

July 18, 2022

Municipality of Leamington
111 Erie St. North
Leamington, ON N8H 2Z9

File: SI-ES-LE-540

Attention: Mr. Peter Neufeld, CAO

Re: Leamington (Union) Distribution System Inspection Report

Please find enclosed the Inspection Report for the inspection of the Leamington (Union) Distribution System (DWS#220004992) on June 21, 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: Nelson Carvalho, Supervisor, Water Services, Municipality of Leamington; Shannon Belleau, Manager of Environmental Services
Samuel Wen, Process & Coampliance Technician, OCWA
Nicole Dupuis, Chief Executive Officer; Kristy McBeth, Director of Health Protection; Victoria Peczulis, Manager, Environmental Health, WECHU;
Marc Bechard, Supervisor, Ministry of the Environment, Conservation and Parks.



LEAMINGTON DISTRIBUTION SYSTEM (UNION DS)

Inspection Report

System Number: 220004992

Entity: CORPORATION OF THE
MUNICIPALITY OF LEAMINGTON

Inspection Start Date: 06/21/2022

Inspection End Date: 07/14/2022

Inspected By: Emily Awad

Badge #: 1823



(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: DRINKING WATER | **Regulated Activity:**

Question ID	MRDW1001001	Question Type	Information
Question:			
What was the scope of this inspection?			
Legislative Requirement	Not Applicable		
Observation			
<p>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.</p> <p>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.</p> <p>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.</p> <p>The Leamington (Union) Distribution System (DWS#220004992) is a stand alone connected distribution system (DS) that receives water from the Union Water Supply System (UWSS). The Leamington Tower and the Albuna Tower in the Town of Kingsville are owned by the UWSS, which monitors and controls their water levels for maintenance of pressure in the Union DS.</p> <p>The UWSS is owned by four municipalities, Essex, Kingsville, Lakeshore and Leamington. The UWSS is managed by a Joint Board of Management and is operated by the Ontario Clean Water Agency (OCWA). The raw water is obtained from Lake Erie and is treated by a conventional surface-water treatment plant. Leamington's Water Services Department is responsible for all other aspects of the operation, including maintenance and repair, of the water distribution system.</p> <p>This unannounced focused inspection was conducted on June 21, 2022 for the inspection period June 1, 2021 to May 31, 2022.</p>			

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Question ID	MRDW1000001	Question Type	Information
Question: Does this drinking water system provide primary disinfection?			
Legislative Requirement	Not Applicable		
Observation			
This Drinking Water System provides for only secondary disinfection and distribution of water. Primary disinfection is undertaken by another regulated Drinking Water System which provides treated water to this Drinking Water System.			

Question ID	MRDW1033001	Question Type	Legislative
Question: Is the secondary disinfectant residual measured as required for the large municipal residential distribution system?			
Legislative Requirement	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 large municipal residential distribution system.			
As per O.Reg. 170/03 s. 7-2 (3), the owner/operating authority of a system that provides secondary disinfection shall ensure that at least seven distribution samples are taken each week and are tested immediately for, (a) free chlorine residual, if the system provides chlorination and does not provide chloramination; or (b) combined chlorine residual, if the system provides chloramination. The following rules apply to the distribution samples referred above unless at least one sample is taken on each day of the week: At least four of the samples must be taken on one day of the week, at least 48 hours after the last sample was taken in the previous week. Then, at least three of the samples must be taken on a second day of the week, at least 48 hours after the last sample was taken on the first day of the sampling week. When more than one sample is taken on the same day of the week then each sample must be taken from a different location. As of June 4, 2018 the UWSS has been using chlorination, instead of chloramination, for secondary disinfection purposes.			
Failure to maintain target secondary disinfection has been identified in the Operational Plan as a critical control point. The critical control limits are: Trigger Free Chlorine Residual = 0.25 mg/L, Target Free Chlorine Residual = 0.5 mg/L. During the inspection review period (June 1, 2021 to May 31, 2022) at least seven distribution samples were collected each			

week using the 4/3 rule and tested for free and total chlorine residuals. The free chlorine residuals ranged from 0.54 to 1.51 mg/L.

At the inspection, the undersigned officer measured the chlorine residual in the distribution system at SS#L14. The concentration was 1.04 mg/L free and 1.29 mg/L total.

