Ontario

FOREMAN DRINKING WATER SYSTEM
Physical Address: 50 FOREMAN DR, , SOUTH BRUCE PENINSULA, ON N0H 1A0

INSPECTION REPORT

Entity:	ONTARIO CLEAN WATER AGENCY THE CORPORATION OF THE TOWN OF SOUTH BRUCE PENINSULA
Inspection Start Date:	September 11, 2024
Site Inspection Date:	September 11, 2024
Inspection End Date:	October 21, 2024
Inspected By:	Robert Graham
Badge #:	1667

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(signature)

INTRODUCTION

Purpose

This announced, focused inspection was conducted to confirm compliance with Ministry of the Environment, Conservation and Parks' (MECP) legislation and conformance with ministry drinking water policies and guidelines.

Scope

The ministry utilizes a comprehensive, multi-barrier approach in the inspection of water systems that focuses on the source, treatment, and distribution components as well as management and the operation of the system. The inspection of the drinking water system (DWS) included both the physical inspection of the component parts of the system listed in section 4 "Systems Components" of the report and the review of data and documents associated with the operation of the DWS during the review period.

This DWS is subject to the legislative requirements of the Safe Drinking Water Act, 2002 (SDWA) and regulations made therein, including Ontario Regulation 170/03, "Drinking Water Systems" (O. Reg. 170/03). This inspection has been conducted pursuant to Section 81 of the SDWA. This inspection report does not suggest that all applicable legislation and regulations were evaluated. It remains the responsibility of the owner to ensure compliance with all applicable legislative and regulatory requirements.

Facility Contacts and Dates

The Foreman DWS is a Small Municipal Residential DWS owned by the Corporation of the Town of South Bruce Peninsula (Owner) and operated by the Ontario Clean Water Agency (OCWA/Operating Authority/OA). Information reviewed for this inspection covered the time period of September 1, 2023, the day following the previous inspection, to the inspection date on September 11, 2024. MECP Water Compliance Officer Bob Graham met with OCWA staff members, Overall Responsible Operator (ORO), James Learn, Process & Compliance Technician, Karla Young and Operator in Training, Yulia Shenurina, as part of the inspection process.

Systems/Components

The following is a summary description of the works comprising the drinking water system:

The Foreman Drinking Water System is located at Lot 19, Concession 2, civic address 50 foreman Drive, Town of South Bruce Peninsula, UTM Coordinates NAD 27, UTM Zone 17, 482348.42 m E, 4934452.99 m N and consists of one (1) well, a well pumphouse housing chlorination equipment and facilities, packaged filtration treatment system for iron and

manganese, cartridge filters, UV, high lift pumps, process piping and valves, instrumentation and control systems, one underground storage reservoir and distribution watermains. The well serving the Foreman DWS is drilled to a depth of 73 meters, has a 125 mm diameter steel casing and is considered ground water under the direct influence of surface water (GUDI).

Permissions/Approvals

This drinking water system was subject to specific conditions contained within the following permissions and/or approvals at the time of the inspection, in addition to the requirements of the SDWA and its regulations (please note this list is not exhaustive):

- Municipal Drinking Water Licence Number 094-104, Issue Number 4, dated March 6, 2020,
- Drinking Water Works Permit Number 094-204, Issue Number 4, dated March 6, 2020,
- Permit To Take Water No. 0725-BTFKTF issued on September 15, 2020.

Background and Compliance

The well serving the Foreman drinking water system is drilled to a depth of 73 metres and has a 125 mm diameter casing. The well pump is a submersible pump with a nominal rating of 1.9 L/s at a TDH (total dynamic head) of 92 metres. It is operated in a pressure range of 40 - 60 PSI and has a 50 mm diameter discharge line. The well is supplied by a source that is considered GUDI.

Treatment for the Foreman drinking water system includes: iron and manganese removal (potassium permanganate with greensand filtration), cartridge filtration (1 micron), UV disinfection and chlorination (sodium hypochlorite).

As per CT calculation supplied by the OA dated 10/24/2011.
According to the Procedure for Disinfecting Drinking Water in Ontario for a 4 log (99.99%) Inactivation of Viruses by Free Chlorine with a Raw Water temperature of 5 degrees Celsius, with a pH between 6 – 9 the required CT value = 8
Clearwell capacity =86 m3
Auto shutdown of Highlift pump = 60%
Baffle ratio = 0.1
Flow rate = 1.9 L/sec. (0.114 m3/min)
Effective Contact time = (86 x 0.6 x 0.1) / 0.114
Effective Contact Time = 5.16 / 0.114 = 45.26 min
CT (required) = Disinfection Residual Concentration (mg/L) x Effective contact time (min)
Thus the minimum disinfection residual can be calculated using the following formula:
Minimum Disinfection Residual (mg/L) = CT (required) / Effective contact time (min)
Minimum Disinfection Residual (mg/L) = 8 / 45.26 = 0.177

A minimum Free Chlorine Concentration of 0.18 mg/L is required to meet primary disinfection with a minimum clearwell volume of 51.6 m3 (60%).

