

March 8, 2022

Town of Lakeshore
419 Notre Dame St.
Belle River, ON N0R 1A0

File: SI-ES-LA-540

Attention: Mr. Truper McBride, CAO

Re: Municipality of Lakeshore – Stoney Point Inspection Report

Please find enclosed the Inspection Report for the inspection of the Stoney Point Drinking Water System (DWS# # 220003396) on February 10, 2022.

The format of the enclosed report has been updated, and you will note that the non-compliance and/or non-conformance items are now detailed at the beginning of the report. All questions that were assessed are included in the Inspection Details Section.

In order to measure individual inspection results, the Ministry has established an inspection compliance risk framework based on the principles of the Inspection, Investigation & Enforcement (II&E) Secretariat and advice of internal/external risk experts. The Inspection Rating Report (IRR) provides the Ministry, the system owner and the local Public Health Units with a summarized quantitative measure of the drinking water system's annual inspection and regulated water quality testing performance. IRR ratings are published (for the previous inspection year) in the Ministry's Chief Drinking Water Inspectors' Annual Report.

Please note that due to a change in IT systems, the Inspection Rating Report (IRR) cannot be generated at the same time as the inspection report. The IRR will be sent separately and prior to any public release (typically within 1-2 month of the completion of the inspection).

If you have any questions or concerns regarding this report, please call me at (226) 280-1406.

Yours truly,



Emily Awad
Water Inspector, Provincial Officer #1823
Drinking Water and Environmental Compliance Division
Sarnia/Windsor District

Encl.

cc: Garry Punt, Team Leader – Water Management, Krystal Kalbol, Corporate Leader – Operations, Albert Dionne, Division Leader – Water Management, Kyle Davis, Water Compliance, Town of Lakeshore;
Nicole Dupuis, Chief Executive Officer, Kristy McBeth, Director of Health Protection, Phil Wong, Manager, Health Inspection Department, Victoria Peczulis, Manager, Environmental Health, Windsor-Essex County Health Unit;
Marc Bechard, Supervisor, Ministry of the Environment, Conservation and Parks;
Katie Stammier, Project Manager Source Water Protection, Essex Region Conservation Authority.



MUNICIPALITY OF LAKESHORE DRINKING WATER SYSTEM -
STONEY POINT
6011 ST CLAIR RD, LAKESHORE, ON,
Inspection Report

System Number: 220003396
Inspection Start Date: 02/07/2022
Inspection End Date: 03/07/2022
Inspected By: Emily Awad
Badge #: 1823

A handwritten signature in black ink, appearing to read "Emily Awad".

(signature)

NON-COMPLIANCE/NON-CONFORMANCE ITEMS

This should not be construed as a confirmation of full compliance with all potential applicable legal requirement and 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: Regulated Activity: DRINKING WATER : DW Municipal Residential

Question ID	MRDW1001000		
Question	Question Type	Legislative Requirement	
What was the scope of this inspection?	Information	Not Applicable	
Observation			
The primary focus of this inspection is to confirm compliance with Ministry of the Environment, Conservation and Parks (MECP) legislation as well as evaluating conformance with ministry drinking water policies and guidelines during the inspection period. 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 practices. 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. This review also includes an assessment of compliance/conformance in relation to the following: • Drinking Water Operator and Water Quality Analyst Certification Regulation (O. Reg. 128/04) • Drinking Water System Licence 031-101, Issue Number 4, issued May 21, 2021 • Drinking Water Works Permit 031-201, Issue Number 5, issued May 21, 2021 • Ontario Drinking Water Quality Standards (ODWQS; O. Reg. 169/03) based on water quality data generated since the previous inspection. A focused inspection was conducted on February 10, 2022 at the Stoney Point Water Treatment Plant (WTP). A follow-up visit to the WTP was conducted on March 3, 2022. The inspection covers the period from February 1, 2021 to January 31, 2022.			

Question ID	MRDW1000000		
Question		Question Type	Legislative Requirement
Does this drinking water system provide primary disinfection?		Information	Not Applicable
Observation			
This Drinking Water System provides for both primary and secondary disinfection and			

distribution of water.

