-2013	27-May-2014	26-Nov-2014
General Chemistry											
Alkalinity (Total as CaCO3)	mg/l	-- ⁽²⁾	152	125	105	150	140	130	130	130	110
Ammonia, unionized	ug/l	20	1.01	0.38	0.06	0.74	0.52	1.45	0.43	1.81	<0.11
Ammonia Nitrogen	ug/l	--	450	60	30	94	180	160	140	130	<50
Biochemical Oxygen Demand, 5 Day	ug/l	--	5000	1000	6000	<2000	<2000	<2000	<2000	<2000	<2000
Bromide	ug/l	--	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	ug/l	--	13000	20000	20000	30000	9700	23000	18000	18000	6200
Chloride	ug/l	--	30000	21000	27000	22000	21000	--	--	--	--
Chloride, dissolved	ug/l	--	--	--	--	--	--	22000	19000	42000	26000
Conductivity	uS/cm	--	431	326	320	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	640	605	611	625	500	590	490	434	470
Dissolved Organic Carbon	ug/l	--	5100	6400	4600	6500	3300	6300	4500	6500	4600
Dissolved Oxygen (Field)	mg/l	-- ⁽³⁾	5.39	5.04	7.04	4.22	4.02	5.80	4.13	1.70	4.20
Fluoride	ug/l	--	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	ug/l	--	168000	139000	131000	--	--	--	--	--	--
Nitrate as N	ug/l	--	140	100	<100	100	<100	130	<100	<100	<100
Nitrite as N	ug/l	--	<100	<100	<100	<10	<10	10	18	10	<10
Nitrogen, Total Kjeldahl	ug/l	--	600	340	690	770	610	660	440	950	370
Nitrogen, Nitrate-Nitrite	ug/l	--	--	--	--	100	<100	140	<100	<100	<100
pH (Field)	-	6.5 - 8.5	7.4	7.3	7.21	7.3	7.4	7.3	7.5	7.54	7.4
Phenols, Total	ug/l	1 ⁽¹¹⁾	--	--	--	--	--	--	--	--	--
Phosphorus	ug/l	-- ⁽⁴⁾	20	40	40	94	55	92	51	90	28
Phosphorus, Total Orthophosphate	ug/l	--	--	--	--	--	--	--	--	--	--
Sulphate	ug/l	--	22000	14000	13000	--	--	--	--	--	--
Temperature (Field)	deg c	-- ⁽⁵⁾	1	17	5.1	20	4	22	2	20.4	1
Total Dissolved Solids	ug/l	--	280000	212000	208000	186000	186000	186000	198000	244000	198000
Total Suspended Solids	ug/l	--	11000	6000	12000	16000	<10000	<10000	<10000	12000	11000
Metals											
Antimony	ug/l	20	--	--	--	--	--	--	--	--	--
Arsenic	ug/l	100 ⁽⁶⁾	<1	<1	<1	<1.0	<1.0	<1.0	<1	<1.0	<1
Barium	ug/l	--	60	30	30	48	43	32	31	34	36
Beryllium	ug/l	-- ⁽¹³⁾	--	--	--	--	--	--	--	--	--
Boron	ug/l	200 ⁽⁷⁾	40	20	<10	25	<10	22	<10	18	<10
Cadmium	ug/l	0.2 ⁽⁶⁾	<0.1	0.2	<0.1	<0.10	<0.10	<0.10	<0.1	<0.10	<0.1
Calcium	ug/l	--	49000	39000	36000	52000	54000	42000	48000	42000	41000
Chromium	ug/l	-- ⁽⁸⁾	<1	<1	4	<5.0	<5.0	<5.0	<5	<5.0	<5
Cobalt	ug/l	0.9	--	--	--	--	--	--	--	--	--
Copper	ug/l	5	<1	2	<1	1.7	1.1	<1.0	1	1.1	<1
Iron	ug/l	300	3610	840	810	2200	1400	640	1200	1000	410
Lead	ug/l	-- ⁽⁹⁾	<1	<1	<1	0.81	<0.50	<0.50	<0.5	<0.50	<0.5
Lead, dissolved	ug/l	-- ⁽⁹⁾	--	--	--	--	--	--	--	--	--
Magnesium	ug/l	--	11000	10000	10000	11000	8000	10000	8000	12000	8600
Manganese	ug/l	--	430	120	70	250	300	140	210	98	67
Mercury, dissolved	ug/l	0.2 ⁽¹⁰⁾	<0.1	<0.1	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Molybdenum	ug/l	40	--	--	--	--	--	--	--	--	--
Nickel	ug/l	25	--	--	--	--	--	--	--	--	--
Potassium	ug/l	--	3000	2000	3000	2100	2200	1800	1800	2500	2600
Selenium	ug/l	100	--	--	--	--	--	--	--	--	--
Silver	ug/l	0.1	--	--	--	--	--	--	--	--	--
Sodium	ug/l	--	17000	10000	15000	14000	9500	13000	8900	23000	13000
Thallium	ug/l	0.3 ⁽¹⁴⁾	--	--	--	--	--	--	--	--	--
Tungsten	ug/l	30 ⁽¹⁵⁾	--	--	--	--	--	--	--	--	--
Uranium	ug/l	5 ⁽⁷⁾	--	--	--	--	--	--	--	--	--
Vanadium	ug/l	6	--	--	--	--	--	--	--	--	--
Zinc	ug/l	30 ⁽⁶⁾	<10	10	<10	13	<5.0	<5.0	5	8.6	7
Zirconium	ug/l	4 ⁽⁷⁾	--	--	--	--	--	--	--	--	--
Phenols											
Phenolics, Total Recoverable	ug/l	1 ⁽¹¹⁾	<1	<1	<1	<1.0	<1.0	<1.0	<1.0	1.8	5.1

Parameter	Unit	PWQO ⁽¹⁾	S6	S6	S6	S6	S6	S6	S6	S6	S6
			29-May-2015	30-Nov-2015	14-Jun-2016	29-Nov-2016	02-Jun-2017	23-Nov-2017 ⁽²⁰⁾	28-Jun-2018	27-Nov-2018	18-Jun-2019
			S-6	W-6	SW-6	S-6	S-6	SW-6	S6	S6	S-6
General Chemistry											
Alkalinity (Total as CaCO ₃)	mg/l	-- ⁽²⁾	153	105	120	102	156	228	290	134	153
Ammonia, unionized	ug/l	20	3.37	0.22	0.81	0.28	0.61	--	8.74	1.01	4.29
Ammonia Nitrogen	ug/l	--	270	40	70	50	90	480	690	240	240
Biochemical Oxygen Demand, 5 Day	ug/l	--	5000 ⁽¹⁶⁾	<2000	4000	<2000	4000	8000	3000	<2000	<2000
Bromide	ug/l	--	<100	--	--	<100	--	--	--	--	<100
Chemical Oxygen Demand	ug/l	--	25000	15000	18000	<10000	38000	23000	18000	17000	20000
Chloride	ug/l	--	49000	22000	36000	21000	38000	48000	30000	94000	48000
Chloride, dissolved	ug/l	--	--	--	--	--	--	--	--	--	--
Conductivity	uS/cm	--	--	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	501	555	362	267	490	--	169	589	476
Dissolved Organic Carbon	ug/l	--	6400	4200	6400	4100	7000	4700	10400	6000	5500
Dissolved Oxygen (Field)	mg/l	-- ⁽³⁾	7.93	6.71	1.60	10.81	3.99	10.84	4.5	2.79	5.48
Fluoride	ug/l	--	300	--	--	300	--	--	--	--	<100
Hardness, Calcium Carbonate	ug/l	--	168000	130000	149000	119000	153000	195000	205000	184000	163000
Nitrate as N	ug/l	--	200	<100	<100	<100	<100	<100	200	<100	<100
Nitrite as N	ug/l	--	<50	<50	<50	<50	<50	<50	<50	<50	<50
Nitrogen, Total Kjeldahl	ug/l	--	600	400	700	500	600	900	800	700	600
Nitrogen, Nitrate-Nitrite	ug/l	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	6.5 - 8.5	7.63	7.8	7.76	7.78	7.3	--	7.61	7.64	7.71
Phenols, Total	ug/l	1 ⁽¹¹⁾	<1	--	--	--	--	--	--	--	--
Phosphorus	ug/l	-- ⁽⁴⁾	90	20	90	50	20	50	60	30	30
Phosphorus, Total Orthophosphate	ug/l	--	<200	--	--	<200	--	--	--	--	<200
Sulphate	ug/l	--	13000	--	--	23000	5000	12000	11000	15000	6000
Temperature (Field)	deg c	-- ⁽⁵⁾	16.1	1	11.2	1.5	18	0.9	16.9	1.9	18.5
Total Dissolved Solids	ug/l	--	210000	140000	192000	184000	222000	302000	322000	284000	280000
Total Suspended Solids	ug/l	--	28000	8000	4000	<2000	6000	27000	10000	13000	2000
Metals											
Antimony	ug/l	20	--	--	--	<0.5	--	--	--	--	<0.5
Arsenic	ug/l	100 ⁽⁶⁾	<1	<1	<1	<1	<1	<1	<1	<1	<1
Barium	ug/l	--	49	32	64	30	40	61	157	64	125
Beryllium	ug/l	-- ⁽¹³⁾	--	--	--	<0.5	--	--	--	--	<0.5
Boron	ug/l	200 ⁽⁷⁾	21	<10	82	<10	36	43	102	20	70
Cadmium	ug/l	0.2 ⁽⁶⁾	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Calcium	ug/l	--	49300	39100	41900	36000	39900	53700	59500	47700	43100
Chromium	ug/l	-- ⁽⁸⁾	<1	<1	<1	<1	<1	<1	<1	<1	<1
Cobalt	ug/l	0.9	--	--	--	<0.5	--	--	--	--	<0.5
Copper	ug/l	5	<0.5	<0.5	<0.5	<0.5	<0.5	1.3	<0.5	1.0	0.7
Iron	ug/l	300	2580	368	774	408	799	2040	1470	1570	1350
Lead	ug/l	-- ⁽⁹⁾	<0.1	0.6	0.8	0.2	0.4	0.2	<0.1	0.3	<0.1
Lead, dissolved	ug/l	-- ⁽⁹⁾	--	--	--	--	--	--	--	--	--
Magnesium	ug/l	--	10800	7940	10900	7060	12900	14700	13700	15900	13500
Manganese	ug/l	--	283	37	78	26	58	308	360	571	115
Mercury, dissolved	ug/l	0.2 ⁽¹⁰⁾	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Molybdenum	ug/l	40	--	--	--	<0.5	--	--	--	--	<0.5
Nickel	ug/l	25	--	--	--	<1	--	--	--	--	<1
Potassium	ug/l	--	3500	2360	1740	2660	1720	3610	4120	4080	1760
Selenium	ug/l	100	--	--	--	<1	--	--	--	--	<1
Silver	ug/l	0.1	--	--	--	<0.1	--	--	--	--	0.3
Sodium	ug/l	--	21000	11500	24400	11100	16800	17500	19300	60900	21600
Thallium	ug/l	0.3 ⁽¹⁴⁾	--	--	--	<0.1	--	--	--	--	<0.1
Tungsten	ug/l	30 ⁽¹⁵⁾	--	--	--	<10	--	--	--	--	<10
Uranium	ug/l	5 ⁽⁷⁾	--	--	--	0.1	--	--	--	--	0.2
Vanadium	ug/l	6	--	--	--	<0.5	--	--	--	--	<0.5
Zinc	ug/l	30 ⁽⁶⁾	<5	10	20	<5	13	<5	6	8	14
Zirconium	ug/l	4 ⁽⁷⁾	--	--	--	<1	--	--	--	--	<1
Phenols											
Phenolics, Total Recoverable	ug/l	1 ⁽¹¹⁾	--	<1	3	<1	2	<1	<1	6	<1

Parameter	Unit	PWQO ⁽¹⁾	S6	S6	S6	S6	S6	S6	S6	S6	S6
			28-Nov-2019	04-Jun-2020	30-Nov-2020	08-Jun-2021	25-Nov-2021	20-Jun-2022	23-Nov-2022	10-May-2023	29-Nov-2023
			S-6	S-6	S-6	S6	S6	S-6	S6	S6	S6
General Chemistry											
Alkalinity (Total as CaCO ₃)	mg/l	-- ⁽²⁾	146	146	119	137	108	158	192	190	140
Ammonia, unionized	ug/l	20	0.5	2.81	0.4	1.77	0.37	0.6	0.47	0.75	3.53
Ammonia Nitrogen	ug/l	--	180	250	60	120	40	180	180	140	120
Biochemical Oxygen Demand, 5 Day	ug/l	--	3000	<2000	<2000	2000	<2000	<2000	<2000	<2000	<2000
Bromide	ug/l	--	<100	<100	<100	<100	<100	<100	<100	<100	<100
Chemical Oxygen Demand	ug/l	--	15000	18000	21000	18000	20000	22000	25000	25000	15000
Chloride	ug/l	--	65000	48000	43000	22000	35000	87600	73400	65000	49000
Chloride, dissolved	ug/l	--	--	--	--	--	--	--	--	--	--
Conductivity	uS/cm	--	--	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	604	432	455	335	397	355	649	632	606
Dissolved Organic Carbon	ug/l	--	6100	4700	4100	5600	5700	7200	6000	7100	4500
Dissolved Oxygen (Field)	mg/l	-- ⁽³⁾	2.01	7.79	6.1	3.63	12.10	3.40	7.8	8.70	7.95
Fluoride	ug/l	--	<100	300	400	300	500	400	200	200	200
Hardness, Calcium Carbonate	ug/l	--	178000	169000	150000	143000	135000	178000	198000	203000	146000
Nitrate as N	ug/l	--	100	<100	<100	<100	<100	<100	<100	<100	300
Nitrite as N	ug/l	--	<50	<50	<50	<50	<50	<50	<50	<50	<50
Nitrogen, Total Kjeldahl	ug/l	--	500	400	300	400	300	500	500	500	400
Nitrogen, Nitrate-Nitrite	ug/l	--	--	--	--	--	--	--	--	--	--
pH (Field)	-	6.5 - 8.5	7.5	7.64	7.81	7.54	7.63	7.51	7.43	7.32	8.5
Phenols, Total	ug/l	1 ⁽¹¹⁾	--	--	--	--	--	--	--	--	--
Phosphorus	ug/l	-- ⁽⁴⁾	80	20	30	10	30	30	60	<10	30
Phosphorus, Total Orthophosphate	ug/l	--	<200	<200	<200	<200	<200	<200	<200	<500	<500
Sulphate	ug/l	--	12000	20000	18000	19000	21000	5600	16300	11000	25000
Temperature (Field)	deg c	-- ⁽⁵⁾	0.9	14.4	2.8	21.2	0.6	22.4	2.1	14.3	1.8
Total Dissolved Solids	ug/l	--	268000	218000	208000	176000	210000	292000	342000	316000	270000
Total Suspended Solids	ug/l	--	3000	3000	<2000	8000	8000	<2000	3000	8000	100000
Metals											
Antimony	ug/l	20	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Arsenic	ug/l	100 ⁽⁶⁾	<1	<1	<1	<1	<1	<1	<1	<1	<1
Barium	ug/l	--	40	51	33	46	26	38	43	40	40
Beryllium	ug/l	-- ⁽¹³⁾	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Boron	ug/l	200 ⁽⁷⁾	16	27	12	26	11	14	13	41	<50
Cadmium	ug/l	0.2 ⁽⁶⁾	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Calcium	ug/l	--	48900	47100	41400	42100	38800	47200	55100	56300	42300
Chromium	ug/l	-- ⁽⁸⁾	1	<1	<1	<1	<1	<1	<1	<1	<5
Cobalt	ug/l	0.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Copper	ug/l	5	1.3	<0.5	<0.5	0.7	1.0	4.3	<0.5	<0.5	0.8
Iron	ug/l	300	1460	1550	943	589	3020	616	1250	808	1540
Lead	ug/l	-- ⁽⁹⁾	0.5	0.1	0.1	<0.1	0.5	1.0	<0.1	--	0.2
Lead, dissolved	ug/l	-- ⁽⁹⁾	--	--	--	--	--	--	--	<0.1	--
Magnesium	ug/l	--	13600	12400	11500	9110	9230	14700	14700	15000	9870
Manganese	ug/l	--	151	79	81	102	83	73	239	77	366
Mercury, dissolved	ug/l	0.2 ⁽¹⁰⁾	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Molybdenum	ug/l	40	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nickel	ug/l	25	<1	<1	<1	<1	<1	<1	<1	<1	<1
Potassium	ug/l	--	6370	1860	2800	1760	2540	1270	4600	3000	2930
Selenium	ug/l	100	<1	<1	<1	<1	<1	<1	<1	<1	<1
Silver	ug/l	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Sodium	ug/l	--	26000	19900	20200	12400	29800	23800	23800	29300	21500
Thallium	ug/l	0.3 ⁽¹⁴⁾	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Tungsten	ug/l	30 ⁽¹⁵⁾	<10	<10	<10	<10	<10	<10	<10	<10	<10
Uranium	ug/l	5 ⁽⁷⁾	0.3	0.2	0.2	0.1	0.1	0.2	0.2	0.3	<0.1
Vanadium	ug/l	6	1.2	<0.5	<0.5	<0.5	1.1	<0.5	<0.5	<0.5	<0.5
Zinc	ug/l	30 ⁽⁶⁾	12	<5	<5	<5	<5	7	<5	<5	<5
Zirconium	ug/l	4 ⁽⁷⁾	<1	<1	<1	<1	<1	<1	<1	<1	<1
Phenols											
Phenolics, Total Recoverable	ug/l	1 ⁽¹¹⁾	<1	<1	2	1	2	<1	<1	<1	<1

Appendix D-III Surface Water 2024
Surface Water Monitor S6

Parameter	Unit	PWQO ⁽¹⁾	S6	S6
			25-Apr-2024	23-Oct-2024
			S-6	S6
General Chemistry				
Alkalinity (Total as CaCO3)	mg/l	-- ⁽²⁾	151	75
Ammonia, unionized	ug/l	20	0.02	0.02
Ammonia Nitrogen	ug/l	--	30	20
Biochemical Oxygen Demand, 5 Day	ug/l	--	<2000	7000
Bromide	ug/l	--	<100	<100
Chemical Oxygen Demand	ug/l	--	21000	26000
Chloride	ug/l	--	100000	20000
Chloride, dissolved	ug/l	--	--	--
Conductivity	uS/cm	--	--	--
Conductivity (Field)	uS/cm	--	620	253
Dissolved Organic Carbon	ug/l	--	5500	4700
Dissolved Oxygen (Field)	mg/l	-- ⁽³⁾	12.98	1.49
Fluoride	ug/l	--	300	500
Hardness, Calcium Carbonate	ug/l	--	242000	105000
Nitrate as N	ug/l	--	<100	<100
Nitrite as N	ug/l	--	<50	<50
Nitrogen, Total Kjeldahl	ug/l	--	500	1300
Nitrogen, Nitrate-Nitrite	ug/l	--	--	--
pH (Field)	-	6.5 - 8.5	7.86	6.57
Phenols, Total	ug/l	1 ⁽¹¹⁾	--	--
Phosphorus	ug/l	-- ⁽⁴⁾	30	150
Phosphorus, Total Orthophosphate	ug/l	--	<500	<500
Sulphate	ug/l	--	15000	19000
Temperature (Field)	deg c	-- ⁽⁵⁾	14.2	11.5
Total Dissolved Solids	ug/l	--	338000	150000
Total Suspended Solids	ug/l	--	120000	11000
Metals				
Antimony	ug/l	20	<0.5	<0.5
Arsenic	ug/l	100 ⁽⁶⁾	<1	<1
Barium	ug/l	--	45	37
Beryllium	ug/l	-- ⁽¹³⁾	<0.5	<0.5
Boron	ug/l	200 ⁽⁷⁾	<50	<50
Cadmium	ug/l	0.2 ⁽⁶⁾	<0.1	<0.1
Calcium	ug/l	--	64000	31800
Chromium	ug/l	-- ⁽⁸⁾	<5	<5
Cobalt	ug/l	0.9	<0.5	<0.5
Copper	ug/l	5	1.0	<0.5
Iron	ug/l	300	1970	352
Lead	ug/l	-- ⁽⁹⁾	0.6	2.1
Lead, dissolved	ug/l	-- ⁽⁹⁾	--	--
Magnesium	ug/l	--	20000	6190
Manganese	ug/l	--	85	55
Mercury, dissolved	ug/l	0.2 ⁽¹⁰⁾	<0.1	<0.1
Molybdenum	ug/l	40	<0.5	<0.5
Nickel	ug/l	25	<1	<1
Potassium	ug/l	--	3830	2670
Selenium	ug/l	100	<1	<1
Silver	ug/l	0.1	<0.1	0.3
Sodium	ug/l	--	54700	9790
Thallium	ug/l	0.3 ⁽¹⁴⁾	0.1	<0.1
Tungsten	ug/l	30 ⁽¹⁵⁾	<10	<10
Uranium	ug/l	5 ⁽⁷⁾	0.4	<0.1
Vanadium	ug/l	6	0.9	<0.5
Zinc	ug/l	30 ⁽⁶⁾	<5	<5
Zirconium	ug/l	4 ⁽⁷⁾	<1	<1
Phenols				
Phenolics, Total Recoverable	ug/l	1 ⁽¹¹⁾	<1	<1

Appendix D-III Surface Water 2024
Surface Water Monitor S7D

Parameter	Unit	PWQO ⁽¹⁾	S7D	S7D	S7D	S7D	S7D	S7D	S7D	S7D
			22-Oct-2018	27-Nov-2018	19-Jun-2019	17-Sep-2019	28-Nov-2019	04-Jun-2020	30-Nov-2020	08-Jun-2021
			S-7D	S-7D	S7D	SW-7D	7D	S-7D	S-7D	S7D
General Chemistry										
Alkalinity (Total as CaCO3)	mg/l	-- ⁽²⁾	68	68	69	71	62	63	100	84
Ammonia, unionized	ug/l	20	0.37	0.19	0.62	0.83	0.16	0.4	0.78	2.35
Ammonia Nitrogen	ug/l	--	40	20	20	30	20	20	40	80
Biochemical Oxygen Demand, 5 Day	ug/l	--	--	--	--	--	--	--	--	--
Bromide	ug/l	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	ug/l	--	--	--	--	--	--	--	--	--
Chloride	ug/l	--	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	201	333	256	306	360	288	44	192
Dissolved Organic Carbon	ug/l	--	6800	6100	5500	6000	5200	3500	7000	7200
Dissolved Oxygen (Field)	mg/l	-- ⁽³⁾	10.44	5.99	4.79	5.98	8.10	10.6	9.87	5.95
Fluoride	ug/l	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	ug/l	--	--	--	--	--	--	--	--	--
Nitrate as N	ug/l	--	--	--	--	--	--	--	--	--
Nitrite as N	ug/l	--	--	--	--	--	--	--	--	--
Nitrogen, Total Kjeldahl	ug/l	--	300	400	600	200	200	300	600	500
pH (Field)	-	6.5 - 8.5	7.84	8.01	7.96	8	7.9	7.84	8.25	7.77
Phosphorus	ug/l	-- ⁽⁴⁾	--	--	--	--	--	--	--	--
Phosphorus, Total Orthophosphate	ug/l	--	--	--	--	--	--	--	--	--
Sulphate	ug/l	--	--	--	--	--	--	--	--	--
Temperature (Field)	deg c	-- ⁽⁵⁾	5.89	1.4	18.4	15.5	2.4	16.1	3.6	23.6
Total Dissolved Solids	ug/l	--	--	--	--	--	--	--	--	--
Total Suspended Solids	ug/l	--	--	--	--	--	--	--	--	--
Metals										
Antimony	ug/l	20	--	--	--	--	--	--	--	--
Arsenic	ug/l	100 ⁽⁶⁾	--	--	--	--	--	--	--	--
Barium	ug/l	--	--	--	--	--	--	--	--	--
Beryllium	ug/l	-- ⁽¹³⁾	--	--	--	--	--	--	--	--
Boron	ug/l	200 ⁽⁷⁾	<10	10	<10	<10	<10	<10	11	<10
Cadmium	ug/l	0.2 ⁽⁶⁾	--	--	--	--	--	--	--	--
Calcium	ug/l	--	--	--	--	--	--	--	--	--
Chromium	ug/l	-- ⁽⁸⁾	--	--	--	--	--	--	--	--
Cobalt	ug/l	0.9	--	--	--	--	--	--	--	--
Copper	ug/l	5	--	--	--	--	--	--	--	--
Iron	ug/l	300	109	<100	207	<100	147	232	2610	137
Lead	ug/l	-- ⁽⁹⁾	--	--	--	--	--	--	--	--
Magnesium	ug/l	--	--	--	--	--	--	--	--	--
Manganese	ug/l	--	11	13	26	10	14	26	80	26
Mercury, dissolved	ug/l	0.2 ⁽¹⁰⁾	--	--	--	--	--	--	--	--
Molybdenum	ug/l	40	--	--	--	--	--	--	--	--
Nickel	ug/l	25	--	--	--	--	--	--	--	--
Potassium	ug/l	--	1280	1480	1290	1080	1510	1070	3480	1070
Selenium	ug/l	100	--	--	--	--	--	--	--	--
Silver	ug/l	0.1	--	--	--	--	--	--	--	--
Sodium	ug/l	--	--	--	--	--	--	--	--	--
Thallium	ug/l	0.3 ⁽¹⁴⁾	--	--	--	--	--	--	--	--
Tungsten	ug/l	30 ⁽¹⁵⁾	--	--	--	--	--	--	--	--
Uranium	ug/l	5 ⁽⁷⁾	--	--	--	--	--	--	--	--
Vanadium	ug/l	6	--	--	--	--	--	--	--	--
Zinc	ug/l	30 ⁽⁶⁾	--	--	--	--	--	--	--	--
Zirconium	ug/l	4 ⁽⁷⁾	--	--	--	--	--	--	--	--
Phenols										
Phenolics, Total Recoverable	ug/l	1 ⁽¹¹⁾	--	--	--	--	--	--	--	--

Parameter	Unit	PWQO ⁽¹⁾	S7D	S7D	S7D	S7D	S7D	S7D	S7D	S7D
			25-Nov-2021	20-Jun-2022	23-Nov-2022	11-May-2023	29-Nov-2023	25-Apr-2024	22-Oct-2024	05-Dec-2024
			S7D	S-7D	S7D	S7D	S7D	S7D	S7D	S7D
General Chemistry										
Alkalinity (Total as CaCO3)	mg/l	-- ⁽²⁾	64	69	67	63	50	73	59	63
Ammonia, unionized	ug/l	20	0.02	0.33	1.42	<0.03	0.03	0.44	0.15	<0.01
Ammonia Nitrogen	ug/l	--	20	10	60	<10	20	30	10	<10
Biochemical Oxygen Demand, 5 Day	ug/l	--	--	--	--	--	--	<2000	--	<2000
Bromide	ug/l	--	--	--	--	--	--	<100	--	<100
Chemical Oxygen Demand	ug/l	--	--	--	--	--	--	18000	--	17000
Chloride	ug/l	--	--	--	--	--	--	11000	--	11000
Conductivity (Field)	uS/cm	--	232	199	481	164.5	141	176	180	176
Dissolved Organic Carbon	ug/l	--	6400	6400	7200	7100	5800	5600	7300	6000
Dissolved Oxygen (Field)	mg/l	-- ⁽³⁾	12.72	6.89	12.2	8.30	13.68	12.08	9.54	11.45
Fluoride	ug/l	--	--	--	--	--	--	<100	--	<100
Hardness, Calcium Carbonate	ug/l	--	--	--	--	--	--	89000	--	71000
Nitrate as N	ug/l	--	--	--	--	--	--	<100	--	<100
Nitrite as N	ug/l	--	--	--	--	--	--	<50	--	<50
Nitrogen, Total Kjeldahl	ug/l	--	300	400	900	400	300	300	400	300
pH (Field)	-	6.5 - 8.5	7.06	7.84	8.41	6.96	7.19	6.62	7.85	6.75
Phosphorus	ug/l	-- ⁽⁴⁾	--	--	--	--	--	<10	--	30
Phosphorus, Total Orthophosphate	ug/l	--	--	--	--	--	--	<500	--	<500
Sulphate	ug/l	--	--	--	--	--	--	7000	--	5000
Temperature (Field)	deg c	-- ⁽⁵⁾	1.8	22.9	1.6	15.8	2.9	7.9	11.5	1.6
Total Dissolved Solids	ug/l	--	--	--	--	--	--	94000	--	110000
Total Suspended Solids	ug/l	--	--	--	--	--	--	3000	--	<2000
Metals										
Antimony	ug/l	20	--	--	--	--	--	<0.5	--	<0.5
Arsenic	ug/l	100 ⁽⁶⁾	--	--	--	--	--	<1	--	<1
Barium	ug/l	--	--	--	--	--	--	33	--	32
Beryllium	ug/l	-- ⁽¹³⁾	--	--	--	--	--	<0.5	--	<0.5
Boron	ug/l	200 ⁽⁷⁾	<10	21	<10	<10	<10	<50	<10	<50
Cadmium	ug/l	0.2 ⁽⁶⁾	--	--	--	--	--	<0.1	--	<0.1
Calcium	ug/l	--	--	--	--	--	--	24400	--	18700
Chromium	ug/l	-- ⁽⁸⁾	--	--	--	--	--	<5	--	<5
Cobalt	ug/l	0.9	--	--	--	--	--	<0.5	--	<0.5
Copper	ug/l	5	--	--	--	--	--	0.7	--	1.8
Iron	ug/l	300	229	199	2160	267	182	184	116	579
Lead	ug/l	-- ⁽⁹⁾	--	--	--	--	--	0.3	--	1.0
Magnesium	ug/l	--	--	--	--	--	--	6740	--	5820
Manganese	ug/l	--	18	221	128	18	10	19	27	30
Mercury, dissolved	ug/l	0.2 ⁽¹⁰⁾	--	--	--	--	--	<0.1	--	<0.1
Molybdenum	ug/l	40	--	--	--	--	--	<0.5	--	<0.5
Nickel	ug/l	25	--	--	--	--	--	<1	--	<1
Potassium	ug/l	--	1100	2410	1610	960	808	1380	1380	1290
Selenium	ug/l	100	--	--	--	--	--	<1	--	<1
Silver	ug/l	0.1	--	--	--	--	--	<0.1	--	<0.1
Sodium	ug/l	--	--	--	--	--	--	10100	--	8160
Thallium	ug/l	0.3 ⁽¹⁴⁾	--	--	--	--	--	0.1	--	<0.1
Tungsten	ug/l	30 ⁽¹⁵⁾	--	--	--	--	--	<10	--	<10
Uranium	ug/l	5 ⁽⁷⁾	--	--	--	--	--	0.2	--	0.2
Vanadium	ug/l	6	--	--	--	--	--	0.6	--	1.1
Zinc	ug/l	30 ⁽⁶⁾	--	--	--	--	--	<5	--	10
Zirconium	ug/l	4 ⁽⁷⁾	--	--	--	--	--	<1	--	<1
Phenols										
Phenolics, Total Recoverable	ug/l	1 ⁽¹¹⁾	--	--	--	--	--	<1	--	<1

Appendix D-III Surface Water 2024
Surface Water Monitor S7U

Parameter	Unit	PWQO ⁽¹⁾	S7U	S7U
			22-Oct-2018	27-Nov-2018
			S-7U	S-7U
General Chemistry				
Alkalinity (Total as CaCO3)	mg/l	-- ⁽²⁾	75	69
Ammonia, unionized	ug/l	20	0.84	0.23
Ammonia Nitrogen	ug/l	--	80	20
Conductivity (Field)	uS/cm	--	204	364
Dissolved Organic Carbon	ug/l	--	7000	5800
Dissolved Oxygen (Field)	mg/l	-- ⁽³⁾	10.55	6.81
Nitrogen, Total Kjeldahl	ug/l	--	300	300
pH (Field)	-	6.5 - 8.5	7.90	8.1
Temperature (Field)	deg c	-- ⁽⁵⁾	5.84	1.2
Metals				
Boron	ug/l	200 ⁽⁷⁾	<10	<10
Iron	ug/l	300	123	<100
Manganese	ug/l	--	12	14
Potassium	ug/l	--	1290	1470

Appendix D-III Surface Water 2024
Surface Water Monitor S8

Parameter	Unit	PWQO ⁽¹⁾	S8	S8	S8	S8	S8	S8	S8	S8
			22-Oct-2018	27-Nov-2018	19-Jun-2019	17-Sep-2019	28-Nov-2019	04-Jun-2020	30-Nov-2020	08-Jun-2021
			S-8	S-8	S8	SW-8	8	S-8	S-8	S8
General Chemistry										
Alkalinity (Total as CaCO3)	mg/l	-- ⁽²⁾	79	68	67	80	57	64	103	84
Ammonia, unionized	ug/l	20	1.26	0.2	1.03	1.15	0.16	0.71	0.41	3.63
Ammonia Nitrogen	ug/l	--	110	20	30	40	20	30	30	60
Biochemical Oxygen Demand, 5 Day	ug/l	--	--	--	--	--	--	--	--	--
Bromide	ug/l	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	ug/l	--	--	--	--	--	--	--	--	--
Chloride	ug/l	--	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	198	398	304	384	404	193	398	189
Dissolved Organic Carbon	ug/l	--	7200	5800	5000	6000	5300	3200	8000	7400
Dissolved Oxygen (Field)	mg/l	-- ⁽³⁾	10.61	6.84	6.93	8.23	12.61	19.34	7.63	7.32
Fluoride	ug/l	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	ug/l	--	--	--	--	--	--	--	--	--
Nitrate as N	ug/l	--	--	--	--	--	--	--	--	--
Nitrite as N	ug/l	--	--	--	--	--	--	--	--	--
Nitrogen, Total Kjeldahl	ug/l	--	300	400	500	100	200	400	700	400
pH (Field)	-	6.5 - 8.5	7.94	8.02	7.98	8.02	7.9	7.89	8.12	8.03
Phosphorus	ug/l	-- ⁽⁴⁾	--	--	--	--	--	--	--	--
Phosphorus, Total Orthophosphate	ug/l	--	--	--	--	--	--	--	--	--
Sulphate	ug/l	--	--	--	--	--	--	--	--	--
Temperature (Field)	deg c	-- ⁽⁵⁾	5.80	1.6	19.2	15.5	2.8	16.7	2.9	25.8
Total Dissolved Solids	ug/l	--	--	--	--	--	--	--	--	--
Total Suspended Solids	ug/l	--	--	--	--	--	--	--	--	--
Metals										
Antimony	ug/l	20	--	--	--	--	--	--	--	--
Arsenic	ug/l	100 ⁽⁶⁾	--	--	--	--	--	--	--	--
Barium	ug/l	--	--	--	--	--	--	--	--	--
Beryllium	ug/l	-- ⁽¹³⁾	--	--	--	--	--	--	--	--
Boron	ug/l	200 ⁽⁷⁾	<10	11	12	12	<10	<10	11	<10
Cadmium	ug/l	0.2 ⁽⁶⁾	--	--	--	--	--	--	--	--
Calcium	ug/l	--	--	--	--	--	--	--	--	--
Chromium	ug/l	-- ⁽⁸⁾	--	--	--	--	--	--	--	--
Cobalt	ug/l	0.9	--	--	--	--	--	--	--	--
Copper	ug/l	5	--	--	--	--	--	--	--	--
Iron	ug/l	300	263	130	388	162	202	252	2530	204
Lead	ug/l	-- ⁽⁹⁾	--	--	--	--	--	--	--	--
Magnesium	ug/l	--	--	--	--	--	--	--	--	--
Manganese	ug/l	--	25	19	56	51	12	26	57	36
Mercury, dissolved	ug/l	0.2 ⁽¹⁰⁾	--	--	--	--	--	--	--	--
Molybdenum	ug/l	40	--	--	--	--	--	--	--	--
Nickel	ug/l	25	--	--	--	--	--	--	--	--
Potassium	ug/l	--	1440	1490	2100	1470	1380	1080	4050	1080
Selenium	ug/l	100	--	--	--	--	--	--	--	--
Silver	ug/l	0.1	--	--	--	--	--	--	--	--
Sodium	ug/l	--	--	--	--	--	--	--	--	--
Thallium	ug/l	0.3 ⁽¹⁴⁾	--	--	--	--	--	--	--	--
Tungsten	ug/l	30 ⁽¹⁵⁾	--	--	--	--	--	--	--	--
Uranium	ug/l	5 ⁽⁷⁾	--	--	--	--	--	--	--	--
Vanadium	ug/l	6	--	--	--	--	--	--	--	--
Zinc	ug/l	30 ⁽⁶⁾	--	--	--	--	--	--	--	--
Zirconium	ug/l	4 ⁽⁷⁾	--	--	--	--	--	--	--	--
Phenols										
Phenolics, Total Recoverable	ug/l	1 ⁽¹¹⁾	--	--	--	--	--	--	--	--

