

LEaC SHIELD CORROSION INHIBITOR PINHOLE LEAK PREVENTION PROGRAM



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Date: Jul 19, 2013
To: To Whom It May Concern
From: Alex Madonna
Project: MEI Project No.: 13-0103

Dear Sir/Madam;

We have reviewed the LEaC Shield Corrosion Inhibitor Leak Prevention Program. Sodium Silicates are approved for Human Consumption and for use as a corrosion inhibitor for potable water systems when implemented in accordance with the following standards:

Health Canada – Guidance on Controlling
Corrosion in drinking water distribution systems.

Ontario Ministry of Environment – Guidance document for preparing corrosion
control plans for drinking water systems.

NSF / ANSI Standard 60 Drinking Water Treatment chemicals – Health Effects
maximum produce use level of 42 mg/l.

Sodium silicate liquids are approved by the NSF for use as a corrosion inhibitor in potable water systems at concentrations at or below those listed in the current standard.

Sodium silicate has been used for over 60 Years to protect water distribution piping from internal corrosion.

Sodium silicate can provide protection for individual homes, large buildings, for complete municipal or industrial water distribution systems.

Sodium silicate inhibits corrosion by forming a thin film on the surfaces of metal water pipes as the silicate is fed through them. The films are almost invisible and do not increase in thickness of the piping overtime. Once the film has been created the protection is maintained as long as silicate treatment is continued.

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Various municipalities located in the Province of Ontario have introduced sodium silicates for corrosion control and/or water treatment in-hole or part of their municipal water distribution system. City of Peterborough, Region of York, City of Barrie, City of Ottawa and City of Brantford are some of these municipalities.

Please refer to the following letter issued by the City of Toronto's Social Housing Unit confirming the implementation of the LEaC Shield Corrosion Inhibitor PinHole Leak Prevention Program. Please refer to Appendix A, on page 3.

In conclusion, when installed and operated as per applicable standards the LEaC Shield Corrosion Inhibitor Pinhole Leak Prevention Program complies with the applicable drinking water regulations for the Province of Ontario.

This letter has been prepared solely to confirm compliance with applicable regulations and standards for drinking water safety by the LEaC Shield Corrosion Inhibitor Pinhole Leak Prevention Program. This letter is not meant to confirm the safety of sodium silicates for human consumption beyond that allowed in applicable Ontario Ministry of Environment regulations at the time this letter was prepared.

Regards,

A handwritten signature in black ink, appearing to read 'A. A. Madonna', is written over a light blue horizontal line.

Madonna Engineering Inc.
Alex Madonna, P. Eng.

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Appendix A



Shelter, Support & Housing Administration
Phil Brown, General Manager

Phillip Abrahams
Director, Social Housing

Glenn Courtney, CA
Manager, Social Housing

365 Bloor Street East, 15th floor
Toronto, ON
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March 14, 2011

To Whom It May Concern:

This letter will confirm that the City of Toronto's Social Housing Unit initiated a corrosion control pilot program in 2007. Seven housing providers were included in this program. The program was intended monitor this alternative to addressing the increasing challenge of the deteriorating condition of domestic hot water piping systems.

As Service Manager, we closely monitored the implementation of the LEaC Shield™ system and were pleased with the results achieved. At the conclusion of the pilot, six of the seven participating housing providers continued to utilize the corrosion control system. Since that time, additional housing providers in the City of Toronto have implemented the LEaC Shield™ system.

There was an article on the City's corrosion control pilot program in the June 2009 issue of Exchange. You can access the article at the following link:

http://www.toronto.ca/housing/social_housing/newsletters/shu_exchange_2009_june.pdf

Sincerely,

Glenn Courtney, CA
Manager, Social Housing