Question ID	MRDW1011000	
Question	Question Type	Legislative Requirement
Does the owner have a harmful algal bloom monitoring plan in place?	BMP	Not Applicable
Observation		
The owner had a harmful algal bloom monitoring plan in place.		

Question ID	MRDW1012000	
Question	Question Type	Legislative Requirement
Does the owner have a harmful algal bloom monitoring plan in place that meets the requirements of the MDWL?	Legislative	SDWA 31 (1)
Observation		
The owner had a harmful algal bloom monitoring plan in place. The harmful algal bloom (HAB) plan was completed by the required date in the MDWL (November 15, 2021). Operator training on the new HAB plan took place in November 2021. A camera with extensive tilt and zoom capabilities and a UV filter was installed at the lowlift for HAB monitoring. The recordings are on a 14-day loop. On July 22, 2021, the Municipality reported a total microcystin result of 0.29 ug/L in a raw sample collected on July 18, 2021. There was also a detection in the raw sample from the Lakeshore WTP intake. There were no detections of total microcystin in the treated water from either plant. The subsequent raw sample collected on July 24, 2021 at the Stoney Point WTP also had a detection of total microcystin (1.44 ug/L). The plant continued to use powdered activated carbon in the treatment process and if the pre-filter chlorine demand increased, they increased the chlorine dose. On July 30, 2021, the undersigned officer directed the Municipality to increase visual monitoring to daily and microcystin sampling to twice per week. The bloom was no longer visible by September 17, 2021 so the Municipality was directed to revert back to one sample per week. Raw sample total microcystin ranged from below method detection limit to a high of 4.04 ug/L on August 9, 2021 (see Appendix A). All of the treated samples collected by the Water Treatment Plant were below method detection limits.		

Question ID	MRDW1014000	
Question	Question Type	Legislative Requirement
Is there sufficient monitoring of flow as required by the MDWL or DWWP issued under Part V of the SDWA?	Legislative	SDWA 31 (1)
Observation		
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 2.1, Schedule C of the Licence for the Municipality of Lakeshore Drinking Water System requires the continuous flow measurement and recording to be undertaken for:

- The flow rate and daily volume of treated water that flows from the treatment subsystem to the distribution system
- The flow rate and daily volume of water that flows into the treatment subsystem

ABB Watermaster magnetic type meters measure the raw water discharge (19.75 L/s at the inspection) as well as treated water: high-lift discharge header to the north (18.69 L/s at the inspection) and the Comber line to the south (7.1 L/s at the inspection) for a total of 25.79 L/s treated water flow at the inspection.

Question ID	MRDW1016000		
Question	Question Type	Legislative Requirement	
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?	Legislative	SDWA 31 (1)	
Observation			
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 states that the maximum daily volume of treated water that flows from the treatment subsystem to the distribution system at the Stoney Point Water Treatment Plant shall not exceed 4,546 m3/day.			
During the inspection period the maximum day flow of treated water, which occurred on July 30, 2021, was 3000 m3/d, or approximately 66% of the approved rated capacity. The peak flow of 262 L/s occurred on November 5, 2021.			

Question ID	MRDW1030000		
Question	Question Type	Legislative Requirement	
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?	Legislative	SDWA O. Reg. 170/03 7-2 (1), SDWA O. Reg. 170/03 7-2 (2)	
Observation			
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.			
ProMinent D1C continuous chlorine monitor/controllers with CLE probes measure free chlorine on both the reservoir outlet (CRA-4) and the high-lift outlet (CRA-6). Depending on the use of the			

post-chlorination system for providing free chlorine top-up/trim, results from one or the other analyser can be used for measuring primary disinfection CT, consistent with the Ministry's "Procedure for Disinfection of Drinking Water in Ontario". Free chlorine top-up/trim can be employed to boost the concentration of secondary disinfectant directed to the distribution system at either the inlet to the high-lift well or into the high-lift discharge header. Pre-chlorination prior to the filters provides the majority of the disinfection.

Question ID	MRDW1032000	
Question	Question Type	Legislative Requirement
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?	Legislative	SDWA O. Reg. 170/03 7-3 (2)
Observation		
Continuous monitoring of each filter effluent line was being performed for turbidity.		
Filter effluent turbidity values are measured by Hach TU5300sc turbidity sensors with a SC200 controller on filters 1 and 2. Results are recorded by SCADA Historian.		

