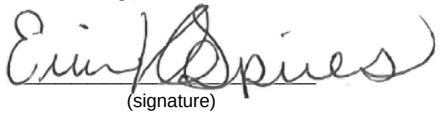
SOUTH RIVER DRINKING WATER SYSTEM
28 HOWARD ST, SOUTH RIVER, ON, P0A 1X0

INSPECTION REPORT

System Number:	220013562
Entity:	ONTARIO CLEAN WATER AGENCY CORPORATION OF THE VILLAGE OF SOUTH RIVER
Inspection Start Date:	November 30, 2023
Inspection End Date:	January 11, 2024
Inspected By:	Erin Spires
Badge #:	1540



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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 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 drinking water system during the review period.

This drinking water system 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 drinking water system is owned by The Corporation of the Village of South River and operated by the Ontario Clean Water Agency.

The system serves an estimated population of 942 and is categorized as a Large Municipal Residential System.

Information reviewed for this inspection covered the time period of September 15th, 2022 to November 29th, 2023.

The water inspector met with Darren Aljoe (Operator with Overall Responsibility, OCWA) and Josh Gravelle (Process and Compliance Technician, OCWA) as part of the inspection process.

Systems/Components

All locations associated with primary disinfection were visited as part of this inspection. The following sites were visited as part of the inspection of the drinking water system:

Forest Lake, South River:

- The intake facilities consist of a 300 mm diameter intake pipe extending 232 m into Forest Lake, with a flared elbow in a wooden and concrete crib located at a depth of 4.5 m. An isolation valve is located in the low lift pumping station (LLPS). Two plastic, 15 mm lines (unused) reportedly run from the LLPS to the intake, one for pre-chlorination for zebra muscle control (with diffuser) and the second for raw water sampling.

- The LLPS is located approximately 170 m south of the eastern end of Howard Street, at the south end of Tom Thomson Lane. The locked, entry alarmed building contains a 4.2 m deep raw water well, dual manual screens which separate the low lift intake well and the low lift pump well. There are continuous level monitors trended to the Sensory Control and Data Acquisition (SCADA) system at the water treatment plant (WTP) on either side of the screens. There are three submersible electric-driven low lift pumps (LLPs), each rated at 10 L/s, which typically operate automatically (manual control is possible) and sequentially in response to clearwell level sensors. Each LLP discharge is equipped with backflow prevention and manual valves. A low lift pressure control valve will return water to the intake pipe if there is too much pressure in the raw water main to the WTP. The LLPs will lock-out on a low level alarm from the low lift pump well level switch.

- The raw watermain to the WTP is 200 mm diameter stainless steel with an isolation valve at the LLPS discharge point. It runs approximately 400 m subsurface to the WTP. At the WTP inlet, there is a continuously monitored magnetic flow meter, a mechanical control valve, a raw water sample tap, and a supply line feeding the raw water turbidity analyzer and pH meter, both continuously monitored through SCADA.

Chemical Addition Systems:

- Coagulant System

Polyaluminum chloride (coagulant) is fed into the raw water header prior to the in-line mixer. There are two metering pumps (one duty and one standby) each rated at approximately 30 L/hr. There is an 11 500 L polyethylene bulk storage tank which is filled from the exterior of the plant by tanker and which is vented to the exterior of the WTP. A transfer pump, drawing from the bulk tank and controlled by a float switch in the adjacent, 450 L day tank, maintains solution level in the day tank. Coagulant is fed continuously while the SCADA system registers raw water flows. A failure of this system will shut-down water production at the WTP.

- pH and Alkalinity Adjustment System

Soda ash is fed into the raw water header prior to the in-line mixer and the HLPW discharge. There is a 1350 L storage tank. The pre-pH chemical pump is rated at 30 L/hr and triggered by raw water flows. The post-pH chemical pump is rated at 60 L/hr and is triggered by treated water flows.

- Iron and Manganese Control System:

Currently feeding potassium permanganate into the raw water header prior to the in-line mixer with a pre-oxidation chemical pump rated at 30 L/hr. The 1 350 L storage tank has an in-tank mixer. Chemical is fed continuously while the SCADA system registers raw water flows. The filter backwash greensand regeneration pump is rated at 120 L/hr.

- Sodium Hypochlorite Feed System – Primary and Secondary Disinfection

Each package plant has a dedicated sodium hypochlorite pump rated at 30 L/hr. Chemical is fed continuously to the filter effluent line while the SCADA system registers raw water flows. A failure of both pumps will lock-out the LLPs and stop water production.

South River Water Treatment Plant:

- Treatment consists of chemical addition, coagulation, flocculation, sedimentation, filtration and disinfection by chlorination with contact time. The WTP has a rated capacity of 1 680 m3/day. All of the processes are completed within the enclosed WTP building located at 28 Howard Street, the Village of South River, District of Parry Sound, Ontario.

- Raw water passes the raw water analyzers and is injected with potassium permanganate (iron and manganese control by oxidation/precipitation), sodium carbonate (soda ash – for elevation of pH) and polyaluminum chloride (coagulant). These chemical feeds are triggered by raw water flows and are flow paced. After chemical injection and prior to entering the package plants the water passes through an in-line mixer.

- A coagulant feed failure will lock-out the LLPs and effectively stop treatment.

- Water is directed equally into two Napier Reid package treatment plants via individual headers and automated valves (plants can operate individually).

- Within each plant, water flows into flocculation tanks, each equipped with a flash mixer, vertical flocculator and a floc recirculator. The flocculation tanks provide 30 minutes detention time.

- Continuous pH monitoring is completed within the mixing/flocculation chamber. An unused pH analyzer is also located at each package plant inlet.