Parameter	Unit	PWQO ⁽¹⁾	S8	S8	S8	S8	S8	S8	S8	S8
			25-Nov-2021	20-Jun-2022	23-Nov-2022	11-May-2023	29-Nov-2023	25-Apr-2024	22-Oct-2024	05-Dec-2024
			S8	S-8	S8	S8	S8	S8	S8	S-8
General Chemistry										
Alkalinity (Total as CaCO3)	mg/l	-- ⁽²⁾	63	69	59	61	49	72	55	63
Ammonia, unionized	ug/l	20	0.2	0.93	0.35	<0.02	0.24	0.58	<0.29	0.02
Ammonia Nitrogen	ug/l	--	60	20	20	<10	20	20	<10	20
Biochemical Oxygen Demand, 5 Day	ug/l	--	--	--	--	--	--	<2000	--	<2000
Bromide	ug/l	--	--	--	--	--	--	<100	--	<100
Chemical Oxygen Demand	ug/l	--	--	--	--	--	--	17000	--	16000
Chloride	ug/l	--	--	--	--	--	--	10000	--	12000
Conductivity (Field)	uS/cm	--	185	184	165	155	135	172	166	171
Dissolved Organic Carbon	ug/l	--	6200	6600	6600	7000	5500	5500	7300	6200
Dissolved Oxygen (Field)	mg/l	-- ⁽³⁾	13.53	7.49	11.3	12.20	11.85	12.03	10.63	15.33
Fluoride	ug/l	--	--	--	--	--	--	<100	--	<100
Hardness, Calcium Carbonate	ug/l	--	--	--	--	--	--	88000	--	62000
Nitrate as N	ug/l	--	--	--	--	--	--	<100	--	<100
Nitrite as N	ug/l	--	--	--	--	--	--	<50	--	<50
Nitrogen, Total Kjeldahl	ug/l	--	200	500	300	300	300	300	300	300
pH (Field)	-	6.5 - 8.5	7.54	7.97	8.26	6.84	8.14	7.25	8.17	7.04
Phosphorus	ug/l	-- ⁽⁴⁾	--	--	--	--	--	<10	--	10
Phosphorus, Total Orthophosphate	ug/l	--	--	--	--	--	--	<500	--	<500
Sulphate	ug/l	--	--	--	--	--	--	6000	--	5000
Temperature (Field)	deg c	-- ⁽⁵⁾	1.8	23.9	2.2	14.0	0.8	7.7	11.1	0.6
Total Dissolved Solids	ug/l	--	--	--	--	--	--	80000	--	102000
Total Suspended Solids	ug/l	--	--	--	--	--	--	4000	--	<2000
Metals										
Antimony	ug/l	20	--	--	--	--	--	<0.5	--	<0.5
Arsenic	ug/l	100 ⁽⁶⁾	--	--	--	--	--	<1	--	<1
Barium	ug/l	--	--	--	--	--	--	33	--	28
Beryllium	ug/l	-- ⁽¹³⁾	--	--	--	--	--	<0.5	--	<0.5
Boron	ug/l	200 ⁽⁷⁾	<10	22	<10	<10	<10	<50	<10	<50
Cadmium	ug/l	0.2 ⁽⁶⁾	--	--	--	--	--	<0.1	--	<0.1
Calcium	ug/l	--	--	--	--	--	--	24200	--	16300
Chromium	ug/l	-- ⁽⁸⁾	--	--	--	--	--	<5	--	<5
Cobalt	ug/l	0.9	--	--	--	--	--	<0.5	--	<0.5
Copper	ug/l	5	--	--	--	--	--	0.7	--	<0.5
Iron	ug/l	300	154	165	117	340	109	233	446	163
Lead	ug/l	-- ⁽⁹⁾	--	--	--	--	--	0.3	--	<0.1
Magnesium	ug/l	--	--	--	--	--	--	6690	--	5280
Manganese	ug/l	--	10	233	8	18	8	21	36	10
Mercury, dissolved	ug/l	0.2 ⁽¹⁰⁾	--	--	--	--	--	<0.1	--	<0.1
Molybdenum	ug/l	40	--	--	--	--	--	<0.5	--	<0.5
Nickel	ug/l	25	--	--	--	--	--	<1	--	<1
Potassium	ug/l	--	1130	2330	1020	961	909	1360	1370	1140
Selenium	ug/l	100	--	--	--	--	--	<1	--	<1
Silver	ug/l	0.1	--	--	--	--	--	<0.1	--	<0.1
Sodium	ug/l	--	--	--	--	--	--	9230	--	7700
Thallium	ug/l	0.3 ⁽¹⁴⁾	--	--	--	--	--	0.1	--	<0.1
Tungsten	ug/l	30 ⁽¹⁵⁾	--	--	--	--	--	<10	--	<10
Uranium	ug/l	5 ⁽⁷⁾	--	--	--	--	--	0.2	--	0.1
Vanadium	ug/l	6	--	--	--	--	--	0.6	--	<0.5
Zinc	ug/l	30 ⁽⁶⁾	--	--	--	--	--	<5	--	<5
Zirconium	ug/l	4 ⁽⁷⁾	--	--	--	--	--	<1	--	<1
Phenols										
Phenolics, Total Recoverable	ug/l	1 ⁽¹¹⁾	--	--	--	--	--	<1	--	<1

Parameter	Unit	PWQO ⁽¹⁾	S9	S9	S9	S9	S9	S9	S9	S9
			22-Oct-2018	27-Nov-2018	19-Jun-2019	17-Sep-2019	28-Nov-2019	04-Jun-2020	30-Nov-2020	08-Jun-2021
			S-9	S-9	S9	SW-9	9	S-9	S-9	S9
General Chemistry										
Alkalinity (Total as CaCO3)	mg/l	-- ⁽²⁾	69	69	67	65	55	62	103	87
Ammonia, unionized	ug/l	20	2.08	0.39	0.97	1.41	0.13	0.69	0.82	3.6
Ammonia Nitrogen	ug/l	--	260	40	30	50	20	30	40	60
Biochemical Oxygen Demand, 5 Day	ug/l	--	--	--	--	--	--	--	--	--
Bromide	ug/l	--	--	--	--	--	--	--	--	--
Chemical Oxygen Demand	ug/l	--	--	--	--	--	--	--	--	--
Chloride	ug/l	--	--	--	--	--	--	--	--	--
Conductivity (Field)	uS/cm	--	201	197	189	199	395	165	266	190
Dissolved Organic Carbon	ug/l	--	25200	6000	5000	7200	5300	3300	7300	7000
Dissolved Oxygen (Field)	mg/l	-- ⁽³⁾	10.51	7.92	6.99	8.45	12.40	10.10	8.81	6.91
Fluoride	ug/l	--	--	--	--	--	--	--	--	--
Hardness, Calcium Carbonate	ug/l	--	--	--	--	--	--	--	--	--
Nitrate as N	ug/l	--	--	--	--	--	--	--	--	--
Nitrite as N	ug/l	--	--	--	--	--	--	--	--	--
Nitrogen, Total Kjeldahl	ug/l	--	500	600	500	300	200	200	600	400
pH (Field)	-	6.5 - 8.5	7.78	8.01	7.94	7.99	7.8	7.92	8.31	8.10
Phosphorus	ug/l	-- ⁽⁴⁾	--	--	--	--	--	--	--	--
Phosphorus, Total Orthophosphate	ug/l	--	--	--	--	--	--	--	--	--
Sulphate	ug/l	--	--	--	--	--	--	--	--	--
Temperature (Field)	deg c	-- ⁽⁵⁾	5.90	1.9	19.5	16.1	2.7	15.5	2.6	23.4
Total Dissolved Solids	ug/l	--	--	--	--	--	--	--	--	--
Total Suspended Solids	ug/l	--	--	--	--	--	--	--	--	--
Metals										
Antimony	ug/l	20	--	--	--	--	--	--	--	--
Arsenic	ug/l	100 ⁽⁶⁾	--	--	--	--	--	--	--	--
Barium	ug/l	--	--	--	--	--	--	--	--	--
Beryllium	ug/l	-- ⁽¹³⁾	--	--	--	--	--	--	--	--
Boron	ug/l	200 ⁽⁷⁾	<10	<10	<10	<10	<10	<10	11	<10
Cadmium	ug/l	0.2 ⁽⁶⁾	--	--	--	--	--	--	--	--
Calcium	ug/l	--	--	--	--	--	--	--	--	--
Chromium	ug/l	-- ⁽⁸⁾	--	--	--	--	--	--	--	--
Cobalt	ug/l	0.9	--	--	--	--	--	--	--	--
Copper	ug/l	5	--	--	--	--	--	--	--	--
Iron	ug/l	300	<100	109	191	<100	168	281	2200	131
Lead	ug/l	-- ⁽⁹⁾	--	--	--	--	--	--	--	--
Magnesium	ug/l	--	--	--	--	--	--	--	--	--
Manganese	ug/l	--	<5	16	23	10	11	29	53	26
Mercury, dissolved	ug/l	0.2 ⁽¹⁰⁾	--	--	--	--	--	--	--	--
Molybdenum	ug/l	40	--	--	--	--	--	--	--	--
Nickel	ug/l	25	--	--	--	--	--	--	--	--
Potassium	ug/l	--	1240	1650	1210	1130	1310	1110	3560	1070
Selenium	ug/l	100	--	--	--	--	--	--	--	--
Silver	ug/l	0.1	--	--	--	--	--	--	--	--
Sodium	ug/l	--	--	--	--	--	--	--	--	--
Thallium	ug/l	0.3 ⁽¹⁴⁾	--	--	--	--	--	--	--	--
Tungsten	ug/l	30 ⁽¹⁵⁾	--	--	--	--	--	--	--	--
Uranium	ug/l	5 ⁽⁷⁾	--	--	--	--	--	--	--	--
Vanadium	ug/l	6	--	--	--	--	--	--	--	--
Zinc	ug/l	30 ⁽⁶⁾	--	--	--	--	--	--	--	--
Zirconium	ug/l	4 ⁽⁷⁾	--	--	--	--	--	--	--	--
Phenols										
Phenolics, Total Recoverable	ug/l	1 ⁽¹¹⁾	--	--	--	--	--	--	--	--

Parameter	Unit	PWQO ⁽¹⁾	S9	S9	S9	S9	S9	S9	S9	S9
			25-Nov-2021	20-Jun-2022	23-Nov-2022	11-May-2023	29-Nov-2023	25-Apr-2024	22-Oct-2024	05-Dec-2024
			S9	S-9	S9	S9	S9	S9	S9	S-9
General Chemistry										
Alkalinity (Total as CaCO3)	mg/l	-- ⁽²⁾	64	71	58	61	51	72	58	62
Ammonia, unionized	ug/l	20	0.06	2.01	0.84	<0.02	0.14	1.42	<0.36	0.01
Ammonia Nitrogen	ug/l	--	40	40	30	<10	20	40	<10	20
Biochemical Oxygen Demand, 5 Day	ug/l	--	--	--	--	--	--	<2000	--	<2000
Bromide	ug/l	--	--	--	--	--	--	<100	--	<100
Chemical Oxygen Demand	ug/l	--	--	--	--	--	--	18000	--	14000
Chloride	ug/l	--	--	--	--	--	--	10000	--	12000
Conductivity (Field)	uS/cm	--	202	194	172	185	134	165	148	176
Dissolved Organic Carbon	ug/l	--	7900	8200	7400	6700	5800	5600	7600	5700
Dissolved Oxygen (Field)	mg/l	-- ⁽³⁾	13.82	7.11	12.8	8.20	13.25	12.08	10.99	13.47
Fluoride	ug/l	--	--	--	--	--	--	<100	--	<100
Hardness, Calcium Carbonate	ug/l	--	--	--	--	--	--	88000	--	65000
Nitrate as N	ug/l	--	--	--	--	--	--	100	--	<100
Nitrite as N	ug/l	--	--	--	--	--	--	<50	--	<50
Nitrogen, Total Kjeldahl	ug/l	--	300	700	300	300	300	400	400	300
pH (Field)	-	6.5 - 8.5	7.18	8.04	8.49	6.90	7.9	7.12	8.25	6.80
Phosphorus	ug/l	-- ⁽⁴⁾	--	--	--	--	--	10	--	10
Phosphorus, Total Orthophosphate	ug/l	--	--	--	--	--	--	<500	--	<500
Sulphate	ug/l	--	--	--	--	--	--	6000	--	5000
Temperature (Field)	deg c	-- ⁽⁵⁾	2.19	22.7	1.4	16.9	0.75	7.9	11.4	0.8
Total Dissolved Solids	ug/l	--	--	--	--	--	--	80000	--	104000
Total Suspended Solids	ug/l	--	--	--	--	--	--	3000	--	<2000
Metals										
Antimony	ug/l	20	--	--	--	--	--	<0.5	--	<0.5
Arsenic	ug/l	100 ⁽⁶⁾	--	--	--	--	--	<1	--	<1
Barium	ug/l	--	--	--	--	--	--	32	--	29
Beryllium	ug/l	-- ⁽¹³⁾	--	--	--	--	--	<0.5	--	<0.5
Boron	ug/l	200 ⁽⁷⁾	<10	22	<10	<10	<10	<50	<10	<50
Cadmium	ug/l	0.2 ⁽⁶⁾	--	--	--	--	--	<0.1	--	<0.1
Calcium	ug/l	--	--	--	--	--	--	24300	--	16900
Chromium	ug/l	-- ⁽⁸⁾	--	--	--	--	--	<5	--	<5
Cobalt	ug/l	0.9	--	--	--	--	--	<0.5	--	<0.5
Copper	ug/l	5	--	--	--	--	--	0.6	--	<0.5
Iron	ug/l	300	113	320	<100	263	107	184	113	124
Lead	ug/l	-- ⁽⁹⁾	--	--	--	--	--	0.3	--	<0.1
Magnesium	ug/l	--	--	--	--	--	--	6550	--	5480
Manganese	ug/l	--	8	690	8	17	10	20	14	8
Mercury, dissolved	ug/l	0.2 ⁽¹⁰⁾	--	--	--	--	--	<0.1	--	<0.1
Molybdenum	ug/l	40	--	--	--	--	--	<0.5	--	<0.5
Nickel	ug/l	25	--	--	--	--	--	<1	--	<1
Potassium	ug/l	--	1090	2610	975	938	730	1400	1290	1160
Selenium	ug/l	100	--	--	--	--	--	<1	--	<1
Silver	ug/l	0.1	--	--	--	--	--	<0.1	--	<0.1
Sodium	ug/l	--	--	--	--	--	--	8970	--	8050
Thallium	ug/l	0.3 ⁽¹⁴⁾	--	--	--	--	--	0.1	--	<0.1
Tungsten	ug/l	30 ⁽¹⁵⁾	--	--	--	--	--	<10	--	<10
Uranium	ug/l	5 ⁽⁷⁾	--	--	--	--	--	0.2	--	0.1
Vanadium	ug/l	6	--	--	--	--	--	0.5	--	<0.5
Zinc	ug/l	30 ⁽⁶⁾	--	--	--	--	--	<5	--	<5
Zirconium	ug/l	4 ⁽⁷⁾	--	--	--	--	--	<1	--	<1
Phenols										
Phenolics, Total Recoverable	ug/l	1 ⁽¹¹⁾	--	--	--	--	--	<1	--	<1

Footnotes:	
	Tables should be read in conjunction with the accompanying document.
<	Indicates parameter not detected above laboratory method detection limit.
>	Indicates parameter detected above equipment analytical range.
--	Chemical not analyzed or criteria not defined.
Value	Parameter is greater than PWQO
(1)	Provincial Water Quality Objectives (July 1994, reprinted February 1999)
(2)	Alkalinity should not be decreased by more than 25% of the natural concentration.
(3)	Objective depends on water temperature and biota. Dissolved oxygen concentrations should not be less than the values specified in the PWQO document for cold water biota (e.g. salmonid fish communities) and warm water biota (e.g. centrarchid fish communities).
(4)	Current scientific evidence is insufficient to develop a firm Objective at this time. Accordingly, the following phosphorus concentrations should be considered as general guidelines which should be supplemented by site-specific studies: To avoid nuisance concentrations of algae in lakes, average total phosphorus concentrations for the ice-free period should not exceed 20 ug/L; A high level of protection against aesthetic deterioration will be provided by a total phosphorus concentration for the ice-free period of 10 ug/L or less. This should apply to all lakes naturally below this value; Excessive plant growth in rivers and streams should be eliminated at a total phosphorus
(5)	(1) General: The natural thermal regime of any body of water shall not be altered so as to impair the quality of the natural environment. In particular, the diversity, distribution and abundance of plant and animal life shall not be significantly changed. (2) Waste Heat Discharge: (a) Ambient Temperature Changes: The temperature at the edge of a mixing zone shall not exceed the natural ambient water temperature at a representative control location by more than 10°C (18°F). However, in special circumstances, local conditions may require a significantly lower temperature difference than 10°C (18°F). Potential dischargers are to apply to the MOEE for guidance as to the allowable temperature rise for each thermal discharge. This ministry will also specify the nature of the mixing zone and the procedure for the establishment of a representative control location for temperature recording on a case-by-case basis. (b) Discharge Temperature Permitted: The maximum temperature of the receiving body of water, at any point in the thermal plume outside a mixing zone, shall not exceed 30°C (86°F) or the temperature of a representative control location plus 10°C (18°F) or the allowed temperature difference, which ever is the lesser temperature. These maximum temperatures are to be measured on a mean daily basis from continuous records. (c) Taking and Discharging of Cooling Water: Users of cooling water shall meet both the Objectives for temperature outlined above and the "Procedures for the
(6)	An Interim PWQO also exists for this parameter. See Section 1.10 of the PWQO - Where both a PWQO and an Interim PWQO exist.
(7)	See Section 1.2.3. of PWQO. This Interim PWQO was set for emergency purposes based on the best information readily available. Employ due caution when applying this
(8)	PWQO values exist for Cr(III) and Cr(VI)
(9)	If alkalinity as CaCO ₃ < 20 mg/L, PWQO = 5 µg/L; if alkalinity as CaCO ₃ from 20 to 40 mg/L, PWQO = 10 µg/L; if alkalinity as CaCO ₃ from 40 to 80 mg/L, PWQO = 20 µg/L; if alkalinity as CaCO ₃ > 80 mg/L, PWQO = 25 ug/L. An Interim PWQO also exists for this parameter. See Section 1.10 of the PWQO - Where both a PWQO and an
(10)	In a filtered water sample.
(11)	Determined by the total reactive phenols test - the 4-AAP (4-amino-antipyrine) test. This objective should be used primarily as a screening tool. The isomer specific PWQOs for various phenolics should be employed where possible.
(12)	No result(s) available.
(13)	If hardness as CaCO ₃ < 75 mg/L, PWQO = 11 µg/L; if hardness as CaCO ₃ > 75 mg/L, PWQO = 1100 µg/L.
(14)	See Section 1.2.2. of PWQO. This Interim PWQO is currently under development. The value is subject to change upon publication by MOEE.
(15)	See Section 1.2.3. of PWQO. This Interim PWQO was set for emergency purposes based on the best information readily available. Employ due caution when applying
(16)	H-02 This analysis was conducted after the accepted holding time had been exceeded.
(17)	Monitoring location could not be accessed due to safety concerns. No sample taken.
(18)	Parameter was not measured.
(19)	TKN MRL elevated due to matrix interference.
(20)	Field pH not measured during sampling session. Field conductivity not measured during sampling session.

APPENDIX E

2024 Landfill Gas Monitoring Data

Table E-1: Indoor Monitoring by WSP Canada Inc.

Date	Methane (%)	Oxygen (%)	Carbon Dioxide (%)	Hydrogen Sulphide (ppm)
April 25, 2024*	0.0	20.7	0.0	0.0
September 20, 2024*	0.0	20.7	0.0	0.0
October 23, 2024*	0.0	20.5	0.1	0.0

Notes:

* Readings were taken by WSP Canada Inc. in the garage during monitoring sessions.

Prepared by: ETB
Checked by: BH

Table E-2: Landfill Gas Monitoring Table

Parameter	GW1			GW2			GW3			GW4			GW07-5			GW09-1			GW11-1			GW14-01		
	Apr. 2024	Sept. 2024	Oct. 2024	Apr. 2024	Sept. 2024	Oct. 2024	Apr. 2024	Sept. 2024	Oct. 2024	Apr. 2024	Sept. 2024	Oct. 2024	Apr. 2024	Sept. 2024	Oct. 2024	Apr. 2024	Sept. 2024	Oct. 2024	Apr. 2024	Sept. 2024	Oct. 2024	Apr. 2024	Sept. 2024	Oct. 2024
CH ₄ (%)	15.2	14.4	3.7	19.1	nm	3.2	46.7	0	13.5	29.9	55.8	29.8	0	0	0	6.6	0.6	12.8	0.3	0	0	0.1	0	0
CO ₂ (%)	14.1	6.8	5.1	9.8	nm	2.5	27.7	0	8.4	20.1	35.1	17.6	0	1.3	0	5.6	0.1	4.1	0.6	0	0	0.4	0.8	0.7
O ₂ (%)	9.9	14.8	16.0	13.9	nm	18.7	0	21.0	16.8	4.3	6	6.1	20.6	19.1	21.4	12.8	20.4	17.5	20.2	20.5	20.3	20.4	13.0	20.1
H ₂ S (ppm)	0	1	0	0	nm	0	0	0	0	0	0	8	0	1	0	0	0	0	0	0	0	0	0	0

Notes:

nm - Not monitored.

Spring monitoring occurred on April 25, 2024.

Summer monitoring occurred on September 20, 2024.

Fall monitoring occurred on October 23, 2024.

Prepared by: ETB

Checked by: BH



Renfrew
Bridging Charm and Convenience

Town of Renfrew Landfill Site - 376 Bruce Street

2024 Landfill Gas Monitoring	January	February	March	April	May	June
Date	Jan 17/24	Feb 22/24	March 19/24	April 16/24	May 15/24	June 11/24
Monitoring completed by:	Mark Breen	Mark Breen	Mark Breen	Mark Breen	Mark Breen	Mark Breen
SCALE HOUSE						
METHANE (CH ₄)	0	0	0	0	0	0
CARBON MONOXIDE (CO)	0	0	0	0	0	0
HYDROGEN SULPHINDE (H ₂ S)	0	0	0	0	0	0
OXYGEN (O ₂)	20.8	20.8	20.8	20.8	20.8	20.8
GARAGE						
METHANE (CH ₄)	0	0	0	0	0	0
CARBON MONOXIDE (CO)	0	0	0	0	0	0
HYDROGEN SULPHINDE (H ₂ S)	0	0	0	0	0	0
OXYGEN (O ₂)	20.8	20.8	20.8	20.8	20.8	20.8
2024 Landfill Gas Monitoring	July	August	September	October	November	December
Date	July 23/24	Aug 23/24	Sept 11/24	Oct 8/24	Nov 12/24	Dec 10/24
Monitoring completed by:	Mark Breen	Mark Breen	Mark Breen	Mark Breen	Mark Breen	Mark Breen
SCALE HOUSE						
METHANE (CH ₄)	0	0	0	0	0	0
CARBON MONOXIDE (CO)	0	0	0	0	0	0
HYDROGEN SULPHINDE (H ₂ S)	0	0	0	0	0	0
OXYGEN (O ₂)	20.8	20.8	20.8	20.8	20.8	20.8
GARAGE						
METHANE (CH ₄)	0	0	0	0	0	0
CARBON MONOXIDE (CO)	0	0	0	0	0	0
HYDROGEN SULPHINDE (H ₂ S)	0	0	0	0	0	0
OXYGEN (O ₂)	20.8	20.8	20.8	20.8	20.8	20.8

APPENDIX F

**Environmental Compliance
Approval No. A410401**

AMENDED ENVIRONMENTAL COMPLIANCE APPROVAL

NUMBER A410401

Issue Date: December 4, 2024

The Corporation of the Town of Renfrew
127 Raglan St S
Renfrew, Ontario
K7V 1P8

Site Location: Renfrew Landfill Site
376 Bruce St
Renfrew Town, County of Renfrew
K7V 3Z8

You have applied under section 20.2 of Part II.1 of the Environmental Protection Act, R.S.O. 1990, c. E. 19 (Environmental Protection Act) for approval of:

the use and operation of 10 hectare waste disposal/transfer site within a total site area of 40.73 hectares.

For the purpose of this environmental compliance approval, the following definitions apply:

“Approval” means this Environmental Compliance Approval and any Schedules to it;

"Batteries" within the context of this Approval, mean discarded devices in which energy was stored as electricity or converted into electricity and was used as a source of power and include Batteries as defined in O. Regulation 30/20;

"Blue Box Waste" within the context of this Approval, means:

- a. each of the categories set out in Schedule 1 of O. Regulation 101/94 (entitled "Blue Box Waste"), including Part I ("Basic Blue Box Waste") and Part II ("Supplementary Blue Box Waste") of O. Regulation 101/94; and
- b. discarded Blue Box Materials, as defined in O. Regulation 391/21;

“Contaminating Life Span” means contaminating life span as defined in Ontario Regulation 232/98;

"DGMS" means Durable Goods Materials Stream waste consisting of, but is not limited to, waste with the potential for reuse, recycle or resale such as furniture, woody items and materials, waste electrical and electronic equipment, textiles, carpets, scrap metal, mattresses, box springs, consumer goods, sports equipment and ceramic waste generated within the service area;

"Director" means any Ministry employee appointed in writing by the Minister pursuant to section 5 of the EPA as a Director for the purposes of Part II.1 of the EPA;

"District Manager" means the District Manager of the local district office of the Ministry in which the Site is geographically located;

"EEE" within the context of this Approval, means electrical and electronic equipment as defined in O. Regulation 522/20, the equipment subject to requirements of O. Regulation 522/20 and the equipment listed in O. Regulation 522/20 but exempted from the requirements of O. Regulation 522/20;

"EPA" means the *Environmental Protection Act*, R.S.O. 1990, c.E.19, as amended;

"Generator" means the operator of a waste generation facility;

"Guideline C-4" means the Ministry's Guideline C-4 entitled "The Management of Biomedical Waste in Ontario", dated March 31, 2016 and updated July 16, 2021 and as amended;

"Guideline" means the Ministry publication "Guidelines for environmental protection measures at chemical and waste storage facilities, May 2007" as amended.

"HHW Depot" means that part of the Site where waste management activities pertaining to the bulking and temporary storage pending transfer of MHSW takes place;

"MHSW" within the context of this Approval, means waste that is limited to the following materials:

- a. Municipal Hazardous Waste and Municipal Special Waste as defined in O. Regulation 387/16; and
- b. discarded materials derived/originating from Hazardous and Special Products as defined in O. Regulation 449/21;

"Ministry" means the ministry of the government of Ontario responsible for the EPA and OWRA and includes all officials, employees or other persons acting on its behalf;

"NMA" means the *Nutrient Management Act*, 2002, S.O. 2002, c. 4, as amended;

"O. Reg. 101/94" means Ontario Regulation 101: (Recycling and Composting of Municipal Waste), made under the EPA, as amended;

"O. Reg. 232/98" means Ontario Regulation 232/98: (Landfilling Sites), made under the EPA, as

amended;

"O. Regulation 30/20" means Ontario Regulation 30/20: Batteries, made under the Resource Recovery and Circular Economy Act, as amended;

"O. Regulation 387/16" means Ontario Regulation 387/16: Municipal Hazardous or Special Waste, made under the Waste Diversion Transition Act, as amended;

"O. Regulation 389/16" means Ontario Regulation 389/16: Waste Electrical and Electronic Equipment, made under the Waste Diversion Transition Act, as amended;

"O. Regulation 391/21" means O. Reg. 391/21: Blue Box, made under the Resource Recovery and Circular Economy Act, as amended;

"O. Regulation 449/21" means Ontario Regulation 449/21: Hazardous and Special Products, made under the Resource Recovery and Circular Economy Act, as amended;

"O. Reg. 463/10" means Ontario Regulation 463/10 (Ozone Depleting Substances and Other Halocarbons), made under the EPA, as amended;

"O. Regulation 522/20" means Ontario Regulation 522/20: Electrical and Electronic Equipment, made under the Resource Recovery and Circular Economy Act, as amended;

"Ontario Drinking Water Quality Standards" means Ontario Regulation 169/03 (Ontario Drinking Water Quality Standards), made under the SDWA, as amended;

"Operator" means any person, other than the Owner's employees, authorized by the Owner as having the charge, management or control of any aspect of the Site and includes its successors or assigns;

"Owner" means any person that is responsible for the establishment or operation of the Site being approved by this Approval, and includes the Corporation of the Town of Renfrew and its successors and assigns;

"OWRA" means the *Ontario Water Resources Act*, R.S.O. 1990, c. O.40, as amended;

"PA" means the *Pesticides Act*, R.S.O. (1990), c. P.11, as amended;

"Provincial Officer" means any person designated in writing by the Minister as a provincial officer pursuant to Section 5 of the OWRA, Section 5 of the EPA, Section 17 of the PA, Section 4 of the NMA, or Section 8 of the SDWA;

"Regional Director" means the Regional Director of the local Regional Office of the Ministry in which the Site is located;

"Reg. 347" means R.R.O. 1990, Reg. 347: (General - Waste Management), made under the EPA, as

amended;

“Reg. 903” means R.R.O. 1990, Reg. 903: (Wells), made under the OWRA, as amended;

"Resource Recovery and Circular Economy Act" means the *Resource Recovery and Circular Economy Act*, 2016, S.O. 2016, c. 12, Sched. 1, as amended;

"Re-Use Centre" means the public drop-off platform/building protected from atmospheric precipitation and other elements, where public can drop off or pick up DGMS;

“SDWA” means the *Safe Drinking Water Act, 2002* , S.O. 2002, c. 32, as amended;

"Schedules" means the following schedules attached to this Approval and forming part of this Approval namely:

- o Schedule 1 - Supporting Documentation;
- o Schedule 2 - Surface Water Monitoring Program; and
- o Schedule 3 - Groundwater Monitoring Program;

“Site” means the entire waste disposal site, including the buffer lands, and contaminant attenuation zone at Renfrew Landfill Site, 376 Bruce St
Renfrew Town, County of Renfrew;

“Trained Personnel” means personnel knowledgeable in the following through instruction and/or practice:

- o relevant waste management legislation, regulations and guidelines;
- o major environmental concerns pertaining to the waste to be handled;
- o occupational health and safety concerns pertaining to the processes and wastes to be handled;
- o management procedures including the use and operation of equipment for the processes and wastes to be handled;
- o emergency response procedures;
- o specific written procedures for the control of nuisance conditions;
- o specific written procedures for refusal of unacceptable waste loads; and
- o the requirements of this Approval;

"Waste Diversion Transition Act" means the *Waste Diversion Transition Act*, 2016, S.O. 2016, c. 12, Sched. 2, as amended;

"WEEE" within the context of this Approval, means waste electrical and electronic equipment consisting of devices that required an electric current to operate. WEEE is limited to the following:

- a. the devices listed in O. Regulation 389/16; and
- b. discarded devices originating/derived from the EEE;

"White Goods Containing Refrigerants" means the White Goods which contain, or may contain refrigerants; and

"White Goods" means the white goods (appliances) with or without the refrigerants.

You are hereby notified that this environmental compliance approval is issued to you subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

1. GENERAL

Compliance

1. The Owner and Operator shall ensure compliance with all the conditions of this Approval and shall ensure that any person authorized to carry out work on or operate any aspect of the Site is notified of this Approval and the conditions herein and shall take all reasonable measures to ensure any such person complies with the same.
2. Any person authorized to carry out work on or operate any aspect of the Site shall comply with the conditions of this Approval.

In Accordance

3. Except as otherwise provided by this Approval, the Site shall be designed, developed, built, operated and maintained in accordance with the documentation listed in the attached Schedule 1.
4. Construction and installation of the aspects of the Re-use centre defined and approved in this Approval must be completed within five (5) years of the later of:
 - a. the date this Approval; or
 - b. if there is a hearing or other litigation in respect of the issuance of this Approval, the date that this hearing or litigation is disposed of, including all appeals.
5. This Approval ceases to apply in respect of the aspects of the and Re-use centre defined and approved in this Approval that have not been constructed or installed before the later of the dates identified in condition 1.4 above.

Interpretation

6. Where there is a conflict between a provision of any document listed in Schedule 1 in this Approval, and the conditions of this Approval, the conditions in this Approval shall take

precedence.

7. Where there is a conflict between the application and a provision in any document listed in Schedule 1, the application shall take precedence, unless it is clear that the purpose of the document was to amend the application and that the Ministry approved the amendment.
8. Where there is a conflict between any two documents listed in Schedule 1, the document bearing the most recent date shall take precedence.
9. The conditions of this Approval are severable. If any condition of this Approval, or the application of any condition of this Approval to any circumstance, is held invalid or unenforceable, the application of such condition to other circumstances and the remainder of this Approval shall not be affected thereby.

Other Legal Obligations

10. The issuance of, and compliance with, this Approval does not:
 - a. relieve any person of any obligation to comply with any provision of any applicable statute, regulation or other legal requirement; or
 - b. limit in any way the authority of the Ministry to require certain steps be taken or to require the Owner and Operator to furnish any further information related to compliance with this Approval.

Adverse Effect

11. The Owner and Operator shall take steps to minimize and ameliorate any adverse effect on the natural environment or impairment of water quality resulting from the Site, including such accelerated or additional monitoring as may be necessary to determine the nature and extent of the effect or impairment.
12. Despite an Owner, Operator or any other person fulfilling any obligations imposed by this Approval the person remains responsible for any contravention of any other condition of this Approval or any applicable statute, regulation, or other legal requirement resulting from any act or omission that caused the adverse effect to the natural environment or impairment of water quality.

Change of Ownership

13. The Owner shall notify the Director, in writing, and forward a copy of the notification to the District Manager, within 30 days of the occurrence of any changes in the following information:
 - a. the ownership of the Site;
 - b. the Operator of the Site;
 - c. the address of the Owner or Operator; and

- d. the partners, where the Owner or Operator is or at any time becomes a partnership and a copy of the most recent declaration filed under the Business Names Act, R. S. O. 1990, c. B.17, shall be included in the notification.
- 14. No portion of this Site shall be transferred or encumbered prior to or after closing of the Site unless the Director is notified in advance and sufficient financial assurance is deposited with the Ministry to ensure that these conditions will be carried out.
- 15. In the event of any change in ownership of the Site, other than change to a successor municipality, the Owner shall notify the successor of and provide the successor with a copy of this Approval, and the Owner shall provide a copy of the notification to the District Manager and the Director.

Registration on Title Requirement

- 16. Prior to dealing with the property in any way, the Owner shall provide a copy of this Approval and any amendments, to any person who will acquire an interest in the property as a result of the dealing.
- 17.
 - a. Within ninety (90) calendar days from the date of issuance of this Approval, the Owner shall submit to the Director a completed Certificate of Requirement which shall include:
 - i. a plan of survey prepared, signed and sealed by an Ontario Land Surveyor, which shows the area of the Site where waste has been or is to be deposited at the Site;
 - ii. proof of ownership of the Site;
 - iii. a letter signed by a member of the Law Society of Upper Canada or other qualified legal practitioner acceptable to the Director, verifying the legal description provided in the Certificate of Requirement;
 - iv. the legal abstract of the property; and
 - v. any supporting documents including a registerable description of the Site.
 - b. Within fifteen (15) calendar days of receiving a Certificate of Requirement authorized by the Director, the Owner shall:
 - i. register the Certificate of Requirement in the appropriate Land Registry Office on the title to the property; and
 - ii. submit to the Director and the District Manager, written verification that the Certificate of Requirement has been registered on title.

Registration on Title Requirement - Contaminant Attenuation Zone (CAZ)

- 18. Within ninety (90) calendar days from the date of establishing a Contaminant Attenuation Zone (CAZ) (overburden and/or bedrock aquifers) in either fee simple or by way of a groundwater easement, the Owner shall submit to the Director a completed Certificate of Requirement which shall include:

- a. If rights are obtained in fee simple, the Owner shall provide:
 - i. documentation evidencing ownership of the CAZ obtained in compliance with O.Reg. 232/98, as amended;
 - ii. a completed Certificate of Requirement and supporting documents containing a registerable description of the CAZ; and
 - iii. a letter signed by a member of the Law Society of Upper Canada; or other qualified legal practitioner acceptable to the Director, verifying the legal description of the CAZ.
- b. Within fifteen (15) calendar days of receiving a Certificate of Requirement signed or authorized by the Director, the Owner shall:
 - i. register the Certificate of Requirement in the appropriate Land Registry Office on the title to the property; and
 - ii. submit to the Director and the District Manager, written verification that the Certificate of Requirement has been registered on title.
- c. If rights are obtained by way of a groundwater easement, the Applicant shall:
 - i. provide a copy of the easement;
 - ii. provide a plan of survey signed and sealed by an Ontario Land Surveyor for the CAZ; and
 - iii. submit proof of registration on title of the groundwater easement to the Director;
- d. The Owner shall not amend or remove or consent to the removal of the easement or CAZ from title without the prior written consent of the Director.

Inspections by the Ministry

19. No person shall hinder or obstruct a Provincial Officer from carrying out any and all inspections authorized by the OWRA, the EPA, the PA, the SDWA or the NMA, of any place to which this Approval relates, and without limiting the foregoing:
 - a. to enter upon the premises where the approved works are located, or the location where the records required by the conditions of this Approval are kept;
 - b. to have access to, inspect, and copy any records required to be kept by the conditions of this Approval;
 - c. to inspect the Site, related equipment and appurtenances;
 - d. to inspect the practices, procedures, or operations required by the conditions of this Approval; and
 - e. to sample and monitor for the purposes of assessing compliance with the terms and conditions of this Approval or the EPA, the OWRA, the PA, the SDWA or the NMA.

