Ontario

AMABEL-SAUBLE DRINKING WATER SYSTEM
Physical Address: 628 D LINE, , SOUTH BRUCE PENINSULA, ON N0H 2G0

INSPECTION REPORT

Entity:	ONTARIO CLEAN WATER AGENCY THE CORPORATION OF THE TOWN OF SOUTH BRUCE PENINSULA
Inspection Start Date:	October 02, 2024
Site Inspection Date:	October 02, 2024
Inspection End Date:	November 27, 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 Amabel-Sauble DWS is a Large Municipal Residential DWS (serves a major residential development and serves more than 100 private residences), Classified as a Class II Water Treatment Subsystem and a Class II Water Distribution Subsystem, 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 November 18, 2023, the day following the previous inspection, to the inspection date on October 2, 2024. MECP Water Compliance Officer (WCO) Bob Graham met with OCWA staff members, Senior Operations Manager Leo-Paul Frigault, Overall Responsible Operator (ORO) James Learn, Operator Cole Hutchinson, 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 above drinking water system:

Located at Lot 31, Conc. D, Former Township of Amabel, Town of South Bruce Peninsula, UTM Coordinates NAD 83: UTM Zone 17, 479829.00 m E., 4944145.00 m N, the Amabel-Sauble Drinking Water System consists of three (3) wells, a treatment plant building housing chlorination equipment and facilities, packaged filtration treatment system for iron and manganese, cartridge filter and UV disinfection, high lift pumps, process piping and valves, instrumentation and control systems, one underground storage reservoir and approximately 15.6 kilometers of distribution watermains.

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 (MDWL) No. 094-101, Issue No. 4, issued on March 6, 2020.
- Drinking Water Works Permit (DWWP) No. 094-201, Issue No. 5, issued on March 6, 2020.
- Permit To Take Water No. 8444-AKMQCN (PTTW), issued on May 5, 2017.

Background and Compliance

Well # 1 (PW1) GUDI w/o Effective Insitu
This raw water source is used in conjunction with PW2 as the primary water source. This is a 150 mm diameter 102 m deep drilled well equipped with a submersible pump rated at 4 L/sec.

Well # 2 (PW2) GUDI w/o Effective Insitu
This raw water source is used in conjunction with PW1 as a primary water source for this drinking water system. This is a 150 mm diameter 86.9 m deep drilled well. It is equipped with a submersible well pump rated at 4 L/sec.

Well (Winburk)
This raw water source for the Amabel-Sauble DWS consists of a 150 mm diameter, 87-metre deep drilled groundwater well which is GUDI and is used only as a standby source. It was constructed in 1977 and has steel casing. Upgrades to the well were completed in 2009 to remove the well pit. The well is equipped with a 6.05 L/s (80 IGPM) capacity 10 HP submersible well pump. A raw watermain from the former Winburk pumphouse to the new Amabel-Sauble Water Treatment Plant was installed from Bunnyview Drive to the D-Line.

Amabel-Sauble Water Treatment Plant
The Amabel-Sauble Water Treatment Plant houses the treatment and control facilities including:

• Iron Removal with two pressure vessels containing anthracite and catalytic media.

• Chlorine Disinfection System with three pumps each with a dedicated duty. One pump is used for iron and manganese oxidation, one is used to chlorinate treated water after UV disinfection prior to water entering the clearwell and the third pump is used for post chlorination.
• Additional Disinfection System consisting of one cartridge filter housing prior to the two (2) UV disinfection units.
• Clearwell/Storage Tank with high lift and backwash pumps.
• Residual Management System consisting of one backwash holding tank which discharges supernatant to the ditch and the remaining sludge is pumped via a connection at the building exterior.
• Standby Power consisting of generator with a 32 hour double wall sub-base fuel tank.
• There is also, one (1) programmable logic controller and associated SCADA system for control of plant operations, a chlorine residual analyzer, treated water turbidity analyzer, filtered water turbidity analyzer and Raw, Treated and Backwash flow meters.