- Following flocculation, the water flows into two semi-circular settling/clarification chambers. Each chamber has level monitoring, inclined tube settlers, 150 mm inlet piping and 150 mm sludge collection and recirculation headers. Each tank is designed for an overflow rate of 2.4 m/hour. Settled sludge is drawn down via an automated valve to the backwash clarification tank.

- The clarified water overflows from the tube settlers in the clarifiers into gravity fed, individual multi-media filters consisting of garnet, silica sand, greensand and granulated activated carbon (GAC) with gravel underlayers. There is continuous level monitoring on the surface of each filter. Continuous turbidity monitoring is completed on each filter effluent line with programmable LLP lock-outs on high/high alarm set point for the affected plant(s) to stop water production. Continuous flow monitoring is also completed on each filter effluent line.

- Filter backwashes are triggered on programmed pass-through volume (typical), time, filtered water turbidity and/or head-loss pressure monitoring. Backwashes are completed using chlorinated water from the clearwells via two submersible, 15 HP pumps. Each backwash line has continuous flow monitoring, automated valving and backflow prevention.

- Filter-to-waste is completed during filter ripening. Backwash water is directed to the backwash effluent handling system (backwash clarification tank).

- Filtered water is directed into a common header and injected with a 6% sodium hypochlorite solution for primary and secondary disinfection. There is a pre-chlorine analzyer used for continuous monitoring. The header splits and chlorinated water is directed equally (typical, but manual valving exists to isolate individual cells) into a two celled (each with a capacity of 573 m3), baffled, clearwells. Each cell is equipped with continuous level monitoring (controls LLPs), low level lock-outs for emergency low levels and valved lines feeding the high lift pump well by gravity and high lift pump (HLP) draw down. Overflows are directed to the roadside ditch.

- The high lift pump well has an estimated capacity of 140 m3. Six (6) vertical turbine HLPs (two rated at 7 L/s at 45 m total dynamic head (TDH) with 5.6 kW motors; two rated at 14 L/s at 45 m TDH with 11.2 kW motors; and two fire pumps rated at 56 L/s at 38 m TDH with 22 kW motors) are situated above and draw from this tank (sequential starts on system pressure monitoring set points).
These pumps direct treated water to the common discharge header which is equipped with a post-contact sodium hypochlorite injection point, a sodium carbonate injection point (post treatment pH adjustment), a continuously monitored treated water turbidity analyzer, a treated water/distributed water continuously monitored magnetic flow meter, continuous distribution system /treated water discharge pressure monitoring, continuous treated water pH monitoring, a plant supply line with flow monitoring and backflow prevention, and, a continuously monitored treated water free chlorine residual analyzer.

- The SCADA system continuously collects and monitors information from instruments and sensor throughout the works and automatically controls plant processes and generates alarms.

- There is an on-site septic system

South River Distribution System:

The South River distribution system supplies approximately 1100 consumers. It is classified as a Class I Water Distribution Subsystem (#1497).
As of December 2021, there were 508 total service connections: 454 residential and multi-residential services; 38 commercial connections (mix of commercial, industrial and institutional); and 16 separate residential services in Machar Township fed from a watermain in South River Village.

- There are 30 customers who do not receive water, but who are billed for fire protection.

- The distribution system infrastructure consists of a mixture of cast iron, ductile iron, asbestos and PVC piping ranging in diameter from 300 mm down to 50 mm.

- There are approximately 13 km of distribution watermains.

- There are 11 dead end locations, approximately 60 main valves and 66 fire hydrants.

Stand-by Power Generator:

- Emergency backup power is provided by a 135 kW radiator cooled diesel generator housed in a separate building. The fuel is contained in a double walled external storage tank. The generator is programmed for automatic starts and stops on power interruptions and restoration. It is monitored and alarmed for operational parameters.

Wastewater Treatment System:

The South River Water Treatment Plant Process generates wastewater through filter backwashing and clarifier blowdown to remove sludge.

- Filter backwash water is directed to the clarification tank. The supernatant from the clarification tank is decanted and discharged to a storm sewer which discharges to the lake. The settled solids from the clarification tank are pumped to the sludge holding tank.

- Clarifier blow-down is directed to the wastewater surge tank. Supernatant from the wastewater surge tank is directed to the clarification tank, while the settled solids are directed to the sludge holding tank.

- The sludge holding tank receives settled solids from both the clarification tank and the waste surge tank. Supernatant from the sludge holding tank is directed to the clarification tank. The settled solids from the sludge holding tank are pumped to the sludge bagging system 3-5 times/week for disposal at Machar Township Landfill.

- There are two process wastewater polymer systems; one system consists of a storage tank, mechanical mixer, and a single metering pump that injects polymer into the package plant waste effluent line (common pipe for both clarifier blowdown and filter backwash water). The second system forms part of the twelve (12) bag sludge dewatering system.

Permissions/Approvals

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

- Drinking Water Works Permit No. 200-201, Issue No. 4, dated January 15th, 2021 (Permit),
- Municipal Drinking Water Licence No. 200-101, Issue No. 4, dated January 15th, 2021 (Licence),
- Permit to Take Water No. 4340-BA6RUQ dated March 14th, 2019, and;
- Previous ministry inspection reports dated September 21st, 2022 and October 26th, 2021.