Information and Record Retention

20.
 - a. Except as authorized in writing by the Director, all records required by this Approval shall be retained at the Site for a minimum of two (2) years from their date of creation.
 - b. The Owner shall retain all documentation listed in Schedule 1 for as long as this Approval is valid.
 - c. All monthly summary reports of waste records collected are to be kept at the Site until they are included in the Annual Report.
 - d. The Owner shall retain employee training records as long as the employee is working at the Site.
 - e. The Owner shall make all of the above documents available for inspection upon request of Ministry staff.
21. The receipt of any information by the Ministry or the failure of the Ministry to prosecute any person or to require any person to take any action under this Approval or under any statute, regulation or other legal requirement, in relation to the information, shall not be construed as:
 - a. an approval, waiver, or justification by the Ministry of any act or omission of any person that contravenes any term or condition of this Approval or any statute, regulation or other legal requirement; or
 - b. acceptance by the Ministry of the information's completeness or accuracy.
22. The Owner shall ensure that a copy of this Approval, in its entirety and including all its Notices of Amendment, and documentation listed in Schedule 1, are retained at the Site at all times.
23. Any information related to this Approval and contained in Ministry files may be made available to the public in accordance with the provisions of the Freedom of Information and Protection of Privacy Act, RSO 1990, CF-31.

2. SITE OPERATION

Operation

1. The Site shall be operated and maintained at all times including management and disposal of all waste, in accordance with the EPA, Reg. 347, and the conditions of this Approval. At no time shall the discharge of a contaminant that causes or is likely to cause an adverse effect be permitted.

Signs

2. The Owner shall install and maintain a sign at the entrance to the Site. The sign shall be visible and readable from the main road leading to the Site. The following information shall be included on the sign:
 - a. the name of the Site and Owner;
 - b. the number of the Approval;
 - c. the name of the Operator;
 - d. the normal hours of operation;
 - e. the allowable and prohibited waste types;
 - f. the telephone number to which complaints may be directed;
 - g. a warning against unauthorized access;
 - h. a twenty-four (24) hour emergency telephone number (if different from above); and
 - i. a warning against dumping outside the Site.
3. The Owner shall install and maintain signs to direct vehicles to drop off areas for waste, recyclable and HHW Depot.
4. The Owner shall provide signs at recycling depot and HHW Depot informing users what materials are acceptable and directing users to appropriate storage areas.

Vermin, Vectors, Dust, Litter, Odour, Noise and Traffic

5. The Site shall be operated and maintained such that the vermin, vectors, dust, litter, odour, noise and traffic do not create a nuisance.

Burning Waste Prohibited

6. Burning of waste at the Site is prohibited.

Site Access

7. Waste shall only be accepted for disposal, HHW Depot, small loads drop off and re-use centre at the Site during the following times:

Tuesdays, Wednesdays, Thursday	:8:30 am to 4:00 pm
Friday, Saturday	:8:30 am to 2:00 pm
8. On-site equipment may be operated seven (7) days a week from 7 am to 5 pm.
9. With the prior written approval from the District Manager, the time periods may be extended to accommodate seasonal or unusual quantities of waste.

Site Security

10. No waste shall be received, landfilled or removed from the Site unless a site supervisor or an attendant is present and supervises the operations during operating hours. The Site shall be closed when a site attendant is not present to supervise landfilling operations.
11. The Site shall be operated and maintained in a safe and secure manner. During non-operating hours, the Site entrance and exit gates shall be locked and the Site shall be secured against access by unauthorized persons.

3. EMPLOYEE TRAINING

1. A training plan for all employees that operate any aspect of the Site shall be developed and implemented by the Owner or the Operator. Only Trained Personnel shall operate any aspect of the Site or carry out any activity required under this Approval.

4. COMPLAINTS RESPONSE PROCEDURE

1. If at any time the Owner receives complaints regarding the operation of the Site, the Owner shall respond to these complaints according to the following procedure:
 - a. The Owner shall record and number each complaint, either electronically or in a log book, and shall include the following information: the nature of the complaint, the name, address and the telephone number of the complainant if the complainant will provide this information and the time and date of the complaint;
 - b. The Owner, upon notification of the complaint, shall initiate appropriate steps to determine possible causes of the complaint, proceed to take the necessary actions to eliminate the cause of the complaint and forward a formal reply to the complainant; and
 - c. The Owner shall complete and retain on-site a report written within one (1) week of the complaint date, listing the actions taken to resolve the complaint and any recommendations for remedial measures, and managerial or operational changes to reasonably avoid the recurrence of similar incidents.

5. EMERGENCY RESPONSE

1. All Spills as defined in the EPA shall be immediately reported to the **Ministry's Spills Action Centre at 1-800-268-6060** and shall be recorded in the log book as to the nature of the emergency situation, and the action taken for clean-up, correction and prevention of future occurrences.

2. In addition, the Owner shall submit, to the District Manager a written report within three (3) business days of the emergency situation, outlining the nature of the incident, remedial measures taken, handling of waste generated as a result of the emergency situation and the measures taken to prevent future occurrences at the Site.
3. All wastes resulting from an emergency situation shall be managed and disposed of in accordance with Reg. 347.
4. All equipment and materials required to handle the emergency situations shall be:
 - a. kept on hand at all times that waste landfilling and/or handling is undertaken at the Site; and
 - b. adequately maintained and kept in good repair.
5. The Owner shall ensure that the emergency response personnel are familiar with the use of such equipment and its location(s).

6. INSPECTIONS, RECORD KEEPING AND REPORTING

Daily Log Book

1. A daily log shall be maintained in written or electronic format and shall include the following information:
 - a. the type, date and time of arrival, hauler, and quantity (tonnes) of all waste and cover material received at the Site;
 - b. the area of the Site in which waste disposal operations are taking place;
 - c. a record of litter collection activities and the application of any dust suppressants;
 - d. a record of the daily inspections; and
 - e. a description of any out-of-service period of any control, treatment, disposal or monitoring facilities, the reasons for the loss of service, and action taken to restore and maintain service.
2. Any information requested, by the Director or a Provincial Officer, concerning the Site and its operation under this Approval, including but not limited to any records required to be kept by this Approval shall be provided to the Ministry, upon request.

Daily Inspections and Log Book

3. An inspection of the entire Site and all equipment on the Site shall be conducted each day the Site is in operation to ensure that: the Site is secure; that the operation of the Site is

not causing any nuisances; that the operation of the Site is not causing any adverse effects on the environment and that the Site is being operated in compliance with this Approval. Any deficiencies discovered as a result of the inspection shall be remedied immediately, including temporarily ceasing operations at the Site if needed.

4. A record of the inspections shall be kept in a daily log book that includes:
 - a. the name and signature of person that conducted the inspection;
 - b. the date and time of the inspection;
 - c. the list of any deficiencies discovered;
 - d. the recommendations for remedial action; and
 - e. the date, time and description of actions taken.
5. A record shall be kept in the daily log book of all refusals of waste shipments, the reason(s) for refusal, and the origin of the waste, if known.

Annual Report

6. A written report on the development, operation and monitoring of the Site, shall be completed annually (Annual Report). The Annual Report shall be submitted to the District Manager, by March 31st of the year following the period being reported upon.
7. The Annual Report shall include but not be limited to the following information:
 - a. the results and an interpretive analysis of the results of all leachate, groundwater, surface water and landfill gas monitoring, including an assessment of the need to amend the monitoring programs;
 - b. an assessment of the operation and performance of all engineered facilities, the need to amend the design or operation of the Site, and the adequacy of and need to implement the contingency plans;
 - c. site plans showing the existing contours of the Site; areas of landfilling operation during the reporting period; areas of intended operation during the next reporting period; areas of excavation during the reporting period; the progress of final cover, vegetative cover, and any intermediate cover application; facilities existing, added or removed during the reporting period; and site preparations and facilities planned for installation during the next reporting period;
 - d. an estimate of the volume of waste, daily and intermediate cover, and final cover deposited or placed at the *Site* during the reporting period and a calculation of the total volume of *Site* capacity used during the reporting period;

- e. a calculation of the remaining capacity of the Site and an estimate of the remaining Site life;
- f. a summary of the monthly and total annual quantity (tonnes) of waste received at the Site and recyclables transferred from the Site;
- g. a summary of any complaints received and the responses made;
- h. a discussion of any operational problems encountered at the Site and corrective action taken;
- i. any changes to the Design and Operations Report and the Closure Plan that have been approved by the Director since the last Annual Report;
- j. a report on the status of all monitoring wells and a statement as to compliance with Reg. 903; and
- k. any other information with respect to the Site which the District Manager may require from time to time.

7. LANDFILL DESIGN AND DEVELOPMENT

Approved Waste Types

- 1. Only municipal waste as defined under Reg. 347 being solid non-hazardous shall be accepted at the Site for landfilling.
- 2. The Owner shall develop and implement a program to inspect waste to ensure that the waste received at the Site is of a type approved for acceptance under this Approval.
- 3. The Owner shall ensure that all loads of waste are properly inspected by Trained personnel prior to acceptance at the Site and that the waste vehicles are directed to the appropriate areas for disposal or transfer of the waste. The Owner shall notify the District Manager, in writing, of load rejections at the Site within one (1) business day from their occurrence.

Capacity

- 4. The maximum volumetric capacity of the Site, consisting of the waste, daily cover and intermediate cover, but excluding the final cover is 1,069,000 cubic metres.
- 5. The Site is approved for the design, operation and use of 557,400 cubic meters of the maximum volumetric capacity of the Site in Stages 1, 2, 3 and 4 as described in Item 6 of Schedule 1.

6. At least two (2) years prior to utilizing capacity in Stage 5 the Owner shall submit to the Director for approval, a design and operation plan with up to date engineering and environmental standards and a detailed hydrogeological assessment for proper and safe development of the remainder of the Site. If the Owner does not intend to use the remaining capacity the Owner shall submit a Closure Plan as per condition 9 of this Approval.

Service Area

7.
 - a. Only waste that is generated within the boundaries of the Town of Renfrew may be accepted at the Site for landfilling.
 - b. Notwithstanding condition 7.7.a, MHSW that is generated within the boundaries of the Town of Renfrew, Addington Highlands Township, Town of Arnprior, Admaston Bromley Township, Horton Township, Greater Madawaska Township, McNab Braeside Township and Township of Whitewater Region may be accepted at the HHW Depot for transfer.

Cover

8. Alternative materials to soil may be used as weekly and interim cover material, based on an application with supporting information and applicable fee for a trial use or permanent use, submitted by the Owner to the Director, copied to the District Manager and as approved by the Director via an amendment to this Approval. The alternative material shall be non-hazardous according to Reg. 347 and will be expected to perform at least as well as soil in relation to the following functions:
 - a. Control of blowing litter, odours, dust, landfill gas, gulls, vectors, vermin and fires;
 - b. Provision for an aesthetic condition of the landfill during the active life of the Site;
 - c. Provision for vehicle access to the active tipping face; and
 - d. Compatibility with the design of the Site for groundwater protection, leachate management and landfill gas management.
9. Cover material shall be applied as follows:
 - a. **Daily Cover** - Weather permitting, deposited waste shall be covered **daily** in a manner acceptable to the District Manager so that no waste is exposed to the atmosphere;
 - b. **Intermediate Cover** - In areas where landfilling has been temporarily discontinued for six (6) months or more, a minimum thickness of 300 millimetre of soil cover or an approved thickness of alternative cover material shall be placed; and
 - c. **Final Cover** - In areas where landfilling has been completed to final contours, a

minimum 600 millimetre thick layer of soil of medium permeability and 150 millimetres of top soil (vegetative cover) shall be placed. Fill areas shall be progressively completed and rehabilitated as landfill development reaches final contours.

10. Tarpauline, ground woodwaste and ground drywall are hereby approved to be used as alternative daily cover material subject to the operational procedures described in Items 22 (b), 23 and 24 in Schedule 1.
11.
 - a. As requested by the Owner, the area of "Fill Beyond Approved Limits" is hereby approved to be left at the location marked in Figure 2 submitted with the Item 15 of Schedule 1.
 - b. No waste shall be deposited in the above area in condition 7.11.a.
 - c. The area in above condition 7.11.a shall be marked with stakes for identification as "Fill Beyond Approved Limits".
12. The construction of an on-site ring road at the Renfrew Landfill Site is approved, to return the Site to the original conditions as per the original landfill design, and to provide improved access to portions of the Site, as described in Item 21 of Schedule 1.
13. Sludge disposal shall be in accordance with the Item 30 of Schedule 1.

8. LANDFILL MONITORING

Landfill Gas

1.
 - a. The Owner shall ensure that any buildings or structures at the Site contain adequate ventilation systems to relieve any possible landfill gas accumulation to prevent methane concentration reaching the levels within its explosive range. Routine monitoring for explosive methane gas levels shall be conducted in all buildings or structures at the Site, especially enclosed structures which at times are occupied by people.
 - b. Outdoor landfill gas monitoring shall be conducted twice per year at GW1, GW2, GW3, GW4, GW07-5, GW09-1, GW11-01 and GW14-01.

Compliance

2. The Site shall be operated in such a way as to ensure compliance with the following:
 - a. Reasonable Use Guideline B-7 for the protection of the groundwater at the Site; and

- b. Provincial Water Quality Objectives included in the July 1994 publication entitled Water Management Policies, Guidelines, Provincial Water Quality Objectives, as amended from time to time or limits set by the Regional Director, for the protection of the surface water at and off the Site.

Surface Water and Groundwater

- 3. The Owner shall monitor surface water and ground water in accordance with the monitoring programs outlined in documents listed in Schedules 2 and 3.
- 4. A certified Professional Geoscientist or Engineer possessing appropriate hydrogeologic training and experience shall execute or directly supervise the execution of the groundwater monitoring and reporting program.

Groundwater Wells and Monitors

- 5. The Owner shall ensure that all groundwater monitoring wells which form part of the monitoring program are properly capped, locked and protected from damage.
- 6. Where landfilling is to proceed around monitoring wells, suitable extensions shall be added to the wells and the wells shall be properly re-secured.
- 7. Any groundwater monitoring well included in the on-going monitoring program that is damaged shall be assessed, repaired, replaced or decommissioned by the Owner, as required.
 - a. The Owner shall repair or replace any monitoring well which is destroyed or in any way made to be inoperable for sampling such that no more than one regular sampling event is missed.
 - b. All monitoring wells which are no longer required as part of the groundwater monitoring program, and have been approved by the Director for abandonment, shall be decommissioned by the Owner, as required, in accordance with Reg. 903, to prevent contamination through the abandoned well. A report on the decommissioning of the well shall be included in the Annual Report for the period during which the well was decommissioned.

Trigger Mechanisms and Contingency Plans

- 8. Trigger mechanisms shall be in accordance with the Item 28, Schedule 1.
- 9. Contingency plan in the event of a confirmed exceedance of a site-specific trigger level relating to leachate mounding or groundwater or surface water impacts due to leachate shall be in accordance with the Item 29, Schedule 1.

10. In the event of a confirmed exceedance of a site-specific trigger level relating to leachate mounding or groundwater or surface water impacts due to leachate, the Owner shall immediately notify the District Manager, and an investigation into the cause and the need for implementation of remedial or contingency actions shall be carried out by the Owner in accordance with the approved trigger mechanisms and associated contingency plans.
11. If monitoring results, investigative activities and/or trigger mechanisms indicate the need to implement contingency measures, the Owner shall ensure that the following steps are taken:
 - a. The Owner shall notify the District Manager, in writing of the need to implement contingency measures, no later than 30 days after confirmation of the exceedances;
 - b. Detailed plans, specifications and descriptions for the design, operation and maintenance of the contingency measures shall be prepared and submitted by the Owner to the Director for approval; and
 - c. The contingency measures shall be implemented by the Owner upon approval by the Director.
12. The Owner shall ensure that any proposed changes to the site-specific trigger levels for leachate impacts to the surface water or groundwater, are approved in advance by the Director via an amendment to this Approval.

Changes to the Monitoring Programs, Trigger Mechanisms and Contingency Plans

13. The Owner may request to make changes to the monitoring program(s), trigger mechanisms and/or contingency plan to the District Manager in accordance with the recommendations of the Annual Report. The Owner shall make clear reference to the proposed changes in a separate letter that shall accompany the Annual Report.
14. Within fourteen (14) days of receiving the written correspondence from the District Manager confirming that the District Manager is in agreement with the proposed changes to the environmental monitoring program, trigger mechanisms and/or contingency plans, the Owner shall forward a letter identifying the proposed changes and a copy of the correspondences from the District Manager and all other correspondences and responses related to the changes, to the Director requesting the Approval be amended to approve the proposed changes to the environmental monitoring plan prior to implementation.

Contaminant Attenuation Zone

15. Within two (2) years from the date of this Approval, the Owner shall complete acquiring the ground water easement to the Contaminant Attenuation Zone required to bring the

Site into compliance with respect to groundwater. The Owner shall submit annually, with the Annual Report under condition 6.6, a summary of progress in the reporting year on the acquisition of the groundwater easement to the Contaminant Attenuation Zone. The Owner may request to extend the deadline for acquisition of the property rights and/or groundwater easement to the District Manager. Within fourteen (14) days of receiving written correspondence confirming that the District Manager is in agreement with the extension, the Owner shall forward the concurrence to the Director requesting that the Approval be amended to approve the extension.

16. Once established the Owner must continue to own the property rights or groundwater easement to the Contaminant Attenuation Zone for all of the Contaminating Life Span of the Site.
17. The ownership of the property rights must include the rights to:
 - a. discharge contaminants from the operations at the Site into the Contaminant Attenuation Zone;
 - b. enter into the Contaminant Attenuation Zone and onto the surface above the Contaminant Attenuation Zone for purposes of testing, monitoring, intercepting contaminants and carrying out remedial work;
 - c. install, operate and maintain works, for the purposes mentioned in the condition 8.16.b in the Contaminant Attenuation Zone, including on the surface above the Contaminant Attenuation Zone; and
 - d. prevent the owner(s) of the land(s) in which the Contaminant Attenuation Zone is located from interfering with the functioning of the Contaminant Attenuation Zone or with the exercise of any of the rights mentioned in this subsection.
18. The Owner shall notify the Director in writing within thirty (30) days after any change in his, her or its ownership of the property rights in the Contaminant Attenuation Zone.
19. The Owner shall ensure that the written easement agreement, specified in condition 8.14. includes an agreement of the property owner(s) of the land(s) required for the Contaminant Attenuation Zone, to register a Certificate of Requirement on title to the land(s) to be used as the Contaminant Attenuation Zone.

9. CLOSURE PLAN

1. At least two (2) years prior to closure, the Owner shall submit to the Director for approval, with copies to the District Manager, a detailed Site closure plan pertaining to the termination of landfilling operations at this Site, post-closure inspection, maintenance and monitoring, and end use. The plan shall include the following as a minimum but are not limited to:

- a. a plan showing Site appearance after closure;
 - b. a description of the proposed end use of the Site, that shall include a discussion on the Environmental Assessment commitments (if applicable) to dedicate portion of the lands within the Site that are not required for site post-closure operations and monitoring, to be used for community recreational purpose;
 - c. a description of how pollinator friendly plants were considered in the final vegetative cover for the landfill and/or in the landscaping within the Site;
 - d. a description of the procedures for closure of the Site:
 - i. advance notification of the public of the landfill closure;
 - ii. posting a sign at the Site entrance indicating the landfill is closed and identifying any alternative waste disposal arrangements;
 - iii. completion, inspection and maintenance of the final cover and landscaping;
 - iv. site security;
 - v. removal of unnecessary landfill-related structures, buildings and facilities; and
 - vi. final construction of any control, treatment, disposal and monitoring facilities for leachate, groundwater, surface water and landfill gas;
 - e. a schedule indicating the time-period for implementing sub-conditions i to vi above;
 - f. descriptions of the procedures for post-closure care of the Site, including:
 - i. operation, inspection and maintenance of the control, treatment, disposal and monitoring facilities for leachate, groundwater, surface water and landfill gas;
 - ii. record keeping and reporting; and
 - iii. complaint contact and response procedures;
 - g. an assessment of the adequacy of and need to implement the contingency plans for leachate and methane gas; and
 - h. an updated estimate of the Contaminating Life Span of the Site, based on the results of the monitoring programs to date.
2. The Site shall be closed in accordance with the closure plan as approved by the Director.

10. WASTE DIVERSION

Approved Waste Types for Transfer

1. The Site is limited to receive the following Waste categories:
 - a. Blue Box Waste as defined in this Approval;
 - b. MHSW as listed in the documentation in item 19, Schedule 1;
 - c. WEEE as defined in this Approval;
 - d. White Goods Containing Refrigerants as defined in this Approval; and
 - e. DGMS, as defined in this Approval.
2. The Owner shall ensure that:
 - a. all bins and waste storage areas are clearly labelled;
 - b. all lids or doors on bins shall be kept closed during non-operating hours and during high wind events; and
 - c. if necessary to prevent litter, waste storage areas shall be covered during high winds events.
3. The Owner/Operator shall remove the refrigerant as defined in O. Reg. 463/10 in accordance with the following:
 - a. all White Goods containing refrigerants which have not been tagged by a licensed technician to verify that the equipment no longer contains refrigerants, shall be stored in a separate area in an upright position; and
 - b. White Goods containing refrigerants received at the Site shall be shipped off-Site in order to have the refrigerants removed by a licensed technician in accordance with O. Reg. 463/10; or
 - c. the refrigerant shall be removed at the Site by a licensed technician, in accordance with O. Reg. 463/10, prior to shipping White Goods off-Site; and
 - d. a detailed log of all White Goods containing refrigerants received shall be maintained. The log shall include the following:
 - i. date of the record;
 - ii. types, quantities and source of White Goods containing refrigerants

received;

- iii. details on removal of refrigerants as required by O. Reg. 463/10; and
 - iv. the quantities and destination of the White Goods and/or refrigerants transferred from the Site.
- 4. The Owner shall transfer waste and recyclable materials from the Site as follows:
 - a. recyclable materials shall be transferred off-site once their storage bins are full;
 - b. scrap metal shall be transferred off-site at least twice a year;
 - c. tires shall be transferred off-site as soon as a load for the contractor hired by the Owner has accumulated or as soon as the accumulated volume exceeds the storage capacity of its bunker; and
 - d. immediately, in the event that waste is creating an odour or vector problem.
 - 5. The Owner shall notify the appropriate contractors that waste and recyclable wastes that are to be transferred off-site are ready for removal. Appropriate notice time, as determined by the contract shall be accommodated in the notification procedure.
 - 6. Collection, storage and transfer of Waste Electrical and Electronic Equipment shall be in accordance with the documents in the Schedule 1.
 - 7. Operation of the proposed re-use centre (Item 26 in Schedule 1) is hereby approved as proposed.

11. MHSW TRANSFER STATION (HHW DEPOT)

- 1. Notwithstanding condition 7.1, MHSW from households; and industrial, commercial and/or institutional Generators shall be accepted at the HHW Depot. Waste from Generators other than households shall only be accepted at the HHW Depot pursuant to conditions 11.2 to 11.19.
- 2. The HHW Depot shall be operated in accordance with documents in the Schedule 1.
- 3. The Design and Operations Report shall be retained at the Site; kept up to date through periodic revisions; and be available for inspection by Ministry staff. Changes to the Design and Operations Report shall be submitted to the Director for approval.
- 4. a. The HHW Depot shall only accept for bulking and temporary storage pending transfer to an approved carrier for disposal elsewhere, the following hazardous waste classes: 112, 121, 145, 146, 148, 212, 213, 221, 222, 242, 243, 251, 252,

261, 263, 312 and 331, as outlined in the New Ontario Waste Classes, January 1986.

- b. For waste type 312 (restricted to sharps only), the Owner shall ensure that:
 - i. waste type 312 shall be accepted and handled by Trained Personnel only;
 - ii. waste type 312 shall be shipped in accordance with the Guideline C-4;
 - iii. where there is a conflict between the Guideline C-4 and the conditions of an approval issued to contractor or agent of the Owner which allows for the transportation of waste type 312 (restricted to sharps and syringes only), the conditions of that approval shall prevail;
 - iv. waste type 312 shall be packaged in dedicated, leak-proof, puncture-resistant containers capable of withstanding the weight of the waste and specifically designed for storage of sharps and syringes;
 - v. the waste containers have well fitted lids which cannot be removed once closed; and
 - vi. the container shall be marked with the universal biohazard symbol and labelled "Biomedical Waste/Déchets Biomédicaux".
- c. For the waste types 261, the Owner shall ensure that:
 - i. waste type 261 shall be accepted and handled by Trained Personnel only;
 - ii. waste class 261 shall be packaged in dedicated, rigid, puncture-resistant, leak-proof containers designed specifically for that purpose;
 - iii. the waste containers shall have lids which cannot be removed once closed; and
 - iv. the waste containers shall be marked with the appropriate pharmaceutical symbol and labelled.
- d.
 - i. Batteries may be stored outdoors provided they are stored in a manner which protects the batteries from the effects of atmospheric precipitation.
 - ii. Automotive batteries are to be stored in a secure area and provided with a containment area to ensure containment of any leakage or spilled battery acid.
- e.
 - i. The waste mercury thermostats shall be checked for any damaged or broken thermostats and spilled mercury upon receipt at the HHW Depot.

- ii. Mercury spill kit(s) shall be used during handling of the waste mercury thermostats at the HHW Depot to contain unexpected spills or leaks of mercury.
- 5. The HHW Depot may accept incidental household hazardous waste discovered in waste delivered to the Site, provided:
 - a. the waste is characterized as being one or more of the Waste Class Nos. in condition 11.4 above; and
 - b. the waste is labelled in accordance with the requirements of s.80 of Reg. 347.
- 6. Incidental waste which does not conform to condition 5.b above shall either be:
 - a. returned to the Generator; or
 - b. in the absence of a known Generator, characterized and managed in accordance with Reg. 347.
- 7. A detailed record shall be made of any incidental waste discovered at the Facilities, including but not limited to:
 - a. the date;
 - b. the type of waste;
 - c. the amount of waste;
 - d. the condition of the container; and
 - e. how the waste was managed.
- 8.
 - a. The Owner shall implement the protocol in Item 20 of Schedule 1 for the Generator users of the HHW Depot.
 - b. When accepting waste from the Generators, the Owner shall only accept waste from the Generators who have signed the protocol.
- 9. The HHW Depot shall be supervised at all times during operating hours by staff that have been adequately trained to handle spill emergencies.
- 10. Waste received at the HHW Depot shall be stored in the following manner:
 - a. propane cylinders shall be stored outdoors in a segregated area in a manner which prevents cylinders from being knocked over or cylinder valves from being damaged;
 - b. all other waste shall be stored in a covered area such that it is sheltered from rain and snow;
 - c. all liquid wastes shall be stored in secondary containment that meets the requirements of the Ministry document entitled "Guidelines for Environmental

Protection Measures at Chemical and Waste Storage Facilities" dated May 2007;

- d. containers and storage areas containing flammable and/or ignitable materials shall be adequately grounded;
 - e. storage containers shall be clearly labelled indicating the type and nature of the hazardous waste stored as required by applicable legislation;
 - f. incompatible waste types shall be segregated during storage;
 - g. batteries shall be stored in a secure area apart from other wastes and provided with a containment area to ensure against leakage or spilled battery acid; and
 - h. all waste being transported from the HHW Depot shall be transported in accordance with Reg. 347 and the Environmental Protection Act.
11. The Owner shall not offer MHSW for reuse unless:
- a. the waste is in its original packaging, and the label on the package is legible;
 - b. the waste has been inspected by trained personnel to ensure the waste meets the requirements for reuse for that specific waste type; and
 - c. the waste is one of the following:
 - i. waste paint, subject to the requirements of condition 11.12 below;
 - ii. aerosols;
 - iii. waxes and soaps;
 - iv. motor oil, provided the original container has never been opened;
 - v. antifreeze, provided the original container has never been opened;
 - vi. household cleaning products, other than bleach or ammonia, that are no more than 5 years old;
 - vii. drywall compound;
 - viii. cement; and
 - ix. fertilizers that do not contain pesticides, provided the original container/packaging has never been opened.
 - d. All waste offered for reuse shall be inspected by Trained Personnel to ensure that waste meets the requirements for reuse for that specific waste.
12. The Owner shall only offer waste paint for reuse provided that the following conditions are met:
- a. the waste paint is contained in the original manufacturer's container;
 - b. the original manufacturer's label containing product information use and product

hazards is clearly legible;

- c. the original manufacturer's container is in an undamaged state such that the material may be transported without risk of leaks or spills; and
- d. the Owner does not suspect the paint to have been manufactured prior to 1972.

13. The Owner shall only accept MHSW from Generators under the following restrictions:
- a. the owner shall only receive MHSW from Generators that have entered into an agreement with the owner in accordance with the protocol described in condition 11.8 above;
 - b. no waste shall be received from Generators where the Generator's activities include waste management;
 - c. the Owner may only receive up to 60 kg of MHSW waste per year per Generator;
 - d. the Owner may only receive up to a maximum of 300 litres of liquid industrial waste per year per Generator;
 - e. the Owner shall not receive subject waste from single Generator more than 4 times per year;
 - f. no hazardous waste shall be received in containers greater than 25 litres in size;
 - g. no liquid industrial waste shall be received in containers greater than 25 L in size;
 - h. where a load consists of a combination of hazardous waste and liquid industrial waste, the sum total of the wastes may not exceed 90 kg per load;
 - i. all containers shall be closed, secured and maintained so that under normal conditions of transport, including handling, there will be no accidental release of waste;
 - j. no containers other than those with an intact seal that cannot be opened without breaking or noticeably tampering with the seal shall be accepted at the HHW Depot;
 - k. no broken or leaking containers, or containers otherwise unsuitable for the type of waste they contain, shall be accepted at the HHW Depot;
 - l. all containers shall be identified with a label which contains the company name, address, telephone number, the name of the company representative and the contents of the container;

- m. all containers shall have a certificate meeting the requirements of condition 11.14 below is affixed to the container; and
 - n. hazardous waste in sealed containers that is accepted at the site shall not be bulked, and the waste will be exempt from the land disposal restriction requirements.
- 14. No container of MHSW from Generators shall be accepted by the Owner unless the waste has been characterized by the Generator and the container has a certificate affixed to it stating the following:
 - a. "All waste in this container is hazardous industrial waste, hazardous waste chemical or characteristic waste";
 - b. "No waste in this container has been mixed, blended, bulked or in any other way intermingled with any other waste or material";
 - c. "This waste has been generated solely at [insert name of Generator]'s facility which generates no greater than 5kg of hazardous industrial waste, hazardous waste chemical and characteristic waste in any month and is being accumulated for transportation purposes only";
 - d. "This container and seal comply with the requirements of the Generator Registration Manual"; and
 - e. "The total weight of this container does not exceed 30kg".
- 15. The Owner shall have in place an emergency response services program to attend to the clean-up any spills of MHSW or liquid industrial waste that occur during the transit of waste, by Generators that have entered into an agreement with the Owner, from the point of generation to the Owner's Site.
- 16. The Owner shall instruct all Generators to contact the emergency response services program immediately should a hazardous and/or liquid industrial waste spill occur while waste is in transit.
- 17. The Owner shall provide to the waste Generator the contact information for the emergency response services program, and the means with which to initiate contact (e.g. cellular phone), and shall inform the Generator of the need for this information to be available in the vehicle used to transport hazardous and/or liquid industrial waste at all times that waste is being transported.
- 18. Generators who have entered into an agreement with the Owner in accordance with the protocol described in condition 11.8 shall not require further approval under Part V of the Act, and shall be exempt from the requirements of Section 16 of Reg. 347, subject to the

following conditions:

- a. each Generator transports its wastes to the HHW Depot using its own vehicle(s);
 - b. each Generator has a copy of the agreement entered into with the Owner in the vehicle at the time of waste transport;
 - c. each Generator transports its wastes as specified in the condition 11.13 and in accordance with the protocol described in condition 11.8; and
 - d. waste transported by Generators shall be transported on municipal roads unless a permit has been obtained from the Ontario Ministry of Transportation in accordance with Section 2 of the Dangerous Goods Transportation Act, R.S.O. 1990, Chapter D.1 to allow for the transport of dangerous goods on highways.
19. For Generators who have entered into an agreement with the Owner in accordance with the protocol described in condition 11.8, Sections 18-23 of Reg. 347 do not apply. Waste that is not part of the agreement with the Owner continues to be subject to the requirements of Reg. 347.

Schedule 1
Supporting Documentation

1. Application for a Certificate of Approval for a Waste Disposal Site dated January 4, 1971 including supporting information submitted with the application.
2. Site location map entitled "Town of Renfrew Waste Disposal Site".
3. Site plan entitled "Municipal Owned Sanitary Disposal Area"
4. The March 31, 1999, completed Ministry form, Application for Approval of a Waste Disposal Site, signed by Wayne Fraser of the Town of Renfrew.
5. The undated report, Renfrew HHW Depot Application, with attached Appendices "A" to "G".
6. Town of Renfrew Landfill Site Application to Amend Certificate of Approval A410401 and Supporting Documentation prepared by Oliver, Mangione, McCalla & Associates and dated March 2, 1998.
7. Letter from J.A. McKee of Trow Consulting Engineers Ltd. to E. Zaltsberg of the MOE dated February 28, 2002 re: Town of Renfrew Landfill Site.
8. Addendum #1 Operation & Development Report Town of Renfrew Landfill Site prepared by Trow Consulting Engineers Ltd. and dated February 28, 2002.
9. Letter from L.A. McKee of Trow Consulting Engineers Ltd. to E.Zaltsberg of the MOE dated March 28, 2002 re: Town of Renfrew Landfill Site.
10. 2001 Ground and Surface Water Monitoring Report Town of Renfrew Landfill prepared by Trow Consulting Engineers Ltd. and dated March, 2002.
11. Application for a Provisional Certificate of Approval for a Waste Disposal Site dated May 28, 2002 and signed by W.P. Fraser, the Director of Development & Works, Corporation of the Town of Renfrew.
12. Letter dated July 28, 2005 Re: Town of Renfrew Landfill Site, Compliance Report to Andrew Polley, Ministry of the Environment, from Michel Asselin and Hiran Sandanayake, Trow Associates Inc.
13. Application for a Provisional Certificate of Approval for a Waste Disposal Site dated April 23, 2008.
14. Letter dated April 14, 2008 from Michel Asselin, P.Eng., Director of Development Works addressed to the Ministry of the Environment, Environmental Assessment and Approvals Branch.

15. Letter dated April 30, 2008 from P.A.S. Benson, M.Eng., P.Eng., Golder Associates Ltd. addressed to the Ministry of the Environment, Environmental Assessment and Approvals Branch.
16. Application for a Provisional Certificate of Approval for a Waste Disposal Site dated May 1, 2008.
17. Report titled "2008 Annual Report, Renfrew Landfill Site", dated March 2009 prepared by Golder Associates Limited.
18. Table 4 (revised) titled "Proposed 2010 Groundwater Monitoring Program", dated November 2009, submitted VIA electronic mail on November 18, 2009.
19. Report titled "Town of Renfrew, Household Hazardous Waste Depot" dated December 2010 and prepared by Pamela Russell, P.Eng., Associate, Senior Waste Engineer, and Michael Cant, Associate, Canadian Waste Sector Leader, Golder Associates Ltd.
20. Report titled "Responsibilities for Industrial, Commercial and Institutional Users of the HHW Depot, Town of Renfrew HHW Depot" dated December 2010 and prepared by Pamela Russell, P.Eng., Associate, Senior Waste Engineer, and Michael Cant, Associate, Canadian Waste Sector Leader, Golder Associates Ltd.
21. Application for Administrative Amendment to Provisional Certificate of Approval No. A410401, proposed ring road for the Renfrew Landfill located in Renfrew, Ontario, prepared by Golder Associates Ltd. on behalf of the Corporation of the Town of Renfrew, dated November 29, 2011, and supporting documentation.
22. Application, dated March 22, 2013, signed by Michel Asselin, Developments and Works Director. Re: Approval for the use of Tarp and Ground Woodwaste as Alternative Daily Cover, and to change the operating hours of the Landfill, and Household Hazardous Waste Facility. This application contains the following attachments:
 - (a) Renfrew Landfill Site Plan of final contours updated, dated August 31, 2012, made by Golder Associates Ltd.
 - (b) "Attachment A", dated March 22, 2013. Re: Supporting information about Operational Enhancements, Operation Hours Change and Alternative Daily Cover at the Site.
 - (c) Letter dated December 13, 2012, from Michel Asselin, Renfrew Developments and Works Director, to adjacent Neighbours of the landfill Site, and a List of Notice Recipients. Re: Information about the proposed Operational hours change, and the use of new alternatives for Daily Cover at the Site.
23. A letter dated July 29, 2013, from Megan K. Farnel, P. Eng. Environmental Engineer, Golder Associates Ltd. to Aracelis Carbonell, Project Engineer Intern, Waste Division,

MOE, EAB. Re: Response to General letter, dated May 23, 2013. Re: Comments about application to amend the ECA: A410401, MOE Reference No: 2220-96DRQW. This letter has the following attachments:

- (a) Table 1: "Diverted Materials".
 - (b) Letter dated July 26, 2013 from Andria Caletti, Engineer in Training, Golder Associates Ltd. to Director of Environmental Approvals Access, and Service Integration Branch, MOE. Re: Renfrew Landfill proposed Monitoring Program amendment response to approved changes, with the following attachments:
 - (i) Tables 1: "2013 Groundwater Monitoring Program", Table 2: "2013 Surface Water Monitoring Program", and Table 3: "2013 Landfill Gas Monitoring Program".
 - (ii) Letter dated July 15, 2013, from Steve Burns, Ottawa MOE District Manager, to Mike Asselin, Public Works Director of Town of Renfrew. Re: Proposed Monitoring Program amendment.
 - (iii) Letter dated May 24, 2011, from S. Richards, M. Sc., P. Eng., Golder Associates Ltd., Environmental Engineer, to Steve Burns, Ottawa MOE District Manager. Re: Proposed changes to the Surface and Groundwater Monitoring Program and Landfill Gas Monitoring, Renfrew Landfill Site.
24. A letter dated August 26, 2013, from Megan K. Farnel, P. Eng. Environmental Engineer, Golder Associates Ltd., to Aracelis Carbonell, Project Engineer Intern, Waste Division, MOE, EAB. Re: Supporting information about the application to amend the ECA A410401, MOE Ref: 2220-96DRQW.
25. Letter report Re: Request to Amend Surface Water and Groundwater Monitoring Program at the Renfrew Landfill, dated January 27, 2020 from Andria Caletti, P.Eng. and Trish Edmond, M. E. Sc., P.Eng., Golder Associates Ltd. to Director, Ministry of the Environment, Conservation and Parks.
26. Letter report dated June 5, 2020 from Emily Bacon, M.Eng., E.I.T. and Trish Edmond, M.E.Sc., P.Eng, Golder Associates Ltd. to Mr. Tyler Armstrong, Town of Renfrew, Re: Supplemental Information for a Re-Use Centre at Renfrew Landfill Site.
27. Environmental Compliance Approval Application dated March 20, 2024 and signed Amanda Springer, Manager of Environmental Services
The Corporation of the Town of Renfrew, including the attached supporting documentation.
28. Letter dated July 20, 2023 (revised December 2024) from Andria L. Caletti, P. Eng., Environmental Engineer and Trish L. Edmond, M.E.Sc., P.Eng. Principal, Geoenvironmental Engineer, WSP Canada, to Tracy Hart, District Manager, Ottawa District Office, Ministry of Environment, Conservation and Parks Re: Summary of Revised Trigger Mechanism for the Renfrew Waste Disposal Site (ECA No. A4104010).