The distribution system was constructed in 1973 and is located along the north-east side of Chesley Lake in the Town of South Bruce Peninsula (formerly Township of Amabel). Flush lines and sampling taps are found at both ends of the distribution line. There are 18 residential service connections served by the Foreman drinking water system. The majority of residents are seasonal.

During the inspection review period there were no Adverse Water Quality Incidents (AWQI's) reported to the MECP Spills Action Centre (SAC).

NON-COMPLIANCE

The following item(s) have been identified as non-compliance, based on a "No" response captured for a legislative question(s). For additional information on each question see the Inspection Details section of the report.

Ministry Program: DRINKING WATER | **Regulated Activity:** DW Municipal Residential

Item	Question	Compliance Response/Corrective Action(s)
NC-1	**Question ID:** DWMR1115001 Were the inspection questions sufficient to address other non-compliance items identified during the inspection period?	The following instance(s) of non-compliance were also noted during the inspection:

RECOMMENDATIONS

This should not be construed as a confirmation of full conformance with all potential applicable BMPs. These inspection findings are limited to the components and/or activities that were assessed, and the legislative framework(s) that were applied. It remains the responsibility of the owner to ensure compliance with all applicable legislative and regulatory requirements.

If you have any questions related to this inspection, please contact the signed Provincial Officer.

INSPECTION DETAILS

This section includes all questions that were assessed during the inspection.

Ministry Program: DRINKING WATER | **Regulated Activity:** DW Municipal Residential

Question ID	DWMR1007001	**Question Type**	Legislative

Legislative Requirement(s):
SDWA | O. Reg. 170/03 | 1-2 | (1)1;

Question:
Was the owner maintaining the production well(s) in a manner sufficient to prevent entry into the well of surface water and other foreign materials?

Compliance Response(s)/Corrective Action(s)/Observation(s):
The owner was maintaining the production well(s) in a manner sufficient to prevent entry into the well of surface water and other foreign materials.

Question ID	DWMR1009001	**Question Type**	Legislative

Legislative Requirement(s):
SDWA | 31 | (1);

Question:
Were measures in place to protect the groundwater and/or GUDI source in accordance with the Municipal Drinking Water Licence and Drinking Water Works Permit?

Compliance Response(s)/Corrective Action(s)/Observation(s):
Measures were in place to protect the groundwater and/or GUDI source.

Question ID	DWMR1014001	**Question Type**	Legislative

Legislative Requirement(s):
SDWA | 31 | (1);

Question:
Was flow monitoring performed as required by the Municipal Drinking Water Licence or Drinking Water Works Permit?

Compliance Response(s)/Corrective Action(s)/Observation(s):
Flow monitoring was performed as required.

Question ID	DWMR1016001	Question Type	Legislative

Legislative Requirement(s):
SDWA | 31 | (1);

Question:
Was the owner in compliance with the conditions associated with maximum flow rate or the rated/operational capacity in the Municipal Drinking Water Licence?

Compliance Response(s)/Corrective Action(s)/Observation(s):
The owner was in compliance with the conditions associated with maximum flow rate and/or the rated/operational capacity conditions.

MDWL Schedule C, Table 1, identifies that the maximum daily volume of treated water that flows from the treatment subsystem to the distribution system shall not exceed 165 cubic metres/day. During the inspection review time period, the maximum daily volume of treated water that flows from the treatment subsystem to the distribution system was not exceeded.

Question ID	DWMR1018001	Question Type	Legislative

Legislative Requirement(s):
SDWA | 31 | (1);

Question:
Did the owner ensure that equipment was installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit?

Compliance Response(s)/Corrective Action(s)/Observation(s):
The owner ensured that equipment was installed as required.

Question ID	DWMR1023001	Question Type	Legislative

Legislative Requirement(s):
SDWA | O. Reg. 170/03 | 1-2 | (2);

Question:
Did records indicate that the treatment equipment was operated in a manner that achieved the design capabilities prescribed by O. Reg. 170/03, Drinking Water Works Permit and/or Municipal Drinking Water Licence at all times that water was being supplied to consumers?

Compliance Response(s)/Corrective Action(s)/Observation(s):
Records indicated that the treatment equipment was operated in a manner that achieved the design capabilities prescribed.

