
DATE: February 16, 2010

REPORT TITLE: **WATER TREATMENT AND QUALITY**
2009 ANNUAL SUMMARY REPORT: MUNICIPAL WATER SUPPLIES

FROM: Dan Labrecque, Commissioner of Public Works

RECOMMENDATION

That the 2009 Annual Summary Report be endorsed to comply with the Ontario Drinking-Water Systems Regulation (O.Reg.170/03) under the *Safe Drinking Water Act, 2002*.

REPORT HIGHLIGHTS

- Schedule 22 of the Ontario Drinking Water Systems Regulation (O.Reg.170/03) under the *Safe Drinking Water Act, 2002* requires drinking water system owners to prepare a Summary Report.
- The Summary Report must be made available by March 31 of each year and presented to the municipal Council.
- The Region of Peel complied with the requirements of the *Safe Drinking Water Act, 2002* and its regulations, and the terms and conditions of all Approvals and Permits for the municipal groundwater and surface water systems with the exception of nine operational conditions. These requirements were not associated with the safety of drinking water or exceeding the Ontario Drinking Water Quality Standards.

DISCUSSION

Background

The municipal drinking water systems in Ontario are governed by the *Safe Drinking Water Act, 2002*, and its regulations. The Ontario Drinking Water Systems Regulation (O.Reg.170/03) prescribes stringent and mandatory requirements to monitor, test and report drinking water quality. Under Schedule 22 of the O.Reg.170/03 the owner of a drinking water system must prepare a summary report and make it available to the municipal Council by March 31 of each year.

The objective of the summary report is to ensure the drinking water system owners regularly review compliance with the terms and conditions of their Approvals, Permits and the requirements of the *Safe Drinking Water Act, 2002* and its regulations. The report must summarize the regulatory requirements that the drinking water system failed to meet. For any such failures, the report must describe the actions taken by the owner to correct these non-compliances.

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The report must also include a summary of the quantities and flow rates of water supplied during the period from January 1 to December 31, 2009, counting monthly average and maximum daily flows for all municipal water systems.

Statement of Compliance with Terms and Conditions

In the year 2009, the Region of Peel complied with the terms and conditions of all Approvals, Permits and the *Safe Drinking Water Act* and its regulations with the exception of nine operational events. These occurrences were found non-compliant with the conditions of the Ontario drinking water regulations and supplementary legislated documents.

Summary of the regulatory requirements that Peel's drinking water systems failed to meet and corrective action taken has been presented in appendix I.

CONCLUSION

The Region of Peel complied with the terms and conditions of all Approvals, Permits and the *Safe Drinking Water Act* and its regulations with the exception of nine non-health related operational conditions. These oversights never compromised the integrity of the water supply and public health.


Staff recommends Council endorse the Summary Report in order to remain in compliance with Schedule 22 under the Ontario Regulation 170/03 for the municipal drinking water systems in the Region of Peel.



Dan Labrecque
Commissioner of Public Works

Approved for Submission:

D. Szwarc, Chief Administrative Officer

 For further information regarding this report, please contact Justyna Burkiewicz, Supervisor, Water Quality and Compliance at extension 4494 or via email at justyna.burkiewicz@peelregion.ca

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c. Legislative Services

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APPENDIX I

Summary of Events - Statement of Compliance

| Report Name | | 2009 Annual Summary Report: Municipal Water Supplies | |
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| Report Date | | February 16, 2010 | |
| Drinking Water System Name | Legislative Requirement | Statement of Non-Compliance | Corrective Action |
| <i>Municipal Groundwater Systems (North Peel)</i> | | | |
| Caledon Village-Alton | O. Reg. 128/04 - Certification of Drinking Water System Operators and Water Quality Analysts, Section 28 Drinking water system operators must have ready access to the comprehensive operations and maintenance manuals that contain plans, drawings, and process descriptions. | During an inspection, the maintenance manuals had sufficient documentation with the exception of the up to date Process Flow Diagram (PFD) and Process and Instrumentations Diagram (PFID). | Complete PFDs and P&IDs were delivered to the stations by June 30, 2009. The current implementation of the quality management system (QMS) includes review and update of all station files. The Operations and Maintenance Manuals and drawings for the treatment systems in Caledon are being revised to reflect all the operational changes. |
| Cheltenham (2008 MOE Inspection) | | | |
| Palgrave (2008 MOE Inspection) | | | |
| Caledon East | O. Reg. 170 – Drinking Water System Regulation, Schedule 6-5(1)8 Drinking water system owner shall ensure that continuous monitoring equipment is checked and calibrated in accordance with the manufacturer's instructions. | UV system was being calibrated and maintained at the recommended monthly frequency, except prior to March 2009 when based on the excellent quality of source water and very low potential for UV lamp fouling calibrations were done every three months. | The Region of Peel staff performs calibration and maintenance of monitoring equipment as set out in the manufacturer's instructions. |
| Alton (2008 MOE Inspection) | Certificate of Approval 2896-6QGKNC, Section 5 Performance of the Ultraviolet (UV) disinfection equipment including UV transmittance, flow rate, UV lamp status, and UV dose must be continuously monitored and recorded. | The station UV system monitored all parameters as required; however, the 2008 inspection findings showed not all information was recorded in the form of data trends. | Computer programming has since been modified and effective January 1, 2009 trends have been generated in a new reporting format that clearly demonstrates the operation and performance of the UV units. |