29. Letter dated July 20, 2021 from Emily Bacon, M.Eng., EIT, Environmental Consultant and Trish Edmond, M.E.Sc., P.Eng., Principal, Geoenvironmental Engineer, Golder Associates Ltd., to Tracy Hart, District Manager, Ottawa District Office, Ministry of Environment, Conservation and Parks Re: Summary of Possible Surface Water Contingency Measures for the Renfrew Waste Disposal Site (ECA No. A4104010), Renfrew, Ontario.
30. Letter report dated January 18, 2021 addressed to Tracy Hart, District Manager Ministry of Environment, Conservation and Parks (MECP), Ottawa MECP District Office Re: REVIEW OF SEWAGE SLUDGE DISPOSAL PRACTICES, RENFREW LANDFILL, RENFREW, ONTARIO, prepared by Emily Bacon, M.Eng., EIT and Trish Edmond, Golder Associates Ltd.

Schedule 2
Surface Water Monitoring Program

Monitoring Sessions	Sampling Stations	Laboratory Parameters	Field Parameters
Spring and Fall	S7D, S8, S9	Boron, iron, manganese, potassium, alkalinity, ammonia, dissolved organic carbon (DOC), total Kjeldahl nitrogen (TKN)	Temperature, pH, conductivity, dissolved oxygen, and flow
Spring and Fall	S6	Arsenic, barium, boron, cadmium, chromium, calcium, copper, iron, lead, magnesium, manganese, mercury, potassium, sodium, zinc, chloride, nitrate, nitrite, total phosphorous, alkalinity, ammonia, biochemical oxygen demand (BOD), chemical oxygen demand (COD), dissolved organic carbon (DOC), hardness, phenols, total dissolved solids (TDS), total Kjeldahl nitrogen (TKN), total suspended solids (TSS)	Temperature, pH, conductivity, dissolved oxygen, and flow

Schedule 3
Groundwater Monitoring Program

Monitoring Sessions	Sampling Stations	Laboratory Parameters	Field Parameters
Spring and Fall	OMM 5, OMM 6, OMM 7, OMM 8, OMM 9, OMM 14S, OMM 14M, OMM 14D, OMM 15, BH10-1, BH10-2A, BH10-2B, BH11-01	Arsenic, barium, boron, cadmium, chromium, calcium, copper, iron, lead, magnesium, manganese, mercury, potassium, sodium, zinc, chloride, nitrate, nitrite, total phosphorous, alkalinity, ammonia, chemical oxygen demand (COD), dissolved organic carbon (DOC), hardness, sulphate, total dissolved solids (TDS), total Kjeldahl nitrogen (TKN), phenols	Temperature, pH, conductivity
Fall	OMM 7, OMM 8, OMM 9, OMM 14D, OMM15, BH11-01	Volatile organic compounds (VOCs)	

The reasons for the imposition of these terms and conditions are as follows:

GENERAL

- The reason for conditions 1.1, 1.2, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9, 1.10, 1.18, 1.19 and 1.20 is to clarify the legal rights and responsibilities of the Owner and Operator under this Approval.
- The reasons for conditions 1.3, 1.4, 1.5 and 7.6 are to ensure that the Site is designed, operated, monitored and maintained in accordance with the application and supporting documentation submitted by the Owner, and not in a manner which the Director has not been asked to consider.
- The reasons for condition 1.11 are to ensure that the Site is operated under the corporate name which appears on the application form submitted for this approval and to ensure that the Director is informed of any changes.
- The reasons for condition 1.12 are to restrict potential transfer or encumbrance of the Site without the approval of the Director and to ensure that any transfer of encumbrance can be made only on the basis that it will not endanger compliance with this Approval.
- The reason for condition 1.13 is to ensure that the successor is aware of its legal responsibilities.
- The reasons for conditions 1.14, 1.15 and 1.16 are that the Part II.1 Director is an individual with authority pursuant to Section 197 of the Environmental Protection Act to require registration on title and provide any person with an interest in property before dealing with the property in any way to give a copy of the Approval to any person who will acquire an interest in the property as a result of the dealing.
- The reason for condition 1.17 is to ensure that appropriate Ministry staff has ready access to the Site for inspection of facilities, equipment, practices and operations required by the conditions in this Approval. This condition is supplementary to the powers of entry afforded a Provincial Officer pursuant to the Act, the OWRA, the PA, the NMA and the SDWA.
- Condition 1.21 has been included in order to clarify what information may be subject to the Freedom of Information Act.

SITE OPERATION

- The reasons for conditions 2.1, 2.5 and 6.3 are to ensure that the Site is operated, inspected and maintained in an environmentally acceptable manner and does not result in a hazard or nuisance to the natural environment or any person.

- The reason for conditions 2.2, 2.3 and 2.4 is to ensure that users of the Site are fully aware of important information and restrictions related to Site operations and access under this Approval.
- The reasons for condition 2.6 are open burning of municipal waste is unacceptable because of concerns with air emissions, smoke and other nuisance effects, and the potential fire hazard.
- The reasons for condition 2.7, 2.8 and 2.9 are to specify the hours of operation for the landfill site and a mechanism for amendment of the hours of operation, as required.
- The reasons for condition 2.10 and 2.11 are to ensure that the Site is supervised by properly trained staff in a manner which does not result in a hazard or nuisance to the natural environment or any person and to ensure the controlled access and integrity of the Site by preventing unauthorized access when the Site is closed and no site attendant is on duty.

EMPLOYEE TRAINING

- The reason for condition 3.1 is to ensure that the Site is supervised and operated by properly trained staff in a manner which does not result in a hazard or nuisance to the natural environment or any person.

COMPLAINTS RESPONSE PROCEDURE

- The reason for condition 4.1 is to ensure that any complaints regarding landfill operations at this Site are responded to in a timely and efficient manner.

EMERGENCY RESPONSE

- Conditions 5.1 and 5.2 are included to ensure that emergency situations are reported to the Ministry to ensure public health and safety and environmental protection.
- Conditions 5.3, 5.4 and 5.5 are included to ensure that emergency situations are handled in a manner to minimize the likelihood of an adverse effect and to ensure public health and safety and environmental protection.

RECORD KEEPING AND REPORTING

- The reason for conditions 6.1 and 6.2 is to ensure that accurate waste records are maintained to ensure compliance with the conditions in this Approval (such as fill rate, site capacity, record keeping, annual reporting, and financial assurance requirements), the EPA and its regulations.
- The reason for conditions 6.4 and 6.5 is to ensure that detailed records of Site inspections are recorded and maintained for inspection and information purposes.
- The reasons for conditions 6.6 and 6.7 are to ensure that regular review of site development, operations and monitoring data is documented and any possible improvements to site design,

operations or monitoring programs are identified. An annual report is an important tool used in reviewing site activities and for determining the effectiveness of site design.

LANDFILL DESIGN AND DEVELOPMENT

- The reason for conditions 7.1 to 7.7 inclusive is to specify the approved areas from which waste may be accepted at the Site and the types and amounts of waste that may be accepted for disposal at the Site, based on the Owner's application and supporting documentation.
- Condition 7.8 is to provide the Owner the process for getting the approval for alternative daily and intermediate cover material.
- The reasons for condition 7.9 are to ensure that daily/weekly and intermediate cover are used to control potential nuisance effects, to facilitate vehicle access on the Site, and to ensure an acceptable site appearance is maintained. The proper closure of a landfill site requires the application of a final cover which is aesthetically pleasing, controls infiltration, and is suitable for the end use planned for the Site.
- Condition 7.10 is included to approve alternative daily cover material for the Site.
- The reason for condition 7.11.a is included to approve the request by the Owner to leave the waste in Fill Beyond Approved Limits in the same location. This reason for this approval is to ensure that the waste is dealt with in an environmentally acceptable manner.
- Condition 7.11.b and 7.11.c are included to ensure that this waste does not result in a hazard or nuisance to the natural environment or any person. The proper closure of this area requires the application of a final cover which is aesthetically pleasing, controls infiltration, and is suitable for the end use planned for the Site.
- The reason for condition 7.12 is to approve the construction of the proposed on-site ring road at the Renfrew Landfill Site, to return the Site to the original conditions as per the original landfill design, and to provide improved access to portions of the Site, all in accordance with the application for approval dated November 29, 2011, and supporting information and documentation prepared by Golder Associates Ltd. on behalf of the Corporation of the Town of Renfrew.

LANDFILL MONITORING

- Reasons for conditions 8.1.a and 8.1.b are to ensure that landfill gas is monitored and all buildings at the Site are free of any landfill gas accumulation, which due to a methane gas component may be explosive and thus create a danger to any persons at the Site.
- Condition 8.2 is included to provide the groundwater and surface water limits to prevent water pollution at the Site.
- Conditions 8.3 and 8.4 are included to require the Owner to demonstrate that the Site is performing

as designed and the impacts on the natural environment are acceptable. Regular monitoring allows for the analysis of trends over time and ensures that there is an early warning of potential problems so that any necessary remedial/contingency action can be taken.

- Conditions 8.5, 8.6 and 8.7 are included to ensure the integrity of the groundwater monitoring network so that accurate monitoring results are achieved and the natural environment is protected.
- Conditions 8.8 to 8.12 inclusive are added to ensure the Owner has a plan with an organized set of procedures for identifying and responding to potential issues relating to groundwater and surface water contamination at the Site's compliance point.
- Conditions 8.13 and 8.14 are included to streamline the approval of the changes to the monitoring plans and trigger mechanisms and contingency plans.
- Condition 8.15 to 8.19 inclusive is included to require the Owner to obtain property rights and/or groundwater easements on land(s) that is required for a Contaminant Attenuation Zone that is necessary for attenuation of contamination resulting from the operation of the Site to bring the Site into compliance with Reasonable Use Guideline B-7.

CLOSURE PLAN

- The reasons for condition 9 are to ensure that final closure of the Site is completed in an aesthetically pleasing manner, in accordance with Ministry standards, and to ensure the long-term protection of the health and safety of the public and the environment.

WASTE DIVERSION

- Condition 10 is included to ensure that the recyclable materials are stored in their temporary storage location and transferred off-site in a manner as to minimize a likelihood of an adverse effect or a hazard to the natural environment or any person.

HHW

- The reasons for the condition 11 are to approve collection of MHSW and to ensure that the wastes are managed in a manner that protects the environment and the health and safety of the public.

Upon issuance of the environmental compliance approval, I hereby revoke Approval No(s). A410401 issued on July 20, 2020

In accordance with Section 139 of the *Environmental Protection Act*, you may by written notice served upon me and the Ontario Land Tribunal within 15 days after receipt of this notice, require a hearing by the Tribunal. Section 142 of the *Environmental Protection Act* provides that the notice requiring the hearing ("the Notice") shall state:

- a. The portions of the environmental compliance approval or each term or condition in the environmental compliance approval in respect of which the hearing is required, and;

- b. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

Pursuant to subsection 139(3) of the *Environmental Protection Act*, a hearing may not be required with respect to any terms and conditions in this environmental compliance approval, if the terms and conditions are substantially the same as those contained in an approval that is amended or revoked by this environmental compliance approval.

The Notice should also include:

1. The name of the appellant;
2. The address of the appellant;
3. The environmental compliance approval number;
4. The date of the environmental compliance approval;
5. The name of the Director, and;
6. The municipality or municipalities within which the project is to be engaged in.

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

Registrar*
Ontario Land Tribunal
655 Bay Street, Suite 1500
Toronto, Ontario
M5G 1E5
OLT.Registrar@ontario.ca

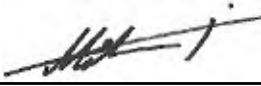
and

The Director appointed for the purposes of Part II.1 of
the *Environmental Protection Act*
Ministry of the Environment, Conservation and Parks
135 St. Clair Avenue West, 1st Floor
Toronto, Ontario
M4V 1P5

* Further information on the Ontario Land Tribunal's requirements for an appeal can be obtained directly from the Tribunal
at: Tel: (416) 212-6349 or 1 (866) 448-2248, or www.olt.gov.on.ca

The above noted activity is approved under s.20.3 of Part II.1 of the *Environmental Protection Act*.

DATED AT TORONTO this 4th day of December, 2024



Mohsen Keyvani, P.Eng.
Director
appointed for the purposes of Part II.1 of the
Environmental Protection Act

RM/

c: District Manager, MECP Ottawa
Andria Caletti, P.Eng., WSP Canada Inc.

APPENDIX G

Daily Inspection Form

DAILY LOG FOR RENFREW LANDFILL SITE

Operated under Environmental Compliance Approval A410401



Renfrew

INC. 1858
Bridging Charm and Convenience

Date: _____ Time: _____ Conducted By: _____ Signature: _____

Daily Inspection

Location/Comment:

Was litter collected Y N N/A _____

Was dust suppressant applied? Y N N/A _____

Was there any equipment out of service, and if so, what actions were taken to rectify the problem?
Y N N/A _____

Was any waste refused? Y N N/A _____

Is all equipment operational? Y N N/A _____

Are fences and gates intact? Y N N/A _____

Is there excess odour? Y N N/A _____

Is there litter? Y N N/A _____

Are there new or existing leachate seeps? If yes, please indicate location on map (see next page):

Is all signage intact? Y N N/A _____

Is there any erosion of side slopes? If so, what repairs were undertaken?
Y N N/A _____

List any other deficiencies and recommend remedial actions

Please indicate the approximate location of the active area where waste was placed today on the site plan on the next page.

Daily Cover

Was cover material placed over exposed waste at the end of the working day?
Y N N/A _____

What was the average depth of cover material?
Y N N/A _____

What was the cover material source/description? _____

Is the cover material used causing excessive dust?
Y N N/A _____

Waste Diversion

Are bins and waste storage areas clearly labelled?
Y N N/A _____

Are lids/doors on bins closed during non-operating hours and during high wind events?
Y N N/A _____

Were there any items shipped off-site? If so, describe.
Y N N/A _____

Other Items

Where any Incident Report Forms Completed?
Y N N/A _____

Record of Official Visitors
Name: _____ Company: _____
Name: _____ Company: _____



APPENDIX H

Waste Quantities Received in 2024

Material Summary Report 2024

Material	Type	Amount (kg)	Amount (tonne)	DataCall	IC&I	Res	C&D
Brush (Cover)	Cover	320,900.00	320.90	Wood		320.9	
Christmas Tree (Cover)	Cover	207.00	0.21	Wood		0.207	
Concrete	Recycled	0.00	-	Brick & Concrete			0
Construction Material	Waste	148,500.00	148.50				148.5
Gravel/ Clay/ Sand	Recycled	2,100.00	2.10	Other			2.1
Household Garbage	Waste	119,052.45	119.05			119.0525	
Masonry Waste	Recycled	41,800.00	41.80	Brick & Concrete			41.8
Commercial Waste	Waste	2,863,000.00	2,863.00		2863		
Residential Waste	Waste	623,700.00	623.70			623.7	
Sawdust	Recycled		-		0		
Shingles Commercial	Recycled	35,800.00	35.80	C&D			35.8
Shingles Residential	Recycled	64,000.00	64.00	C&D			64.00
Sludge	Waste	1,343,600.00	1,343.60		1343.60		
Soil	Waste	0.00	-	Other			0.00
Residential Curbside Pick Up	Waste	1,847,900.00	1,847.90		98.12349	1749.777	
Town Waste	Waste	114,300.00	114.30				
Town Sweeper Truck	Cover	25,100.00	25.10		25.1		
Water Main Leak Material	Cover	52,700.00	52.70		52.7		
Wood Waste Commercial (Cover)	Cover	179,400.00	179.40	C&D	179.4		
Wood Waste Residential (Cover)	Cover	143,600.00	143.60	C&D		143.6	
TOTAL		7,925,659.45	7,925.66		4561.923	2957.236	292.2 7811.359
Cover Material (Cover)	Cover	3,327,000.00	3,327.00		58%	38%	4%

Other Items (Not Landfilled)

Cardboard	11,100.00	11.10
Recycle Material	11,900.00	11.90
E Waste	8,100.00	8.10
Freon Removal (units)	na	10.00
Leaf and Yard Waste Pick Up	85,200.00	85.20
Road Construction Fill	18,739,000.00	18,739.00
Yard Waste	198,000.00	198.00
Scrap Metal Bin	24,100.00	24.10
Tires (units)	na	912

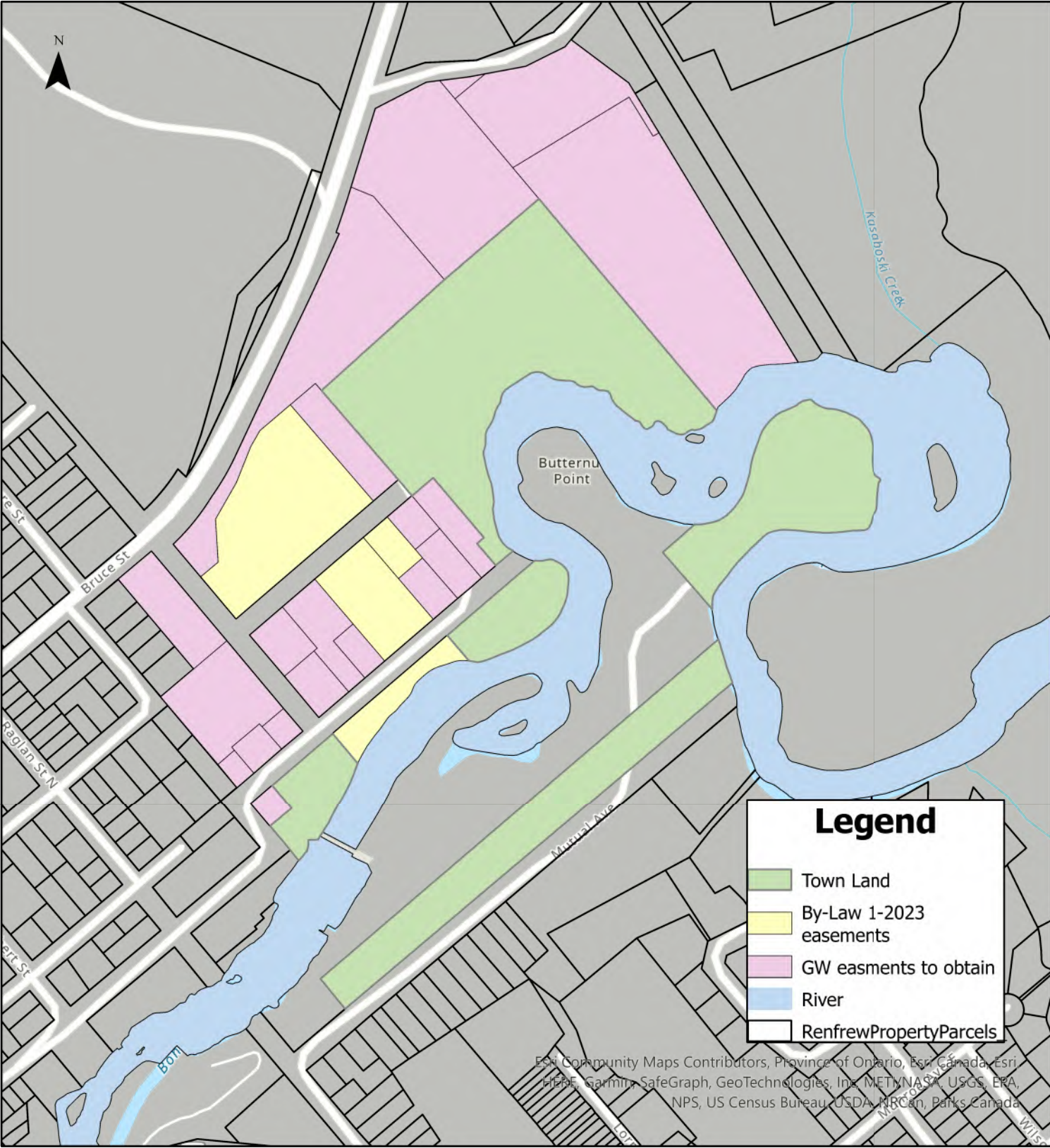
Total Landfilled Waste in Italics	7,062,152.45	7,062.15

	DataCall
Wood	321.107
Brick & Concrete	41.8
C&D	422.8
Other	#REF!
Scrap Metal	24.1

APPENDIX I

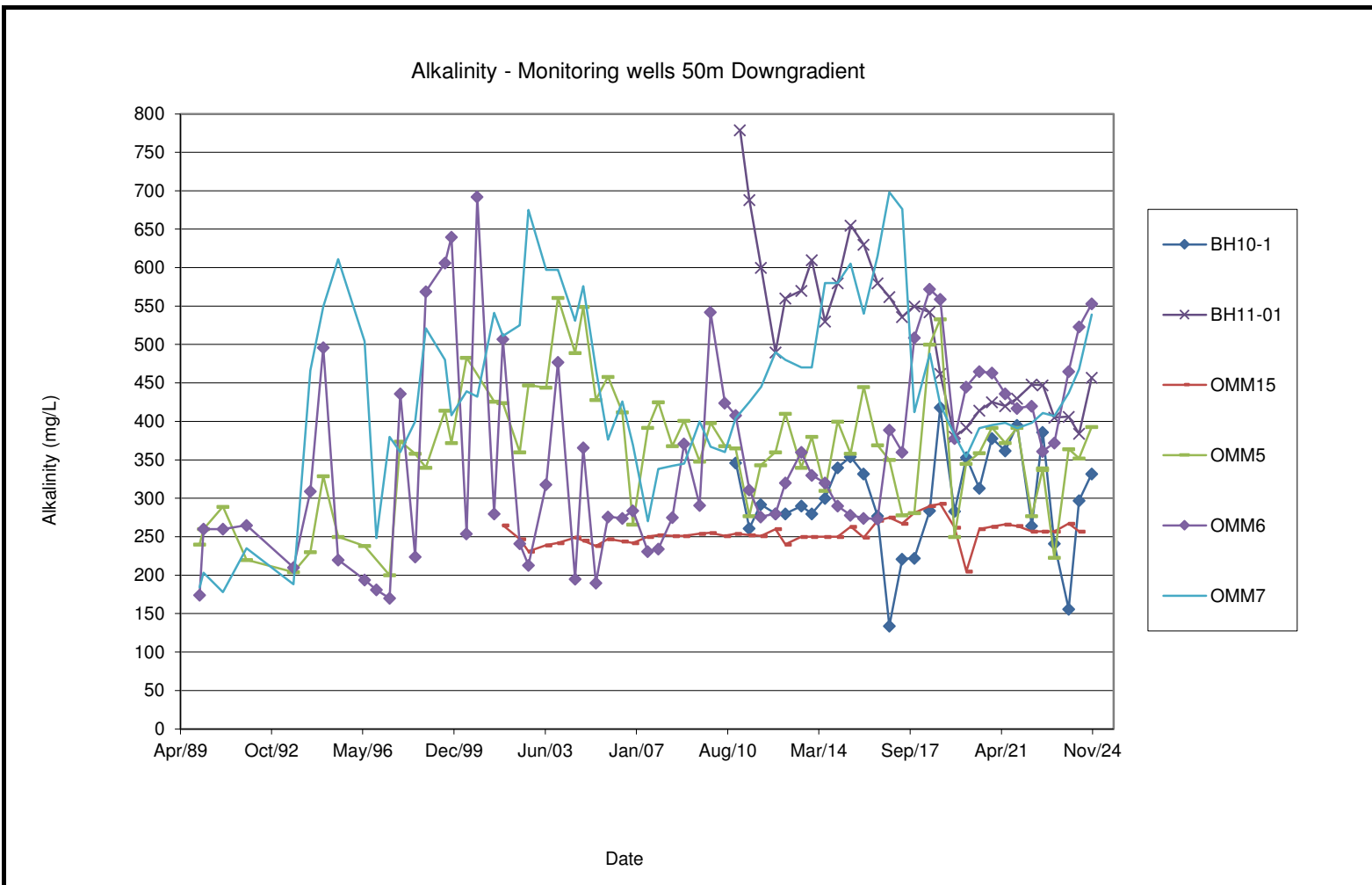
**Contaminant Attenuation Zone
Property Details**

Renfrew Landfill Contaminate
Attenuation Zone (CAZ)



APPENDIX J

Groundwater Time Concentration Plots



FIGURE

Project No. CA0047282.8803

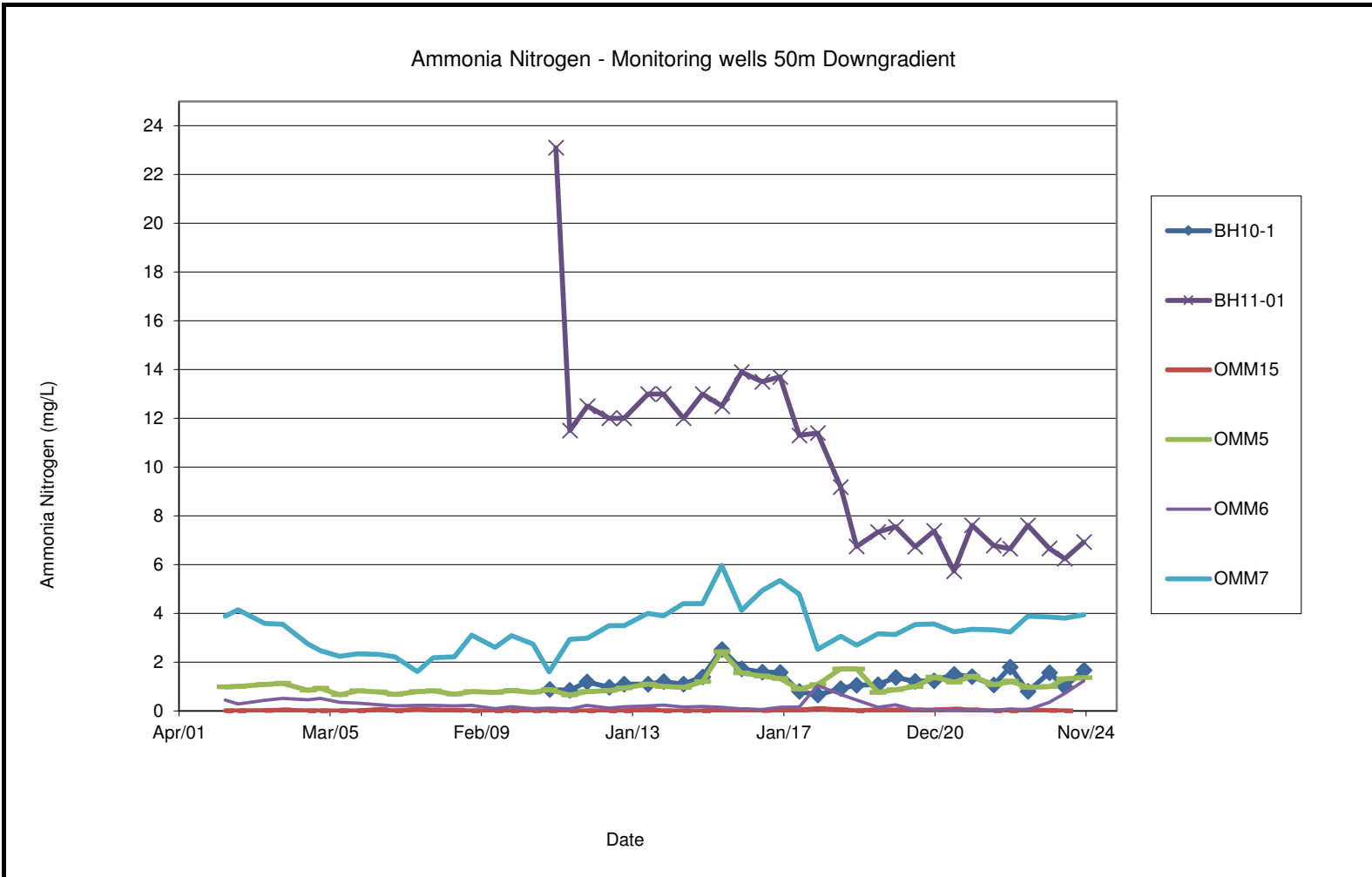
Prepared by: ETB

Checked by: BH

March 2025

Renfrew WDS GROUNDWATER ALKALINITY





FIGURE

Project No. CA0047282.8803

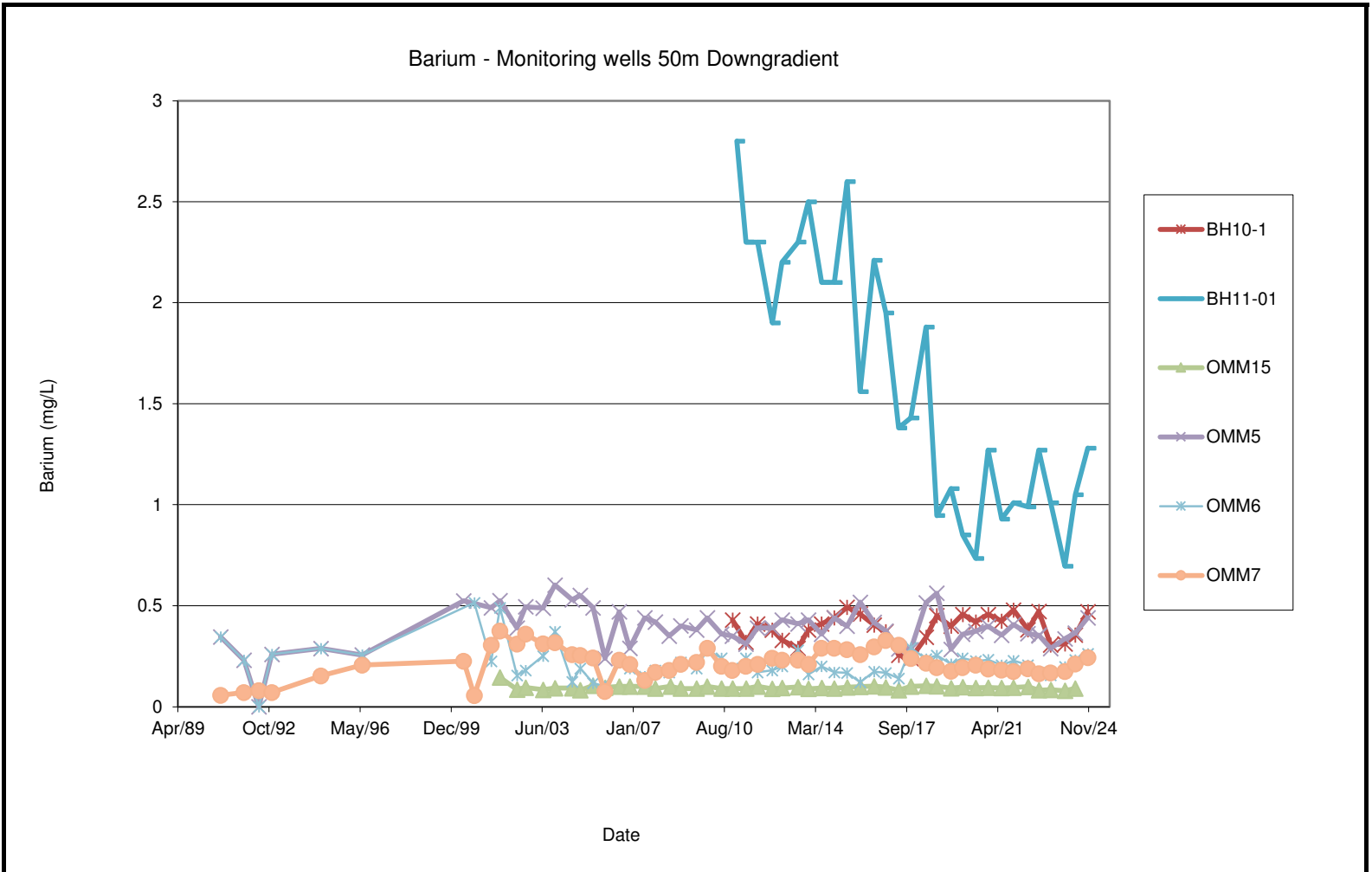
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Checked by: ETB