Records reviewed indicate that the Foreman DWS was operated to achieve the necessary CT requirements and UV performance criteria for primary disinfection during the inspection time period.

Question ID	DWMR1026001	Question Type	Legislative

Legislative Requirement(s):
SDWA | O. Reg. 170/03 | 1-6 | (2);

Question:
If primary disinfection equipment did not use chlorination or chloramination, was the equipment equipped with alarms or shut-off mechanisms that satisfy the standards described in Schedule 1-6 of O. Reg. 170/03?

Compliance Response(s)/Corrective Action(s)/Observation(s):
Primary disinfection equipment was equipped with alarms or shutoff mechanisms that satisfied the standards.

The Ultraviolet light disinfection equipment (UV) shall have a feature that ensures that no water is directed to users of water treated by the equipment or that causes an alarm to sound in the event that the equipment malfunctions, loses power or ceases to provide the appropriate level of disinfection.

At the time of inspection, the UV System alarm setpoints are set for UV Intensity Low 25.0 W/m2 and Low-Low 19.0 W/m2. The operations manual identifies that two (2) Trojan B03 UV disinfection units are certified to provide a minimum UV dose of 40 mj/cm2 at the design UV transmittance of 80% UVT and the design flow of 1.9 L/sec. If the UVT is higher than 80% and/or the flow rate is lower than 1.9 L/sec, dosage will increase.

Question ID	DWMR1024001	Question Type	Legislative

Legislative Requirement(s):
SDWA | O. Reg. 170/03 | 1-2 | (2);

Question:
Did records confirm that the water treatment equipment which provides chlorination or chloramination for secondary disinfection was operated as required?

Compliance Response(s)/Corrective Action(s)/Observation(s):
Records confirmed that the water treatment equipment which provides chlorination or chloramination for secondary disinfection was operated as required.

Question ID	DWMR1034001	Question Type	Legislative

Legislative Requirement(s):
SDWA | O. Reg. 170/03 | 7-2 | (5); SDWA | O. Reg. 170/03 | 7-2 | (6);

Question:
Was secondary disinfectant residual tested as required for the small municipal residential distribution system?

Compliance Response(s)/Corrective Action(s)/Observation(s):
Secondary disinfectant residual was tested as required.

Subsection 7-2 (5) of Schedule 7, O.Reg.170/03 the owner of a small municipal residential system that provides secondary disinfection and the operating authority for the system shall ensure that at least two distribution samples are taken each week in accordance with subsection (6) and are tested immediately for, (a) free chlorine residual. Records provided by the owner and reviewed during the inspection indicate that the owner complied with these requirements, testing free chlorine residual for secondary disinfection monitoring purposes 2 days each week and at least 48 hours apart.

Question ID	DWMR1030001	**Question Type**	Legislative

Legislative Requirement(s):
SDWA | O. Reg. 170/03 | 7-2 | (1); SDWA | O. Reg. 170/03 | 7-2 | (2);

Question:
Was primary disinfection chlorine monitoring being conducted at a location approved by Municipal Drinking Water Licence and/or Drinking Water Works Permit or at/near a location where the intended CT had just been achieved?

Compliance Response(s)/Corrective Action(s)/Observation(s):
Primary disinfection chlorine monitoring was conducted as required.

Question ID	DWMR1032001	**Question Type**	Legislative

Legislative Requirement(s):
SDWA | O. Reg. 170/03 | 7-3 | (2);

Question:
If the drinking water system obtained water from a surface water source and provided filtration, was continuous monitoring of each filter effluent line performed for turbidity?

Compliance Response(s)/Corrective Action(s)/Observation(s):
Continuous monitoring of each filter effluent line was performed for turbidity.

Question ID	DWMR1035001	**Question Type**	Legislative

Legislative Requirement(s):
SDWA | O. Reg. 170/03 | 6-5 | (1)1-4;

Question:
Were operators examining continuous monitoring test results and did they examine the results within 72 hours of the test?

Compliance Response(s)/Corrective Action(s)/Observation(s):
Operators were examining continuous monitoring test results as required.

Question ID	DWMR1038001	Question Type	Legislative

Legislative Requirement(s):
SDWA | O. Reg. 170/03 | 6-5 | (1)1-4;

Question:
Was continuous monitoring equipment that was being utilized to fulfill O. Reg. 170/03 requirements performing tests for the parameters with at least the minimum frequency and recording data with the prescribed format?

Compliance Response(s)/Corrective Action(s)/Observation(s):
Continuous monitoring equipment that was being utilized to fulfill O. Reg. 170/03 requirements was performing tests for the parameters with at least the minimum frequency and recording data with the prescribed format.

