

The Town of Fort Frances Water System  
General QMS Administration

PROCEDURE TITLE: Document Change Request Form  
QMS REFERENCE: Element No. 5 - APPENDIX "A"

REVISION #4  
QMS REPRESENTATIVE:

## DOCUMENT CHANGE REQUEST FORM

Requested By: QMS Team

Date: April 19, 2018

Department: O. & F. Division

### Type of Change:

**Edit Existing Document      Create New Document      Delete Document**

### Changes Requested:

1. Element 16 Sampling, Testing & Monitoring

### Justification for Changes:

The following section is being revised to update the Town of Fort Frances Drinking Operation Plan.

1. O. Reg. 170/03 (Section 13, subsection 13-6.1) was amended on January 01, 2017 to include testing for Haloacetic Acid (HAA) in drinking water systems.
2. Correction regarding in-house daily testing for fluoride and alum.

### Proposed Changes:

1. Page 65 – **Table 2: Chemical Testing (Minimum Requirements):**

Add Haloacetic Acid (HAA) to the Sampling Plan schedule.

- Sampling Type: Distribution System
- Frequency of sampling: One (1) sample every 3 months
- Notes: To be taken at random locations near the water treatment facility

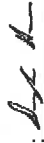
2. Page 66 – **First paragraph – 4<sup>th</sup> and 5<sup>th</sup> bullet points.**

- Existing: Fluoride residual is measured on the treated water.
- Should read: Fluoride residual is measured on the filtered water.
- Existing: Alum residual is measured on the filtered water.
- Should read: Fluoride residual is measured on the treated water.

### Approval:

QMS Representative:  Date: 20-04-2018

### Comments:

The Town of Fort Frances Water System General QMS Administration	
PROCEDURE TITLE: Sampling, Testing & Monitoring	REVISION #10
QMS REFERENCE: ELEMENT NO. 16	QMS REPRESENTATIVE: 

**Table 2: Chemical Testing (Minimum Requirements)**

	Sample Type	Frequency (Regulatory Reference)	Notes
<b>Inorganics</b> (Schedule 23)	Treated	One (1) sample every 12 months (O. Reg. 170, 13-2)	
<b>Organics</b> (Schedule 24)	Treated	One (1) sample every 12 months (O. Reg. 170, 13-4)	
<b>Nitrate &amp; Nitrite</b>	Treated	One (1) sample every 3 months (O. Reg. 170, 13-7)	
<b>Sodium</b>	Treated	One (1) sample every 60 months (O. Reg. 170, 13-8)	
<b>Lead</b>	Private Residences (Plumbing System)	40 sample locations during each period (O. Reg. 170, 15.1)	In every third 12-month period samples are to be taken in each sampling periods (December 15 to April 15 and June 15 to October 15). Require for two consecutive periods. (3 samples to be taken at each location and tested for lead, total alkalinity & pH)
	Non-Residences (Plumbing System)	4 sample locations during each period (O. Reg. 170, 15.1)	
	Distribution System (**)	8 sample locations during each period (O. Reg. 170, 15.1)	
<b>Total Alkalinity</b> <b>pH</b>	Distribution System (**) Only when lead testing is not performed as outlined above)	3 sample locations, every 12-month period in each sampling period (O. Reg. 170, 15.1 – 5(10))	Three (3) distribution locations in each sampling periods (December 15 to April 15 and June 15 to October 15) every 12-month period. (2 samples taken at each location and tested for total alkalinity & pH)
<b>Lead</b>		Same sample locations as above, every third 12-month period in each sampling period (O. Reg. 170, 15.1 – 5(10))	In conjunction with total alkalinity and pH testing, in every third 12-month period samples are to be taken in each sampling periods (December 15 to April 15 and June 15 to October 15). (1 sample taken at each location and tested for lead)
<b>THMs</b>	Distribution	One (1) sample every 3 months (O. Reg. 170, 13-6)	Must be collected from a point that is likely to have elevated THMs.
<b>Haloacetic Acid</b>	Distribution	One (1) sample every 3 months (O. Reg. 170, 13-6.1)	To be taken at random locations near the water treatment facility.

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A competent certified operator oversees all water sampling taken at the Water Treatment Plant (WTP). A competent certified operator performs in-house testing at least once per day and the results are recorded on a monthly log sheet.

In-house daily testing consists of the following:

- PH testing done on the raw, settled and treated water.
- Turbidity testing done on the raw, settled and treated water.
- Free and total chlorine done on the treated water.
- Fluoride residual is measured on the ~~treated~~-filtered water.
- Alum residual is measured on the ~~filtered~~-treated water.

On a weekly basis bacteriological samples, consisting of one (1) raw water sample and one (1) treated water sample are taken at the WTP. These samples are sent to an accredited lab for analysis.

Appendix "E" is devoted to identifying and responding to adverse sample results.

The SCADA computer process control system monitors and trends process treatment parameters as well as levels of raw water in the raw water wells, level of treated water in the reservoirs and whether or not the pumps in the WTP are in the "running" position or in "off" position such pumps as the backwash pumps and the low lift pumps and the high lift pumps and the chemical feed pumps (soda ash pumps, polymer pumps, fluoride pumps, carbon pumps and alum pumps). Chemical residuals are also monitored and trended such as chlorine and fluoride. There is a turbidity meter on the downstream side of each one of the four dual media filters, which is monitored and trended. The WTP operators may adjust treatment processes affecting water quality based upon the information and data provided by the SCADA system. Any adjustments made to process treatment parameters are recorded in the daily logbook at the WTP.

## 16.2 Water Distribution System Sampling, Testing & Monitoring Procedures

Fort Frances' Water Distribution System has a sampling program based on the requirements set out in O. Reg. 170/03 and its Drinking Water System Licence (Lic. #224-101). See sampling plan and schedule as outlined in Table 1 and 2 in Section 16.1.

A competent certified water system operator oversees all water sampling taken within the water distribution system. Water samples are collected in the distribution system for bacterial and chemical properties. On a weekly basis, four (4) bacteriological samples are taken from the water distribution system, where they are sent to an accredited lab for analysis. Chemical samples are collected as outlined in Section 13 of the O. Reg. 170/03, which are sent to an accredited lab for analysis as well. The water distribution