Question ID	MRDW1099001	Question Type	Information
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)?			
Legislative Requirement	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	MRDW1081001	Question Type	Legislative
Question:			
For LMR systems, are all microbiological water quality monitoring requirements for distribution samples being met?			
Legislative Requirement	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 prescribed by legislation for distribution samples in a large municipal residential system were being met.			
As per O.Reg. 170/03 s. 10-2, the owner/operating authority for the system shall ensure that if a system serves 100,000 people or less, at least eight distribution samples, plus one additional sample for every 1,000 people served, are taken every month, with at least one sample being taken each week. Each of the distribution samples collected must be tested for E. coli and total coliforms and at least 25 percent of these samples must be tested for general bacteria population expressed as colony counts on a heterotrophic plate count (HPC). For this system, at least 39 monthly samples of E. coli and total coliform, and 10 monthly samples of HPC, are required.			
During the inspection review period (June 1, 2021 to May 31, 2022), the Leamington (Union) DS was sampled 40 to 50 times per month. All of these samples were tested for E.			

coli, total coliforms and 20 to 25 samples were tested for HPC.

Question ID	MRDW1096001	Question Type	Legislative
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?			
Legislative Requirement	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	MRDW1086001	Question Type	Legislative
Question:			
Are all haloacetic acid water quality monitoring requirements prescribed by legislation conducted within the required frequency and at the required location?			
Legislative Requirement	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 were conducted within the required frequency and at the required location.			
As per O.Reg 170/03 s.13-6.1, the owner/operating authority shall ensure that a minimum of one sample is collected and tested for haloacetic acid (HAA) per calendar quarter. On January 1, 2020, the O.Reg. 169/03 standard for HAA (80ug/L) came into effect and is expressed as a running annual average (RAA) of quarterly results.			
During the inspection review period (June 1, 2021 to May 31, 2022) the HAA quarterly samples were collected on July 6, 2021 (16.5 ug/L), Oct. 7, 2021 (7.3 ug/L), Jan. 5, 2022 (5.9 ug/L) and Apr. 5, 2022 (13.5 ug/L). The RAA was 10.8 ug/L, well below the standard of 80 ug/L.			

Question ID	MRDW1087001	Question Type	Legislative
Question:			
Have all trihalomethane water quality monitoring requirements prescribed by legislation			

been conducted within the required frequency and at the required location?	
Legislative Requirement	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);
Observation	
<p>All trihalomethane water quality monitoring requirements prescribed by legislation were conducted within the required frequency and at the required location.</p> <p>As per O.Reg 170/03 s.13-6, the owner/operating authority shall ensure that a minimum of one sample is collected and tested for trihalomethanes (THM) per calendar quarter.</p> <p>During the inspection review period (June 1, 2021 to May 31, 2022) the THM quarterly samples were collected on July 6, 2021 (37 ug/L), Oct. 7, 2021 (43 ug/L), Jan. 5, 2022 (22 ug/L) and Apr. 5, 2022 (18 ug/L). The RAA was 30 ug/L, well below the standard of 100 ug/L.</p>	

Question ID	MRDW1059000	Question Type	Legislative
Question:			
Do the operations and maintenance manuals contain plans, drawings and process descriptions sufficient for the safe and efficient operation of the system?			
Legislative Requirement	SDWA O. Reg. 128/04 28;		
Observation			
<p>The operations and maintenance manuals contained plans, drawings and process descriptions sufficient for the safe and efficient operation of the system.</p> <p>All operators have access to Leamington's GIS mapping of the distribution system. They also have individual PDFs available that show all water services. Operators can access these maps on the laptops in each vehicle or at the Water Services Building.</p>			

Question ID	MRDW1060000	Question Type	Legislative
Question:			
Do the operations and maintenance manuals meet the requirements of the DWWP and MDWL issued under Part V of the SDWA?			
Legislative Requirement	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 operational plan, including all procedures and related documents, is comprehensive and meets the requirements of the MDWL. These documents are reviewed at least once every calendar year, to ensure they are current and relevant.

Question ID	MRDW1061001	Question Type	Legislative
Question: Are logbooks properly maintained and contain the required information?			
Legislative Requirement	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);		
Observation			
Logbooks were properly maintained and contained the required information.			

Question ID	MRDW1062001	Question Type	Legislative
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?			
Legislative Requirement	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.			

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

The owner had provided security measures to protect components of the drinking water system.

All autoflushers and sampling stations are locked and keys are available from the Leamington Water Services and Union Water Supply personnel.

Question ID	MRDW1073001	Question Type	Legislative
Question: Has the overall responsible operator been designated for all subsystems which comprise the drinking water system?			
Legislative Requirement	SDWA O. Reg. 128/04 23 (1);		
Observation			
The overall responsible operator had been designated for each subsystem.			

Question ID	MRDW1074001	Question Type	Legislative
Question: Have operators-in-charge been designated for all subsystems for which comprise the drinking water system?			
Legislative Requirement	SDWA O. Reg. 128/04 25 (1);		
Observation			
Operators-in-charge had been designated for all subsystems which comprise the drinking water system.			

Question ID	MRDW1075001	Question Type	Legislative
Question: Do all operators possess the required certification?			
Legislative Requirement	SDWA O. Reg. 128/04 22;		
Observation			
All operators possessed the required certification.			