Question ID	MRDW1033000	
Question	Question Type	Legislative Requirement
Is the secondary disinfectant residual measured as required for the large municipal residential distribution system?	Legislative	SDWA O. Reg. 170/03 7-2 (3), SDWA O. Reg. 170/03 7-2 (4)
Observation		
The secondary disinfectant residual was measured as required for the distribution system.		
Logs show that weekly distribution system free chlorine residuals were taken and measured from at least four and three stations on separate days, at least 48 hours apart.		

Question ID	MRDW1037000	
Question	Question Type	Legislative Requirement
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?	Legislative	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)
Observation		

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.

At the follow-up site visit on March 3, 2021, the alarm settings were reviewed. The low chlorine alarm setting for the CT analyser (CRA4) is 1.4 mg/L. A low alarm for secondary disinfection free chlorine level leaving the plant is set at 1.5 mg/L (however, it was set at 1.4 mg/L previously, as per logs). High turbidity operational alarms of 0.25 NTU are set for each filter effluent turbidimeter. Additionally, high turbidity operational set points are used to establish filter to waste controls during the filter backwash sequence and filter shutdown in response to elevated readings. Filter shutdown is currently set at 1 NTU. An adjustable operational alarm for clarifier effluent turbidity prior to filtration can also be set. It is currently set at 2.3 NTU.

During the hours the facility is staffed, operators are alerted to alarms through the SCADA system screen and audible alarms. Critical alarms that occur after-hours are routed to a security company who notifies the on-call operator.

Question ID	MRDW1038000		
Question	Question Type	Legislative Requirement	
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?	Legislative	SDWA O. Reg. 170/03 6-5 (1) 1-4	
Observation			
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.			
O. Regulation 170 sub-section 6-5(1), paragraph 1 requires the continuous monitoring equipment to record the date, time, sampling location and result of every test for the parameter with at least the minimum frequency prescribed as follows:			
1. Free chlorine residual required to achieve primary disinfection: 5 minutes			
2. Filter effluent turbidity: 15 minutes			
The Historian data recording system records these values at a frequency at least as often as that required under the Regulation.			
On August 4, 2021, there was an issue with the battery supply on the PLC for the highlift pumps. Replacement of the battery caused a loss of all plant communication. Plant processes were shut down and only the high lifts continued to operate in manual mode. This resulted in a loss of data trending and Historian operation between 15:15 to 18:52 hrs. Plant online data (plant effluent free chlorine residual, discharge pressure, and plant effluent turbidity) was recorded by the operators every five minutes for the duration of the PLC shutdown.			
Another trending data loss was noted during data and logbook review. On October 1, 2021, a			

Historian error was observed at 15:25 hrs but trending continued. The system was rebooted but the error continued and after troubleshooting, the connection was re-established at 16:40 hrs and the system was operating normally. Plant online data was recorded every five minutes during this outage.

Question ID	MRDW1035000	
Question	Question Type	Legislative Requirement
Are operators examining continuous monitoring test results and are they examining the results within 72 hours of the test?	Legislative	SDWA O. Reg. 170/03 6-5 (1) 1-4, SDWA O. Reg. 170/03 6-5 (1) 5-10
Observation		
Operators were examining continuous monitoring test results and they were examining the results within 72 hours of the test.		
In accordance with the operating authority's Routine Plant Rounds standard operating procedure (PEN-292), and as reflected in the project logs, reviews of continuous monitoring results are completed once per day and recorded in the operational logbook.		

Question ID	MRDW1040000	
Question	Question Type	Legislative Requirement
Are all continuous analysers calibrated, maintained, and operated, in accordance with the manufacturer's instructions or the regulation?	Legislative	SDWA O. Reg. 170/03 6-5 (1) 1-4, SDWA O. Reg. 170/03 6-5 (1) 5-10
Observation		
All continuous analysers were calibrated, maintained, and operated, in accordance with the manufacturer's instructions or the regulation.		
Calibration records provided showed that Flowmetrix calibrated all level meters, flow meters and continuous chlorine and turbidity analyzers in July 2021. Flowmetrix also calibrated the handheld meters.		
Internal checks/verifications against standards were performed on the handheld meters (chlorine, turbidity, pH and the lab spectrophotometer) approximately once per month. Operators also checked/verified continuous turbidity, chlorine and pH analyzers approximately once per month.		
As recommended in the last inspection, all continuous meters that measure the parameters used to calculate CT were calibrated.		