Amabel-Sauble Distribution System
The Amabel-Sauble distribution system connected seven former distribution systems (Gremik, Thompson, Trask, Forbes, Winburk, Fedy and Robins). Trunk watermains were constructed on Sauble Falls Parkway, Woodland Crescent, 6th Street North, 3rd Avenue North, 9th Street North, 2nd Avenue North, D-Line, Jewel Bridge Road, Deer Trail Road and Martin Drive in Sauble Beach. There are fire hydrants on the trunk mains and two air release valve chambers. A second distribution line, originating at the water treatment plant supplies water to the Amabel-Sauble School.
There are approximately 300 service connections in the Amabel-Sauble distribution system serving a population of approximately 730 residents.

CT Calculations
As per CT control document dated 04/13/2012 provided by OCWA . The Procedure for Disinfecting Drinking Water in Ontario requires the Amabel Sauble system to achieve 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 =654 m3
Clearwell volume required for fire protection 1.6 m = 43%
Baffle ratio = 0.1
Flow rate = 687 m3/day (0.477 m3/min)
Effective Contact time = (654 x 0.43 x 0.1) / 0.477
Effective Contact Time = 28.12 / 0.477 = 58.95 min
CT (required) = Disinfection Residual Concentration (mg/L) x Effective contact time (min)
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 / 58.95 = 0.135
A minimum Free Chlorine Concentration of 0.14 mg/L is required to meet primary disinfection

with a minimum clearwell volume of 281.2 m3 (43%).

NON-COMPLIANCE

This should not be construed as a confirmation of full compliance with all potential applicable legal requirements. 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.

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.

The owner shall maintain all wells in accordance with Ontario Regulation 903, s.20 (1) under the Ontario Water resources Act which states that, "The well owner shall maintain the well at all times after the completion of the well's structural stage in a manner sufficient to prevent the entry into the well of surface water and other foreign materials."

Well inspection and maintenance procedures for the entire well structure including all above and below grade components are required by MDWL Schedule B (Section 16.2.8, 16.2.9 and 16.2.10) for the Amabel-Sauble DWS. Well inspection and maintenance procedures are included in Appendix F of the Operations and Maintenance Manual.

At the time of inspection, a visual assessment was made of the exposed structural portions of Well # 1, Well #2 and the Winburk Well. The wells appeared to be maintained in such a manner to prevent the entry into the wells 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 of the Amabel-Sauble DWS is 687 cubic meters/day.

Based upon the records provided, 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.

The equipment installed at the Amabel-Sauble DWS plant compares favourably to the equipment listed in the DWWP issued for the Amable-Sauble DWS. The process flow diagram included in Schedule D of the Permit also appears to be accurate. All equipment described in the DWWP appeared to be installed and operating on the date of this inspection.

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.

Treatment for a GUDI water source is required to achieve 2-log removal or inactivation of Cryptosporidium oocysts, a 3-log removal or inactivation of Giardia cysts and a 4-log removal or inactivation of viruses. These requirements are reportedly met by UV disinfection followed by chlorination using sodium hypochlorite for both primary and secondary disinfection purposes. According to Schedule E of the MDWL, the UV disinfection process is credited with 3 log Giardia cyst removal, 2 log Cryptosporidium oocyst removal and 2 log virus removal credits, with the UV disinfection process being fully operational and the applicable log removal/inactivation credit assignment criteria being met. The Chlorination disinfection process is credited with 2+ Virus log removal/inactivation credits, if the chlorination process meets MDWL Schedule E chlorination treatment criteria. Records reviewed indicate that the Amabel-Sauble Water Treatment Plant was operated to achieve the necessary CT requirements and performance criteria for primary disinfection purposes 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.