Question ID	DWMR1037001	Question Type	Legislative

Legislative Requirement(s):
SDWA | O. Reg. 170/03 | 6-5 | (1)5-10; SDWA | O. Reg. 170/03 | 6-5 | (1.1);

Question:
Were all continuous monitoring equipment utilized for sampling and testing required by O. Reg. 170/03, or Municipal Drinking Water Licence or Drinking Water Works Permit or order, equipped with alarms or shut-off mechanisms that satisfied the standards described in Schedule 6?

Compliance Response(s)/Corrective Action(s)/Observation(s):
All required continuous monitoring equipment utilized for sampling and testing were equipped with alarms or shut-off mechanisms that satisfied the standards

The water treatment plant is equipped with continuous analyzers and alarms for free chlorine and turbidity. At the time of inspection, the SCADA system low alarm set point for the treated water chlorine analyzer is 0.50 mg\L, which, if triggered, activates the trim chlorination system to increase the chlorine concentration. If the chlorine residual lowers to 0.20 mg/L the SCADA system low low alarm is activated which notifies the operator(s) and locks out the DWS ensuring the system meets CT requirements. The SCADA system turbidity analyzer high alarm set point downstream of the filters is set at 0.30 NTU, which, if triggered, notifies the operator who conducts a filter trending review. The SCADA system turbidity analyzer high high alarm set point is set at 0.60 NTU, which, if triggered, notifies the operator(s) and locks out the filters ceasing water production and prevents any adverse conditions.

Question ID	DWMR1040001	Question Type	Legislative

Legislative Requirement(s):
SDWA | O. Reg. 170/03 | 6-5 | (1)1-4; SDWA | O. Reg. 170/03 | 6-5 | (1)5-10;

Question:
Were all continuous analysers calibrated, maintained, and operated, in accordance with the manufacturer's instructions or the regulation?

Compliance Response(s)/Corrective Action(s)/Observation(s):
All continuous analysers were calibrated, maintained, and operated as required.

Routine analyzer maintenance, accuracy verification checks and calibrations are conducted by the operator(s) which are recorded in facility log books and daily SCADA reports. Annual analyzer calibrations were performed by Clear Tech on May 10, 2024.

Question ID	DWMR1108001	**Question Type**	Legislative

Legislative Requirement(s):
SDWA | O. Reg. 170/03 | 6-5 | (1)5-10; SDWA | O. Reg. 170/03 | 6-5 | (1.1);

Question:
Where continuous monitoring equipment used for the monitoring of free chlorine residual, total chlorine residual, combined chlorine residual or turbidity, required by O. Reg. 170/03, Municipal Drinking Water Licence, Drinking Water Works Permit, or order triggered an alarm or an automatic shut-off, did a qualified person respond as required and take appropriate actions?

Compliance Response(s)/Corrective Action(s)/Observation(s):
A qualified person responded as required and took appropriate actions.

Question ID	DWMR1039001	**Question Type**	Legislative

Legislative Requirement(s):
SDWA | O. Reg. 170/03 | 1-6 | (3);

Question:
If primary disinfection equipment that does not use chlorination or chloramination was used, did the owner and operating authority ensure the equipment had a recording device that continuously recorded the performance of the disinfection equipment?

Compliance Response(s)/Corrective Action(s)/Observation(s):
The owner and operating authority ensured that the primary disinfection equipment had a recording device that continuously recorded the performance of the disinfection equipment.

Question ID	DWMR1109001	**Question Type**	Legislative

Legislative Requirement(s):
SDWA | O. Reg. 170/03 | 1-6 | (1); SDWA | O. Reg. 170/03 | 1-6 | (2);

Question:
If the system used equipment for primary disinfection other than chlorination or chloramination and the equipment malfunctioned, lost power, or ceased to provide the appropriate level of disinfection, causing an alarm or an automatic shut-off, did a certified operator respond as required and take appropriate actions?

Compliance Response(s)/Corrective Action(s)/Observation(s):
A certified operator responded as required and took appropriate actions.

Question ID	DWMR1042001	**Question Type**	Legislative

Legislative Requirement(s):
SDWA | 31 | (1);

Question:
If UV disinfection was used, were duty sensors and reference UV sensors checked and calibrated as per the requirements of Schedule E of the Municipal Drinking Water Licence or at a frequency as otherwise recommended by the UV equipment manufacturer?

Compliance Response(s)/Corrective Action(s)/Observation(s):
All UV sensors were checked and calibrated as required.