Question ID	MRDW1108000		
Question	Question Type	Legislative Requirement	
Where continuous monitoring equipment used for the monitoring of free chlorine residual, total chlorine residual, combined chlorine residual or turbidity, required by Regulation 170, 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?	Legislative	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)	
Observation			
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.			
Water plant operating logs reviewed indicate that certified operators responded to alarms in a timely manner and took appropriate actions. Critical alarms are documented in the Critical Control Limit Exceedances Binder. There were 5 critical alarms during the inspection period, including high clarifier well turbidity, plant effluent turbidity, as well as low plant effluent free chlorine. Appropriate actions were documented in the logbooks.			

Question ID	MRDW1018000		
Question	Question Type	Legislative Requirement	
Has the owner ensured that all equipment is installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit?	Legislative	SDWA 31 (1)	
Observation			
The owner had ensured that all equipment was installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit.			
It was noted during the inspection that Schedule A of the Permit lists equipment used for zebra mussel removal (chlorine dosing) which is not part of this drinking water system. During the next Licence and Permit renewal, the owner shall identify and remove any equipment that should not be listed in the Permit.			
The owner indicated that an engineering study is underway for the replacement of the watermain between the Stoney Point WTP and Haycroft Pumping Station ("Government Line"). The first phase is estimated to begin in 2023.			

Question ID	MRDW1021000		
Question	Question Type	Legislative Requirement	
Is the owner/operating authority able to demonstrate that, when required during the inspection period, Form 2	Legislative	SDWA 31 (1)	

documents were prepared in accordance with their Drinking Water Works Permit?		
Observation		
The owner/operating authority was in compliance with the requirement to prepare Form 2 documents as required by their Drinking Water Works Permit during the inspection period. A Form 2 "Record of Minor Modifications or Replacement to the Drinking Water System" document was prepared for: 1. Replacement of intermediate pump #1 with a new (Gould) pump, Model # VIT-DITM. Phasor electrical performed the installation. Date: May 11, 2021. 2. Replacement of old plant effluent chlorine analyzers with new prominent CL2 and pH analyzer - Dulcometer multi-parameter controller dialog DACb. Date: May 11, 2021. 3. Intermediate pumps VFD controls connected and programmed. No change to pumps/valves; just a change to the programming to allow the VFDs to control the flow to the filter inlet tank. Date: Sept. 2, 2021. 4. Updated Filter #1 and #2 prominent CRA to a newer model. Date: Dec. 1, 2021. The owner is reminded to complete the Form 2 as per Sch. B, S. 4.6.1 of the Permit, "prior to the modified or replaced components being placed into service".		

Question ID	MRDW1023000	
Question	Question Type	Legislative Requirement
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?	Legislative	SDWA O. Reg. 170/03 1-2 (2)
Observation		
Records indicated that the treatment equipment was operated in a manner that achieved the design capabilities required under Ontario Regulation 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. Schedule E of the Licence stipulates that the Stoney Point facility must utilize chemically assisted filtration and primary disinfection using chlorination to meet log removal credits. In order to claim applicable Cryptosporidium oocyst and Giardia cyst removal credits, the Procedure for Disinfection of Drinking Water Supplies in Ontario states that performance must meet filtered water turbidity of less than or equal to 0.3 NTU in 95% of the turbidity measurements each month. Filter turbidity reports show that 99.8 to 100% of the time, turbidity values were less than 0.3 NTU. The criteria was met at each filter in each month. The Disinfection Procedure requires that in order to be considered conventional filtration and meet or exceed the 2.5 log Giardia cyst removal, the 2.0 log Cryptosporidium oocyst removal and 2.0 log virus removal credits, the filtration process must use a chemical coagulant at all times		

when the treatment plant is in operation. Regular jar testing (once per week or as required) is conducted to determine the optimum coagulant dosage. Coagulant flow is metered to directly alert the operator to flow interruptions and the system is equipped with flow/pressure regulating valves to eliminate dosing rate variability caused by the head pressure (level) in the bulk alum tank. Review of alum flow data (in 3 minute intervals) indicated that alum was flowing at all times.