Schedule E of the MDWL identifies that the UV disinfection system is credited with primary disinfection pathogen log removal/inactivation credits of 2 for Cryptosporidium Oocysts, 3 for Giardia Cysts and 2 for Viruses, provided that the treatment process is fully operational and log removal/inactivation credit assignment criteria is being met. Schedule C of the MDWL further identifies that the UV disinfection equipment at the Amabel-Sauble WTP shall maintain a minimum continuous pass-through UV dose of 40 mJ/cm2. To ensure that the above Schedule requirements are met, and that the UV disinfection system satisfies the standards

described in Section 1-6 (1) of Schedule 1 of Ontario Regulation 170/03, SCADA alarm set points of low 23.5 W/m2 and low-low 23.4 W/m2 are in place. The Trojan UV Swift B08 units installed at the Amabel Sauble WTP are identified as being capable of providing a 40 mJ/cm2 UV dosage at UV intensity of 19 W/m2 up to a maximum flow rate of 40 m3/hour or 11.1 L/s. The UV system alarm was set by the manufacturer to automatically call for the water treatment process to shut down if the UV intensity reaches 23.4 W/m2.

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.

Following completion of the intended chlorine contact time for primary disinfection purposes, free available chlorine residual is maintained out and into the distribution system for secondary disinfection purposes to reduce the potential for microbial re-growth within the distribution system, and in accordance with section 1-2 of Schedule 1, O.Reg.170/03. During the inspection review time period, the free chlorine residual sample test results obtained/recorded by the OA in the distribution system exceeded the minimum distribution system chlorine residual regulatory limit of 0.05 mg/L.

Question ID	DWMR1033001	**Question Type**	Legislative

Legislative Requirement(s):
SDWA | O. Reg. 170/03 | 7-2 | (3); SDWA | O. Reg. 170/03 | 7-2 | (4);

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

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

Subsections 7-2 (3) of Schedule 7, O.Reg.170/03 requires the Owner and OA of a large municipal residential system that provides secondary disinfection to ensure that at least seven distribution system samples are taken each week and tested immediately for free chlorine residual. Where secondary disinfection monitoring is not being done on a daily basis, Subsection 7-2(4) of Schedule 7. Reg.170/03 requires that at least four of the seven required tests be taken on one day of the week at least 48 hours after the last samples were taken the week previous; while the remaining three tests are required to be collected within the same week and at least 48 hours after the initial four. Records provided by OCWA and reviewed during the inspection indicate that the owner complied with these requirements by taking four

tests taken on one day of the week, at least 48 hours after the last samples were taken the week previous, and an additional four tests collected within the same week and at least 48 hours after the initial four.

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. The SCADA system low alarm set point for the treated water chlorine analyzer is set at 0.60 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, notifies the operator, 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. The SCADA system turbidity analyzer high high alarm set point is set at 0.60 NTU, which, if triggered, notifies the operator and locks out the well pumps 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 monthly process and compliance status reports. Annual analyzer accuracy verification checks and calibrations were performed by SCG ClearTech on May 10, 2024. Annual flow meters accuracy verification checks and calibrations were performed by SCG Flowmeterix on May 30, 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.

Records provided by OCWA identify that duty UV sensors were checked monthly against a reference UV sensor, with the calibration ratio (intensity measured with the duty sensor/intensity measured with the reference UV sensor) documented to be less than or equal to 1.2, in compliance with Schedule E of the MDWL. 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.

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	DWMR1083001	**Question Type**	Legislative

Legislative Requirement(s):
SDWA | O. Reg. 170/03 | 10-3;

Question:
Were treated microbiological sampling requirements prescribed by Schedule 10-3 of O. Reg. 170/03 for large municipal residential systems met?

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

Section 10-3 of Schedule 10, O.Reg.170/03 requires the Owner and the Operating Authority ensure samples are collected at least once every week from the system's treated water at the point of entry into the distribution system. The samples collected are required to be tested for E.Coli and total coliform,and general bacteria populations expressed as colony counts on a heterotrophic plate count. This requirement has been met.

Question ID	DWMR1081001	**Question Type**	Legislative

Legislative Requirement(s):
SDWA | O. Reg. 170/03 | 10-2 | (1); SDWA | O. Reg. 170/03 | 10-2 | (2); SDWA | O. Reg. 170/03 | 10-2 | (3);

Question:
Were distribution microbiological sampling requirements prescribed by Schedule 10-2 of O. Reg. 170/03 for large municipal residential systems met?