Duty UV sensors shall be checked on at least a monthly basis against a reference UV sensor or at a frequency as otherwise recommended by the UV equipment manufacturer. When comparing a duty UV sensor to a reference UV sensor, the calibration ratio (intensity measured with the duty UV sensor/intensity measured with the reference UV sensor) shall be less than or equal to 1.20. If the calibration ratio is greater than 1.2, the duty UV sensor shall be replaced with a calibrated UV sensor or a UV sensor correction factor shall be applied while the problem with the UV sensor is being resolved. Reference UV sensors shall be checked against a Master Reference Assembly at a minimum frequency of once every three years or on a more frequent basis depending upon the recommendations of the equipment manufacturer. Records provided for review identify that UV sensors shall be checked on at least a monthly basis and the calibration ratio was reported to be less or equal to 1.20.

Question ID	DWMR1099001	**Question Type**	Information

Legislative Requirement(s):
Not Applicable

Question:
Do records show that water provided by the drinking water system met the Ontario Drinking Water Quality Standards?

Compliance Response(s)/Corrective Action(s)/Observation(s):
Records showed that all water sample results met the Ontario Drinking Water Quality Standards.

Question ID	DWMR1082001	Question Type	Legislative

Legislative Requirement(s):
SDWA | O. Reg. 170/03 | 11-2 | (1); SDWA | O. Reg. 170/03 | 11-2 | (2); SDWA | O. Reg. 170/03 | 11-2 | (6);

Question:
Were distribution microbiological sampling requirements prescribed by Schedule 11-2 of O. Reg. 170/03 for small municipal residential systems met?

Compliance Response(s)/Corrective Action(s)/Observation(s):
Distribution microbiological sampling requirements were met.

For a SMR DWS, distribution bacteriological samples shall be taken:
1) once every 2 weeks provided that the system is in compliance with Schedule 1 of O.Reg. 170/03, or 2) one sample every week if the system does not meet the requirements of Schedule 1 of O. Reg.170/03. Each sample must be tested for EC + TC and, if secondary disinfection is provided, must also be tested for HPC. OCWA staff conduct distribution bacteriological samples weekly satisfying this requirement.

Question ID	DWMR1096001	Question Type	Legislative

Legislative Requirement(s):
SDWA | O. Reg. 170/03 | 6-3 | (1);

Question:
Did records confirm that chlorine residual tests were conducted at the same time and location as microbiological samples?

Compliance Response(s)/Corrective Action(s)/Observation(s):
Records confirmed that chlorine residual tests were conducted as required.

Question ID	DWMR1084001	Question Type	Legislative

Legislative Requirement(s):
SDWA | O. Reg. 170/03 | 13-2;

Question:
Were inorganic parameter sampling requirements prescribed by Schedule 13-2 of O. Reg. 170/03 met?

Compliance Response(s)/Corrective Action(s)/Observation(s):
Inorganic parameter sampling requirements were met.

Sampling and testing for inorganic parameters has been conducted for the DWS in accordance with Schedule 13-2 of Ontario Regulation 170/03. The regulation requires that

samples be collected every 60 months and tested for each parameter listed in Schedule 23. The most recent samples were collected on January 5, 2021 and there were no concerns identified from the results. The next set of samples are due in January 2026.

Question ID	DWMR1085001	**Question Type**	Legislative

Legislative Requirement(s):
SDWA | O. Reg. 170/03 | 13-4 | (1); SDWA | O. Reg. 170/03 | 13-4 | (2); SDWA | O. Reg. 170/03 | 13-4 | (3);

Question:
Were organic parameter sampling requirements prescribed by Schedule 13-4 of O. Reg. 170/03 met?

Compliance Response(s)/Corrective Action(s)/Observation(s):
Organic parameter sampling requirements were met.

Sampling and testing for organic parameters has been conducted for the DWS in accordance with Schedule 13-4 of Ontario Regulation 170/03. The regulation requires that samples be collected every 60 months and tested for each parameter listed in Schedule 24. The most recent samples were collected on January 5, 2021 and there were no concerns identified from the results. The next set of samples are due in January 2026.

Question ID	DWMR1086001	**Question Type**	Legislative

Legislative Requirement(s):
SDWA | O. Reg. 170/03 | 13-6.1 | (1); SDWA | O. Reg. 170/03 | 13-6.1 | (2); SDWA | O. Reg. 170/03 | 13-6.1 | (3); SDWA | O. Reg. 170/03 | 13-6.1 | (4); SDWA | O. Reg. 170/03 | 13-6.1 | (5); SDWA | O. Reg. 170/03 | 13-6.1 | (6);

Question:
Were haloacetic acid sampling requirements prescribed by Schedule 13-6 of O. Reg. 170/03 met?

