

Director of Operations

January 15, 2010

The Mayor and Members of Council
Municipal Offices
45 Hillside Drive North
Elliot Lake, Ontario
P5A 1X5

ATTENTION: Mayor and Member of Council

Your Worship Mayor Hamilton and Members of Council:

**RE: ELLIOT LAKE WATER TREATMENT PLANT
SUMMARY REPORT FOR MUNICIPALITIES
Municipal: Large Residential**

Please find attached the 2009 Summary Report for the Elliot Lake Water Treatment Plant. This report has been prepared in accordance to the guidelines set out in Schedule 22 of the Safe Drinking Water Act, 2002 (Ontario Regulation 170/03).

As per the regulation, this report is for the period from January 1, 2009 to December 31, 2009.

Any questions or concerns should be directed to the undersigned.

Yours truly,

R. deBortoli
Director of Operations

RD:jc

ELLIOT LAKE WATER TREATMENT PLANT

Compliance Report

Section 18 of the Safe Drinking Water Act requires the system operator to report adverse test results immediately after the result is obtained. An adverse test result constitutes a parameter failing to meet, at a minimum, the requirements of the prescribed drinking water standards established for that parameter, under the Ontario Drinking Water Standards. Adverse test results must be identified in the Summary Report.

There were 4 instances in 2009 when reports were made to the Spills Action Centre in accordance with Section 18 of the Safe Drinking Water Act.

Incident Date/2009	Parameter	Result	Unit of Measure	Corrective Action
Jan.19	Low chlorine	<0.05	mg/L	Flush – valve opened
March 18	Lead	10.4	ug/L	resample
July 10	Total coliform	1	Cfu/100 ml	resample
Oct. 1	Lead	13.7	ug/L	resample

Corrective Action:

In the cases where the lead concentration exceeded the maximum level of 10ug/L (parts per billion) a repeat set of samples were taken from each location. The repeat samples were found to have lead levels below 10ug/L. In cases such as these the legislation requires that the property owner be notified, of the elevated levels of lead found in the sample, via letter within 24 hours of receiving the results from the laboratory. Standard procedure includes notifying the home owner directly and re-sampling of the premise plumbing. The written notification provides information to the homeowner as to action

the homeowner may wish to consider in these circumstances. The positive results in both cases could have been caused by either elevated levels of lead in the internal plumbing of the residence or sample contamination/error during analysis.

The presence of total coliform bacteria could indicate the potential for the presence of E.Coli. When a sample tests positive for coliform bacteria the source is immediately re-sampled. In this particular case the repeat sample did not produce any bacterial colonies. Chlorine residuals are monitored concurrently when bacteriological samples are taken. The levels of chlorine in this particular case were adequate, as per the regulation, otherwise the chlorine level would have triggered an adverse incident. Sample contamination either by the sampler or the lab is the likely cause for this adverse incident.

Random samples of the distribution system are conducted to ensure that adequate residual of chlorine is maintained in the system for disinfection purposes. When samples reveal lower than acceptable levels of chlorine in the system corrective action is taken. In this case a closed valve (for the purpose of pressure control) was causing the problem. The valve was opened and this eliminated the low level of chlorine in this area.

MOE Inspection:

The Ministry of the Environment carried out a plant inspection on August 10, 2009. The following actions were required as a result of the inspection. (Please refer to attached pages re: inspection report & inspection rating)

1. It was noted that adverse water quality incidents were not being recorded in the treatment plant log book. This oversight was addressed via a policy for recorded incidents of adverse water quality-*complete*.

Terms and Conditions of Certificate of Approval

Performance: The Elliot Lake Water Treatment Plant meets the requirement of the Ontario "Drinking Water Standards." Disinfection of treated water is achieved as per Ministry Procedure B13-3. Backwash/wastewater effluent discharge suspended solids are below the 25 mg/l annual average.

Monitoring and Recording: Flow meters, chlorine analyzers and turbidimeters are calibrated per manufacturer's specifications and certificates are provided where necessary.

Operations and Maintenance: Maintenance of the water treatment plant is conducted and controlled through a preventive maintenance program. All operators are certified with at least one operator certified at the designated level of the facility. All treatment chemicals

meet A.W.W.A. (American Water Works Association) quality criteria for drinking water. The following are the chemicals used and dosage rates:

Chemical	Approx. Dosage
Hydrated Lime	23 mg/l
Hydrofluosilicic Acid	3.2 mg/l
Chlorine	2.15 mg/l
Polyhydroxyaluminum Chloride	28.67 mg/l

Contingency plans with regard to emergencies, upset conditions and breakdowns are posted in the operator control room and contained in the Plant Operations Manual. Detailed drawings of the facility are centrally located in the Process Control Room.

ELLIOT LAKE WATER TREATMENT PLANT

2009 MONTHLY FLOWS

MONTH	MINIMUM FLOW/DAY (m³)	MAXIMUM FLOW/DAY (m³)	AVERAGE FLOW/DAY (m³)	TOTAL FLOW (m³)	INSTANTANEOUS PEAK FLOW (m³)
JANUARY	6,244	8,938	7,684	249,727	15,863
FEBRUARY	6,211	8,772	7,856	229,996	17,844
MARCH	6,400	10,169	7,807	253,095	16,066
APRIL	6,268	8,792	7,593	238,670	17,858
MAY	6,212	9,212	7,675	248,201	17,739
JUNE	6,284	14,569	9,233	288,864	23,663
JULY	7,165	10,137	8,286	268,834	19,961
AUGUST	7,270	10,189	8,873	286,909	20,574
SEPTEMBER	6,406	10,205	8,556	266,828	21,331
OCTOBER	4,924	7,597	6,277	203,551	25,977
NOVEMBER	5,266	7,107	6,010	187,754	26,241
DECEMBER	5,209	7,520	6,224	186,723	26,142
TOTAL				2,909,152	

NOTE: The maximum rated capacity of 28,400 m³/day as specified in the facility's Certificate of Approval was not exceeded for the period of this report.