Primary disinfection using chlorine accounted for at least 0.5 log inactivation credits for Giardia. To meet inactivation credits, CT must be achieved at all times. Records demonstrated that CT was achieved for the duration of the review period.

Question ID	MRDW1024000	
Question	Question Type	Legislative Requirement
Do records confirm 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?	Legislative	SDWA O. Reg. 170/03 1-2 (2)
Observation		
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.		
Available chlorine residual measurements taken during routine microbiological sampling and the weekly residual checks showed that free chlorine residuals in the distribution system ranged from 0.22 to 1.93 mg/L, never falling below 0.05mg/L.		

Question ID	MRDW1025000	
Question	Question Type	Legislative Requirement
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?	Legislative	SDWA 31 (1)
Observation		
All parts of the drinking water system were disinfected in accordance with a procedure listed in Schedule B of the Drinking Water Works Permit.		
According to the Watermain Break Repair Standard Operating Procedure (SOP #2000397), all parts of the drinking water system are disinfected in accordance with the ministry's Watermain Disinfection Procedure and the other required procedures. The operating authority is reminded that, as per Schedule B, Condition 2.3 of the new Permit, the new Watermain Disinfection Procedure, dated August 1, 2020, was to be adopted by November 21, 2021 (6 months after the date of the Permit).		

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Question ID	MRDW1062000	
Question	Question Type	Legislative Requirement
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?	Legislative	SDWA O. Reg. 170/03 7-5
Observation		
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.		
Operational testing is conducted daily and recorded on the Daily Plant Lab Analysis logsheets.		

Question ID	MRDW1060000	
Question	Question Type	Legislative Requirement
Do the operations and maintenance manuals meet the requirements of the DWWP and MDWL issued under Part V of the SDWA?	Legislative	SDWA 31 (1)
Observation		
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.		
The master copy of the standard operating procedures is maintained at the Stoney Point water plant. Selected procedures are included in the "Lakeshore Water Supply System - Operations & Maintenance/Contingency Plan Manual" binder maintained for the distribution group. Copies of the Municipal Drinking Water System Licence and Drinking Water Works Permit are also kept in the Contingency binder. Current electronic versions of the standard operating procedures are available in the Compliance Science Programme.		
As required in the last inspection report, SOP#2000957: Transfer of Treated Water was created before May 3, 2021 and was reviewed and revised on November 8, 2021.		

Question ID	MRDW1071000	
Question	Question Type	Legislative Requirement
Has the owner provided security measures to protect components of the drinking water system?	BMP	Not Applicable
Observation		
The owner had provided security measures to protect components of the drinking water system.		

All components of the drinking water system are fully fenced and doors are locked, with keycard access. The plant is staffed between 7am and 3:30pm during the week and for four hour shifts on the weekends. Video monitoring of the main plant and lowlift station is conducted.

Question ID	MRDW1073000	
Question	Question Type	Legislative Requirement
Has the overall responsible operator been designated for all subsystems which comprise the drinking water system?	Legislative	SDWA O. Reg. 128/04 23 (1)
Observation		
The overall responsible operator has been designated for each subsystem.		
The overall responsible operator (ORO) for the treatment and distribution system has class 3 water treatment certification and class 3 water distribution certification.		

Question ID	MRDW1074000	
Question	Question Type	Legislative Requirement
Have operators in charge been designated for all subsystems for which comprise the drinking water system?	Legislative	SDWA O. Reg. 128/04 25 (1)
Observation		
Operators-in-charge had been designated for all subsystems which comprised the drinking water system.		
Any certified operator on shift is designated the Operator-in-charge and is identified in the sign-in logbook.		

Question ID	MRDW1075000	
Question	Question Type	Legislative Requirement
Do all operators possess the required certification?	Legislative	SDWA O. Reg. 128/04 22
Observation		
All operators possessed the required certification.		

