

APPENDIX B

Performing Work on the Niagara Falls Drinking Water System

INFORMATION TO CONTRACTOR

Performing Work on the Niagara Falls Drinking Water System

In 2002, the *Safe Drinking Water Act* came into force, and changed how drinking water is tested, monitored and regulated in the Province.

Part of the SDWA requirements, is that all municipalities in the province must obtain a Municipal Drinking Water Licence for their drinking water system. In order to obtain a licence, all municipalities in the province are required to implement a quality management system (QMS) for their drinking water departments, in accordance with the Drinking Water Quality Management Standard. The City of Niagara Falls was required to apply for their licence and submit evidence of having implemented a QMS (by submitting an Operational Plan) by May 1, 2009 – and on September 9, 2009, the City received its Municipal Drinking Water Licence.

Section 5.1 of the City's licence it states that:

The owner and operating authority shall ensure that any person authorized to carry out work on or to operate any aspect of the drinking water system has been informed of the SDWA, all applicable regulations made in accordance with that act, the drinking water works permit and this licence, and shall take all reasonable measures to ensure any such person complies with same.

Therefore, to ensure the City can demonstrate that contractors who perform work on the distribution system have been informed; contractor personnel must review the following information.

Who can operate the drinking water system?

Section 12(1) of the SDWA specifies that only persons holding a valid Operator's Certificate can 'operate' a municipal system.

The following activities are considered 'Operating Functions' and therefore require a Certified Operator:

- Open and close valves and gates
- Isolate watermains and reconnect isolated watermains
- Flush hydrants
- Conduct water tests for the 24 operational parameters listed under O.Reg. 248/03 (i.e. testing for chlorine residual, turbidity, pH)
- Control flow or pressure of drinking water in drinking water subsystems
- Disinfect or treat water using chemicals
- Monitor gauges, meters and control valves related to distribution of drinking water
- Add chlorine or other chemicals to the distribution system
- Perform wet-taps

APPENDIX B

Performing Work on the Niagara Falls Drinking Water System

Note: The above list is NOT considered to be exhaustive. Tasks that impact drinking water quality may also require a valid Operator's Certificate. Contact the Ministry of Environment for additional information.

Therefore, contractor personnel are not allowed to perform any of the 'Operating Functions' listed above. If in doubt, check with the Municipal Inspector or Environmental Services Water Operator before performing a task.

Are there any special conditions/instructions etc. to be considered during water appurtenance installation?

It is important to note that under Section 20(1) of the SDWA:

No person shall cause or permit any thing to enter a drinking water system if it could result in:

- a) *a drinking water health hazard*
- b) *a contravention of a prescribed standard; or*
- c) *interference with the normal operation of the system*

Therefore Contractors should take all reasonable precautions to ensure that nothing enters the watermain during construction that could cause any of the above issues to occur (i.e. taking care to ensure the watermain remains as clean and debris-free as possible during construction, using only approved products during construction (i.e. if have to grease joints – must use a food-grade product)). This clause also means that authorized City staff will be examining the watermain construction on a regular basis to ensure compliance.

During Water Appurtenance Commissioning

According to the City's Drinking Water Works Permit, Section 2.3:

All parts of the drinking water system in contact with drinking water which are:

- 2.3.1 Added, modified, replaced, extended; or
- 2.3.2 Taken out of service for inspection, repair or other activities that may lead to contamination

shall be disinfected before being put into service in accordance with the provisions of the AWWA C651 – Standard for Disinfecting Water Mains.

Moreover, Section 10 of the City's licence states, in part, that:

- 10.1 *Nothing in this licence or the drinking water works permit shall be read as to permit:*
 - 10.1.1 The discharge of a contaminant into the natural environment that causes or is likely to cause an adverse effect
 - 10.1.2 The discharge of any material of any kind into or in any waters or on any shore or bank thereof or into or in any place that may impair the quality of the water of any waters.

APPENDIX B

Performing Work on the Niagara Falls Drinking Water System

- 10.2 *All reasonable steps shall be taken to minimize and ameliorate any adverse effect on the natural environment or impairment of the quality of water of any waters resulting from the operation of the drinking water system including such accelerated or additional monitoring as may be necessary to determine the nature and extent of the effect or impairment.*

This means that, during the flushing of the watermain during and/or after disinfection – the waste water cannot be discharged into a storm sewer or onto land where it may enter a storm sewer or ditch, without be treated to eliminate the chlorine and reduce the toxicity. Even treated water from the existing distribution system cannot be “wasted” without treatment to eliminate the chlorine.

Summary

The Municipal Drinking Water Licensing program is new. Therefore, our expectations may seem “higher” than other municipalities, or even from other projects previously completed in Niagara Falls. However, as more and more municipalities receive their licences), the general conditions will be identical from municipality to municipality – this process has created consistent “rules” for all municipalities, which should make it easier for contractors to work at different municipalities as the general “rules” will be the same.

You are expected to ensure your staff on-site are aware of these requirements, as well as any sub-contractors that will have contact with the drinking water system. City Staff is willing to attend on site to answer questions or go over the above information with your staff.

This is a new process for all, any comments you can provide that can improve this process is greatly appreciated.