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:** DWMR1020000 Is the owner/operating authority able to demonstrate that, when required during the inspection period, Form 1 documents were prepared in accordance with their Drinking Water Works Permit?	The owner/operating authority was not in compliance with the requirement to prepare Form 1 documents as required by their Drinking Water Works Permit during the inspection period. Required Actions: Subsequent to the watermains being completed the Form 1s were signed and kept on filed. The owner and operating authority shall ensure that all Form 1's are completed prior to completing or placing into service watermains. No further action required.
NC-2	**Question ID:** DWMR1023000 Do records indicate that the treatment equipment was operated in a manner that achieved the design capabilities required under Ontario Regulation 170/03 or a DWWP and/or MDWL issued under Part V of the SDWA at all times that water was being supplied to consumers?	Records did not indicate that the treatment equipment was operated in a manner that achieved the design capabilities required under O. Reg. 170/03 or a Drinking Water Works Permit and/or Municipal Drinking Water Licence issued under Part V of the SDWA at all times that water was being supplied to consumers. Required Actions: On October 24th, 2022, the boil water advisory was lifted after the distribution system was flushed and two sets of satisfactory microbiological samples were received. On November 1st, 2022, the operating authority added and tested PLC and SCADA alarm programming to lock out the package plant for various alarms including coagulant pump fault

		and low-level alarm. No further actions required.
NC-3	**Question ID:** DWMR1094000 Are all water quality monitoring requirements imposed by the MDWL and DWWP being met?	All water quality monitoring requirements imposed by the MDWL or DWWP issued under Part V of the SDWA were not being met. Required Actions: A review of the certificates of analysis and discussions with operators indicated that sampling the backwash wastewater was increased in 2023. No further actions required.

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	DWMR1000000	**Question Type**	Information

Legislative Requirement(s):
Not Applicable

Question:
Does this drinking water system provide primary disinfection?

Compliance Response(s)/Corrective Action(s)/Observation(s):
This drinking water system provides for both primary and secondary disinfection and distribution of water.

Question ID	DWMR1012000	**Question Type**	Legislative

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

Question:
Does the owner have a harmful algal bloom monitoring plan in place that meets the requirements of the MDWL?

Compliance Response(s)/Corrective Action(s)/Observation(s):
The owner had a harmful algal bloom monitoring plan in place.

Condition 6 of Schedule C of the Licence requires that the owner shall develop and keep up to date a Harmful Algal Bloom (HAB) monitoring, reporting, and sampling plan to be implemented when a potential harmful algal bloom is suspected or present.

A review of the Operations and Maintenance Manuals indicates that there is a Standard Operating Procedure for Responding to a Blue-Green Algae Bloom (dated March 29th, 2023).

A review of the certificates of analysis indicate that weekly raw water samples were taken and tested for microcystins in September 2022, October 2022, and from May 29th, 2023 to October 30th, 2023.

A review of the elogbook indicates that weekly monitoring of the source occurred in September and October 2022 and from June to October 2023.

Question ID	DWMR1014000	**Question Type**	Legislative

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

Question:
Is there sufficient monitoring of flow as required by the MDWL or DWWP issued under Part V of the SDWA?

Compliance Response(s)/Corrective Action(s)/Observation(s):
There was sufficient monitoring of flow as required by the Municipal Drinking Water Licence or Drinking Water Works Permit issued under Part V of the SDWA.

Condition 2 of Schedule C of the Licence requires continuous flow measurement and recording for the flow rate and daily volume of: treated water that flows from the treatment subsystem to the distribution system, and water that flows into the treatment subsystem.

The raw water flowmeter is located on the raw watermain. The treated water flowmeter is located on the discharge header.

Question ID	DWMR1016000	**Question Type**	Legislative

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

Question:
Is the owner in compliance with the conditions associated with maximum flow rate or the rated capacity conditions in the MDWL issued under Part V of the SDWA?

Compliance Response(s)/Corrective Action(s)/Observation(s):
The owner was in compliance with the conditions associated with maximum flow rate or the rated capacity conditions in the Municipal Drinking Water Licence issued under Part V of the SDWA.

Condition 1.1 of Schedule C of the Licence specifies the rated capacity as 1 680 m3/day of treated water that flows from the treatment subsystem to the distribution system.

A review of the WISKI data provided for the inspection period indicates that the maximum daily treated water volume was 1 004.3 m3/day in October 2022.

Question ID	DWMR1018000	**Question Type**	Legislative

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

Question:
Has the owner ensured that all equipment is 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 had ensured that all equipment was installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit.

Question ID	DWMR1020000	Question Type	Legislative

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

Question:
Is the owner/operating authority able to demonstrate that, when required during the inspection period, Form 1 documents were prepared in accordance with their Drinking Water Works Permit?

Compliance Response(s)/Corrective Action(s)/Observation(s):
The owner/operating authority was not in compliance with the requirement to prepare Form 1 documents as required by their Drinking Water Works Permit during the inspection period.

Required Actions:

Subsequent to the watermains being completed the Form 1s were signed and kept on filed.

The owner and operating authority shall ensure that all Form 1's are completed prior to completing or placing into service watermains.

No further action required.

Condition 3.3.1 of Schedule B of the Permit requires verification from Conditions 3.1.7 and 3.1.8 shall be recorded on the ministry's "Form 1 – Record of Watermain Authorized as a Future Alteration" prior to the watermain replacement being placed into service.

1. Form 1 signed for watermain replacements in Phase 2 in the South River distribution system on May 31st, 2023 for:

a. Dufferin St. from Ottawa Ave. to Maple St.
b. Marie St. from Eagle Lake Rd to Lincoln St.
c. Ottawa Ave. from west side of Hwy 124 to the east side of Hwy 124
d. Broadway St. from Ena Ave. to Main St.
e. Ena Ave. from Broadway St. to Ottawa Ave. and Howard St.
f. Ethelbert Ave. from Ena Ave. to Riverside St.

2. Form 1 signed on November 22nd, 2022 for watermain replacements completed between October 11th to November 18th, 2022 Eagle Lake Road from Ottawa Ave. to Alfred St.

3. Form 1 for replacing the watermain on Ottawa Ave. from Cedar Cres. to Lincoln St. signed on September 15th, 2022.

4. Form 1 for replacement of the Alfred St. Watermain from Tebby Avenue to Eagle Lake Road. Work was completed in July 2023. Form 1 was signed on September 7th, 2023.