Question ID	MRDW1076000	
Question	Question Type	Legislative Requirement
Do only certified operators make adjustments to the treatment equipment?	Legislative	SDWA O. Reg. 170/03 1-2 (2)
Observation		
Only certified operators made adjustments to the treatment equipment.		

Question ID	MRDW1099000	
Question	Question Type	Legislative Requirement
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)?	Information	Not Applicable
Observation		
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	MRDW1094000	
Question	Question Type	Legislative Requirement
Are all water quality monitoring requirements imposed by the MDWL and DWWP being met?	Legislative	SDWA 31 (1)
Observation		
All water quality monitoring requirements imposed by the MDWL or DWWP issued under Part V of the SDWA were being met.		
Solids removed from the clarifier and filters were pumped to a residue management facility that consisted of two (2) settling ponds. Condition 1.5 under Schedule C of the Licence requires monthly sampling of composite samples of total suspended solids (TSS) from the point of discharge. The composite samples were collected from the discharge from either the north or south settling pond, whichever was discharging that month, or both. The annual average cannot exceed 25 mg/L. The annual average TSS for 2021 was 4.6 mg/L, much lower than in 2020 when the Suez Ultrafiltration unit was in use. For the inspection period, TSS ranged from below method detection to 12 mg/L.		

Question ID	MRDW1096000	
Question	Question Type	Legislative Requirement
Do records confirm that chlorine residual tests are being conducted at the same time and at the same location that microbiological samples are obtained?	Legislative	SDWA O. Reg. 170/03 6-3 (1)
Observation		
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	MRDW1081000	
Question	Question Type	Legislative Requirement

Are all microbiological water quality monitoring requirements for distribution samples being met?	Legislative	SDWA O. Reg. 170/03 10-2 (1),SDWA O. Reg. 170/03 10-2 (2),SDWA O. Reg. 170/03 10-2 (3)
Observation		
All microbiological water quality monitoring requirements for distribution samples were being met.		
O. Reg. 170/03, Sch.10-2 requires the owner and operating authority to take a minimum of one sample per week, and at least 15 samples per month from the distribution system. All samples must be analysed for E. coli and total coliforms. In addition, at least 25% of the distribution microbiological samples must be analysed for heterotrophic plate count (HPC).		
The owner/operating authority collected 20-25 samples per month from 26 sample stations throughout the distribution system. Samples were analysed for E.coli, total coliform, and more than 25% of the samples (8-10 samples/month) were tested for HPC.		

Question ID	MRDW1083000	
Question	Question Type	Legislative Requirement
Are all microbiological water quality monitoring requirements for treated samples being met?	Legislative	SDWA O. Reg. 170/03 10-3
Observation		
All microbiological water quality monitoring requirements for treated samples were being met.		
O. Reg. 170/03, Sch. 10-3 requires the owner and operating authority to sample treated water once per week and analyse them for E. coli, total coliforms and heterotrophic plate count (HPC).		
For the period reviewed, treated water microbiological samples were taken each week. For each sampling event, two treated water samples were collected.		

Question ID	MRDW1084000	
Question	Question Type	Legislative Requirement
Are all inorganic water quality monitoring requirements prescribed by legislation conducted within the required frequency?	Legislative	SDWA O. Reg. 170/03 13-2
Observation		
All inorganic water quality monitoring requirements prescribed by legislation were conducted within the required frequency.		
Provided that previous sample results haven't exceeded one-half maximum acceptable		

concentration (MAC) for any parameter under O. Reg. 170/03, Schedule 23, Sch. 13-2 requires that samples must be taken and analysed for Sch. 23 parameters every 12 months for a surface water supply. The required samples were collected November 29, 2021. No parameters exceeded one-half the MAC listed in O.Reg. 169/03.

Question ID	MRDW1085000	
Question	Question Type	Legislative Requirement
Are all organic water quality monitoring requirements prescribed by legislation conducted within the required frequency?	Legislative	SDWA O. Reg. 170/03 13-4 (1),SDWA O. Reg. 170/03 13-4 (2),SDWA O. Reg. 170/03 13-4 (3)
Observation		
All organic water quality monitoring requirements prescribed by legislation were conducted within the required frequency.		
Provided that previous sample results haven't exceeded one-half MAC for any parameter under O. Reg. 170/03, Schedule 24, Sch. 13-4 requires that samples must be taken and analysed for Sch.24 parameters every 12 months for a surface water supply. The required samples were collected November 29, 2021. Benzo(a)pyrene was below the method detection limit (0.006 ug/L); however, this detection limit exceeded half of the MAC. No other parameters exceeded one-half the MAC listed in O.Reg. 169/03.		