March 2025

Renfrew WDS GROUNDWATER Ammonia Nitrogen





FIGURE

Project No. CA0047282.8803

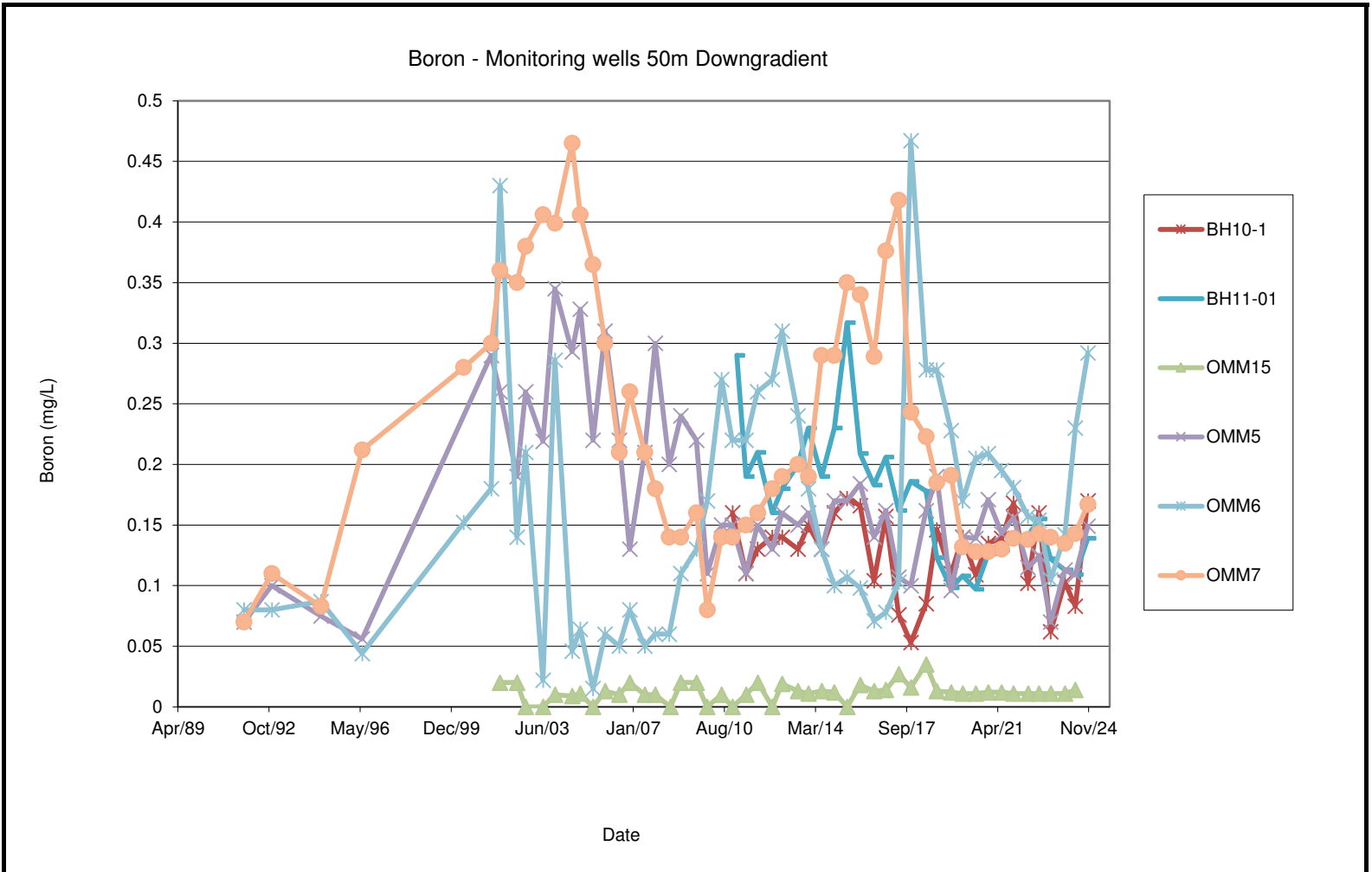
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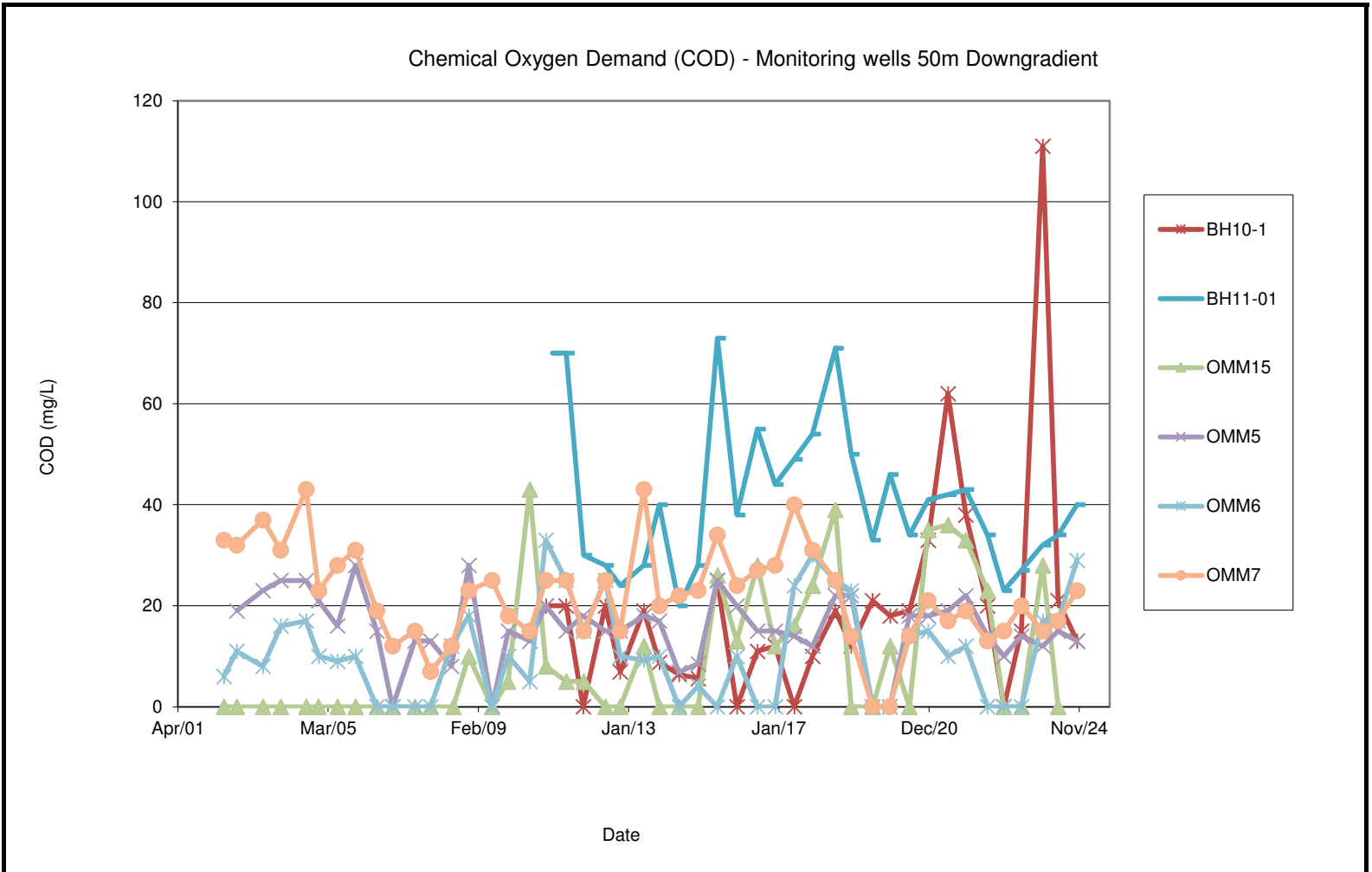
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March 2025

Renfrew WDS GROUNDWATER Barium







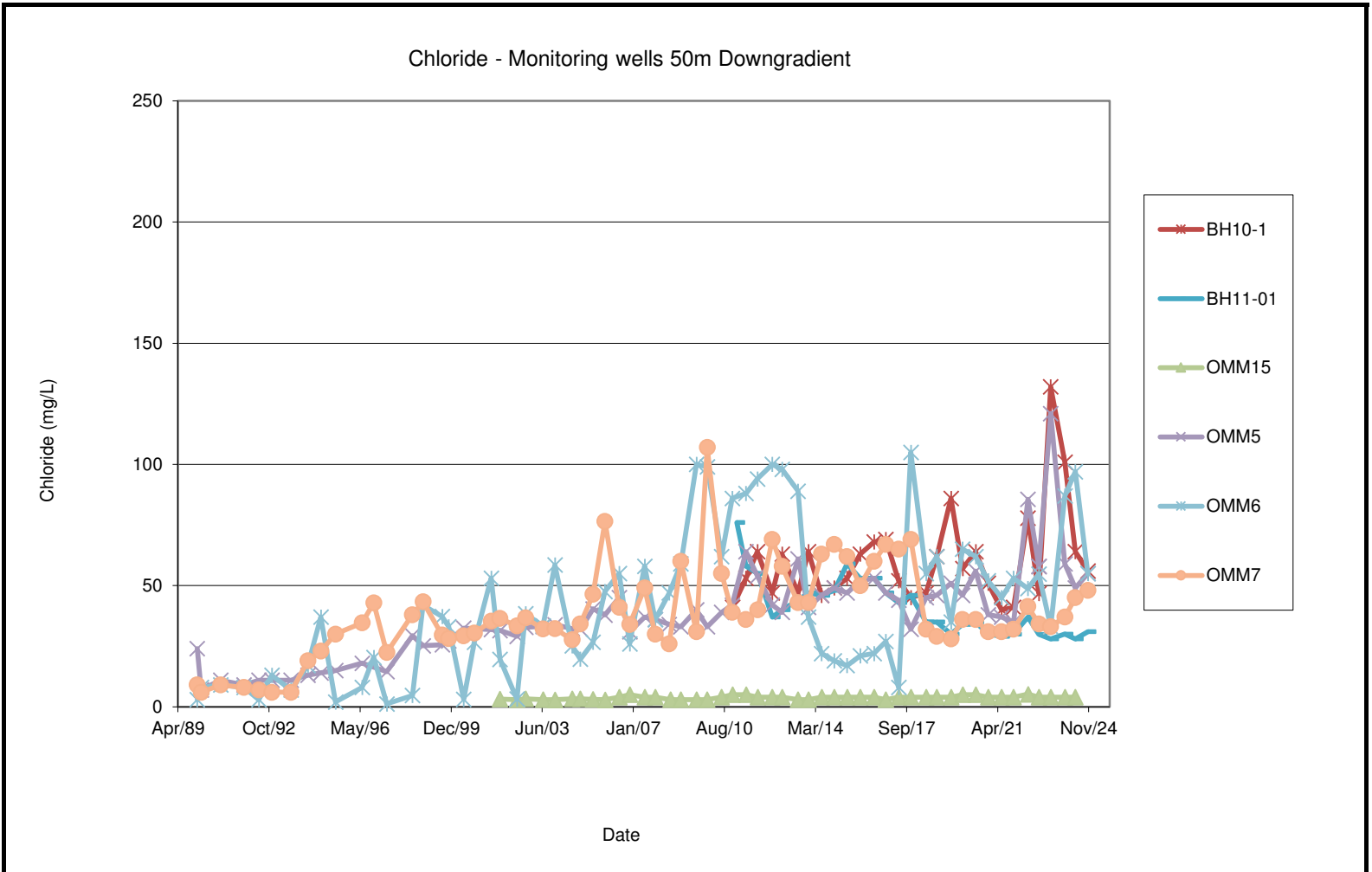
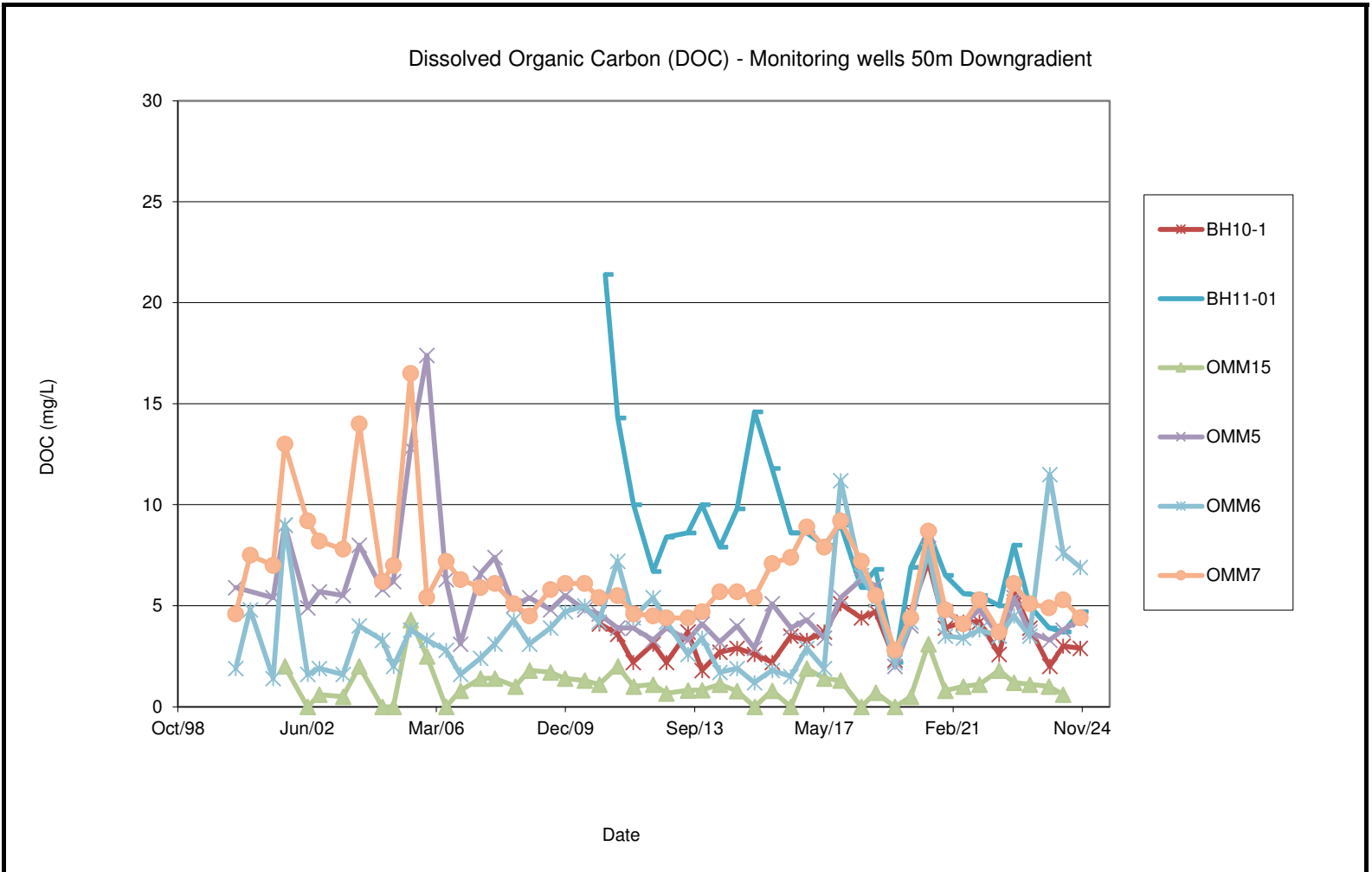


FIGURE Project No. CA0047282.8803 Prepared by: BH Checked by: ETB March 2025	Renfrew WDS GROUNDWATER Chloride	



FIGURE

Project No. CA0047282.8803

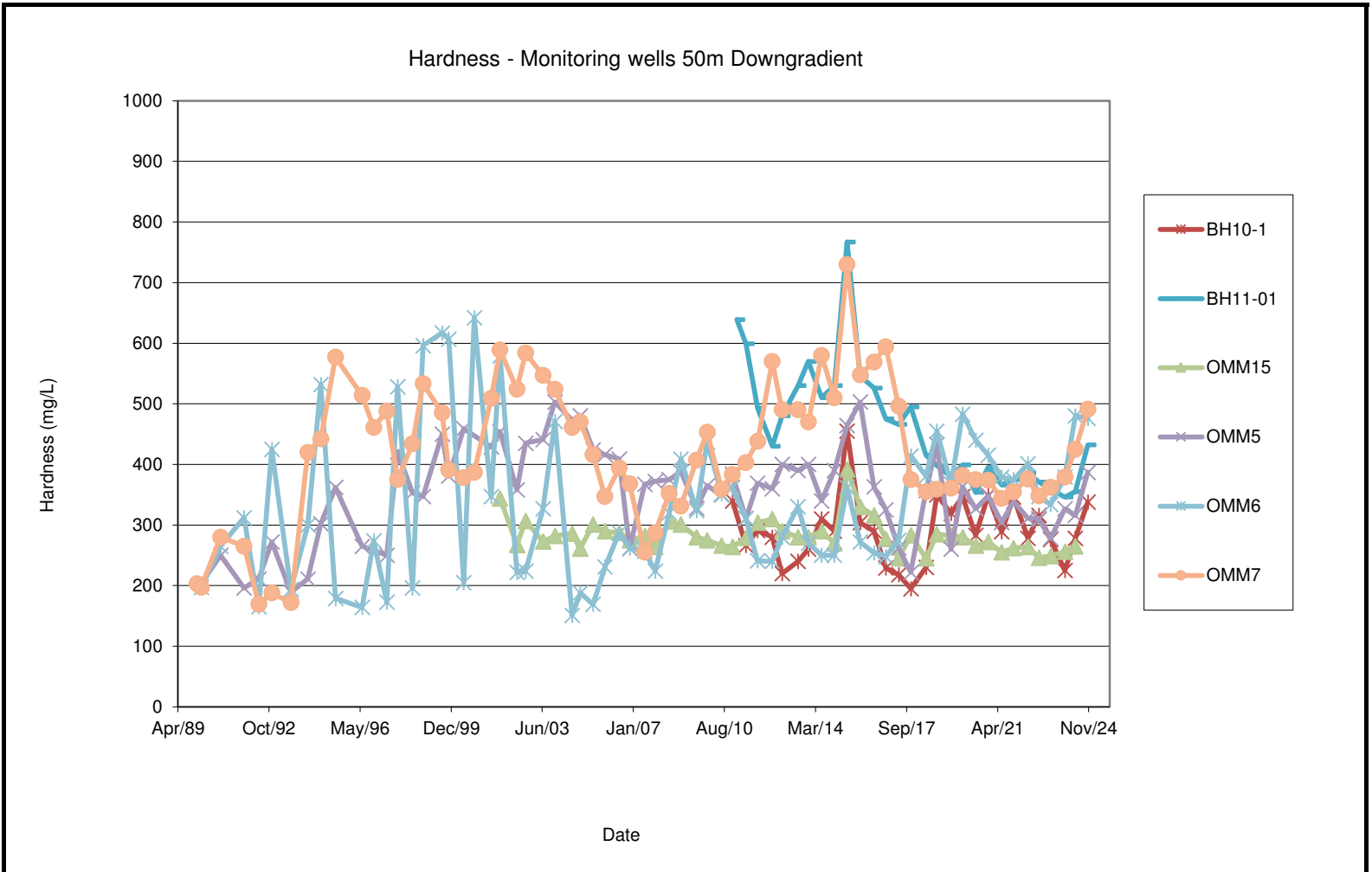
Prepared by: BH

Checked by: ETB

March 2025

**Renfrew WDS
GROUNDWATER
DOC**





FIGURE

Project No. CA0047282.8803

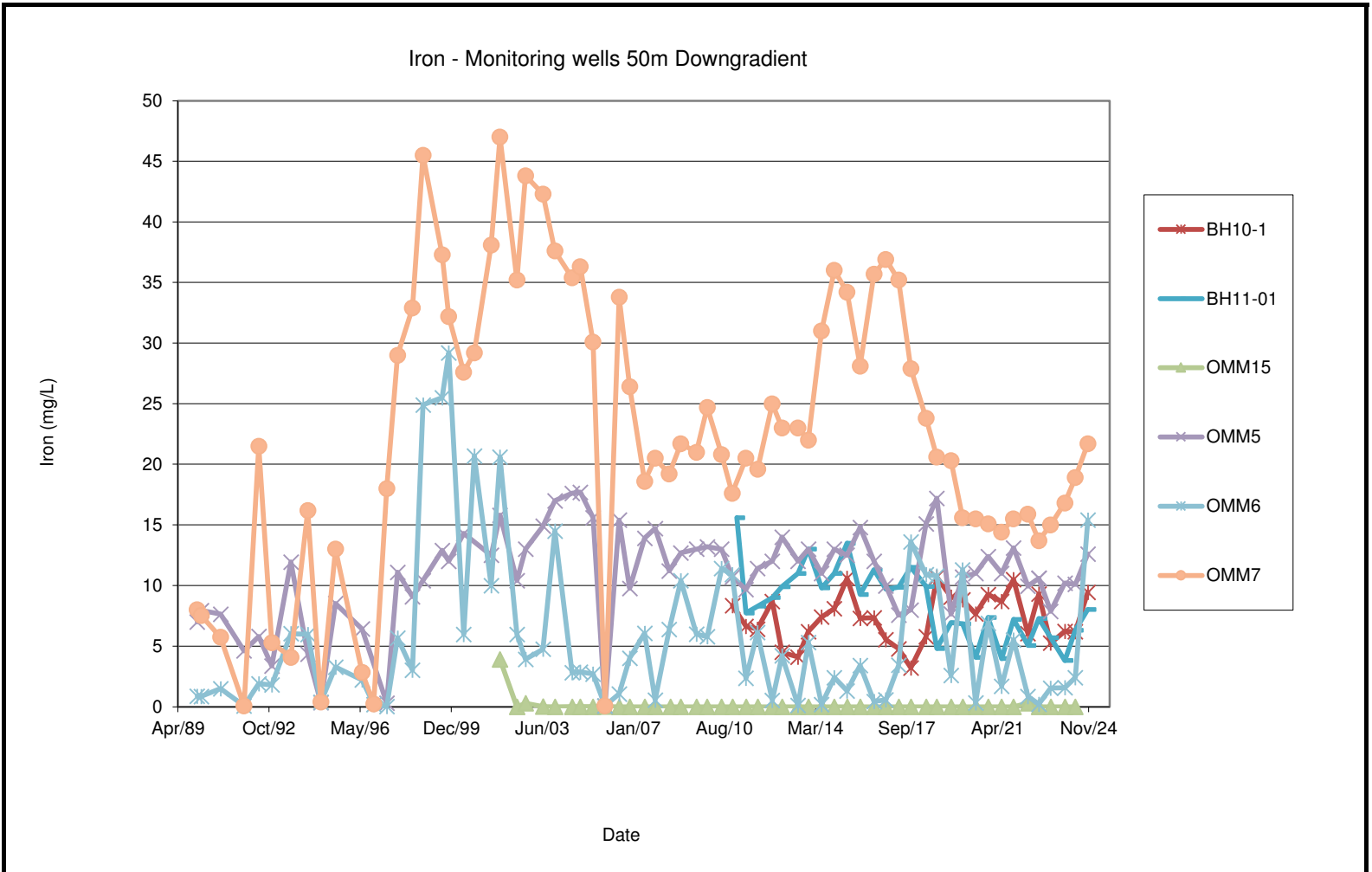
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March 2025

Renfrew WDS GROUNDWATER Hardness





FIGURE

Project No. CA0047282.8803

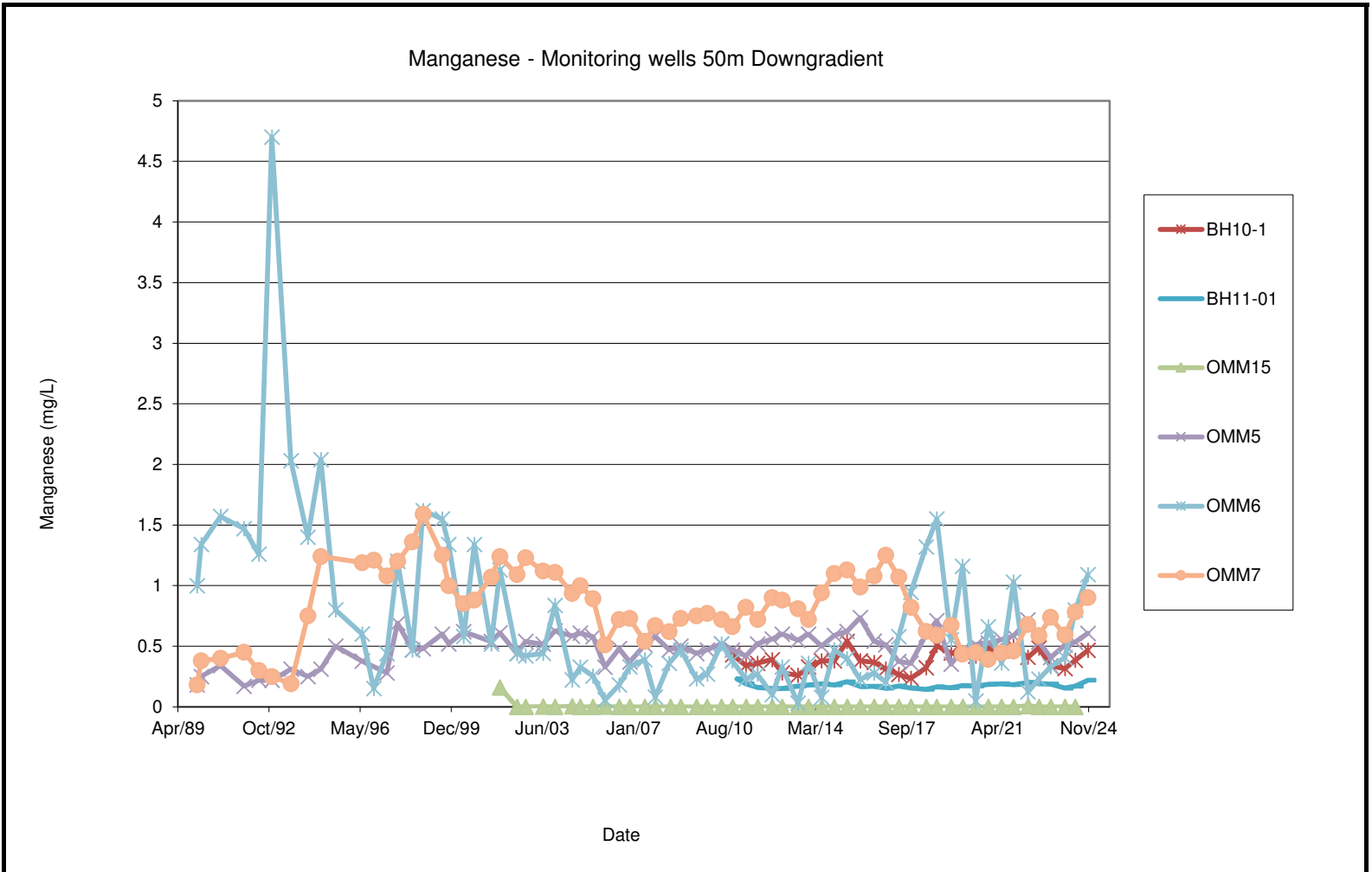
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March 2025

Renfrew WDS GROUNDWATER Iron





FIGURE

Project No. CA0047282.8803

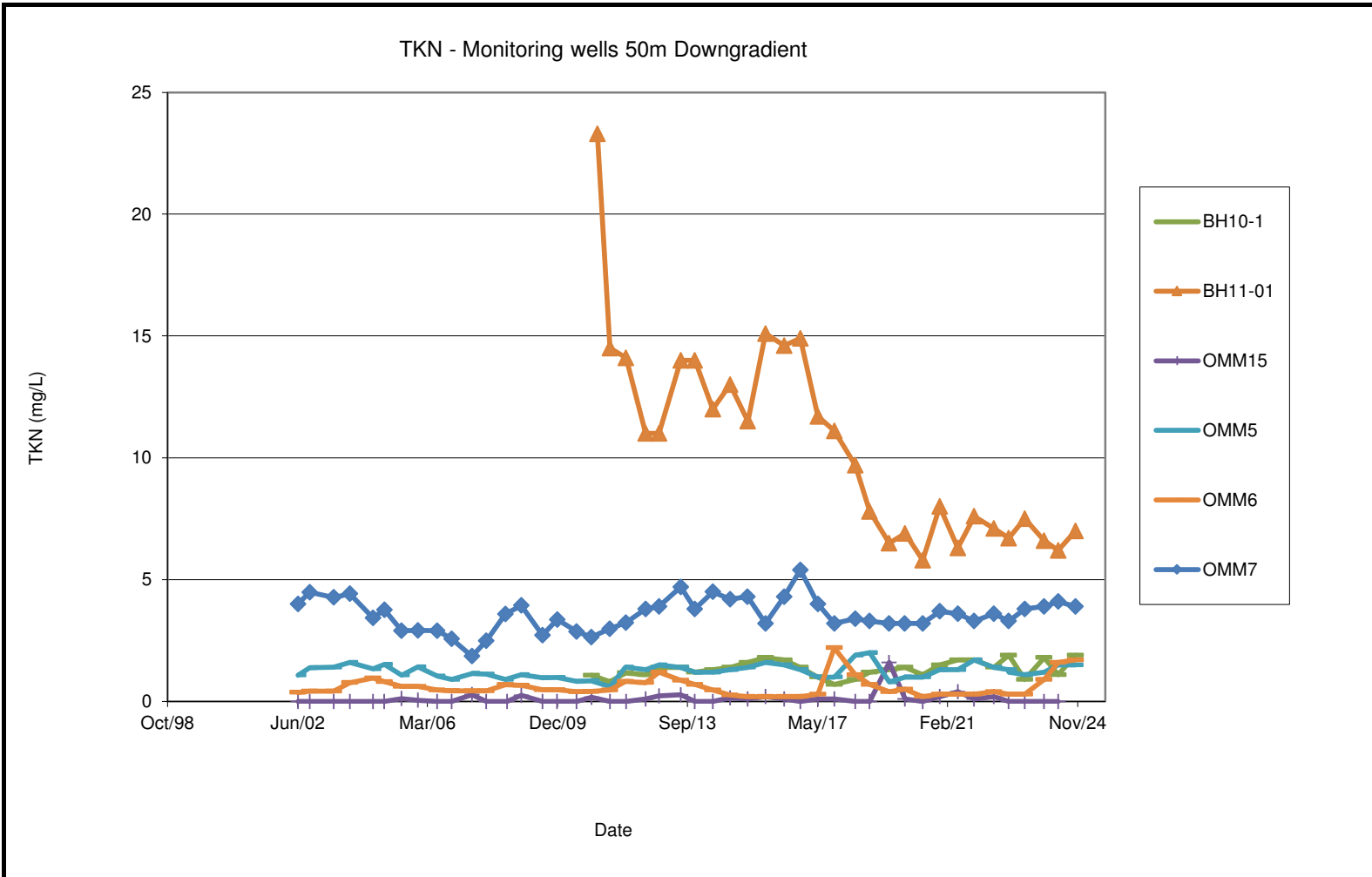
Prepared by: BH

Checked by: ETB

March 2025

**Renfrew WDS
GROUNDWATER
Manganese**





FIGURE

Project No. CA0047282.8803

Prepared by: BH

Checked by: ETB

March 2025

**Renfrew WDS
GROUNDWATER
TKN**



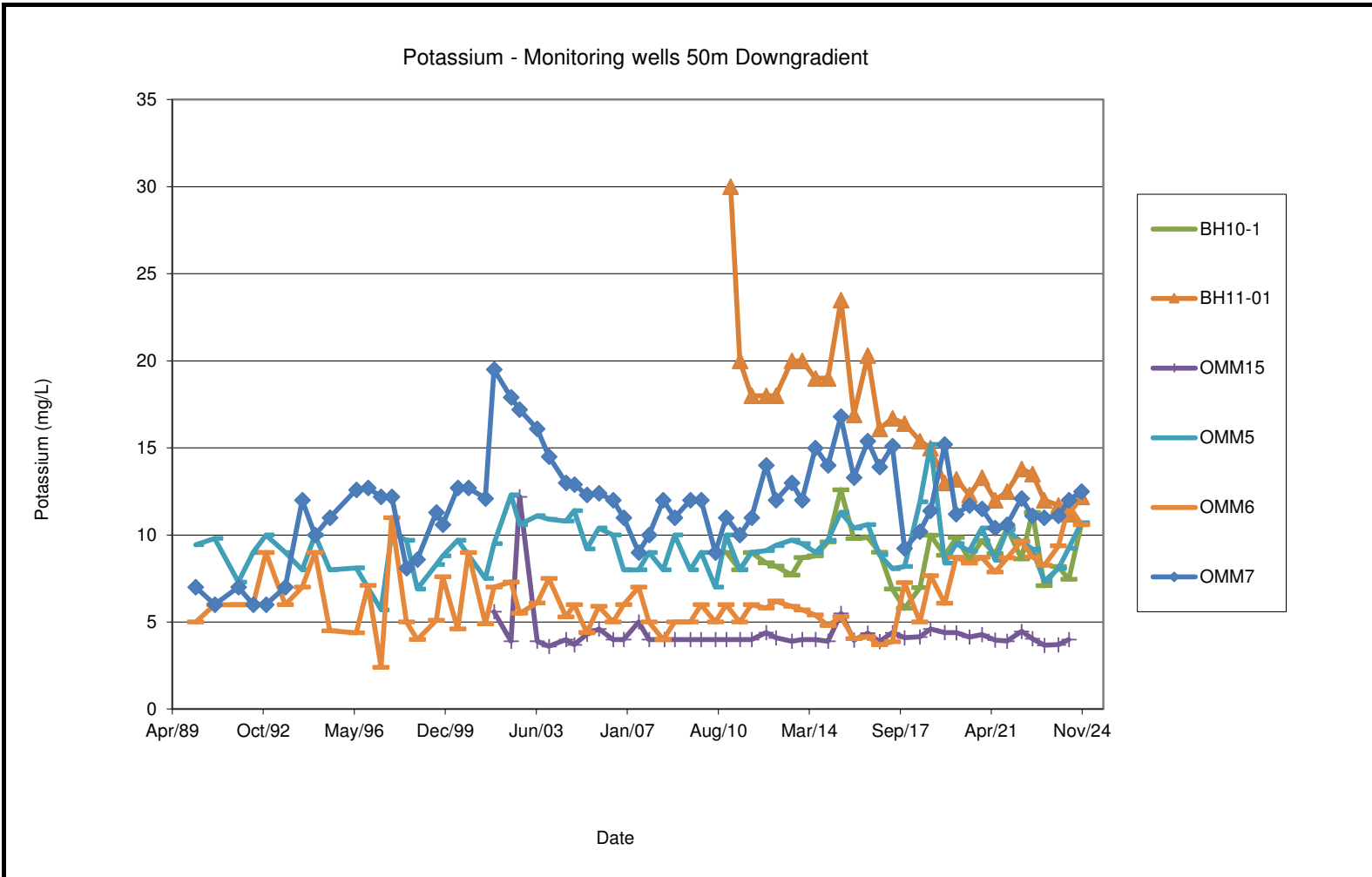
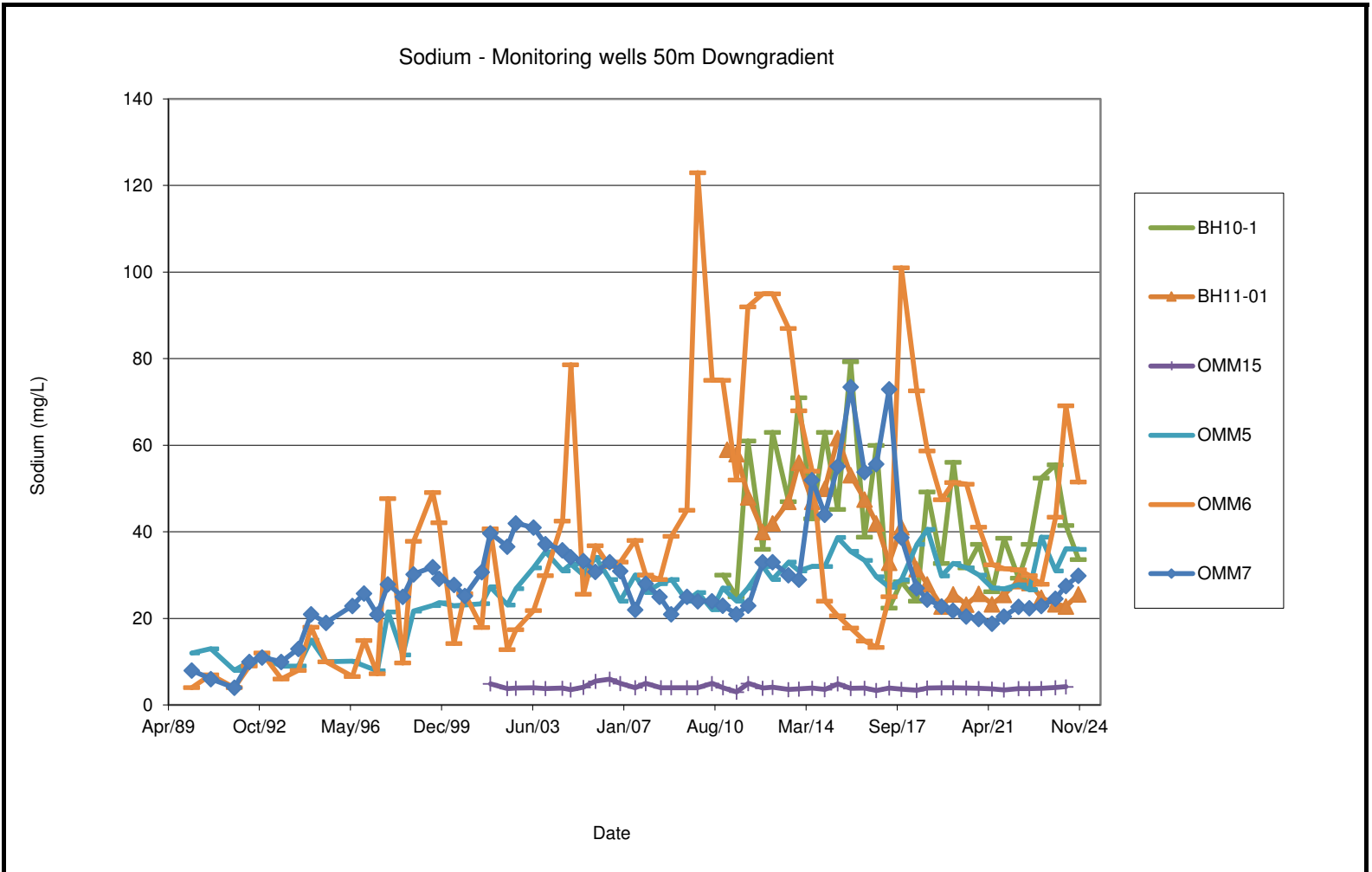


FIGURE Project No. CA0047282.8803 Prepared by: BH Checked by: ETB March 2025	Renfrew WDS GROUNDWATER Potassium	



