

May 24, 2023

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 May 12, 2023.

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 and Shannon Belleau, Manager of Environmental Services, Municipality of Leamington;
Samuel Wen, Process & Compliance Technician, OCWA
Kristy McBeth, Director of Health Protection; Victoria Peczulis, Manager, Environmental Health; Elaine Bennett, Manager, Environmental Health, WECHU;
Marc Bechard, Supervisor, Ministry of the Environment, Conservation and Parks.



LEAMINGTON DISTRIBUTION SYSTEM (UNION DS)

Inspection Report

System Number:

Entity: CORPORATION OF THE
MUNICIPALITY OF LEAMINGTON

Inspection Start Date: 05/08/2023 (mm/dd/yyyy)

Inspection End Date: 05/19/2023 (mm/dd/yyyy)

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:** DW Municipal Residential

Question ID	DWMR1001000	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. 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. This focused inspection was conducted on May 12, 2023 for the inspection period June 1, 2022 to April 30, 2023.</p>			

Question ID	DWMR1000000	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	DWMR1025000	Question Type	Legislative
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?			
Legislative Requirement	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.			
The SOP for new watermains has been updated to comply with the new MECP Watermain Disinfection Procedure (2020). The other watermain related SOPs have not yet been updated to reflect changes to the the above procedure. The owner shall review all pertinent SOPs to ensure that they comply with the Watermain Disinfection Procedure.			
The Leamington Water Services Mainbreak Report Form did not contain all the required documentation as per the new MECP Watermain Disinfection Procedure (2020). The owner updated the form to include all required information during the inspection. All operational staff shall review section 2 of the Watermain Disinfection Procedure to ensure that all required procedures for watermain repairs are being completed.			

Question ID	DWMR1033000	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 free chlorine residual. Samples must either be taken daily, or at least four of the samples must be taken on one day of the week, and at least three of the samples must be taken on a second day of the week, at least 48 hours apart. 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, 2022 to April 30, 2023) at least seven distribution samples were collected each week and tested for free and total chlorine residuals. The free chlorine residuals ranged from 0.75 to 1.49 mg/L. At the inspection, the undersigned officer measured the chlorine residual in the distribution system at SS#L15. The concentration was 1.41 mg/L free and 1.65 mg/L total. In addition, the chlorine residual was measured at the kitchen fixture at the Municipality of Leamington Water office. The concentration was 1.44 mg/L free and 1.68 mg/L total.

On January 4, 2023, OCWA reported that the chlorine residuals measured on December 30, 2022 were collected less than 48 hours after the previous measurements (Dec. 28, 2022). The owner/operating authority shall ensure that chlorine residual measurements in the distribution system are conducted 48 hours after the previous measurements, as required.

Question ID	DWMR1099000	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	DWMR1081000	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, 2022 to April 30, 2023), 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	DWMR1096000	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	DWMR1086000	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, 2022 to April 30, 2023) the HAA quarterly samples were collected on July 6, 2022 (9.2 ug/L), Oct. 3, 2022 (7.9 ug/L), Jan. 4, 2023 (<5.3 ug/L) and Apr. 3, 2023 (<5.3 ug/L). The RAA was 6.9 ug/L, well below the standard of 80 ug/L.

Question ID	DWMR1087000	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			
All trihalomethane 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, the owner/operating authority shall ensure that a minimum of one sample is collected and tested for trihalomethanes (THM) per calendar quarter. During the inspection review period (June 1, 2022 to April 30, 2023) the THM quarterly samples were collected on July 6, 2022 (27 ug/L), Oct. 3, 2022 (24 ug/L), Jan. 4, 2023 (15 ug/L) and Apr. 3, 2023 (17 ug/L). The RAA was 20.75 ug/L, well below the standard of 100 ug/L.			

Question ID	DWMR1059000	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			
The operations and maintenance manuals contained plans, drawings and process descriptions sufficient for the safe and efficient operation of the system.			

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.

Question ID	DWMR1060000	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	DWMR1061000	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.			
The Town of Leamington began using electronic logbooks exclusively in October 2022. The entries in the physical logs (June to October 2022) and the electronic logs contained all required information.			

Question ID	DWMR1062000	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	DWMR1071000	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	DWMR1073000	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	DWMR1074000	Question Type	Legislative
Question: Have operators-in-charge been designated for all subsystems 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	DWMR1075000	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.			

Question ID	DWMR1117000	Question Type	Information
Question: Are there any other DWS related items that should be recognized in this report?			
Legislative Requirement	Not Applicable		
Observation			
The following items are noted as being relevant to the Drinking Water System:			
<p>On October 13, 2022, samples collected from the plumbing of a resident in this distribution system had lead concentrations above the standard of 10ug/L (1st: 22.4; 2nd: 42.7 ug/L). The sampling was initiated at the resident's request. They recently purchased the home and were told by the previous owner that they had lead pipes. The resident contacted OCWA to collect and analyze a sample. OCWA notified the Windsor-Essex County Health Unit (WECHU) and sent a letter back to the homeowner. The watermain serving this property was installed in 2019, and is made of copper, and so it was determined that it is not the source of the lead.</p>			

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

DWS Name: LEAMINGTON DISTRIBUTION SYSTEM (UNION DS)
DWS Number: 220004992
DWS Owner: CORPORATION OF THE MUNICIPALITY OF LEAMINGTON
Municipal Location: LEAMINGTON

Regulation: O.REG. 170/03
DWS Category: DW Municipal Residential
Type of Inspection: Focused
Inspection Date: May-8-2023
Ministry Office: Windsor Area Office

Maximum Risk Rating: 167

Inspection Module	Non Compliance Risk (X out of Y)
Certification and Training	0/28
Logbooks	0/18
Operations Manuals	0/28
Treatment Processes	0/42
Water Quality Monitoring	0/51
Overall - Calculated	0/167

Inspection Risk Rating: 0.00%

Final Inspection Rating: 100.00%

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

DWS Name: LEAMINGTON DISTRIBUTION SYSTEM (UNION DS)
DWS Number: 220004992
DWS Owner Name: CORPORATION OF THE MUNICIPALITY OF LEAMINGTON
Municipal Location: LEAMINGTON

Regulation: O.REG. 170/03
DWS Category: DW Municipal Residential
Type of Inspection: Focused
Inspection Date: May-8-2023
Ministry Office: Windsor Area Office

All legislative requirements were met. No detailed rating scores.

Maximum Question Rating: 167

Inspection Risk Rating: 0.00%

FINAL INSPECTION RATING: 100.00%