Question ID	MRDW1086000	
Question	Question Type	Legislative Requirement
Are all haloacetic acid water quality monitoring requirements prescribed by legislation conducted within the required frequency and at the required location?	Legislative	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)
Observation		
All haloacetic acid water quality monitoring requirements prescribed by legislation are being		

conducted within the required frequency and at the required location.

As required under O. Reg. 170/03, Sch. 13-6 (2), samples must be taken and analysed for haloacetic acids (HAAs) quarterly. The Ontario drinking water quality limit for HAAs is 0.080 mg/L; calculated as a running annual average (RAA) of quarterly test results. Samples were taken within the prescribed time frame. The RAA was 0.0144 mg/L.

Question ID	MRDW1087000	
Question	Question Type	Legislative Requirement
Have all trihalomethane water quality monitoring requirements prescribed by legislation been conducted within the required frequency and at the required location?	Legislative	SDWA O. Reg. 170/03 13-6 (1)
Observation		
All trihalomethane water quality monitoring requirements prescribed by legislation were conducted within the required frequency and at the required location.		
As required under O. Reg. 170/03, Sch. 13-6(2), samples must be taken and analysed for trihalomethanes (THMs) quarterly. The Ontario drinking water quality limit for THMs is 0.100 mg/L; calculated as an RAA of quarterly test results. Samples were taken within the prescribed time frame. The RAA was 0.0345 mg/L. Treated water samples were also taken quarterly and the RAA was 0.019 mg/L.		

Question ID	MRDW1088000	
Question	Question Type	Legislative Requirement
Are all nitrate/nitrite water quality monitoring requirements prescribed by legislation conducted within the required frequency for the DWS?	Legislative	SDWA O. Reg. 170/03 13-7
Observation		
All nitrate/nitrite water quality monitoring requirements prescribed by legislation were conducted within the required frequency for the DWS.		
During the inspection review period, one treated sample was collected quarterly for nitrate and nitrite, as prescribed in Sch. 13-7 of O.Reg. 170/03. Nitrate concentrations ranged from below the method detection limit (MDL; 0.1 mg/L) to 2.2 mg/L, well below the standard of 10 mg/L, and nitrite concentrations were all below the MDL (0.1 mg/L) and well below the standard of 1 mg/L.		

Question ID	MRDW1089000	
Question	Question Type	Legislative Requirement
Are all sodium water quality monitoring requirements prescribed by legislation conducted within the required frequency?	Legislative	SDWA O. Reg. 170/03 13-8

Observation
All sodium water quality monitoring requirements prescribed by legislation were conducted within the required frequency.
O. Reg. 170/03, Sch. 13-8 requires sampling and analysis of sodium every 60 months. The sample for sodium was taken on November 29, 2021 and the result was 8.2 mg/L.

Question ID	MRDW1090000		
Question	Question Type	Legislative Requirement	
Where fluoridation is not practiced, are all fluoride water quality monitoring requirements prescribed by legislation conducted within the required frequency?	Legislative	SDWA O. Reg. 170/03 13-9	
Observation	All fluoride water quality monitoring requirements prescribed by legislation were conducted within the required frequency. O. Reg. 170/03, Sch. 13-9 requires sampling and analysis of fluoride every 60 months. The sample for fluoride was taken on November 29, 2021 and the result was below detection (<0.10 mg/L).		

Question ID	MRDW1100000		
Question		Question Type	Legislative Requirement
Did any reportable adverse/exceedance conditions occur during the inspection period?		Information	Not Applicable
Observation			
There were no reportable adverse/exceedances during the inspection period.			

