



Report to: General Committee

Date Report Authored: April 13, 2011

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**SUBJECT:** Community Lead Testing Program – Status Report (7)  
**PREPARED BY:** Helena Frantzke, Ext. 2449  
Water Quality Coordinator, Waterworks

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**RECOMMENDATION:**

- 1) THAT the report titled “Community Lead Testing Program – Status Report (7)” be received;
- 2) AND THAT staff report back to Council with the findings of the Community Lead Testing Program after completion of sampling period #8;
- 3) AND FURTHER THAT staff be authorized and directed to do all things necessary to give effect to this resolution.

**EXECUTIVE SUMMARY:**

Not Applicable

**PURPOSE:**

The purpose of this report is to notify Council of the findings from the Community Lead Testing Program, for sampling period #7 (December 15, 2010 to April 15, 2011).

**BACKGROUND:**

On July 26, 2007, the Drinking Water Systems Regulation O.Reg. 170/03 (Schedule 15.1) was amended, requiring mandatory community lead testing for lead (Pb) in drinking water at the tap level. Sampling is required semi-annually, between December 15 to April 15 and June 15 to October 15. Currently, Markham is required to sample as a minimum:

- 50 sampling locations from plumbing that serves private residences;
- 5 sampling locations that do not serve private residences (i.e. an industrial, commercial or institutional property (ICI)), and
- 10 sampling locations from the distribution system during each sampling period to verify system conditions in relation to the residential results.

The Waterworks department has presented the results of each of the six previous rounds of the Community Lead Test Program. All test results have been below the Ministry of Environment Drinking Water Quality Standard (DWQS) as required by regulation.

**OPTIONS/ DISCUSSION:**

**Reduction in Sampling:**

When the Community Lead Testing Program was introduced in 2007, it included a provision for large municipalities to qualify for a reduction of sample location numbers by half. A large municipality would qualify for this reduction after it had successfully completed 4 consecutive rounds of lead testing in which less than 10% of the residential

samples collected exceeded the DWQS of 0.0100 mg/L. As a result of the Town's acceptable lead testing results, Markham was able to institute reduced sampling in Round 5 and has continued with the reduced sample numbers for both Round 6 and Round 7.

### **Sampling Locations:**

During this round of testing Waterworks collected samples from 73 residences, 10 ICI's locations and 41 distribution system locations.

Markham has had tremendous support and interest from its residents from the beginning of the Community Lead Testing Program. Currently, after volunteers have completed four rounds of sampling, without detection of elevated lead levels, the residence is removed from the roster and the program is opened to new participants. The new participants are taken from the original volunteer database. Since the sampling is based on a volunteer basis a resident can request to be removed from the program at anytime.

In this round Waterworks sampled a total of 73 residential locations, of which 52 were maintained in the program from the previous round of sampling. There were 21 new homes enrolled in the program. A total of 103 new volunteers were contacted in order to obtain the 21 new homes enrolled. Approximately 80% of new volunteers contacted were no longer interested to be part of the program. This is the first time since the program began that Waterworks has witnessed such a significant drop out rate.

### **O. Reg. 170/03 Compliance:**

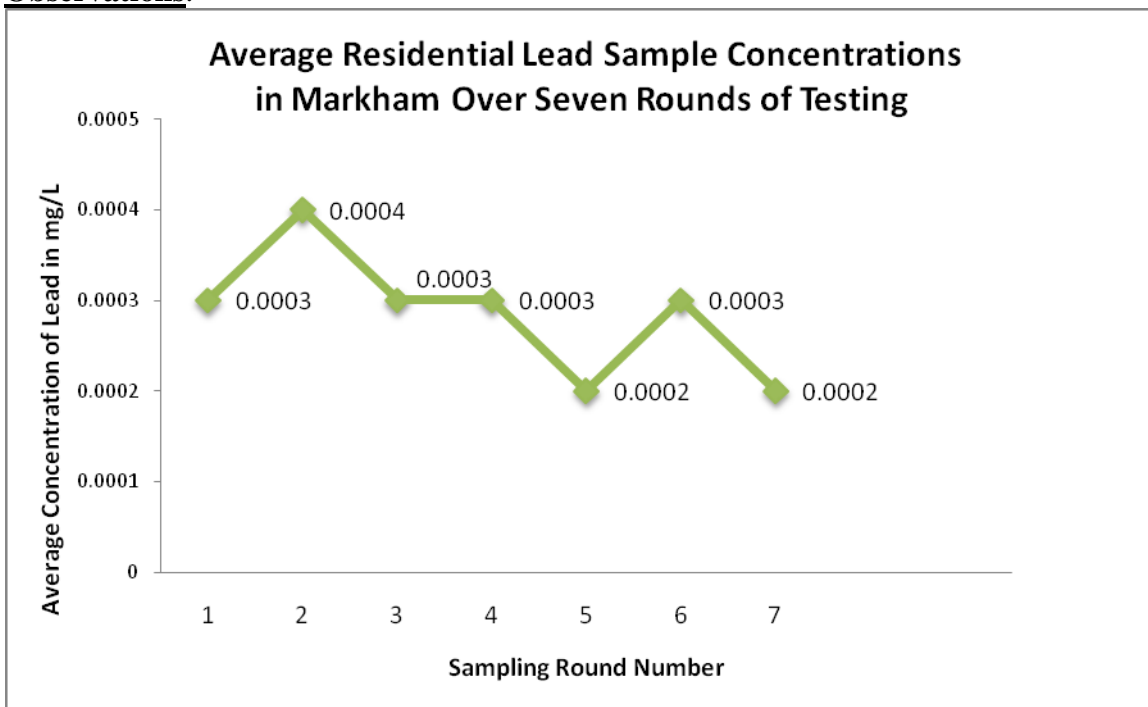
The Town of Markham has met and exceeded all of the testing requirements for lead prescribed by Schedule 15.1 of O. Reg. 170/03 for the seventh round of sampling (December 15, 2010 to April 15, 2011). In addition, as required, the results have been forwarded to the Ministry of the Environment (MOE).