Two of the Form 1's (dated Nov. 22, 2022 and Sept. 7, 2023) were signed after the watermain replacements were completed. These are violations of Condition 3.3.1 of Schedule B of the

Permit.

Failure to complete a Form 1 – Record of Watermains Authorized as a Future Alteration prior to the watermain addition, modification, replacement, or extension being placed into service is a violation of Condition 3.3 of Schedule B of the Permit.

Question ID	DWMR1025000	**Question Type**	Legislative

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

Question:
Were all parts of the drinking water system that came in contact with drinking water (added, modified, replaced or extended) disinfected in accordance with a procedure listed in Schedule B of the Drinking Water Works Permit?

Compliance Response(s)/Corrective Action(s)/Observation(s):
All parts of the drinking water system were disinfected in accordance with a procedure listed in Schedule B of the Drinking Water Works Permit.

Condition 2.3 of Schedule B of the Permit requires that all parts of the drinking water system in contact with drinking water that are added, modified, replaced, or extended shall be disinfected in accordance with the ministry's Watermain Disinfection Procedure (dated August 1, 2020).

A review of the Distribution Repair and Maintenance forms, elogbooks, and adverse water quality incidents indicated that watermain repairs and replacements were disinfected in accordance with the ministry's Watermain Disinfection Procedure.

Question ID	DWMR1023000	**Question Type**	Legislative

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

Question:
Do records indicate that the treatment equipment was operated in a manner that achieved the design capabilities required under Ontario Regulation 170/03 or a DWWP and/or MDWL issued under Part V of the SDWA at all times that water was being supplied to consumers?

Compliance Response(s)/Corrective Action(s)/Observation(s):
Records did not indicate that the treatment equipment was operated in a manner that achieved the design capabilities required under O. Reg. 170/03 or a Drinking Water Works Permit and/or Municipal Drinking Water Licence issued under Part V of the SDWA at all times that water was being supplied to consumers.

Required Actions:

On October 24th, 2022, the boil water advisory was lifted after the distribution system was flushed and two sets of satisfactory microbiological samples were received.

On November 1st, 2022, the operating authority added and tested PLC and SCADA alarm programming to lock out the package plant for various alarms including coagulant pump fault and low-level alarm.

No further actions required.

The Procedure for Disinfection of Drinking Water in Ontario requires the treatment process of surface water to consist of chemically assisted filtration and disinfection and achieve an overall performance that provides (at a minimum) 2-log (99%) removal or inactivation of Cryptosporidium oocysts, a 3-log (99.9%) removal or inactivation of Giardia cysts and a 4-log (99.99%) removal or inactivation of viruses prior to the first consumer. In addition, at least 0.5-log removal or inactivation of Giardia cysts and a 2-log removal or inactivation of viruses must be provided through disinfection.

Conventional Filtration

Conventional filtration provides 2 log inactivation credit for Cryptosporidium oocyts, 2.5 log inactivation credits for Giardia cysts, and 2 log removal credit for viruses when:

1. A chemical coagulant is used at all times when the treatment plant is in operation.

2. Chemical dosages are monitored and adjusted in response to variations in raw water quality.

3. Effective backwash procedures, including the filter-to-waste, to ensure that the effluent turbidity requirements are met at all times.

4. Filtrate turbidity is continuously monitored from each filter, and;

5. Performance Criterion for filtered water turbidity of less than or equal to 0.3 NTU in 95% of the measurements each month shall be met for each filter.

Chlorination

Chlorination is required to provide the remaining 0.5 log inactivation credit for Giardia Cysts and 2 log inactivation credits for viruses.

The Standard Operating Procedure (SOP) for CT (Chlorine Concentration x Time) at the South River Drinking Water System, dated December 3rd, 2018, indicates that a CT of 70.29 mg/L*min would be achieved under the following worst-case conditions:

- Free chlorine residual below: 1 mg/L
- Treated flow above: 85 L/sec
- Clearwell level of 2.5 m
- pH above 8.5

On December 2nd, 2022, the SOP for CT indicated that a CT of 61.51 mg/L*min would be achieved under the following worst-case conditions:

- Free chlorine residual below: 1.25 mg/L
- Treated flow above: 85 L/sec
- Clearwell level of 1.75 m
- pH above 8

A review of the continuous monitoring trends for free chlorine residuals, CT, and filter effluent turbidity, WISKI reports, monthly filter effluent reports and elogbooks for the inspection period indicate that primary disinfection was achieved through filtration and chlorine disinfection for the majority of the inspection period.

However, on October 17th, 2022, for approximately 3 hours the South River WTP produced water without the addition of coagulant resulting in improperly disinfected water being distributed to users. This incident was reported the ministry and the North Bay Parry Sound District Health Unit as AWQI No. 160331. The operating authority continued distributing water to users under a boil water advisory, in consultation with the health unit, as the South River Distribution System is a pressurized system. Once disinfection was restored, the operating authority flushed the distribution system and took two sets of microbiological samples which were absent for E.coli and total coliforms.

Failure to ensure that treatment equipment was operated in a manner that achieved the design capabilities required under O. Reg. 170/03 at all times that water was being supplied to consumers is a violation of Section 1-2(2) of Schedule 1 of O. Reg. 170/03.

Question ID	DWMR1024000	**Question Type**	Legislative

Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 1-2 | (2);

Question:

Do records confirm that the water treatment equipment which provides chlorination or chloramination for secondary disinfection purposes 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 purposes was operated so that at all times and all locations in the distribution system the chlorine residual was never less than 0.05 mg/l free or 0.25 mg/l combined.

A review of the South River Distribution System sheets for the inspection period indicates that the lowest free chlorine residual occurred on August 18th, 2023 at 0.06 mg/L.

Question ID	DWMR1033000	**Question Type**	Legislative

Legislative Requirement(s):

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

Question:
Is the secondary disinfectant residual measured as required for the large municipal residential distribution system?