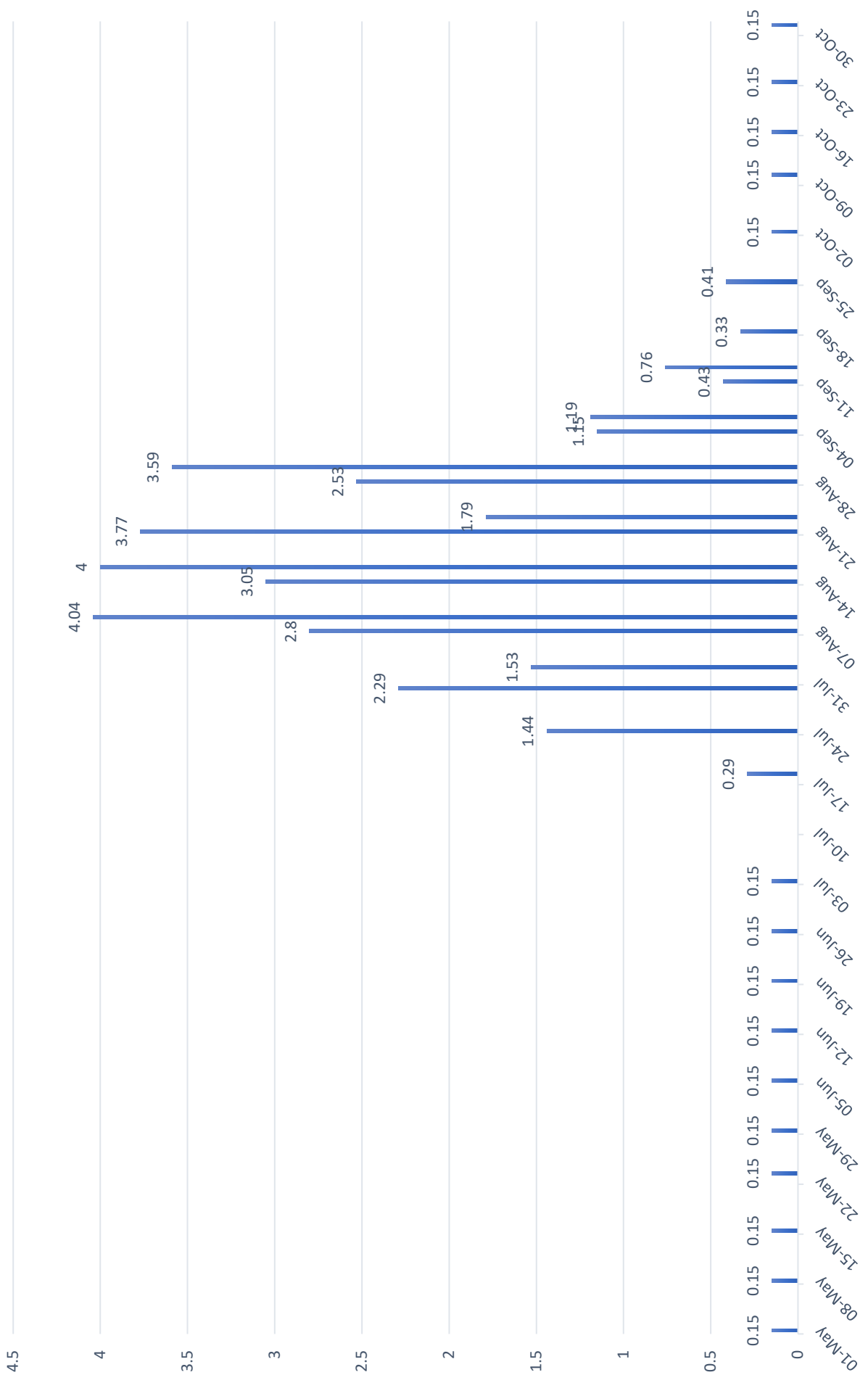
Question ID	MRDW1113000		
Question	Question Type	Legislative Requirement	
Have all changes to the system registration information been provided to the Ministry within ten (10) days of the change?	Legislative	SDWA O. Reg. 170/03 10.1 (3)	
Observation			
All changes to the system registration information were provided within ten (10) days of the change.			



2021 Microcystin Results

Total Microcystin (ug/g) in Raw Samples from Stoney Point WTP

2021



ND = 0.15 ug/L