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

Section 10-2 of Schedule 10, O. Reg. 170/03, requires the Owner of a drinking-water system and the operating authority for the system shall ensure that, if the system serves 100,000 people or less, at least eight distribution samples, plus one additional distribution sample for every 1,000 people served by the system, are taken every month, with at least one of the samples being taken in each week and tested for Escherichia coli and total coliforms, with at least 25 percent of the samples required to be taken are tested for general bacteria population expressed as colony counts on a heterotrophic plate count (HPC). This requirement has been met.

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 drinking water system in accordance with Schedule 13-2 of Ontario Regulation 170/03. The regulation requires that samples are to be collected every 12 months and tested for each parameter listed in Schedule 23; this requirement has been met. The most recent samples were collected on January 9, 2024, and there were no concerns identified from the results.

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 drinking water system in accordance with Schedule 13-4 of Ontario Regulation 170/03. The regulation requires that samples are to be collected every 12 months and tested for each parameter listed in Schedule 24; this requirement has been met. The most recent samples were collected on January 9, 2024, and there were no concerns identified from the results.

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. HAAs will generally form at the beginning of the distribution system. Sampling for the inspection period occurred on January 2 (7.9 ug/L), April 2 (8.5 ug/L) and July 2, 2024 (5.8 ug/L). There were no concerns with the inspection time period RAA concentration for HAAs in the DWS which were below the Ontario Drinking Water Quality Standard 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 on January 2 (29 ug/L), April 2 (33 ug/L) and July 2, 2024 (40 ug/L). There were no concerns with the inspection time period RAA concentration for THMs in the DWS which were below the Ontario Drinking Water Quality Standard 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. The Owner complied with these requirements when they conducted the required monitoring on January 2, April 2nd and July 2, 2024. There were no concerns identified from 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 the Owner and the Operating Authority ensure that a treated water sample is taken every 60 months and is tested for sodium. The last sodium sample occurred on January 6, 2020 with a result of 14.3 mg\L. The next sodium sample is due in January 2025.

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 the Owner and the Operating Authority to ensure that at least one water sample is taken every 60 months and tested for Fluoride. The last Fluoride sample occurred on January 6, 2020 with a result of 1.35 mg/L. The next Fluoride sample is due in January 2025.

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 Suspended Solids discharged from the holding tank shall not exceed 25 mg/L and the annual average concentration of total chlorine residual shall not exceed 0.02 mg/L. Table 7 identifies that Backwash Wastewater Suspended Solids and total chlorine residual parameters shall be comprised of manual composite samples taken monthly at the point of discharge from the filter backwash tank. During the inspection review period this requirement has been met. The sample test results identify that the annual average concentration of Backwash Wastewater Suspended Solids during the inspection time period did not exceed 25 mg/L and the annual average concentration of total chlorine residual did not exceed 0.02 mg/L.

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.

Perimeter fencing with a lockable access gate surrounds the pump house and treatment facility which has lockable doors and is equipped with an intruder alarm and signage restricting access to the site. Wells PW1 and PW2 are locked and have perimeter fencing and lockable access gates restricting access to the wells. The Winburk well, although not fenced, is locked. At the time of inspection there was no reported unauthorized access, vandalism and/or cyber security issues impacting the DWS.

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.

The ORO for the Amabel-Sauble DWS is James Learn, with back-up being provided by Billy Shearer.

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.

DWS Name:	AMABEL-SAUBLE DRINKING WATER SYSTEM
DWS Number:	220007917
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:	Oct-2-2024
Ministry Office:	Owen Sound District Office

Maximum Risk Rating: 496

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
Reporting & Corrective Actions	0/42
Source	0/14
Treatment Processes	0/228
Water Quality Monitoring	0/112
Overall - Calculated	**0/496**

Inspection Risk Rating:	**0.00%**

Final Inspection Rating:	**100.00%**

DWS Name:	AMABEL-SAUBLE DRINKING WATER SYSTEM
DWS Number:	220007917
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:	Oct-2-2024
Ministry Office:	Owen Sound District Office

All legislative requirements were met. No detailed rating scores.

Maximum Question Rating: 496

Inspection Risk Rating:	**0.00%**

FINAL INSPECTION RATING:	**100.00%**