Compliance Response(s)/Corrective Action(s)/Observation(s):
The secondary disinfectant residual was measured as required for the large municipal residential distribution system.

Question ID	DWMR1030000	**Question Type**	Legislative

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

Question:
Is primary disinfection chlorine monitoring being conducted at a location approved by MDWL and/or DWWP issued under Part V of the SDWA, or at/near a location where the intended CT has just been achieved?

Compliance Response(s)/Corrective Action(s)/Observation(s):
Primary disinfection chlorine monitoring was conducted at a location approved by Municipal Drinking Water Licence and/or Drinking Water Works Permit issued under Part V of the SDWA, or at/near a location where the intended CT has just been achieved.

The POE chlorine analyzer is located at the high lift header at the point of entry of treated water into the distribution system and is used to confirm that the intended CT has been achieved.

On November 30th, 2023, the operating authority indicated that the current chlorine analyzer will be replaced and moved. However, the sample line for free chlorine residual will remain at the same location.

Question ID	DWMR1032000	**Question Type**	Legislative

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

Question:
If the drinking water system obtains water from a surface water source and provides filtration, is continuous monitoring of each filter effluent line being performed for turbidity?

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

Question ID	DWMR1035000	**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:
Are operators examining continuous monitoring test results and are they examining the results within 72 hours of the test?

Compliance Response(s)/Corrective Action(s)/Observation(s):
Operators were examining continuous monitoring test results and they were examining the results within 72 hours of the test.

Question ID	DWMR1038000	Question Type	Legislative

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

Question:
Is continuous monitoring equipment that is being utilized to fulfill O. Reg. 170/03 requirements performing tests for the parameters with at least the minimum frequency specified in the Table in Schedule 6 of O. Reg. 170/03 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 specified in the Table in Schedule 6 of O. Reg. 170/03 and recording data with the prescribed format.

Question ID	DWMR1037000	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; SDWA | O. Reg. 170/03 | 6-5 | (1.1);

Question:
Are all continuous monitoring equipment utilized for sampling and testing required by O. Reg. 170/03, or MDWL or DWWP or order, equipped with alarms or shut-off mechanisms that satisfy the standards described in Schedule 6?

Compliance Response(s)/Corrective Action(s)/Observation(s):
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, were equipped with alarms or shut-off mechanisms that satisfy the standards described in Schedule 6.

Section 5-1(1.1)1 of Schedule 6 of O. Reg. 170/03 requires that continuous monitoring equipment must cause an alarm to signal immediately at a location where the equipment conducts tests and at a location where a person is present, if the equipment malfunctions, loses power, or a test result for free chlorine residual is below the minimum alarm standard.

Section 6-5(1)5 of Schedule 6 of O. Reg. 170/03 requires that continuous monitoring equipment must be designed and operated so that no water is directed to users in the event that the

equipment malfunctions, loses power, or if the filter effluent turbidity exceeds 1 NTU, and a qualified person takes appropriate action before water is directed to users.

The following alarms are used at the South River WTP based on the Alarm Setpoint sheet and SCADA system:

There is a high filter effluent turbidity alarm set at 0.4 NTU with a 30 second delay. At 1 NTU, the package plant will shutdown without delay and alarm out.

A backwash is triggered when filter effluent turbidity reaches 0.5 NTU.

There is a low free chlorine alarm set at 1.8 mg/L which triggers an alarm without delay. Clearwell No. 1 has a low chlorine alarm of 1.9 mg/L for operational purposes.

There is a low clearwell level alarm which is triggered at 3 m.

Question ID	DWMR1040000	**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:
Are 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, in accordance with the manufacturer's instructions or the regulation.

A review of the calibration/maintenance records and elogbooks indicates that:

- Flowmeters (including raw, treated, filter no. 1, and filter no. 2) were verified on August 30th, 2023,

- POE free chlorine analyzer was verified weekly and calibrated as needed, and;

- Filter Effluent Turbidity Meters No. 1 and 2 were calibrated on November 29th, 2022, February 27th, 2023, May 31st, 2023, and August 28th, 2023.

Question ID	DWMR1108000	**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; 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, an Order,

MDWL, or DWWP issued under Part V, SDWA, has triggered an alarm or an automatic shut-off, did a qualified person respond in a timely manner and take appropriate actions?

Compliance Response(s)/Corrective Action(s)/Observation(s):

Where required continuous monitoring equipment used for the monitoring of chlorine residual and/or turbidity triggered an alarm or an automatic shut-off, a qualified person responded in a timely manner and took appropriate actions.

Question ID	DWMR1099000	**Question Type**	Information

Legislative Requirement(s):

Not Applicable

Question:

Do records show that all water sample results taken during the inspection review period did not exceed the values of tables 1, 2 and 3 of the Ontario Drinking Water Quality Standards (O. Reg. 169/03)?

Compliance Response(s)/Corrective Action(s)/Observation(s):

Records showed that all water sample results taken during the inspection review period did not exceed the values of tables 1, 2 and 3 of the Ontario Drinking Water Quality Standards (O. Reg. 169/03).

Question ID	DWMR1081000	**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:

For LMR systems, are all microbiological water quality monitoring requirements for distribution samples being met?

Compliance Response(s)/Corrective Action(s)/Observation(s):

All microbiological water quality monitoring requirements prescribed by legislation for distribution samples in a large municipal residential system were being met.

Section 10-2 of Schedule 10 of O. Reg. 170/03 requires that the owner and operating authority for the drinking water system must ensure that at least eight distribution samples are taken every month, with at least one of the samples being taken each week. The owner and operating authority must ensure that each of the samples are tested for E.coli, total coliforms, and that at least 25% of the samples are tested for general bacteria population expressed as colony counts on a heterotrophic plate count (HPC).