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| <p>Palgrave</p> | <p>O. Reg. 170 – Drinking Water System Regulation, Schedule 6, Section 6-5 Chlorine residuals and water flows must be continuously monitored and recorded to ensure adequate disinfection of water supplies.</p> | <p>Water safety parameters were continuously monitored, demonstrating adequate disinfection; however, the inspection findings showed all recorded information could not be presented in the form of data trends.</p> | <p>The system continuously monitors and calculates the minimum, maximum, and average data and these daily values are presented as a Monthly Report. The Region is seeking regulatory relief from this particular requirement.</p> |
| <p><i>Municipal Surface Water Systems (South Peel)</i></p> | | | |
| <p>Lakeview</p> | <p>O. Reg. 170 – Drinking Water System Regulation, Schedule 1, Section (2) – 2 Drinking water system must be operated in accordance with the <i>Procedure for Disinfection of Drinking Water in Ontario</i>. Condition 3.4.1 of the <i>Procedure</i> states that the treatment process consisting of conventional filtration must use a chemical coagulant at all times when in operation.</p> <p>Certificate of Approval No. 2574-6YFR7U, Section 3.11 Surface water systems are not permitted to discharge a contaminant into the natural environment that causes or is likely to cause an adverse effect.</p> | <p>All treatment equipment was operated as required with the exception of February 24, 2009 when the chemical pump testing performed by OCWA's operational staff caused an interruption in the chemical coagulant flow.</p> <p>On May 21, 2009 the Airport Road Pumping Station accidentally discharged 1.3 litres of glycol into the sanitary floor drain system and on July 17, 2009, the Lakeview Water Treatment Plant accidentally discharged 9 litres of hydrofluosilicic acid into a containment area and the sanitary floor drain system.</p> | <p>This short interruption did not impact the treatment process. Action taken by the operating authority included implementation of a procedure for testing chemical coagulant pumps and training sessions to operations staff.</p> <p>Action taken included immediate containment of the spill, notification and reporting of the incident and appropriate management and disposal of the contaminant.</p> |
| <p>Lorne Park</p> | <p>O. Reg. 170 – Drinking Water System Regulation, Schedule 16, Section (16.3) Drinking water system owner and operating authority must report events when the filtered water turbidity tested by continuous monitoring equipment is greater than 1 NTU in two samples taken 15 minutes apart.</p> | <p>Quality of filtered water met the standard with the exception of August 21, 2009 when turbidity was found above 1 NTU for an unknown period of time. The filter's automatic shut down response and process alarm notification were impacted by communication loss within the plant caused by severe weather and power interruption. This resulted in OCWA's staff being unable to confirm whether the filter effluent turbidity exceeded the standard of 1NTU for a period longer than 15 minutes.</p> | <p>Actions taken included manual filter shut down and sampling for turbidity at locations downstream from the filter. The Region of Peel has since installed a surge protection system and revised the programming process to automatically shut down the filters in the event of a communication loss between the filter turbidity analyzer and the computer system recording the data.</p> |

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| | <p>Certificate of Approval No. 5498-7CGSRB, Section 3.11 Surface water systems are not permitted to discharge a contaminant into the natural environment that causes or is likely to cause an adverse effect.</p> | <p>On March 12, April 9, April 19, and November 28, 2009 the Lorne Park Water Treatment Plant discharged chlorinated water into Lake Ontario.</p> | <p>Action taken included shut down of transfer pumps to stop the discharge of chlorinated water, resetting of the sodium bisulphate pumps, servicing of the monitoring equipment, and addition of sodium bisulphate to neutralize chlorinated water.</p> |
| | <p>O. Reg. 170 – Drinking Water System Regulation, Schedule 1, Section (2)-2 Drinking water system must be operated in accordance with the <i>Procedure for Disinfection of Drinking Water in Ontario</i>. Condition 3.4.1 of the <i>Procedure</i> states that the treatment process consisting of conventional filtration must use a chemical coagulant at all times when in operation.</p> | <p>All treatment equipment was operated as required with the exception of November 28, 2009 when the interruption of coagulant flow occurred.</p> | <p>This short interruption did not impact the treatment process. The immediate action taken included filter shut down and back-flushing of water downstream from the filtration process.</p> |

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