Compliance Response(s)/Corrective Action(s)/Observation(s):
Haloacetic acid sampling requirements were met.

Section 13-6.1 (1)of Schedule 13, O.Reg.170/03 requires the Owner and the Operating Authority to ensure that at least one distribution sample is taken every 3 months from a point in the drinking water system's distribution system that is connected to the drinking water system, that is likely to have an elevated potential for the formation of Haloacetic Acids (HAAs), and tested for HAAs. Section 6-1.1 of Schedule 6, O.Reg.170/03 requires that these samples be taken at least 60 days, and not more than 120 days, after a sample was taken for that purpose in the previous three month period. The standard for HAAs is expressed as a Running Annual Average (RAA), where the RAA is defined as the average for quarterly HAAs results for a DWS. Sampling for the inspection period occurred as required and there were no concerns with the results. The Ontario Drinking Water Quality
Standard is a RAA concentration of 80 ug/L.

Question ID	DWMR1087001	Question Type	Legislative

Legislative Requirement(s):
SDWA | O. Reg. 170/03 | 13-6 | (1); SDWA | O. Reg. 170/03 | 13-6 | (2); SDWA | O. Reg. 170/03 | 13-6 | (3); SDWA | O. Reg. 170/03 | 13-6 | (4); SDWA | O. Reg. 170/03 | 13-6 | (5); SDWA | O. Reg. 170/03 | 13-6 | (6);

Question:
Were trihalomethane sampling requirements prescribed by Schedule 13-6 of O. Reg. 170/03 met?

Compliance Response(s)/Corrective Action(s)/Observation(s):
Trihalomethane sampling requirements were met.

Section 13-6 of Schedule 13, O.Reg.170/03 requires the Owner and the Operating Authority to ensure that at least one distribution sample is taken every 3 months from a point in the DWS distribution system, or in plumbing that is connected to the DWS, that is likely to have an elevated potential for the formation of Trihalomethanes (THMs), and tested for THMs. Section 6-1.1 of Schedule 6, O.Reg.170/03 requires that these samples be taken at least 60 days, and not more than 120 days, after a sample was taken for that purpose in the previous three month period. Sampling for the inspection period occurred as required and there were no concerns with the results. The Ontario Drinking Water Quality Standard is a RAA concentration of 100 ug/L.

Question ID	DWMR1088001	Question Type	Legislative

Legislative Requirement(s):
SDWA | O. Reg. 170/03 | 13-7;

Question:
Were nitrate/nitrite sampling requirements prescribed by Schedule 13-7 of O. Reg. 170/03 met?

Compliance Response(s)/Corrective Action(s)/Observation(s):
Nitrate/nitrite sampling requirements were met.

Section 13-7 of Schedule 13, O.Reg.170/03 requires the Owner and Operating authority to ensure that at least one water sample is taken every three months and tested for nitrates and nitrites. Section 6-1.1 of Schedule 6, O.Reg.170/03 requires that these samples be taken at least 60 days, and not more than 120 days, after a sample was taken for that purpose in the previous three month period. Sampling for the inspection period occurred as required and there were no concerns with the results.

Question ID	DWMR1089001	Question Type	Legislative

Legislative Requirement(s):
SDWA | O. Reg. 170/03 | 13-8;

Question:
Were sodium sampling requirements prescribed by Schedule 13-8 of O. Reg. 170/03 met?

Compliance Response(s)/Corrective Action(s)/Observation(s):
Sodium sampling requirements were met.

Section 13-8 of Schedule 13, O.Reg.170/03 requires that a treated water sample is taken every 60 months and is tested for sodium. Previous records provided by OCWA indicate that sampling for sodium was conducted on January 4, 2022, with a result of 16.5 mg\L. The next sodium sample is required in January 2027.

Question ID	DWMR1090001	**Question Type**	Legislative

Legislative Requirement(s):
SDWA | O. Reg. 170/03 | 13-9;

Question:
Where fluoridation is not practiced, were fluoride sampling requirements prescribed by Schedule 13-9 of O. Reg. 170/03 met?

Compliance Response(s)/Corrective Action(s)/Observation(s):
Fluoride sampling requirements were met.

Section 13-9 of Schedule 13, O.Reg.170/03 requires that at least one water sample is taken every 60 months and tested for Fluoride. Previous records provided by OCWA indicate that sampling for fluoride was conducted on January 4, 2022, with a result of 1.21 mg/L. The next fluoride sample is required in 2027.

Question ID	DWMR1094001	**Question Type**	Legislative

Legislative Requirement(s):
SDWA | 31 | (1);

Question:
Were water quality sampling requirements imposed by the Municipal Drinking Water Licence and Drinking Water Works Permit met?

