

2. STATEMENT OF COMPLIANCE AND NON-COMPLIANCE

I. SOUTH PEEL (Municipal Surface Water Systems)

In the year 2009, the Region of Peel complied with the terms and conditions of all Approvals, Permits, Safe Drinking Water Act, Ontario Drinking-Water Quality Standards Regulation (O.Reg.169/03) and the Drinking-Water Systems Regulation O.Reg.170/03 with the exception of the following five events:

Lakeview Drinking Water System

O. Reg. 170 – Drinking Water System Regulation, Schedule 1, Section (2) - 2

Under Section (2) 2 of Schedule 1, a drinking water system must be operated in accordance with the Ministry's *Procedure for Disinfection of Drinking Water in Ontario*. Condition 3.4.1 of the *Procedure* states that the treatment process consisting of conventional filtration must use a chemical coagulant at all times when the plant is in operation.

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.

The short interruption did not impact the treatment process. The action taken by the operating authority included implementation of a procedure for testing chemical coagulant pumps and training sessions to operations staff.

Certificate of Approval No. 2574-6YFR7U, Section 3.11

The surface water systems are not permitted to discharge a contaminant into the natural environment that causes or is likely to cause an adverse effect.

On May 21, 2009 the Airport Road Pumping Station accidentally discharged 1.3 liters of glycol into the sanitary floor drain system and on July 17, 2009, the Lakeview Water Treatment Plant accidentally discharged 9 liters of hydrofluosilicic acid into a containment area and the sanitary floor drain system.

The corrective actions taken included immediate containment of the spills, notification and reporting of the incident and appropriate management and disposal of the contaminant.

Lorne Park Drinking Water System

Certificate of Approval No. 5498-7CGSRB, Section 3.11

The surface water systems are not permitted to discharge a contaminant into the natural environment that causes or is likely to cause an adverse effect. On March 12, April 9, April 19 and November 28, 2009 the Lorne Park Water Treatment Plant discharged chlorinated water into Lake Ontario.

The corrective actions 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.

O. Reg. 170 – Drinking Water System Regulation, Schedule 16, Section (16.3)

Under Section 16.3-6 of Schedule 16, the owner and operating authority of the drinking water system 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.

The quality of filtered water met the standard with the exception of August 21, 2009 when the turbidity was found above 1 NTU for an unknown period of time. The filter's automatic shut down response was impacted by communication loss within the plant caused by severe weather and power interruption, which affected the process notification alarms. This resulted in OCWA's operations staff being unable to confirm whether the filter effluent turbidity exceeded the standard of 1NTU for the period longer than 15 minutes.

The corrective 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.

O. Reg. 170 – Drinking Water System Regulation, Schedule 1, Section (2)-2

Under Subsection (2) 2 of Schedule 1, a drinking water system must be operated in accordance with the Ministry's *Procedure for Disinfection of Drinking Water in Ontario*. Condition 3.4.1 of the *Procedure* states that the treatment process consisting of conventional filtration must use a chemical coagulant at all times when the plant is in operation.

All treatment equipment was operated as required with the exception of November 28, 2009 when the interruption of coagulant flow occurred.

The 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.

II. NORTH PEEL (Municipal Groundwater Systems – Town of Caledon)

**Caledon East Well Supply
Inglewood Well Supply
Cheltenham Well Supply**

**Caledon Village/Alton Well Supply
Palgrave Well Supply**

In the year 2009, the Region of Peel complied with all of the terms and conditions of all Certificates of Approval, Drinking Water Works Permits and Municipal Drinking Water Licences, Permits to Take Water, Safe Drinking Water Act, and all the regulations under the Act, with the following exceptions:

Caledon Village/Alton Drinking Water System Certificate of Approval 2896-6QGKNC (2008 MOE Inspection Findings)

Under Section 5 of the Certificate of Approval No. 2896-6QGKNC, the performance of the Ultraviolet (UV) disinfection equipment including UV transmittance, flow rate, UV lamp status, and UV dose must be monitored and recorded continuously.

The 2008 inspection findings showed that the station UV system did monitor all parameters as required. The UV unit is also equipped with minor and major alarm set points to automatically shut off the well when needed. The UV disinfection parameters have been continuously monitored in the PLC (Programmable Logic Controller), however, some data was not presented in the form of data trends.

SCADA programming has been modified since 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.

Caledon East Drinking Water System

O. Reg. 170/03 – Drinking Water System Regulation, Schedule 6-5(1)8

Under Ontario Regulation 170/03, the drinking water system owner shall ensure that continuous monitoring equipment is checked and calibrated in accordance with the manufacturer's instructions.

It is recommended to calibrate and maintain the Ultraviolet (UV) system on a monthly basis. The UV system was being calibrated and maintained at the recommended frequency except prior to March 2009 at which time 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 continues to perform calibration and maintenance of monitoring equipment as set out in the manufacturer's instructions.

Caledon Village/Alton Drinking Water System
Cheltenham Drinking Water System (2008 MOE Inspection Findings)
Palgrave Drinking Water System (2008 MOE Inspection Findings)
O. Reg. 128/04 - Certification of Drinking Water System Operators and Water Quality Analysts, Section 28

The Ontario Regulation 128/04 requires the drinking water system operators to have ready access to the comprehensive operations and maintenance manuals that contain plans, drawings and process descriptions sufficient for the safe and efficient operation of the system.

It was found during the inspection that the maintenance manuals had sufficient documentation with the exception of the up to date Process Flow Diagram (PFD) and Process and Instrumentations Diagram (PFID). The complete PFDs and P&ID's were delivered to the stations by June 30, 2009.

The Region of Peel is implementing a Quality Management System (QMS) based on the Drinking Water Quality Management Standard. The Operations and Maintenance Manual for the treatment systems in Caledon is currently being updated to reflect all the operational changes. The revised Operations and Maintenance Manuals will be in place by April 2010 and contain up to date plans, drawings and process descriptions as required by the regulation.

Palgrave Drinking Water System
O. Reg. 170, Schedule 6, Section 6.5 - Drinking Water System Regulation

Under the Ontario Regulation 170, continuous monitoring and recording must be carried out for chlorine residuals and water flows to ensure adequate disinfection of water supplies.

The Region of Peel utilizes continuous monitoring and recording equipment for all water safety parameters at all water facilities. The continuous monitoring and recording equipment have minor and major alarm set points to automatically shut off the well when the quality of water produced does not meet the standard. The system continuously monitors and calculates the minimum, maximum, and mean data and presents these daily values in a format of a Monthly Report. The regulation requires the chlorine residual data to be recorded at a minimum frequency of every 5 minutes. To satisfy this requirement, the Region has submitted an application for relief from regulatory requirement with supporting documentation that demonstrate primary disinfection is being achieved at all times.