



DURHAM DRINKING WATER SYSTEM
Physical Address: 172 SOUTH ST E, , WEST
GREY, ON NOG 1R0

INSPECTION REPORT

System Number: 220001771

Entity: THE CORPORATION OF THE

MUNICIPALITY OF WEST GREY

Inspection Start Date: October 09, 2024
Site Inspection Date: October 09, 2024
Inspection End Date: November 12, 2024

Inspected By: Matt Shannon

Badge #: 1021

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(signature)



INTRODUCTION

Purpose

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.

Scope

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 81of 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 inspection review period is from November 21, 2023 to October 9, 2024.

Systems/Components

Well No. 1B Pumphouse:

A GUDI well, 300mm diameter and 77 m deep equipped with a VFD submersible well pump rated at 15.9 L/s at a TDH of 71-133 m. The pumphouse enclosure building is 4.9 m x 3.1 m x 3.3 m high and houses the water treatment equipment including, but not limited to, flow meters, UV disinfection system, cartridge filters, sodium hypochlorite disinfection system, online chlorine and turbidity analyzers, low level alarms, autodialer and backup diesel generator.

Well No. 2 Pumphouse:

A GUDI well, 300mm diameter and 74.7 m deep equipped with a VFD submersible well pump rated at 17 L/s at a TDH of 75-139 m. The pumphouse contains the water treatment equipment including, but not limited to, flow meters, UV disinfection system, cartridge filters, sodium hypochlorite disinfection system, online chlorine and turbidity analyzers, low level alarms, autodialer and backup power source available. Well #2A is located just outside the well#2 pumphouse. It is 250mm diameter well about 68m deep. The variable speed submersible pump has a capacity of 1134 L/min. The capacity of the wellhouse is 18.9L/s.

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Ministry of the Environment, Conservation and Parks

Ministère de l'Environnement, de la Protection de la nature et des Parcs



Note: The above description of the Durham drinking water system was provided by Veolia North America.

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NON-COMPLIANCE

This should not be construed as a confirmation of full compliance with all potential applicable legal requirements. These inspection findings are limited to the components and/or activities that were assessed, and the legislative framework(s) that were applied. It remains the responsibility of the owner to ensure compliance with all applicable legislative and regulatory requirements.

If you have any questions related to this inspection, please contact the signed Provincial Officer.

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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.

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INSPECTION DETAILS

This section includes all questions that were assessed during the inspection.

Ministry Program: DRINKING WATER | Regulated Activity: DW Municipal Residential

Question ID	DWMR1006001	Question Type	Information	
Legislative Requirement(s): Not Applicable				
Question: Is the owner p source(s)?	lanning to add a new drinking water	r source or to make	e changes to their current	
•	Response(s)/Corrective Action(s), blanning to add a new drinking wate	` '	e changes to their current	

Question ID	DWMR1007001	Question Type	Legislative
•	equirement(s): eg. 170/03 1-2 (1)1;		

Question:

Was the owner maintaining the production well(s) in a manner sufficient to prevent entry into the well of surface water and other foreign materials?

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

The owner was maintaining the production well(s) in a manner sufficient to prevent entry into the well of surface water and other foreign materials.

Question ID	DWMR1009001	C	Question Type	Legislative
Legislative Ro	equirement(s): 1);			
Question:				

Were measures in place to protect the groundwater and/or GUDI source in accordance with the Municipal Drinking Water Licence and Drinking Water Works Permit?

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

Measures were in place to protect the groundwater and/or GUDI source.

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Question IDDWMR1014001Question TypeLegislative

Legislative Requirement(s):

SDWA | 31 | (1);

Question:

Was flow monitoring performed as required by the Municipal Drinking Water Licence or Drinking Water Works Permit?

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

Flow monitoring was performed as required.

 Question ID
 DWMR1016001
 Question Type
 Legislative

Legislative Requirement(s):

SDWA | 31 | (1);

Question:

Was the owner in compliance with the conditions associated with maximum flow rate or the rated/operational capacity in the Municipal Drinking Water Licence?

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

The owner was in compliance with the conditions associated with maximum flow rate and/or the rated/operational capacity conditions.

Question IDDWMR1018001Question TypeLegislative

Legislative Requirement(s):

SDWA | 31 | (1);

Question:

Did the owner ensure that equipment was installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit?

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

The owner ensured that equipment was installed as required.

Question IDDWMR1020001Question TypeLegislative

Legislative Requirement(s):

SDWA | 31 | (1);

Question:

Were Form 1 documents prepared as required?

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

Form 1 documents were prepared as required.