A review of the certificates of analysis for the inspection period indicates that at least 12 distribution system samples were taken each month and tested for E.coli and total coliforms. A third of the distribution system samples are also tested for HPC.

Question ID	DWMR1083000	Question Type	Legislative

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

Question:
For LMR systems, are all microbiological water quality monitoring requirements for treated samples being met?

Compliance Response(s)/Corrective Action(s)/Observation(s):
All microbiological water quality monitoring requirements prescribed by legislation for treated samples were being met.

Section 10-3 of Schedule 10 of O. Reg. 170/03 requires the owner and operating authority of the drinking water system must ensure that a treated water sample is taken at least once every week and tested for E.coli, total coliforms and HPC.

A review of the certificates of analysis for the inspection period indicate that a treated water sample was taken each week and tested for E.coli, total coliforms, and HPC.

Question ID	DWMR1096000	Question Type	Legislative

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

Question:
Do records confirm that chlorine residual tests are being conducted at the same time and at the same location that microbiological samples are obtained?

Compliance Response(s)/Corrective Action(s)/Observation(s):
Records confirmed that chlorine residual tests were being conducted at the same time and at the same location that microbiological samples were obtained.

Question ID	DWMR1084000	Question Type	Legislative

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

Question:
Are all inorganic water quality monitoring requirements prescribed by legislation conducted within the required frequency?

Compliance Response(s)/Corrective Action(s)/Observation(s):
All inorganic water quality monitoring requirements prescribed by legislation were conducted within the required frequency.

Section 13-2 of Schedule 13 of O. Reg. 170/03 requires that the owner and operating authority for the system must ensure that at least one treated water sample is taken every 12

months, if the system obtains water from a raw water supply that is surface water, and tested for every parameter set out in Schedule 23 (Inorganics).

A review of the certificates of analysis indicates that treated water samples were taken on January 23rd, 2023 and tested for every parameter under Schedule 23 (Inorganics).

Question ID	DWMR1085000	**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:

Are all organic water quality monitoring requirements prescribed by legislation conducted within the required frequency?

Compliance Response(s)/Corrective Action(s)/Observation(s):

All organic water quality monitoring requirements prescribed by legislation were conducted within the required frequency.

Section 13-4 of Schedule 13 of O. Reg. 170/03 requires that the owner and operating authority for the system must ensure that at least one treated water sample is taken every 12 months, if the system obtains water from a raw water supply that is surface water, and tested for every parameter set out in Schedule 24 (Organics).

A review of the certificates of analysis indicates that treated water samples were taken on January 23rd, 2023 and tested for every parameter set out in Schedule 24 (Organics).

Question ID	DWMR1086000	**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:

Are all haloacetic acid water quality monitoring requirements prescribed by legislation conducted within the required frequency and at the required location?

Compliance Response(s)/Corrective Action(s)/Observation(s):

All haloacetic acid water quality monitoring requirements prescribed by legislation were conducted within the required frequency and at the required location.

Section 13-6.1 of Schedule 13 of O. Reg. 170/03 requires the owner and operating authority of the drinking water system that provides chlorination must ensure that at least one distribution sample is taken in each calendar quarter, from a point in the distribution system that is likely to have an elevated potential for the formation of haloacetic acids and tested for haloacetic acids (HAAs).

O. Reg. 170/03 defines "calendar quarter" as the three-month period that begins on January 1, April 1, July 1, or October 1.

Effective January 1, 2020, the standard for HAAs of 0.08 mg/L (80 ug/L) was introduced and is expressed as a running annual average (RAA) of quarterly results.

A review of the certificates of analysis for the inspection period indicates that a sample was taken and tested for HAAs on October 25th, 2022 (29 µg/L), January 23rd, 2023 (23.3 µg/L), April 17th, 2023 (28.9 µg/L), July 11th, 2023 (38.2 µg/L), and October 16th, 2023 (24 µg/L). The running annual average for HAAs at the time of the inspection is 29 µg/L.

Question ID	DWMR1087000	**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:

Have all trihalomethane water quality monitoring requirements prescribed by legislation been conducted within the required frequency and at the required location?

Compliance Response(s)/Corrective Action(s)/Observation(s):

All trihalomethane water quality monitoring requirements prescribed by legislation were conducted within the required frequency and at the required location.

Section 13-6 of Schedule 13 of O. Reg. 170/03 requires the owner and operating authority of drinking water system that provides chlorination must ensure that at least one distribution sample is taken in each calendar quarter from a point in the distribution system that is likely to have an elevated potential for the formation of trihalomethanes and tested for trihalomethanes (THMs).

O. Reg. 169/03 sets the standard for THMS as 0.1 mg/L (100 ug/L) expressed as a RAA.

RAA is defined as "the running annual average of quarterly results".

O. Reg. 170/03 defines the "calendar quarter" as the three-month period that begins on January 1, April 1, July 1, or October 1.

A review of the certificates of analysis for the inspection period indicates that a sample was taken and tested for THMs on October 25th, 2022 (77 µg/L), January 23rd, 2023 (51 µg/L), April 17th, 2023 (34 µg/L), July 11th, 2023 (70 µg/L), and October 16th, 2023 (50 µg/L).

The running annual average for THMs at the time of the inspection is 51 µg/L.

Question ID	DWMR1088000	**Question Type**	Legislative

Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 13-7;

Question:
Are all nitrate/nitrite water quality monitoring requirements prescribed by legislation conducted within the required frequency for the DWS?

Compliance Response(s)/Corrective Action(s)/Observation(s):
All nitrate/nitrite water quality monitoring requirements prescribed by legislation were conducted within the required frequency.

Section 13-7 of Schedule 13 of O. Reg. 170/03 requires that the owner and operating authority of the drinking water systems must ensure that at least one water sample is taken every three months and tested for nitrate and nitrite.