FIGURE

Project No. CA0047282.8803

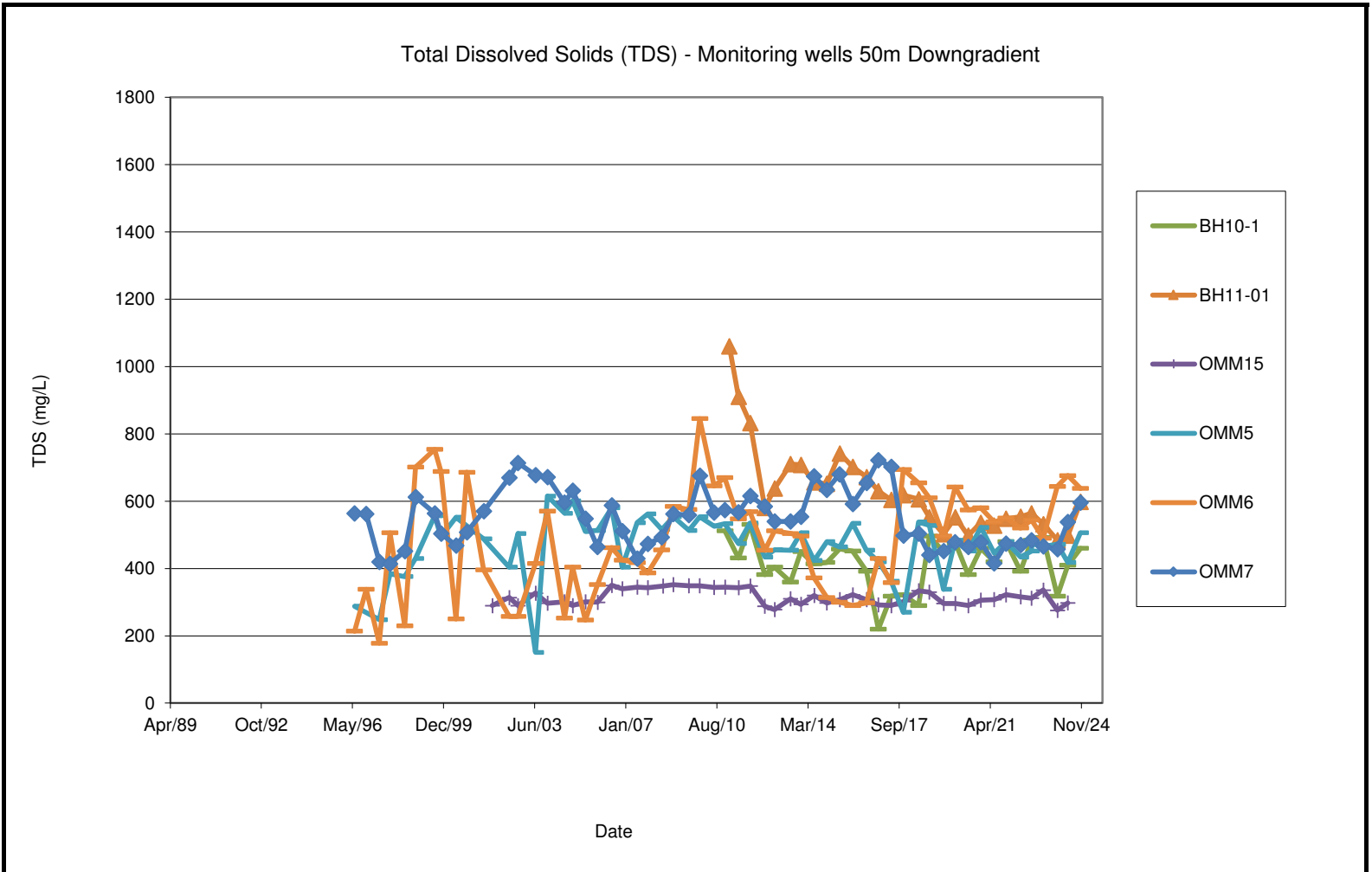
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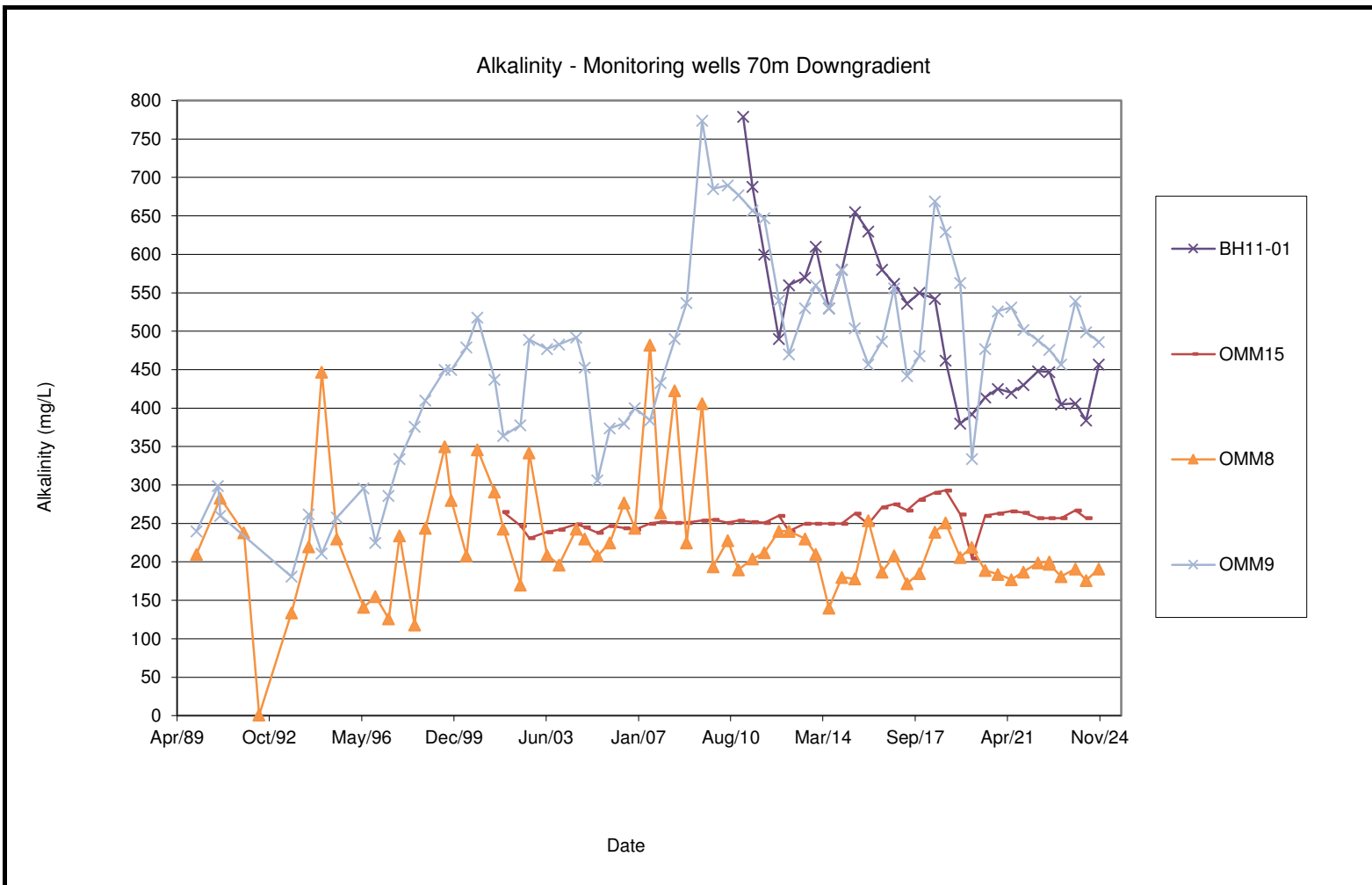
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March 2025

Renfrew WDS GROUNDWATER Sodium







FIGURE

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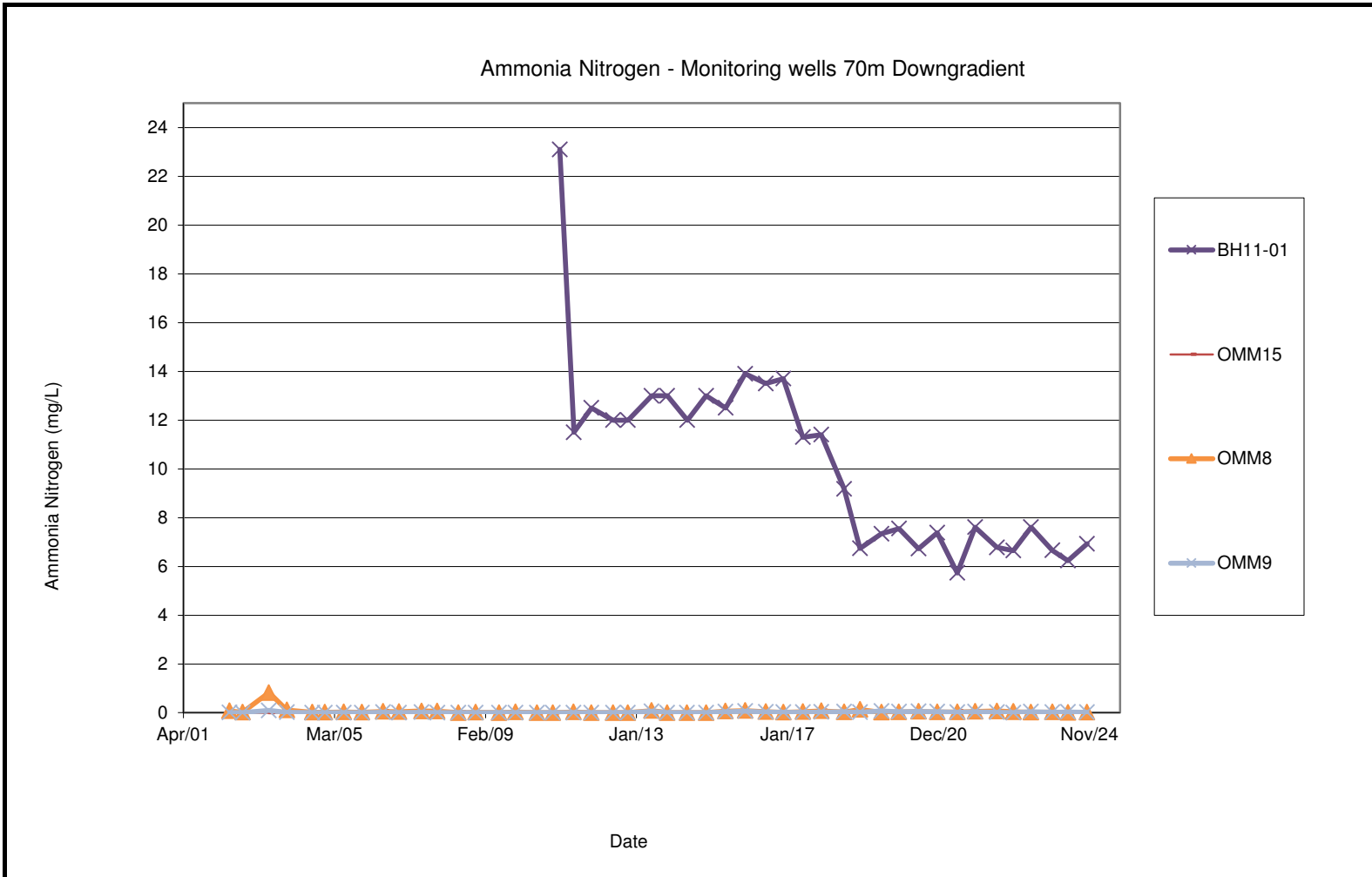
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March 2025

Renfrew WDS GROUNDWATER ALKALINITY





FIGURE

Project No. CA0047282.8803

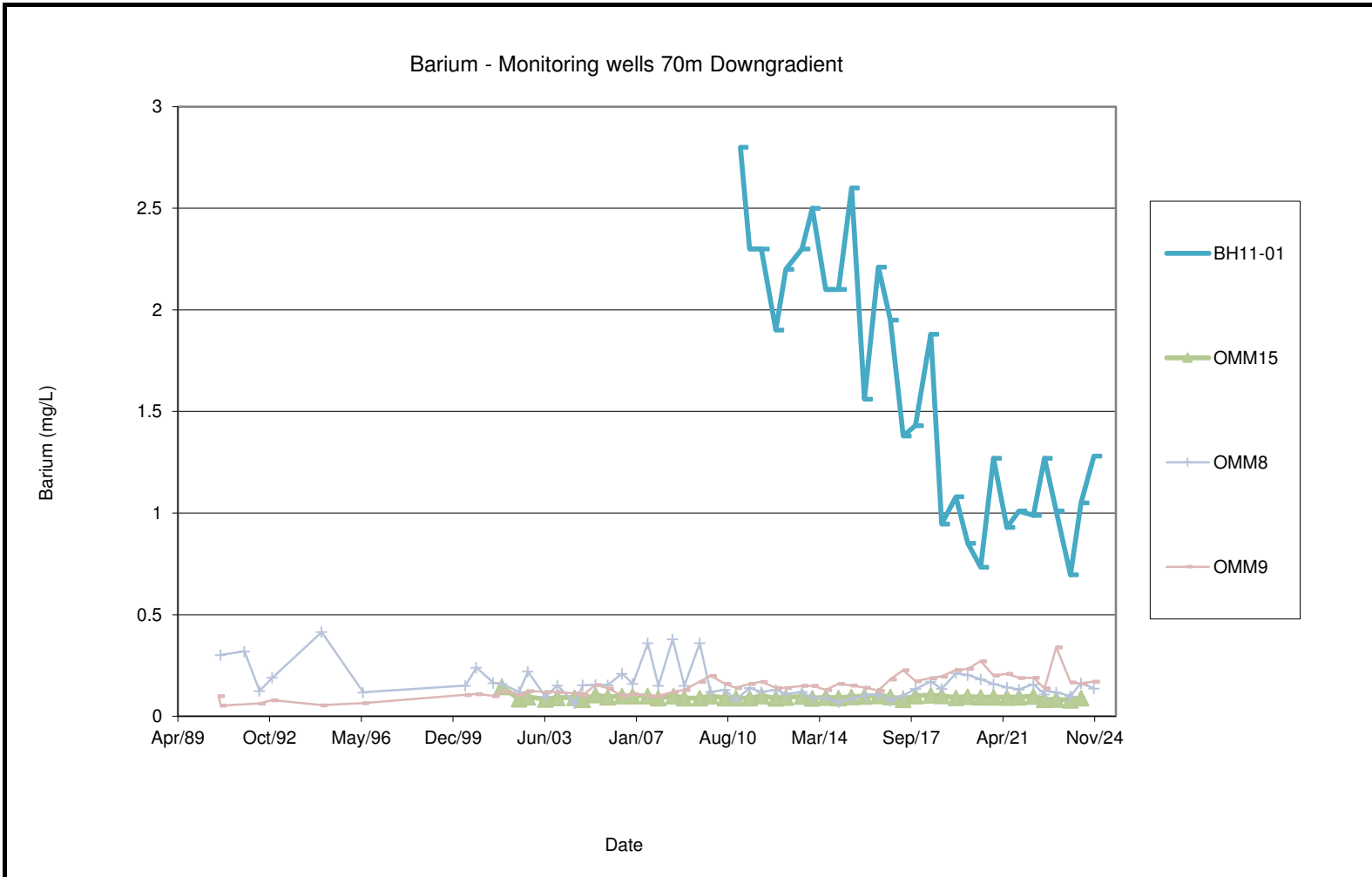
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Checked by: ETB

March 2025

Renfrew WDS GROUNDWATER Ammonia Nitrogen





FIGURE

Project No. CA0047282.8803

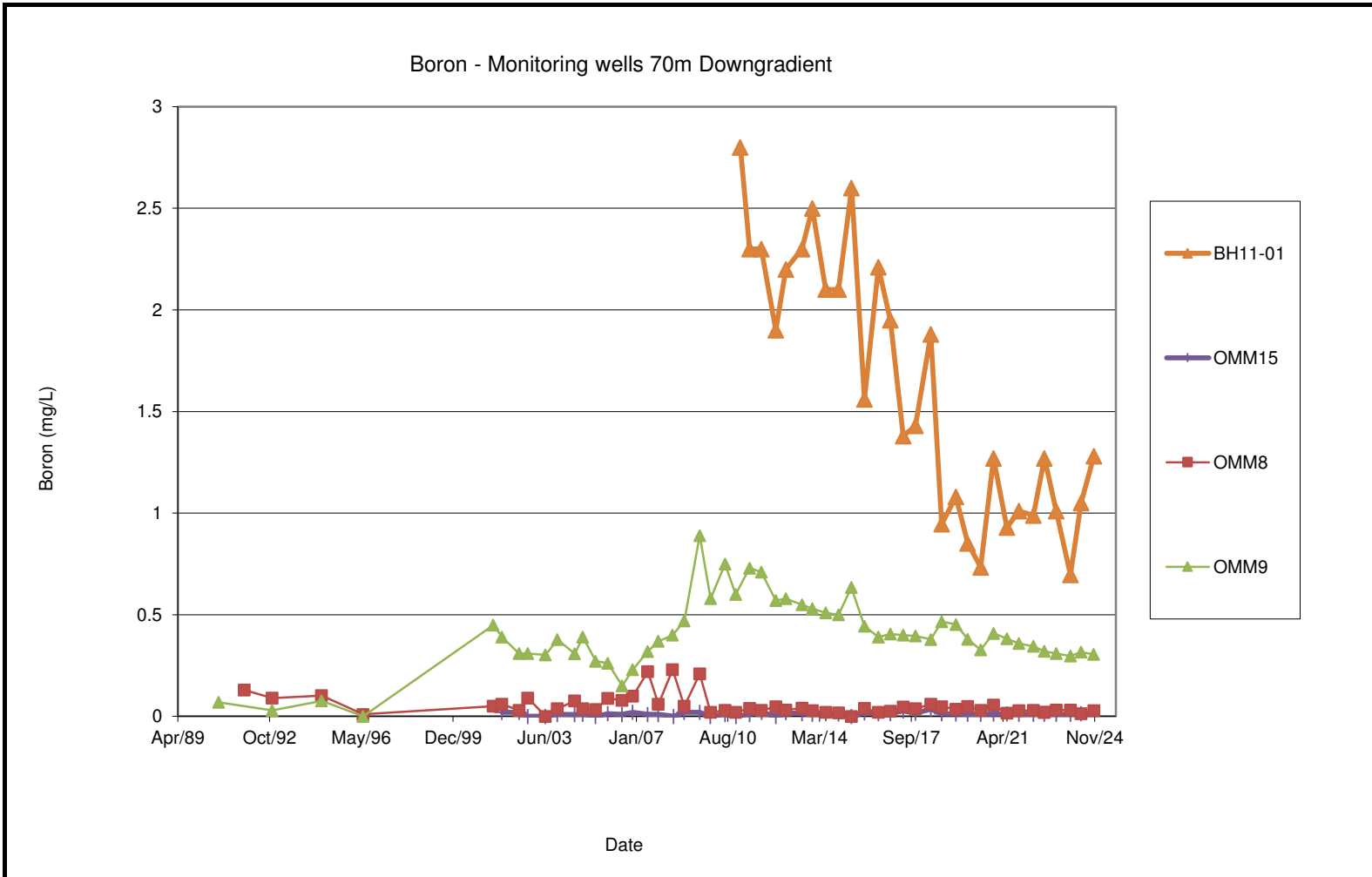
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Checked by: ETB

March 2025

**Renfrew WDS
GROUNDWATER
Barium**





FIGURE

Project No. CA0047282.8803

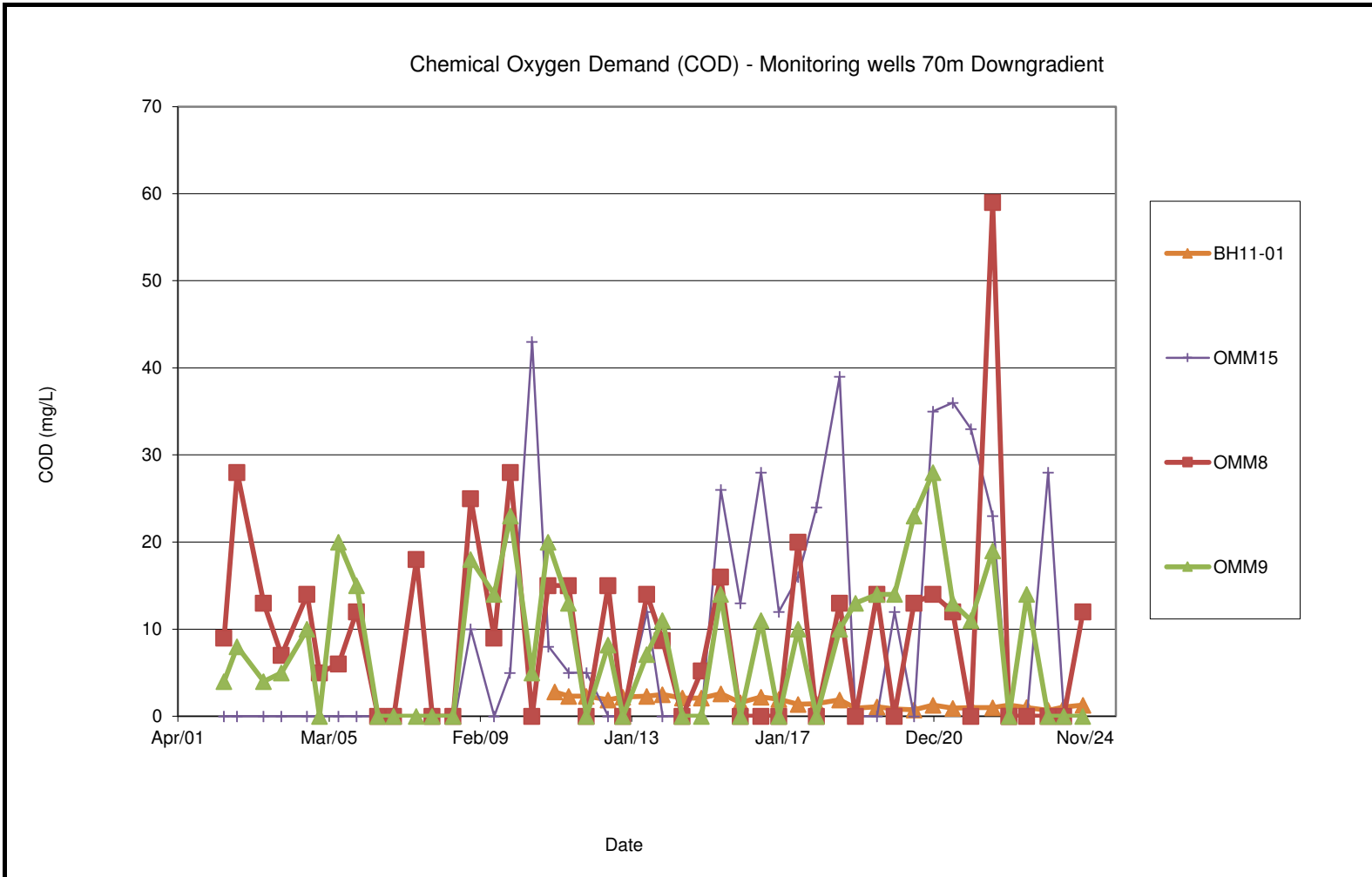
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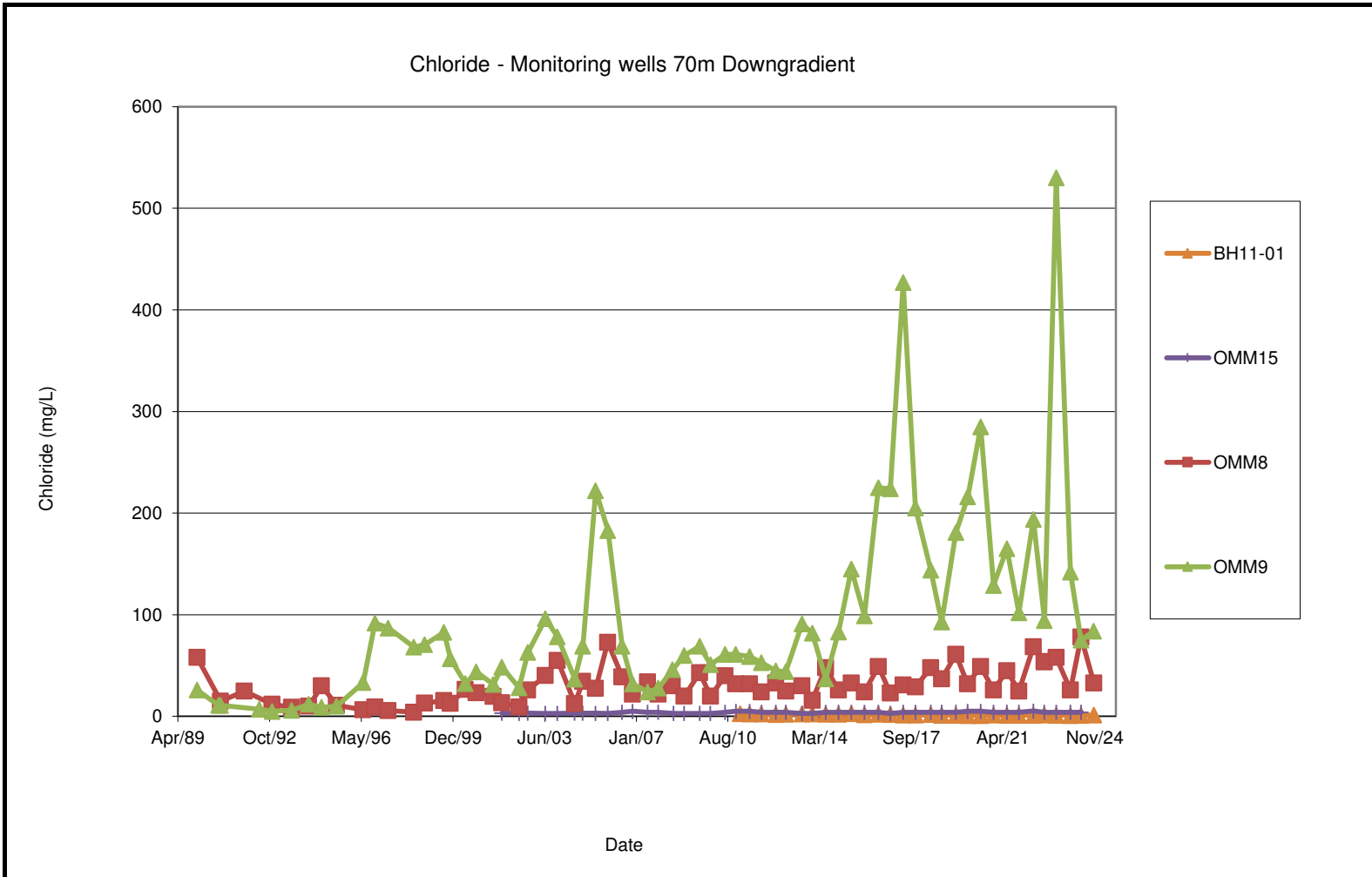
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March 2025

Renfrew WDS GROUNDWATER Boron







FIGURE

Project No. CA0047282.8803

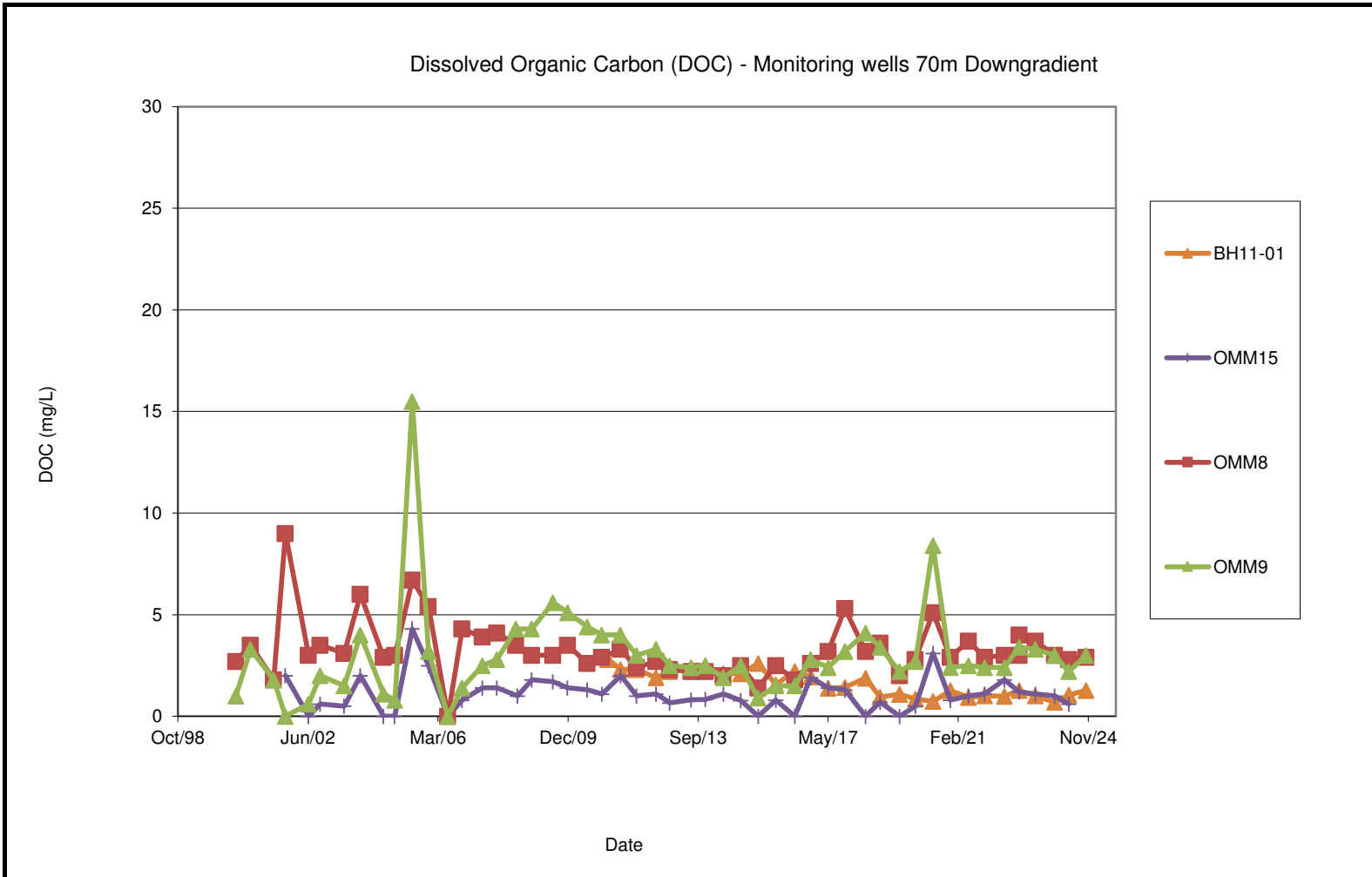
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March 2025

Renfrew WDS GROUNDWATER Chloride





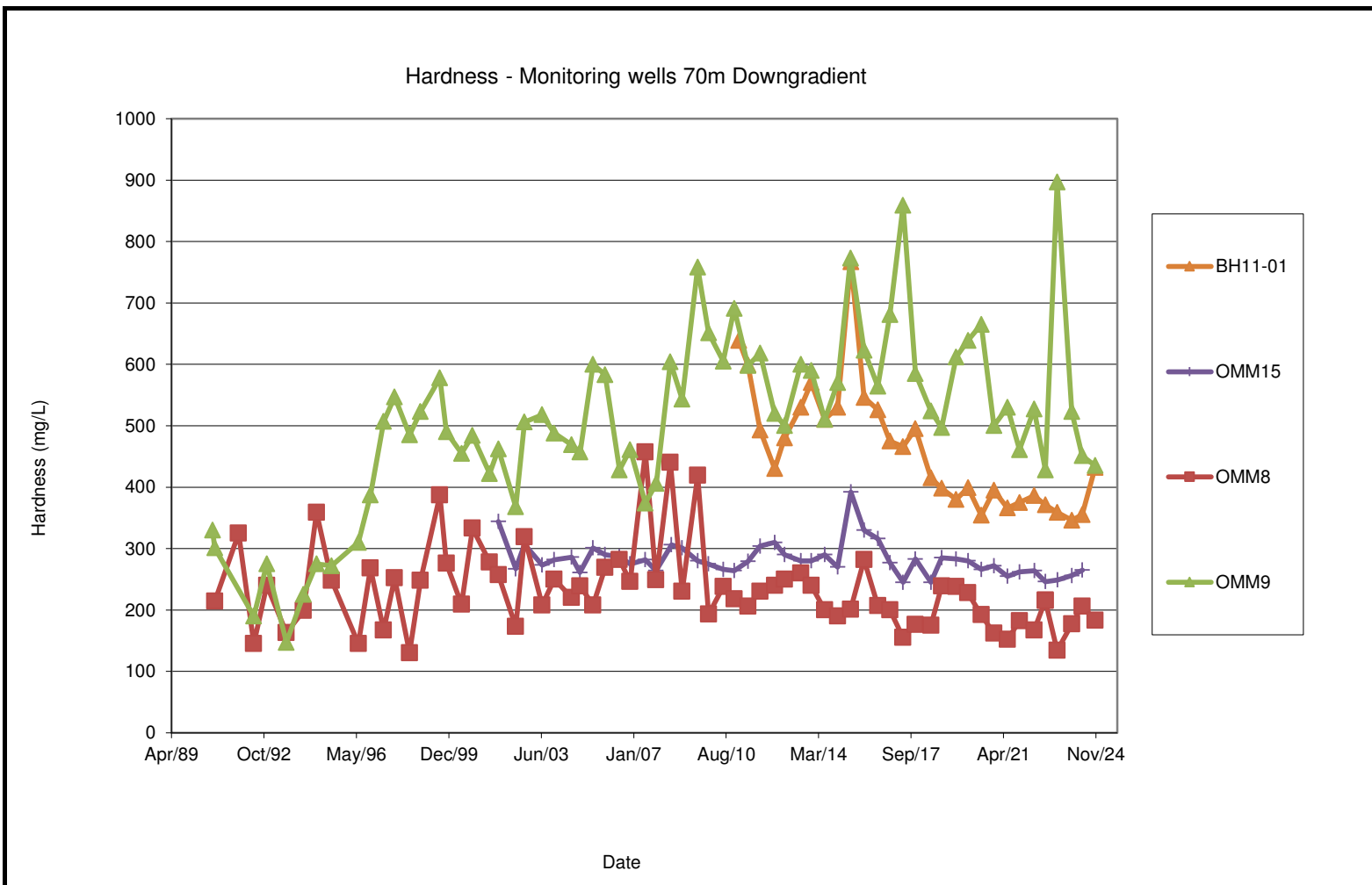
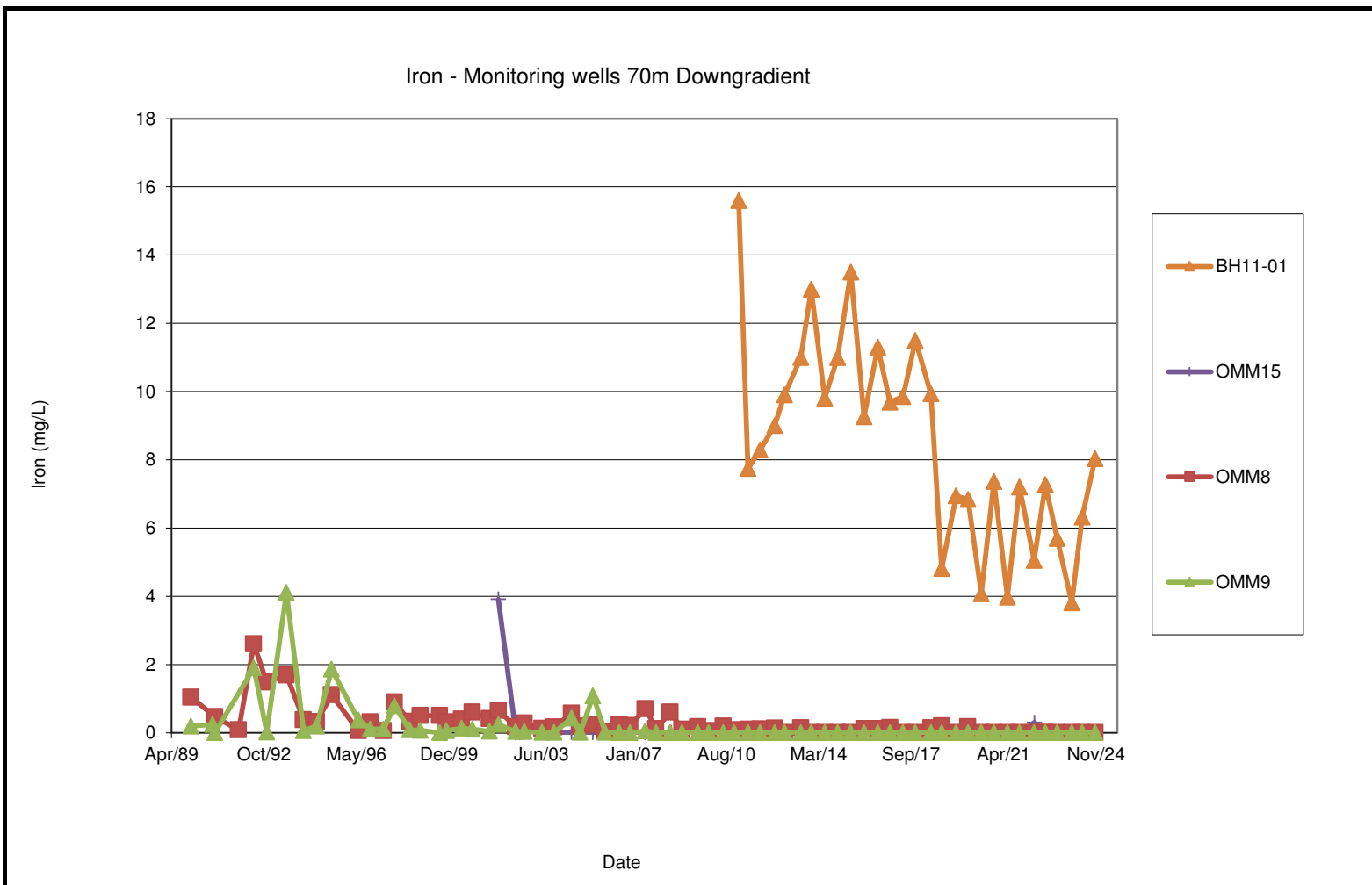