Compliance Response(s)/Corrective Action(s)/Observation(s):
Water quality sampling requirements were met.

Wastewater from the backwash process for the iron and manganese filter system is discharged to a wastewater holding tank where suspended solids are permitted to settle. MDWL Schedule C, Table 3 identifies that the annual average concentration of Backwash Wastewater Facility Total Suspended Solids and Total Chlorine Residual discharged from the holding tank shall not exceed 25 mg/L and 0.02 mg/L, respectively. Table 7 identifies that Backwash Wastewater Total Suspended Solids and Total Chlorine Residuals shall be comprised of grab samples (reference MDWL Section 5.0 for details) taken monthly at the point of discharge from the filter backwash tank. During the inspection review period this requirement has been met. The annual average concentration of Backwash Wastewater Suspended Solids discharged during the inspection time period and the annual average concentration of Total Chlorine Residual discharged during the inspection time period did not

exceed not exceed 25 mg/L and 0.02 mg/L, respectively.

Question ID	DWMR1060001	Question Type	Legislative

Legislative Requirement(s):
SDWA | 31 | (1);

Question:
Did the operations and maintenance manual(s) meet the requirements of the Municipal Drinking Water Licence?

Compliance Response(s)/Corrective Action(s)/Observation(s):
The operations and maintenance manual(s) met the requirements of the Municipal Drinking Water Licence.

Question ID	DWMR1062001	Question Type	Legislative

Legislative Requirement(s):
SDWA | O. Reg. 170/03 | 7-5;

Question:
Did records or other record keeping mechanisms confirm that operational testing not performed by continuous monitoring equipment was done by a certified operator, water quality analyst, or person who met the requirements of Schedule 7-5 of O. Reg. 170/03?

Compliance Response(s)/Corrective Action(s)/Observation(s):
Records or other record keeping mechanisms confirmed that operational testing not performed by continuous monitoring equipment was done by a certified operator, water quality analyst, or person who met the requirements of Schedule 7-5 of O. Reg. 170/03.

Question ID	DWMR1071001	Question Type	BMP

Legislative Requirement(s):
Not Applicable

Question:
Did the owner provide security measures to protect components of the drinking water system?

Compliance Response(s)/Corrective Action(s)/Observation(s):
The owner provided security measures to protect components of the drinking water system.

Question ID	DWMR1073001	Question Type	Legislative

Legislative Requirement(s):
SDWA | O. Reg. 128/04 | 23 | (1);

Question:
Was an overall responsible operator designated for all subsystems which comprise the drinking water system?

Compliance Response(s)/Corrective Action(s)/Observation(s):
An overall responsible operator was designated for all subsystem.

Question ID	DWMR1074001	Question Type	Legislative

Legislative Requirement(s):
SDWA | O. Reg. 128/04 | 25 | (1);

Question:
Were operators-in-charge designated for all subsystems which comprise the drinking water system?

Compliance Response(s)/Corrective Action(s)/Observation(s):
Operators-in-charge were designated for all subsystems.

Question ID	DWMR1075001	Question Type	Legislative

Legislative Requirement(s):
SDWA | O. Reg. 128/04 | 22;

Question:
Were all operators certified as required?

Compliance Response(s)/Corrective Action(s)/Observation(s):
All operators were certified as required.

Question ID	DWMR1076001	Question Type	Legislative

Legislative Requirement(s):
SDWA | O. Reg. 170/03 | 1-2 | (2);

Question:
Were adjustments to the treatment equipment only made by certified operators?

Compliance Response(s)/Corrective Action(s)/Observation(s):
Adjustments to the treatment equipment were only made by certified operators.

Question ID	DWMR1115001	Question Type	Legislative

Legislative Requirement(s):
Not Applicable

Question:
Were the inspection questions sufficient to address other non-compliance items identified during the inspection period?

Compliance Response(s)/Corrective Action(s)/Observation(s):
The following instance(s) of non-compliance were also noted during the inspection:

The following non-compliance was reported to the MECP during the DWS inspection:

On September 11, 2024, OCWA reported non-compliance incidents concerning water taking exceedances of Permit To Take Water (PTTW) No. 0725-BTFKTF for the Foreman DWS Well. Table A of the PTTW identifies, in part, that the maximum water taking per minute is 114 litres/minute (or 1.9 litres/second).

OCWA staff identified that the PTTW raw water flow exceedances greater than 1.9 litres/second occurred due to a raw water flow control valve rusting issue in the pilot control system (the valve needle is described to rust and subsequently freeze, causing the flow control issue). The exceedances reportedly occurred on June 29 and 30, July 1, 2, 3, 15, 16, 19, 20, 21, and 22, 2024 and ranged from approximately 1 minute to 3 hours in duration.