A review of the certificates of analysis for the inspection period indicates that a treated water sample was taken and tested for nitrate and nitrites on October 25th, 2022, January 23rd, 2023, April 17th, 2023, July 11th, 2023, and October 16th, 2023.

Question ID	DWMR1089000	**Question Type**	Legislative

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

Question:
Are all sodium water quality monitoring requirements prescribed by legislation conducted within the required frequency?

Compliance Response(s)/Corrective Action(s)/Observation(s):
All sodium water quality monitoring requirements prescribed by legislation were conducted within the required frequency.

Section 13-8 of Schedule 13 of O. Reg. 170/03 requires that the owner and operating authority for the drinking water system must ensure that at least one treated water sample is taken every 60 months and tested for sodium.

A review of the certificates of analysis indicates that sampling for sodium occurred on January 23rd, 2023 at 64.3 mg/L. This was reported as AWQI No. 161242 and a resample was taken on January 30th, 2023 at 62.4 mg/L.

The North Bay Parry Sound District Health Unit requires notices of the elevated sodium levels to be posted in public locations since the first sodium exceedance in 2013.

Question ID	DWMR1090000	**Question Type**	Legislative

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

Question:
Where fluoridation is not practiced, are all fluoride water quality monitoring requirements

prescribed by legislation conducted within the required frequency?

Compliance Response(s)/Corrective Action(s)/Observation(s):
All fluoride water quality monitoring requirements prescribed by legislation were conducted within the required frequency.

Section 13-9 of Schedule 13 of O. Reg. 170/03 requires the owner and operating authority for the drinking water system must ensure that at least one treated water sample is taken every 60 months and tested for fluoride.

The most recent fluoride sample was collected on January 18th, 2021.

Question ID	DWMR1094000	**Question Type**	Legislative

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

Question:
Are all water quality monitoring requirements imposed by the MDWL and DWWP being met?

Compliance Response(s)/Corrective Action(s)/Observation(s):
All water quality monitoring requirements imposed by the MDWL or DWWP issued under Part V of the SDWA were not being met.

Required Actions:

A review of the certificates of analysis and discussions with operators indicated that sampling the backwash wastewater was increased in 2023.

No further actions required.

Condition 5.4 of Schedule C of the Licence requires the owner and operating authority of the drinking water system to take monthly composite samples of the backwash wastewater facility's point of discharge and test for suspended solids.

Condition 1.5 of Schedule C of the Licence states that the annual average concentration of suspended solids shall not exceed 25 mg/L.

A review of the certificates of analysis for the inspection period indicates that monthly samples of the backwash wastewater facility's point of discharge were taken and tested for suspended solids.

The annual average concentration of suspended solids for 2022 was 50.9 mg/L.

The annual average concentration of suspended solids for 2023 is 17.44 mg/L.

Failure to ensure that the annual average concentration of suspended solids does not exceed 25 mg/L is a violation of Condition 1.5 of Schedule C of Municipal Drinking Water Licence No.

200-101, Issue No. 4 (dated January 15th, 2021) and Section 31(1)(b) of Safe Drinking Water Act, 2002.

Question ID	DWMR1101000	Question Type	Legislative

Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 17-1; SDWA | O. Reg. 170/03 | 17-10 | (1); SDWA | O. Reg. 170/03 | 17-11; SDWA | O. Reg. 170/03 | 17-12; SDWA | O. Reg. 170/03 | 17-13; SDWA | O. Reg. 170/03 | 17-14; SDWA | O. Reg. 170/03 | 17-2; SDWA | O. Reg. 170/03 | 17-3; SDWA | O. Reg. 170/03 | 17-4; SDWA | O. Reg. 170/03 | 17-5; SDWA | O. Reg. 170/03 | 17-6; SDWA | O. Reg. 170/03 | 17-9;

Question:

For LMR Systems, have corrective actions (as per Schedule 17 of O. Reg. 170/03) been taken to address adverse conditions, including any other steps as directed by the Medical Officer of Health?

Compliance Response(s)/Corrective Action(s)/Observation(s):

Corrective actions (as per Schedule 17), including any other steps that were directed by the Medical Officer of Health, had been taken to address adverse conditions.

There were seven (7) AWQI incidents during the inspection period including:

- Three watermain breaks reported as AWQI No. 161192 (November 15th, 2022), AWQI No. 161192 (January 18th, 2023) and AWQI No. 161421 (March 3rd, 2023). Corrective actions taken for the watermain breaks included issuance of a boil water advisory to affected residents, flushed watermains, restoring disinfection and taking microbiological samples.

- NDOGT in distribution system samples reported as AWQI No. 160693 (November 17th, 2022). A sample taken as part of the corrective actions for AWQI No. 161192 resulted in NDOGT (no data; overgrown with target). The distribution system was flushed and two sets of samples were taken.

- Total coliforms in distribution system samples reported as AWQI No. 160718 (November 18th, 2022). Further distribution system samples resulted in the presence of total coliforms. The distribution system was flushed and further samples were taken.

- Improperly disinfected water being directed to users (reported as AWQI No. 160331) on October 17th, 2022. The South River Water Treatment Plant operated for approximately 3 hrs without coagulant. Operators restored disinfection and a boil water advisory was issued. Two sets of microbiological samples were taken and the boil water advisory was lifted on October 24th, 2022.

- Sodium exceedance reported as AWQI No. 161242 on January 27th, 2023.

Question ID	DWMR1104000	Question Type	Legislative

Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 16-6 | (1); SDWA | O. Reg. 170/03 | 16-6 | (2); SDWA | O. Reg. 170/03 | 16-6 | (3); SDWA | O. Reg. 170/03 | 16-6 | (3.1); SDWA | O. Reg. 170/03 | 16-6 | (3.2); SDWA | O. Reg. 170/03 | 16-6 | (4); SDWA | O. Reg. 170/03 | 16-6 | (5); SDWA | O. Reg. 170/03 | 16-6 | (6);

Question:

Were all required verbal notifications of adverse water quality incidents immediately provided as per O. Reg. 170/03 16-6?