FIGURE Project No. CA0047282.8803 Prepared by: BH Checked by: ETB March 2025	Renfrew WDS GROUNDWATER Hardness	



FIGURE

Project No. CA0047282.8803

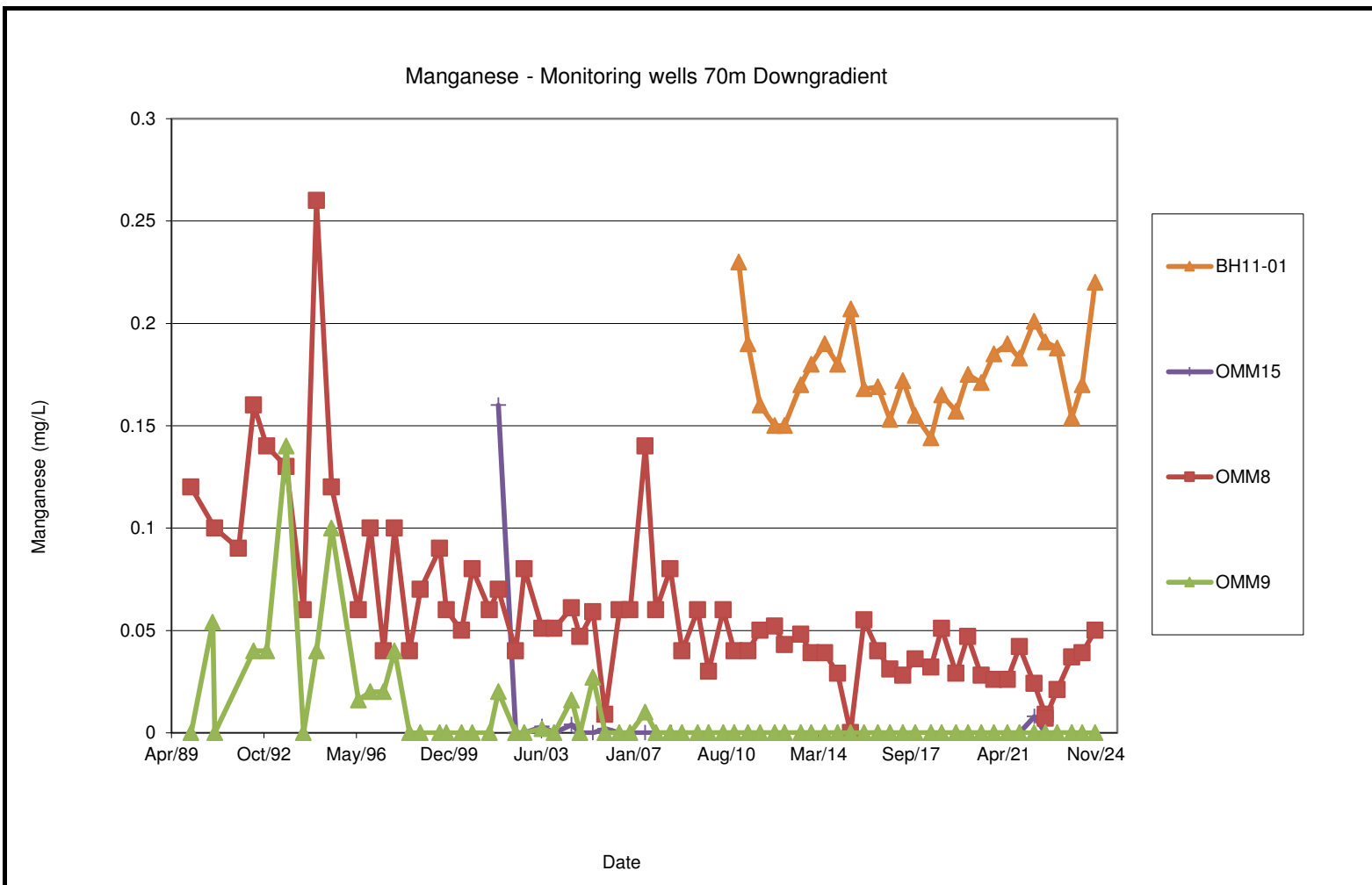
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March 2025

Renfrew WDS GROUNDWATER Iron





FIGURE

Project No. CA0047282.8803

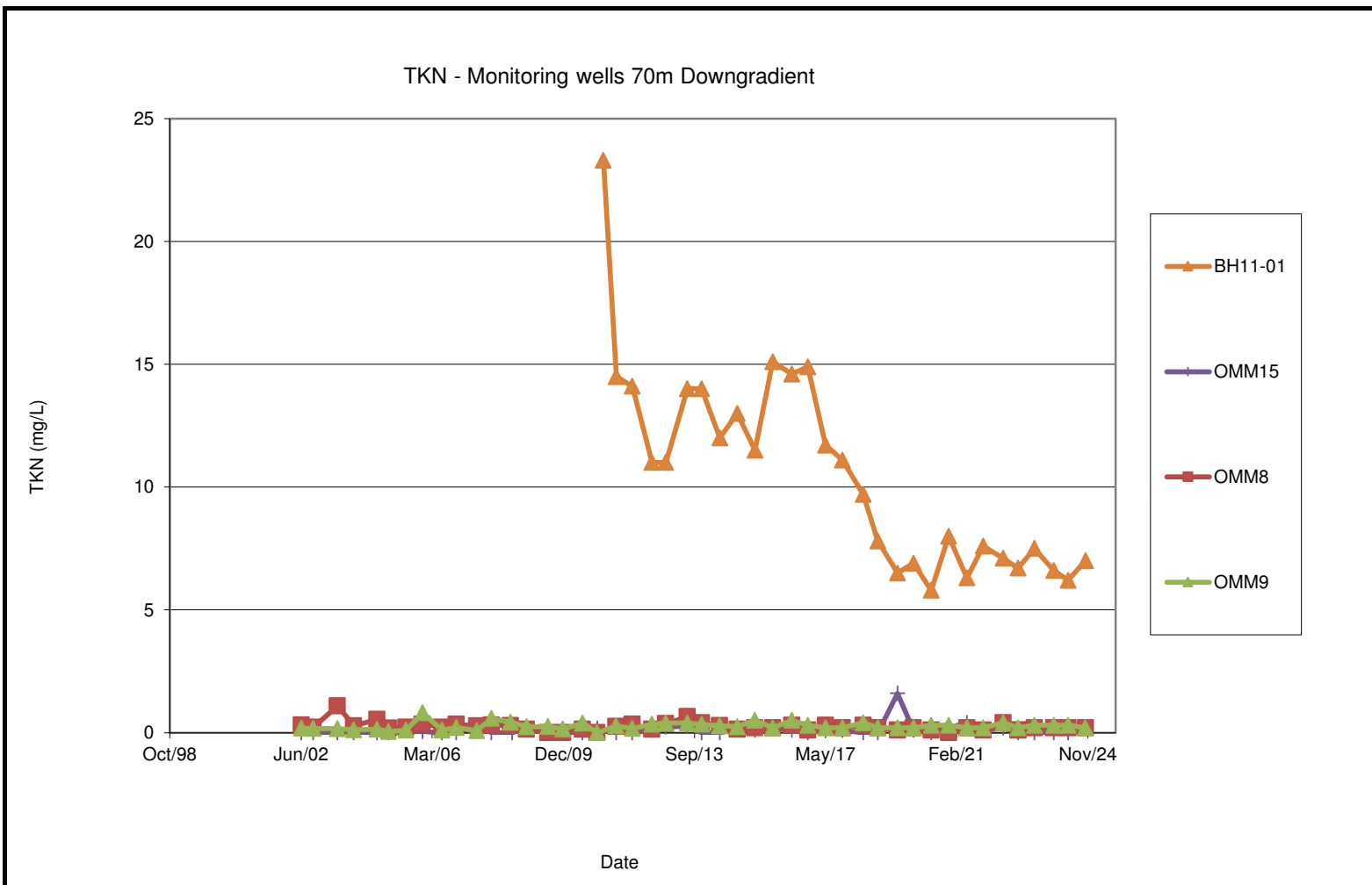
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Checked by: ETB

March 2025

Renfrew WDS GROUNDWATER Manganese





FIGURE

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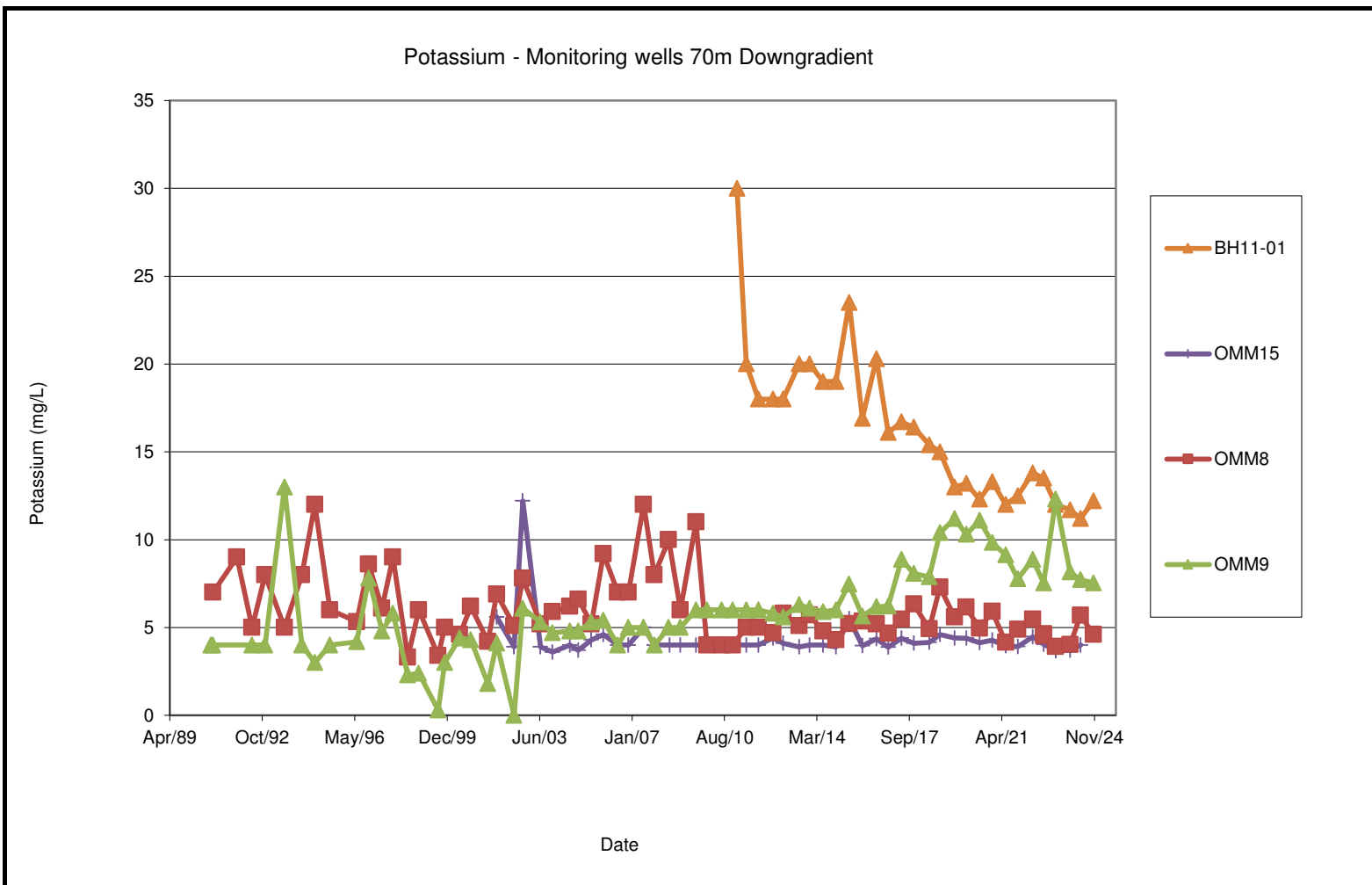
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March 2025

Renfrew WDS GROUNDWATER TKN





FIGURE

Project No. CA0047282.8803

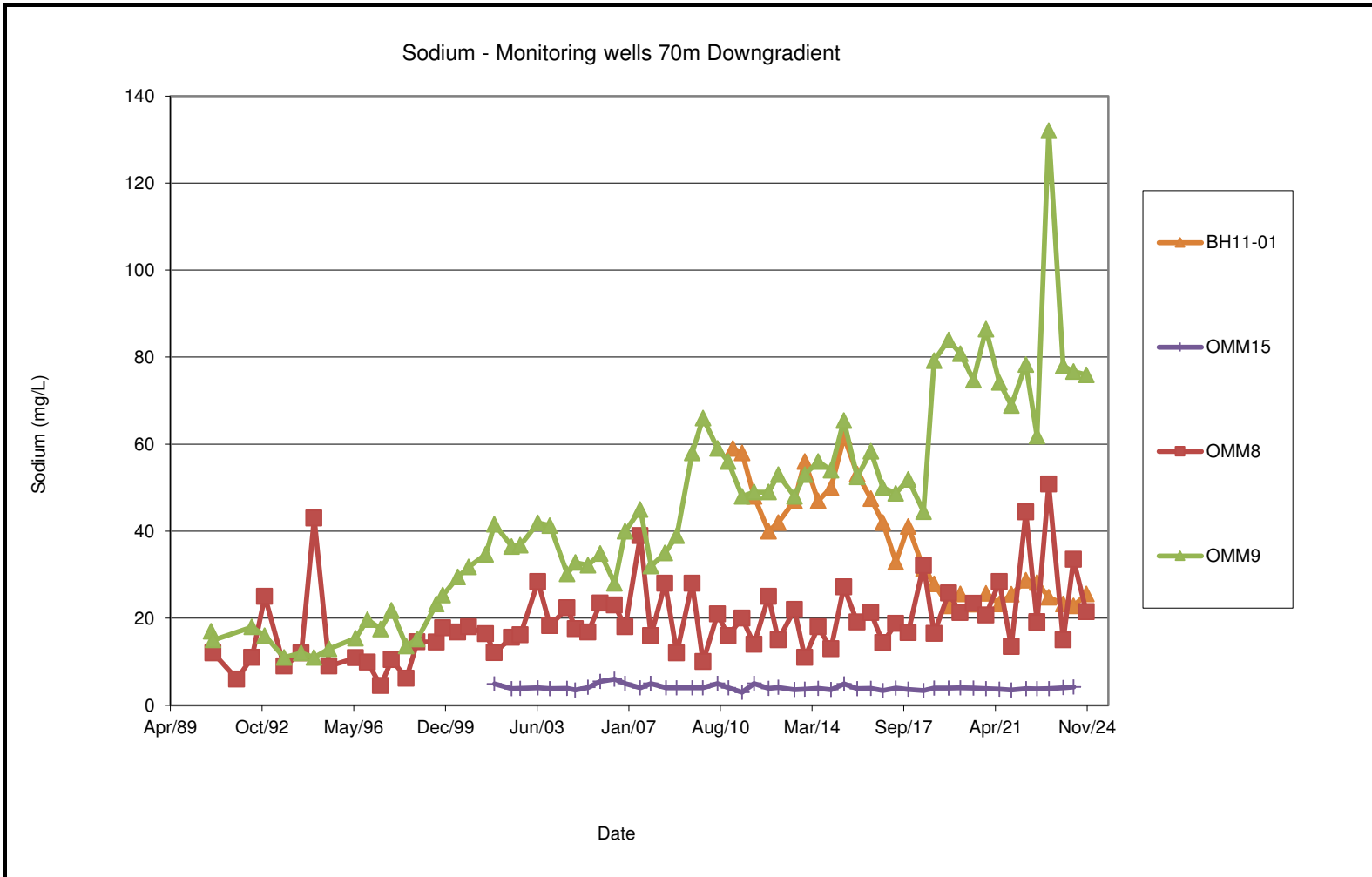
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March 2025

Renfrew WDS GROUNDWATER Potassium





FIGURE

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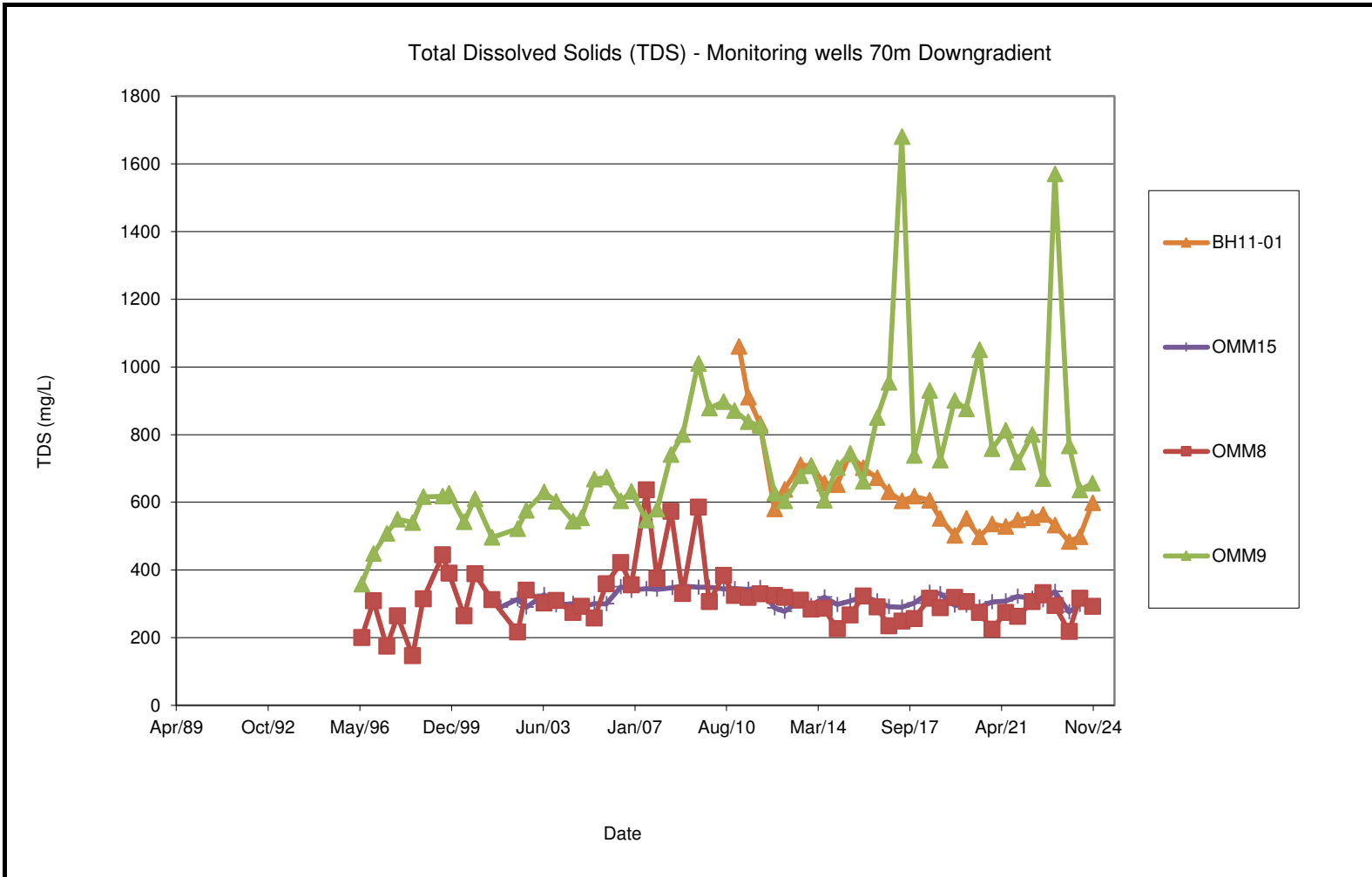
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March 2025

**Renfrew WDS
GROUNDWATER
Sodium**





FIGURE

Project No. CA0047282.8803

Prepared by: BH

Checked by: ETB

March 2025

Renfrew WDS GROUNDWATER TDS



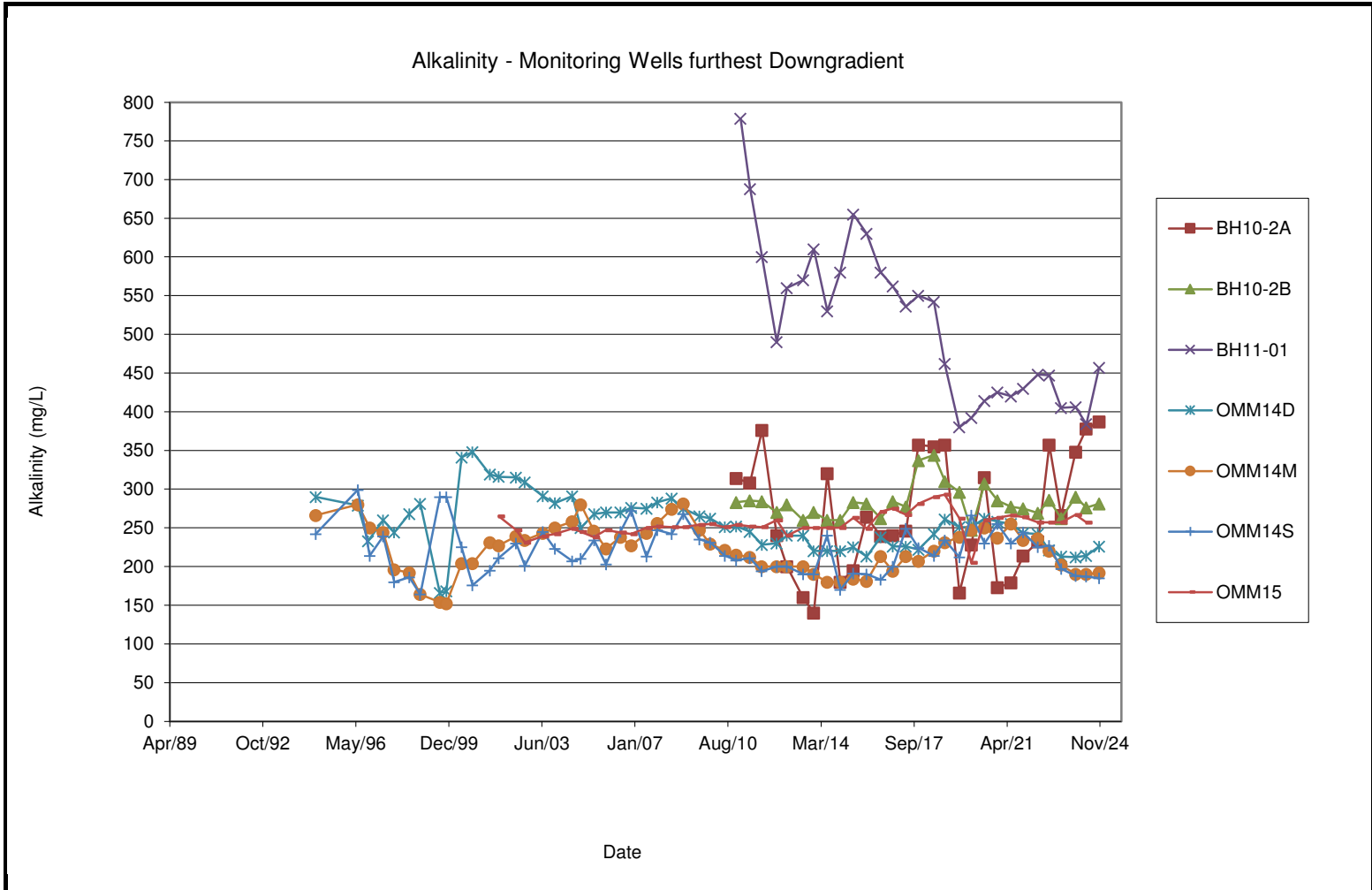
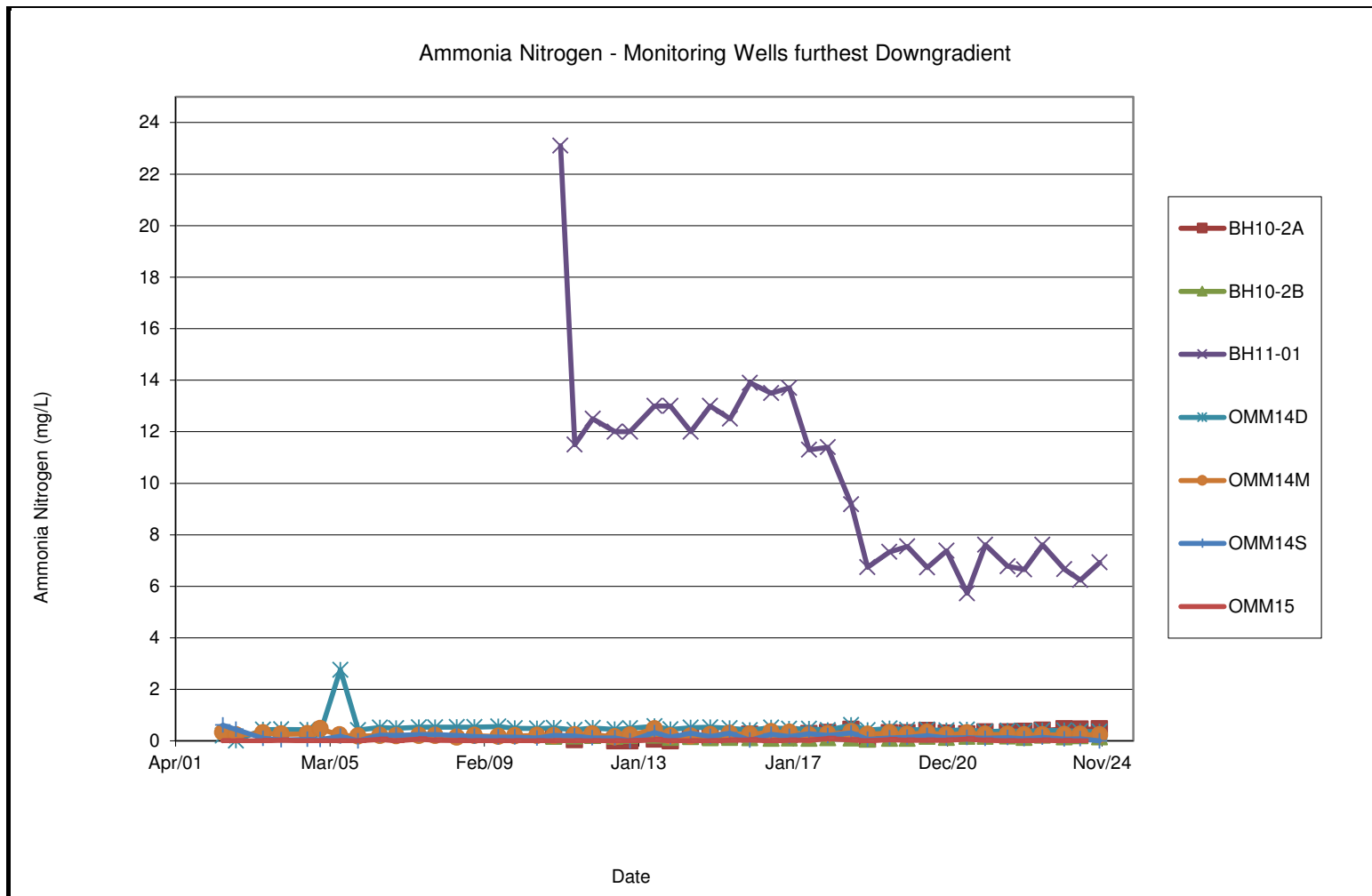


FIGURE Project No. CA0047282.8803 Prepared by: ETB Checked by: BH March 2025	Renfrew WDS GROUNDWATER ALKALINITY	



FIGURE

Project No. CA0047282.8803

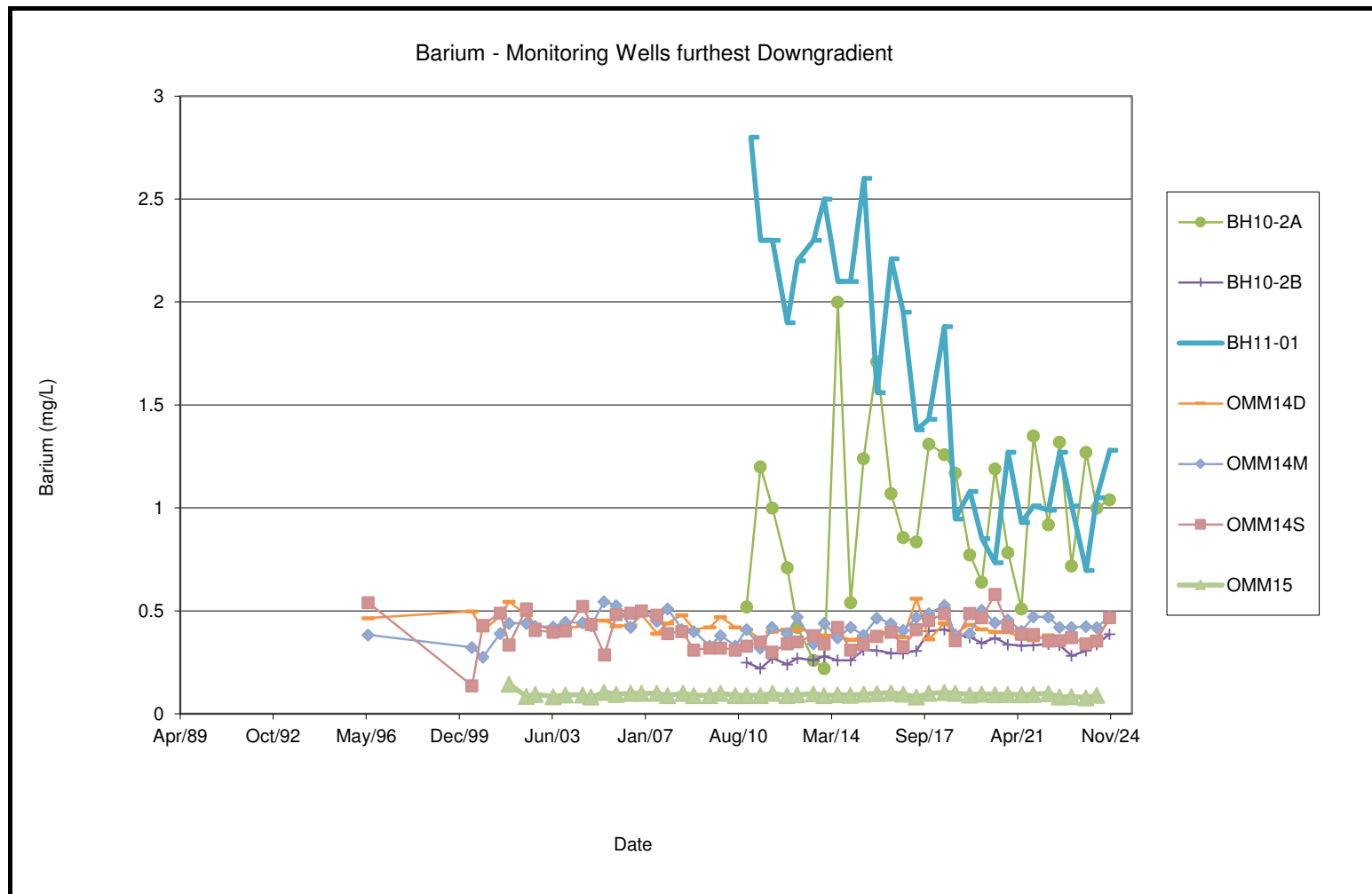
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March 2025