### **Sampling Results:**

The seventh period of sampling began on January 18, 2011 and was completed on April 8, 2011. Results of all tests taken during round #7 continue to be acceptable, below the safe standard for lead of 0.0100 mg/L as set out in the Drinking-Water Systems Regulation (170/03).

The following is a summary of all lead results taken for round 7:

Sampling Round	Type of Sample	# Samples Taken by Markham	# of Samples required by O. Reg. 170/03	Drinking Water Quality Standard (mg/L)	Average (mg/L)	Lowest Value (mg/L)	Highest Value (mg/L)
<b>Round #7, December 15, 2010 to April 15, 2011</b>	Non-Residential ICI (tap)	10	5	0.0100	0.0005	<0.0001	0.0036
	Residential (tap)	73	50	0.0100	0.0002	<0.0001	0.0041
	Distribution	41	10	0.0100	0.0003	0.0001	0.0017

**Observations:**

The Town of Markham lead test results for all seven (7) sampling periods undertaken to date show that the average of lead concentration from all homes in Markham are consistently well below the DWQS of 0.0100 mg/L. A review of the last seven sampling periods indicates minimum variance of the average of lead at the homes of our residents, ranging between 0.0002 mg/L to 0.0004 mg/L. The average pH for this round of testing was 7.0. This neutral pH, a well buffered system and the absence of lead services have helped to keep Markham from experiencing any issue with lead in the drinking water.

**Notification of Results:**

All participants who took part in the seventh round of testing have been mailed a copy of their sample report accompanied by a letter explaining the results. A summary of the results from the seventh round of testing has been posted on Markham's Website, providing general information for all of Markham residents. The Ministry of the Environment has been provided with a summary of all results for the seventh round of sampling.

**Program Next Steps:**

The requirement to undertake community wide sampling is a permanent requirement under O. Reg. 170/03. The next sampling round is June 15, 2011 to October 15, 2011.

Waterworks will be submitting a request to the MOE for a further reduction in required sampling numbers and/or relief from the requirements of the community lead testing program. The request for relief is based on the following items:

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- All test results have been below the DWQS of 0.0100 mg/L
  - Markham has sampled significantly more than the required sample numbers (approximately double for residential locations), and
  - Current volunteer recruitment observations indicate a decrease in volunteer interest and participation; as a result obtaining sufficient sample number may become an issue for future sampling periods.

**FINANCIAL CONSIDERATIONS AND TEMPLATE: (external link)**

Not Applicable

**HUMAN RESOURCES CONSIDERATIONS**

Not Applicable

**ALIGNMENT WITH STRATEGIC PRIORITIES:**

Not Applicable

**BUSINESS UNITS CONSULTED AND AFFECTED:**

Not Applicable

The report presented herein, communicates the results of the Community Lead Testing Program – Sampling Period #7 (December 15, 2010 to April 15, 2011) to the Drinking Water System Owner.

The undersigned represent the Top Management of Town of Markham's Drinking Water Distribution System and by signing below the Top Management of the Operating Authority have reviewed the Community Lead Testing – Sampling Period #7 results identified by Waterworks.

**RECOMMENDED**

**BY:**

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Manager System Engineering,  
Waterworks

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Peter Loukes, P.Eng.  
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Brenda Librecz  
Commissioner, Community and Fire Services

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John Livey  
Chief Administrative Officer

**ATTACHMENTS:** None