Compliance Response(s)/Corrective Action(s)/Observation(s):

All required notifications of adverse water quality incidents were immediately provided as per O. Reg. 170/03 16-6.

Question ID	DWMR1059000	**Question Type**	Legislative

Legislative Requirement(s):

SDWA | O. Reg. 128/04 | 28;

Question:

Do the operations and maintenance manuals contain plans, drawings and process descriptions sufficient for the safe and efficient operation of the system?

Compliance Response(s)/Corrective Action(s)/Observation(s):

The operations and maintenance manuals contained plans, drawings and process descriptions sufficient for the safe and efficient operation of the system.

Question ID	DWMR1060000	**Question Type**	Legislative

Legislative Requirement(s):

SDWA | 31 | (1);

Question:

Do the operations and maintenance manuals meet the requirements of the DWWP and MDWL issued under Part V of the SDWA?

Compliance Response(s)/Corrective Action(s)/Observation(s):

The operations and maintenance manuals met the requirements of the Drinking Water Works Permit and Municipal Drinking Water Licence issued under Part V of the SDWA.

Question ID	DWMR1061000	**Question Type**	Legislative

Legislative Requirement(s):

SDWA | O. Reg. 128/04 | 27 | (1); SDWA | O. Reg. 128/04 | 27 | (2); SDWA | O. Reg. 128/04 | 27 | (3); SDWA | O. Reg. 128/04 | 27 | (4); SDWA | O. Reg. 128/04 | 27 | (5); SDWA | O. Reg. 128/04 | 27 | (6); SDWA | O. Reg. 128/04 | 27 | (7);

Question:

Are logbooks properly maintained and contain the required information?

Compliance Response(s)/Corrective Action(s)/Observation(s):
Logbooks were properly maintained and contained the required information.

Question ID	DWMR1062000	Question Type	Legislative

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

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

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 being done by a certified operator, water quality analyst, or person who suffices the requirements of O. Reg. 170/03 7-5.

Question ID	DWMR1071000	Question Type	BMP

Legislative Requirement(s):
Not Applicable

Question:
Has the owner provided security measures to protect components of the drinking water system?

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

The South River Water Treatment Plant is equipped with intruder alarms, security lights, and doors are kept locked when operators are not onsite. There is also multiple computer security measures in place.

Question ID	DWMR1073000	Question Type	Legislative

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

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

Compliance Response(s)/Corrective Action(s)/Observation(s):
The overall responsible operator had been designated for each subsystem.

Darren Aljoe and Dan Finnigan act as OROs for the South River Drinking Water System on an alternating basis.

Question ID	DWMR1074000	Question Type	Legislative

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

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

Compliance Response(s)/Corrective Action(s)/Observation(s):
Operators-in-charge had been designated for all subsystems which comprise the drinking water system.

Question ID	DWMR1075000	Question Type	Legislative

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

Question:
Do all operators possess the required certification?

Compliance Response(s)/Corrective Action(s)/Observation(s):
All operators possessed the required certification.

Question ID	DWMR1076000	Question Type	Legislative

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

Question:
Do only certified operators make adjustments to the treatment equipment?

Compliance Response(s)/Corrective Action(s)/Observation(s):
Only certified operators made adjustments to the treatment equipment.

Ministry of the Environment, Conservation and Parks - Inspection Summary Rating Record (Reporting Year - 2023-24)

DWS Name:	SOUTH RIVER DRINKING WATER SYSTEM
DWS Number:	220013562
DWS Owner:	CORPORATION OF THE VILLAGE OF SOUTH RIVER
Municipal Location:	SOUTH RIVER
Regulation:	O.REG. 170/03
DWS Category:	DW Municipal Residential
Type of Inspection:	Focused
Inspection Date:	Nov-30-2023
Ministry Office:	North Bay Area Office

Maximum Risk Rating: 510

Inspection Module	Non Compliance Risk (X out of Y)
Capacity Assessment	0/30
Certification and Training	0/42
Logbooks	0/18
Operations Manuals	0/28
Reporting & Corrective Actions	0/66
Source	0/0
Treatment Processes	25/214
Water Quality Monitoring	0/112
Overall - Calculated	**25/510**

Inspection Risk Rating:	**4.90%**

Final Inspection Rating:	**95.10%**

Inspection Rating Record Generated On 2024-01-18 (Inspection ID: 1-189592959)

DWS Name: SOUTH RIVER DRINKING WATER SYSTEM
DWS Number: 220013562
DWS Owner Name: CORPORATION OF THE VILLAGE OF SOUTH RIVER
Municipal Location: SOUTH RIVER

Regulation: O.REG. 170/03
DWS Category: DW Municipal Residential
Type of Inspection: Focused
Inspection Date: Nov-30-2023
Ministry Office: North Bay Area Office

Non-Compliance Question(s)	Non Compliance Risk
Treatment Processes	
Is the owner/operating authority able to demonstrate that, when required during the inspection period, Form 1 documents were prepared in accordance with their Drinking Water Works Permit?	4
Do records indicate that the treatment equipment was operated in a manner that achieved the design capabilities required under Ontario Regulation 170/03 or a DWWP and/or MDWL issued under Part V of the SDWA at all times that water was being supplied to consumers?	21
Water Quality Monitoring	
Are all water quality monitoring requirements imposed by the MDWL and DWWP being met?	0
Overall - Total	**25**

Maximum Question Rating: 510

Inspection Risk Rating:	**4.90%**

FINAL INSPECTION RATING:	**95.10%**

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