Renfrew WDS GROUNDWATER Ammonia Nitrogen





FIGURE

Project No. CA0047282.8803

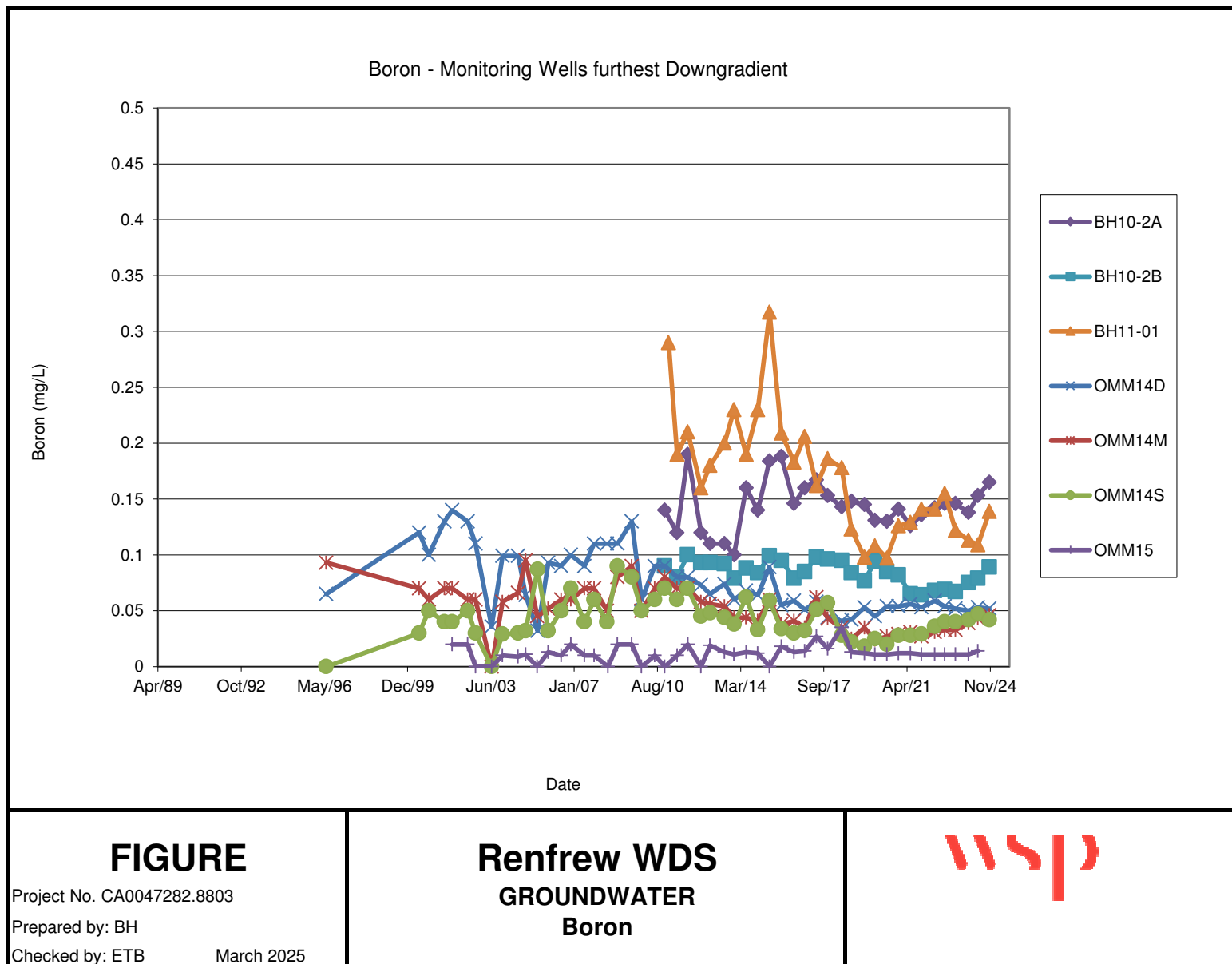
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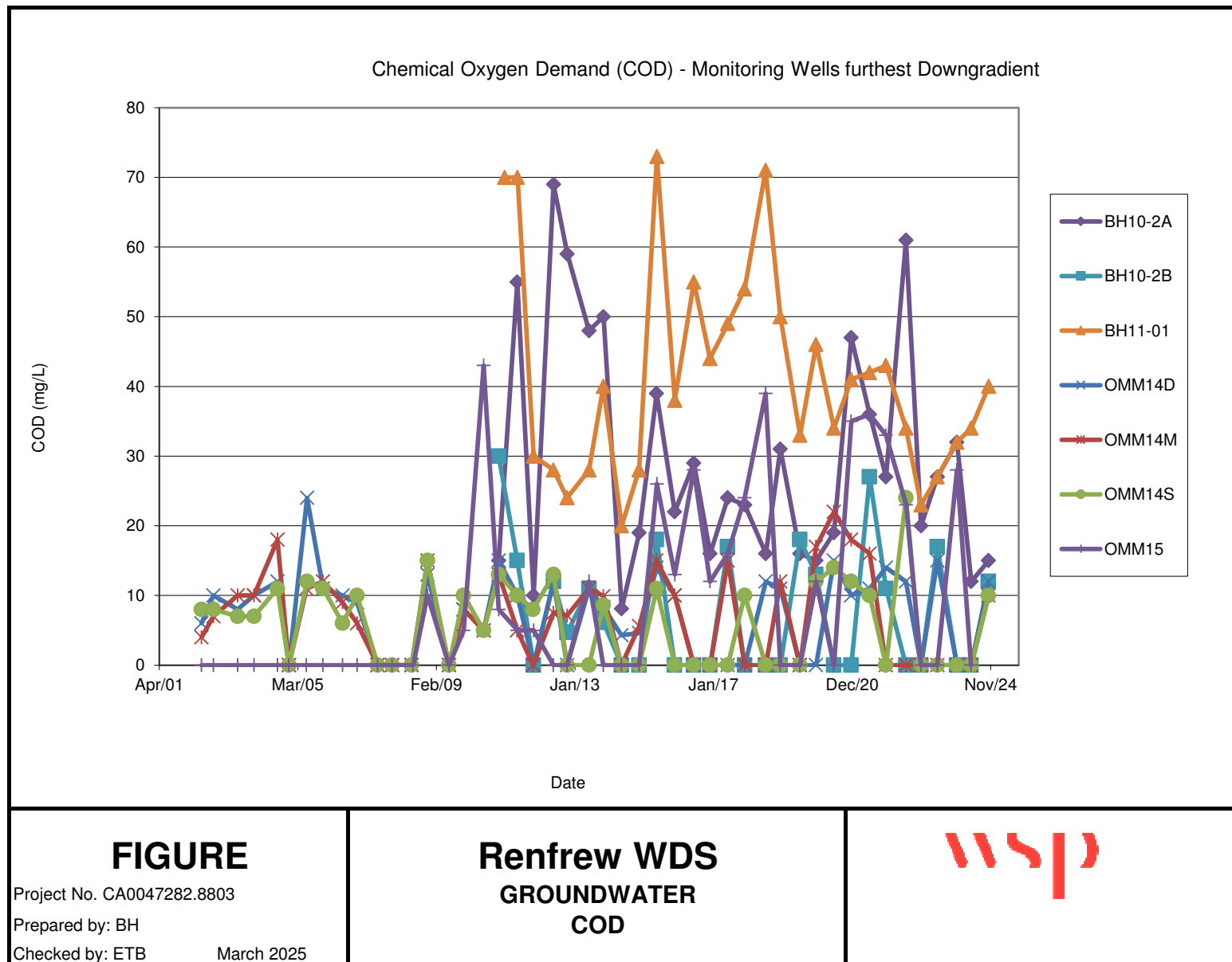
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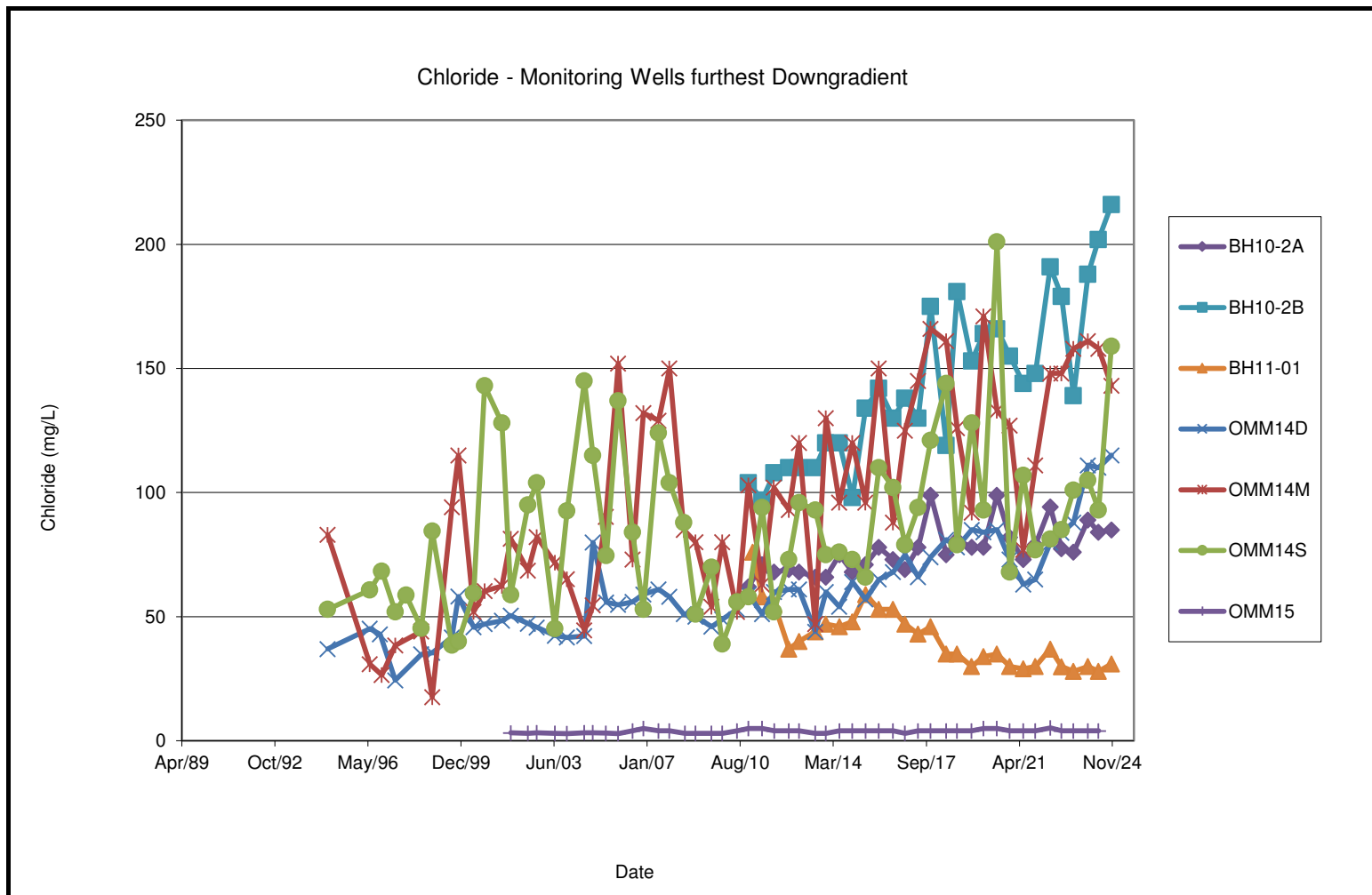
March 2025

Renfrew WDS GROUNDWATER Barium









FIGURE

Project No. CA0047282.8803

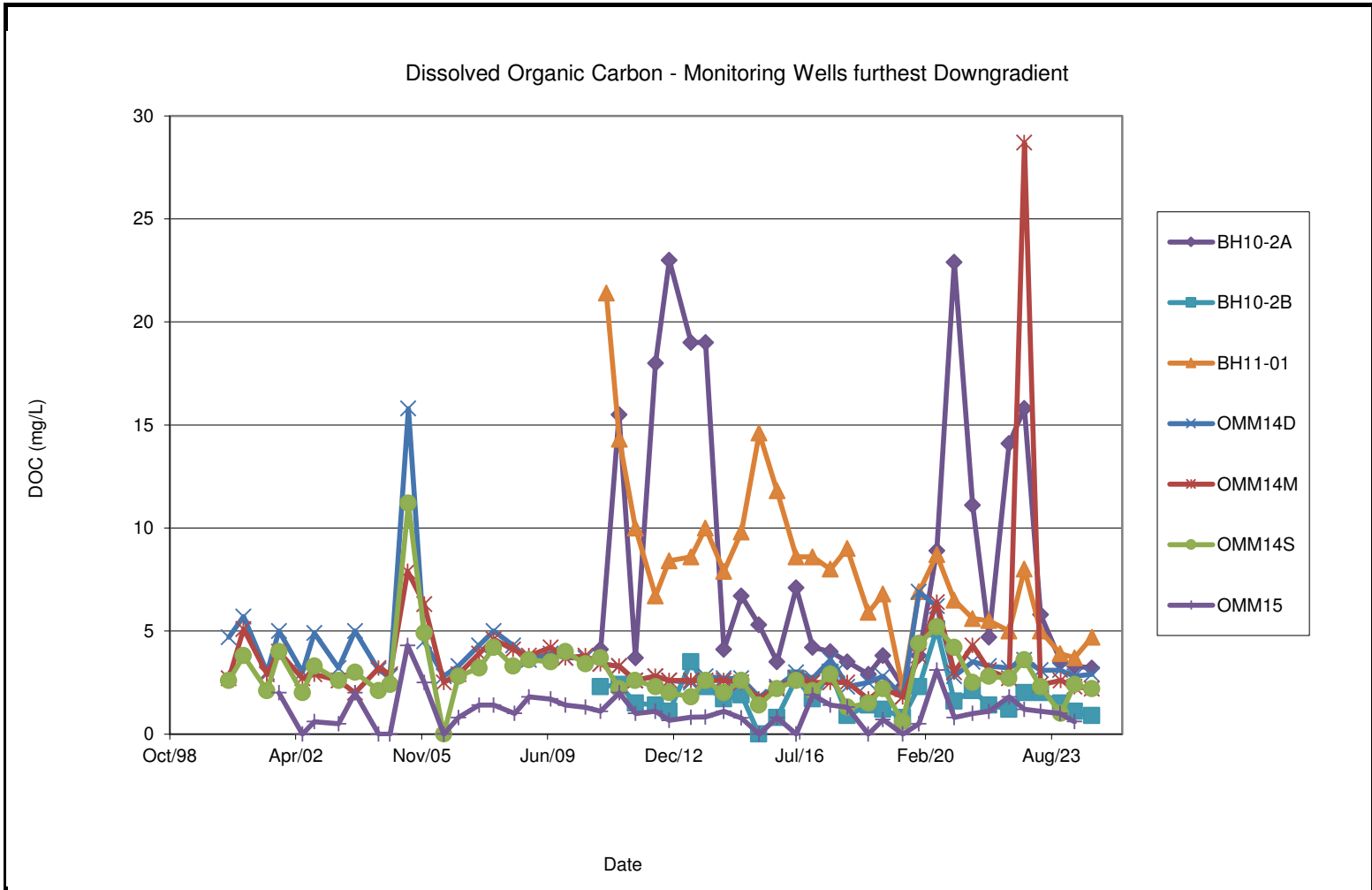
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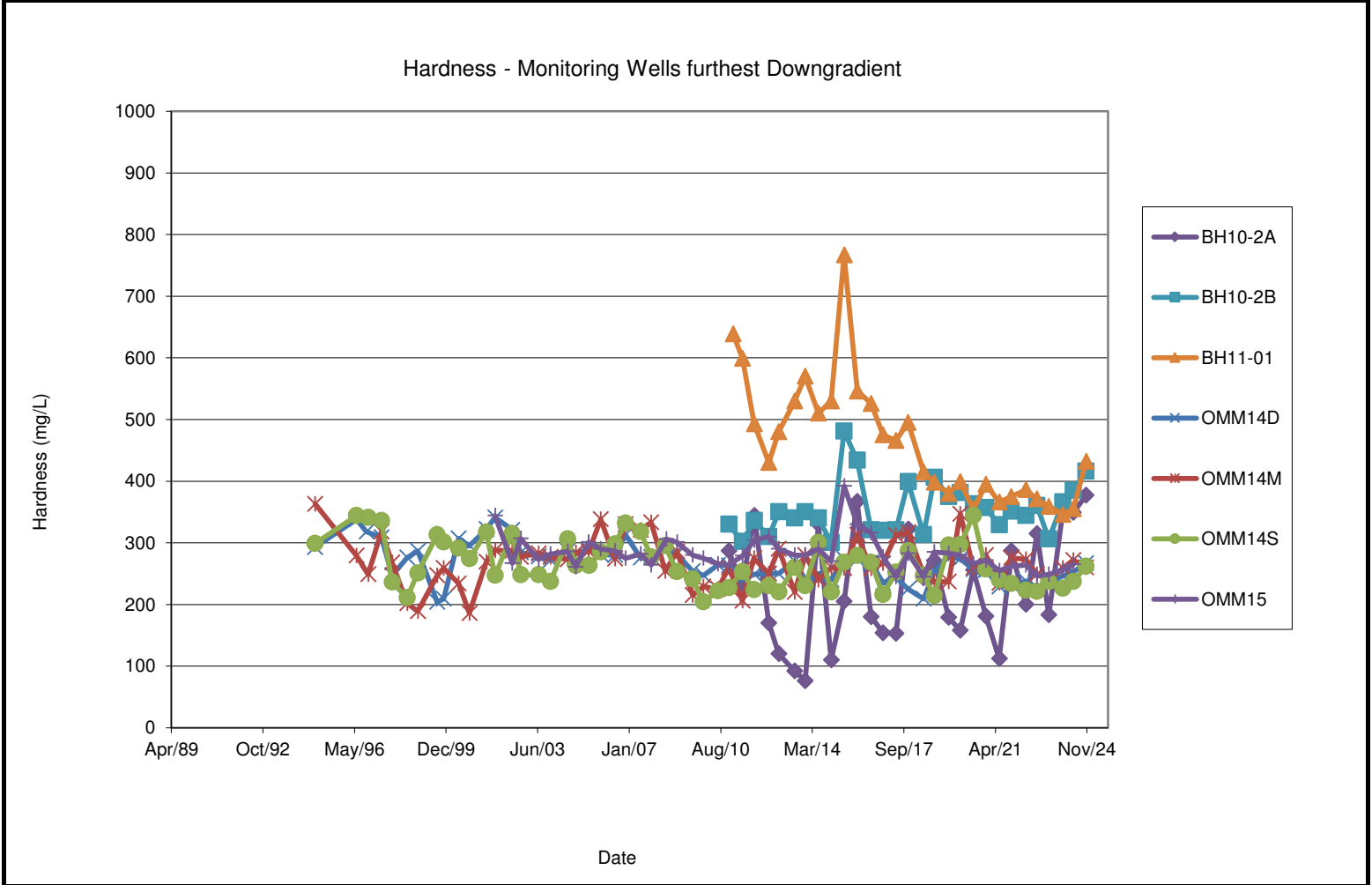
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March 2025

Renfrew WDS GROUNDWATER Chloride







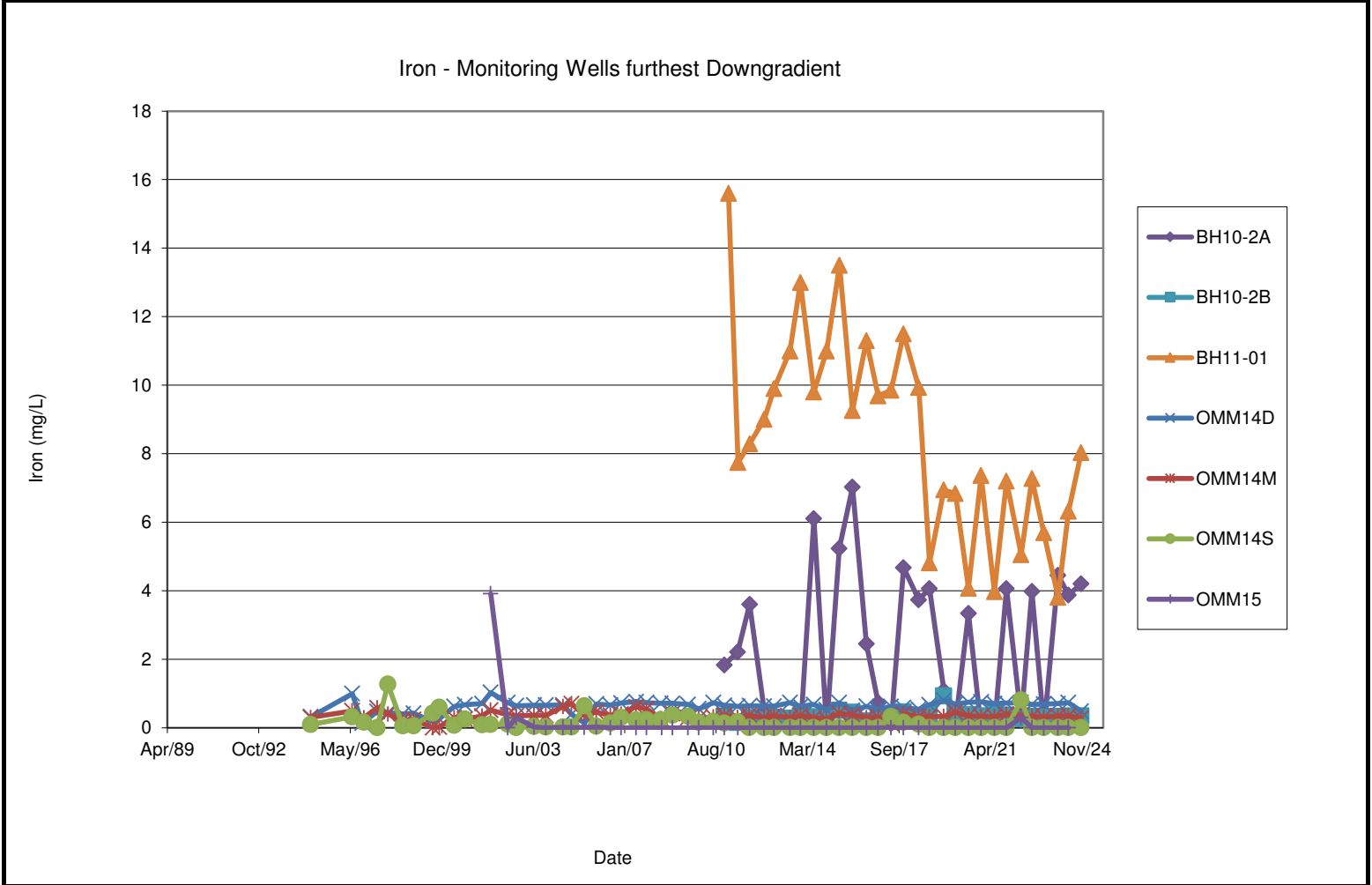


FIGURE Project No. CA0047282.8803 Prepared by: BH Checked by: ETB March 2025	Renfrew WDS GROUNDWATER Iron	

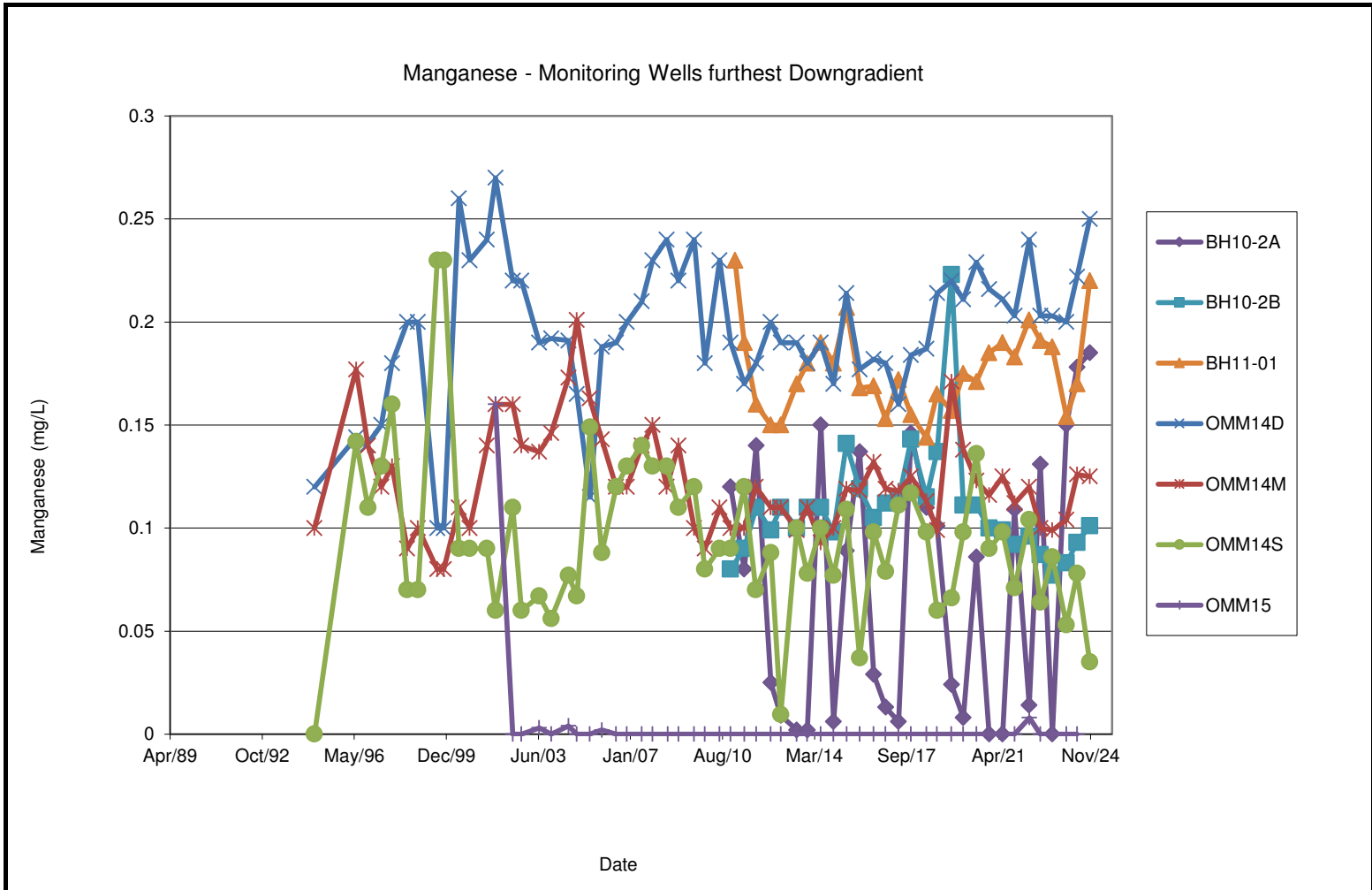
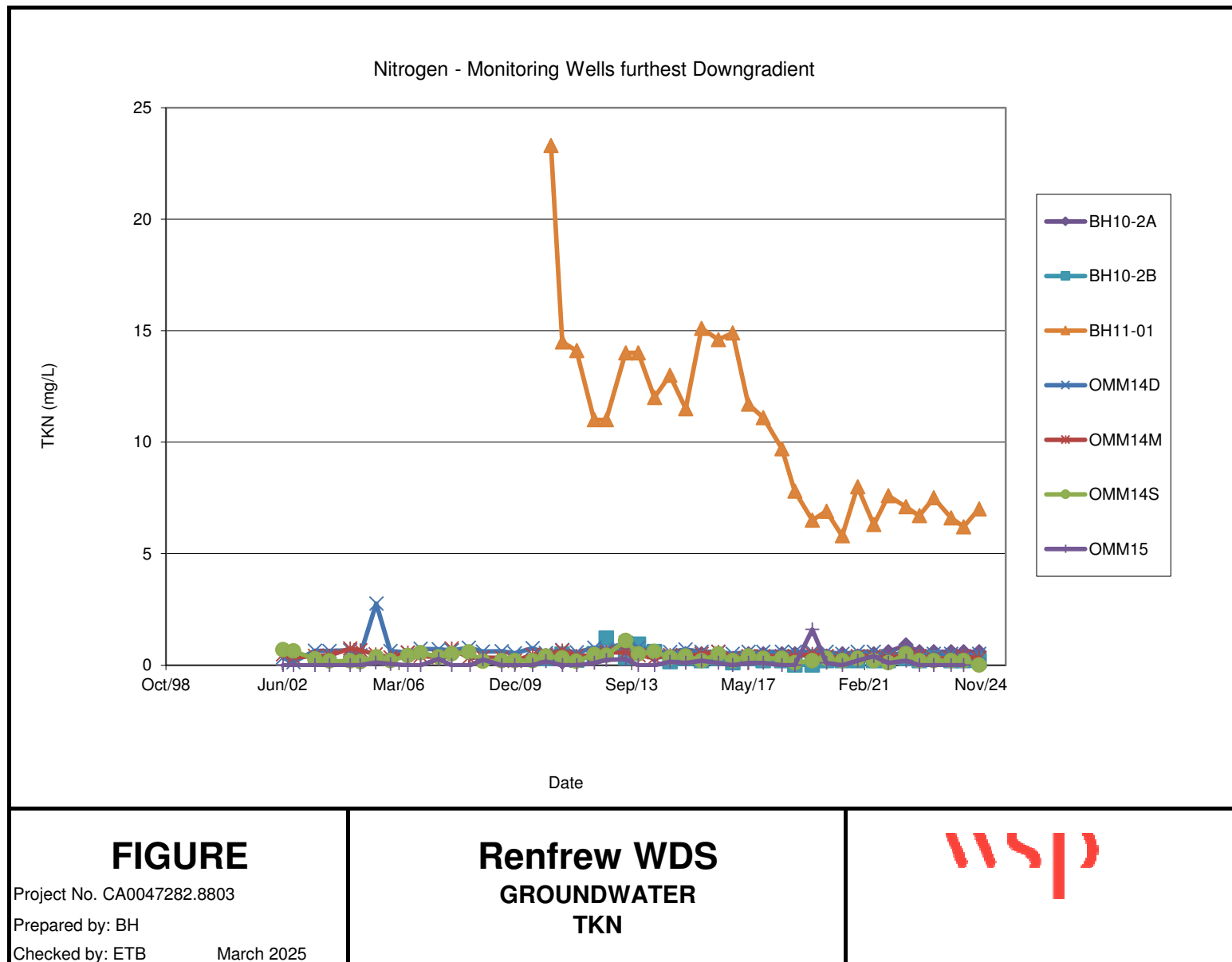


FIGURE Project No. CA0047282.8803 Prepared by: BH Checked by: ETB March 2025	Renfrew WDS GROUNDWATER Manganese	



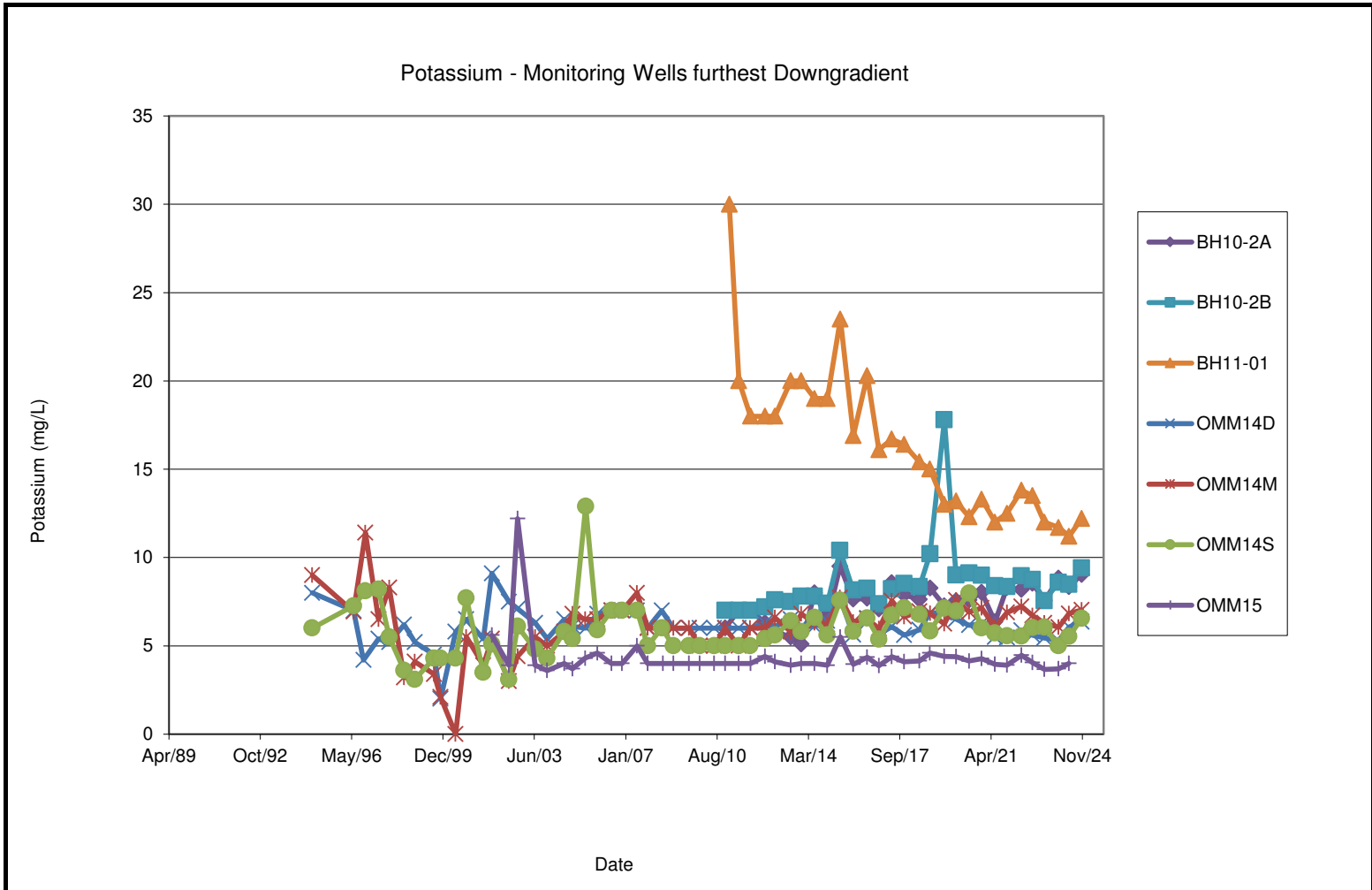


FIGURE Project No. CA0047282.8803 Prepared by: BH Checked by: ETB March 2025	Renfrew WDS GROUNDWATER Potassium	

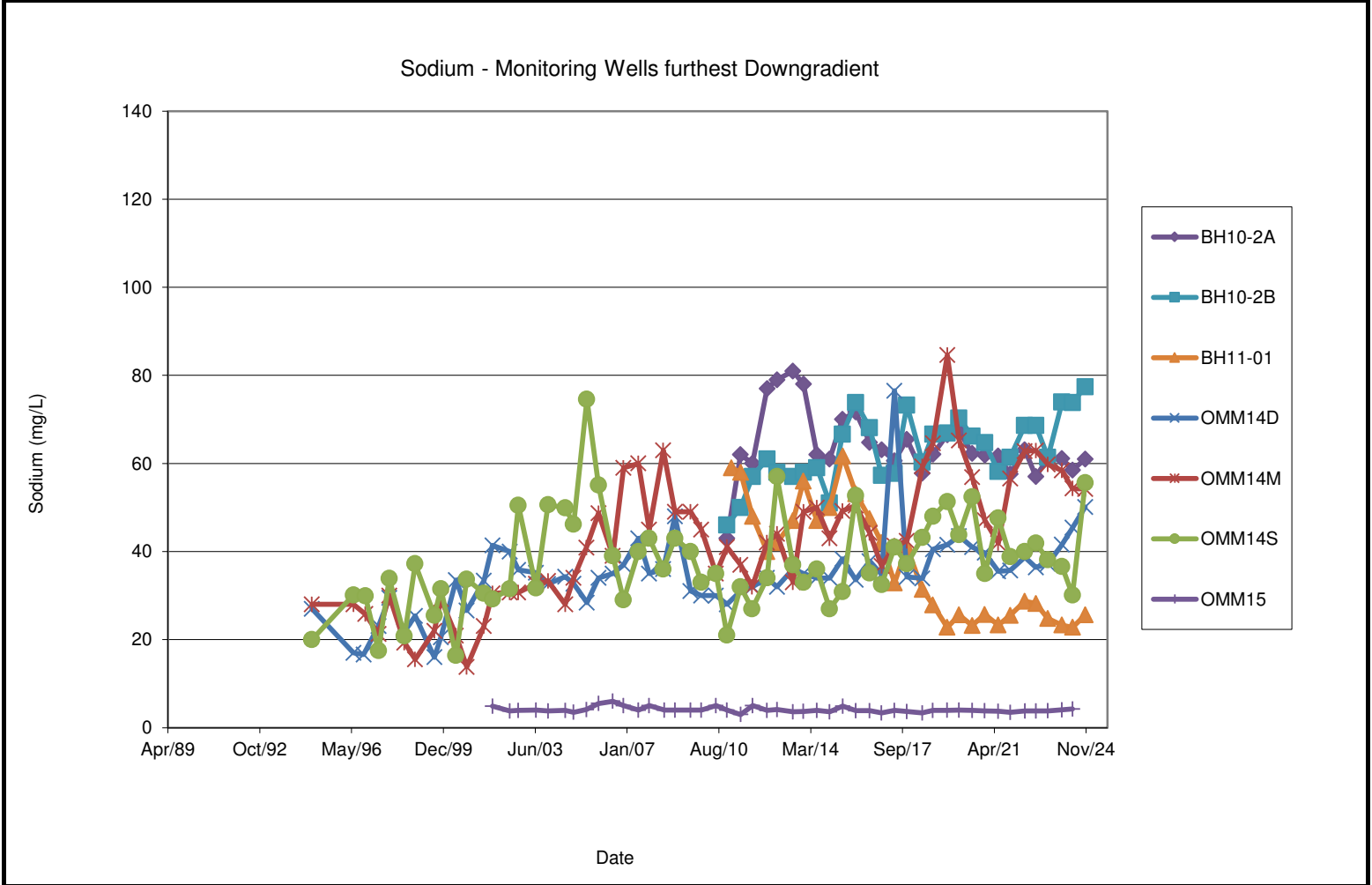


FIGURE Project No. CA0047282.8803 Prepared by: BH Checked by: ETB March 2025	Renfrew WDS GROUNDWATER Sodium	

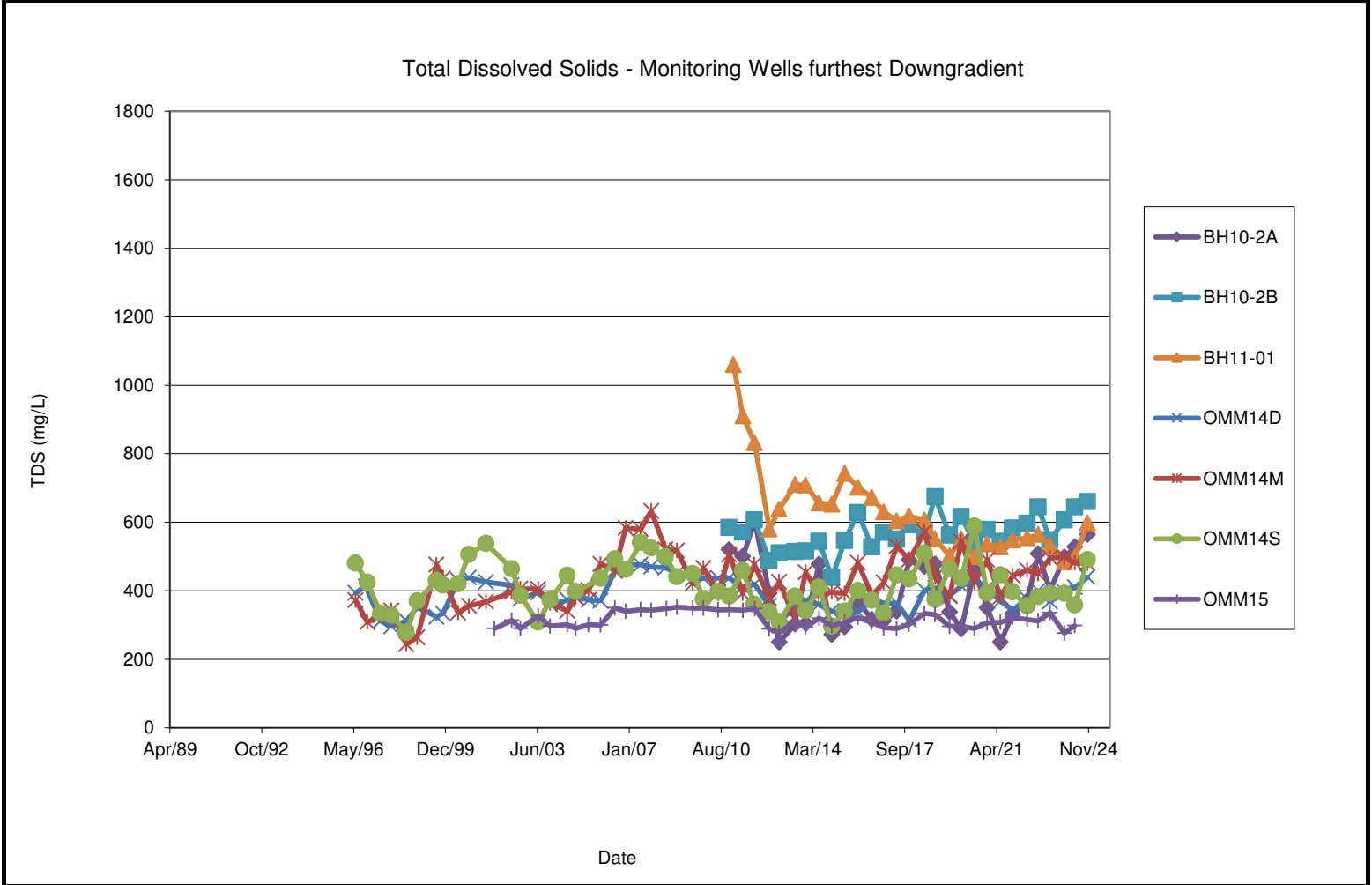


FIGURE Project No. CA0047282.8803 Prepared by: BH Checked by: ETB March 2025	Renfrew WDS GROUNDWATER TDS	