OCWA staff stated they are exploring corrective action options with the owner that include a new well pump operating at a lower pump rate, a VFD on the existing pump, or a new pump with a VFD.

On November 20, 2024, the Owner/OCWA provided the following corrective actions and works to be completed with implementation dates to remedy/eliminate the PTTW raw water flow exceedance occurrences:

On 11/06/2024, OCWA instrumentation technician reprogrammed the raw water flow alarm and plant lock out. The high flow alarm was tested and the plant SCADA system sent an alarm to the plant alarm dialer and the plant was instantaneously shut down;

On 11/19/2024, OCWA and the Owner confirmed the intention to replace the well pump with a smaller capacity pump. OCWA Operations Team is currently planning the replacement process:

On 11/26/2024, the pressure reducing valve is scheduled to be rebuilt.

Respecting the above pump replacement and pressure reducing valve rebuilt works to be completed, please provide the above signed Provincial Officer with written confirmation of

completion.

Ministry of the Environment, Conservation and Parks - Inspection Summary Rating Record (Reporting Year - 2024-25)

DWS Name:	FOREMAN DRINKING WATER SYSTEM
DWS Number:	220007711
DWS Owner:	THE CORPORATION OF THE TOWN OF SOUTH BRUCE PENINSULA
Municipal Location:	SOUTH BRUCE PENINSULA
Regulation:	O.REG. 170/03
DWS Category:	DW Municipal Residential
Type of Inspection:	Focused
Compliance Assessment Start Date:	Sep-11-2024
Ministry Office:	Owen Sound District Office

Maximum Risk Rating: 475

Inspection Module	Non Compliance Risk (X out of Y)
Capacity Assessment	0/30
Certification and Training	0/42
Logbooks	0/14
Operations Manuals	0/14
Other Inspection Findings	0/0
Reporting & Corrective Actions	0/42
Source	0/14
Treatment Processes	0/228
Water Quality Monitoring	0/91
Overall - Calculated	**0/475**

Inspection Risk Rating:	**0.00%**

Final Inspection Rating:	**100.00%**

Inspection Rating Record Generated On 2024-11-25 (Inspection ID: 1-351651770)

DWS Name:	FOREMAN DRINKING WATER SYSTEM
DWS Number:	220007711
DWS Owner Name:	THE CORPORATION OF THE TOWN OF SOUTH BRUCE PENINSULA
Municipal Location:	SOUTH BRUCE PENINSULA
Regulation:	O.REG. 170/03
DWS Category:	DW Municipal Residential
Type of Inspection:	Focused
Compliance Assessment Start Date:	Sep-11-2024
Ministry Office:	Owen Sound District Office

Non-Compliance Question(s)	Non Compliance Risk
Other Inspection Findings	
Were the inspection questions sufficient to address other non-compliance items identified during the inspection period?	0
Overall - Total	**0**

Maximum Question Rating: 475

Inspection Risk Rating:	**0.00%**
FINAL INSPECTION RATING:	**100.00%**

February 2, 2023

Key Reference and Guidance Material for Municipal Residential Drinking Water Systems

Many useful materials are available to help you operate your drinking water system. Below is a list of key materials owners and operators of municipal residential drinking water systems frequently use.

To access these materials online click on their titles below or use your web browser to search for their titles. Contact the Ministry if you need assistance or have questions at 1-866-793-2588 or waterforms@ontario.ca.
For more information on Ontario's drinking water visit www.ontario.ca/page/drinking-water

Click on the publication below to access it

- Drinking Water System Profile Information Form - 012-2149E
- Laboratory Services Notification Form – 012-2148E
- Adverse Test Result Notification Form – 012-4444E
- Taking Care of Your Drinking Water: A Guide for Members of Municipal Councils
- Procedure for Disinfection of Drinking Water in Ontario
- Strategies for Minimizing the Disinfection Products Trihalomethanes and Haloacetic Acids
- Filtration Processes Technical Bulletin
- Ultraviolet Disinfection Technical Bulletin
- Guide for Applying for Drinking Water Works Permit Amendments, & License Amendments
- Certification Guide for Operators and Water Quality Analysts
- Training Requirements for Drinking Water Operator
- Community Sampling and Testing for Lead: Standard and Reduced Sampling and Eligibility for Exemption
- Drinking Water System Contact List – 7128E01
- Ontario's Drinking Water Quality Management Standard - Pocket Guide
- 2020 Watermain Disinfection Procedure
- List of Licensed Laboratories