Question IDDWMR1021001Question TypeLegislative

Legislative Requirement(s):

SDWA | 31 | (1);

Question:

Were Form 2 documents prepared as required?

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

Form 2 documents were prepared as required.

Question ID DWMR1025001 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 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 as required.

Question IDDWMR1023001Question TypeLegislative

Legislative Requirement(s):

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

Question:

Did records indicate that the treatment equipment was operated in a manner that achieved the design capabilities prescribed by O. Reg. 170/03, Drinking Water Works Permit and/or Municipal Drinking Water Licence at all times that water was being supplied to consumers?

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

Records indicated that the treatment equipment was operated in a manner that achieved the design capabilities prescribed.

Primary disinfection is achieved through cartridge filtration, UV disinfection and chlorination to meet a combined 4-log inactivation of viruses, as required in Schedule E of License #096-101, Issue No. 7.

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A new licence and permit were issued in March 2022 classifying Well 1B as groundwater. The requirement for chlorine as part of the primary disinfection was removed, as UV disinfection alone is adequate for a groundwater source. UV equipment must provide a minimum dosage of 40 mJ/cm2 to meet primary disinfection requirements for all wells.

During the inspection review period, primary disinfection criteria were met at all times water was being directed to users.

Question ID	DWMR1026001	Question Type	Legislative
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Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 1-6 | (2);

Question:

If primary disinfection equipment did not use chlorination or chloramination, was the equipment equipped with alarms or shut-off mechanisms that satisfy the standards described in Schedule 1-6 of O. Reg. 170/03?

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

Primary disinfection equipment was equipped with alarms or shutoff mechanisms that satisfied the standards.

Legislative Requirement(s):

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

Question:

Did records confirm that the water treatment equipment which provides chlorination or chloramination for secondary disinfection was operated as required?

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

Records confirmed that the water treatment equipment which provides chlorination or chloramination for secondary disinfection was operated as required.

	Question ID	DWMR1033001	Question Type	Legislative
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Legislative Requirement(s):

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

Question:

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

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

Secondary disinfectant residual was tested as required.

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Question IDDWMR1030001Question TypeLegislative

Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 7-2 | (1); SDWA | O. Reg. 170/03 | 7-2 | (2);

Question:

Was primary disinfection chlorine monitoring being conducted at a location approved by Municipal Drinking Water Licence and/or Drinking Water Works Permit or at/near a location where the intended CT had just been achieved?

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

Primary disinfection chlorine monitoring was conducted as required.

Question IDDWMR1035001Question TypeLegislative

Legislative Requirement(s):

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

Question:

Were operators examining continuous monitoring test results and did they examine the results within 72 hours of the test?

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

Operators were examining continuous monitoring test results as required.

 Question ID
 DWMR1038001
 Question Type
 Legislative

Legislative Requirement(s):

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

Question:

Was continuous monitoring equipment that was being utilized to fulfill O. Reg. 170/03 requirements performing tests for the parameters with at least the minimum frequency and recording data with the prescribed format?

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

Continuous monitoring equipment that was being utilized to fulfill O. Reg. 170/03 requirements was performing tests for the parameters with at least the minimum frequency and recording data with the prescribed format.

 Question ID
 DWMR1037001
 Question Type
 Legislative

 Legislative Requirement(s):
 SDWA | O. Reg. 170/03 | 6-5 | (1)5-10; SDWA | O. Reg. 170/03 | 6-5 | (1.1);

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Question:

Were all continuous monitoring equipment utilized for sampling and testing required by O. Reg. 170/03, or Municipal Drinking Water Licence or Drinking Water Works Permit or order, equipped with alarms or shut-off mechanisms that satisfied the standards described in Schedule 6?

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

All required continuous monitoring equipment utilized for sampling and testing were equipped with alarms or shut-off mechanisms that satisfied the standards

Question ID	DWMR1040001	Question Type	Legislative
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Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 6-5 | (1)1-4; SDWA | O. Reg. 170/03 | 6-5 | (1)5-10;

Question:

Were all continuous analysers calibrated, maintained, and operated, in accordance with the manufacturer's instructions or the regulation?

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

All continuous analysers were calibrated, maintained, and operated as required.

Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 6-5 | (1)5-10; SDWA | O. Reg. 170/03 | 6-5 | (1.1);

Question:

Where continuous monitoring equipment used for the monitoring of free chlorine residual, total chlorine residual, combined chlorine residual or turbidity, required by O. Reg. 170/03, Municipal Drinking Water Licence, Drinking Water Works Permit, or order triggered an alarm or an automatic shut-off, did a qualified person respond as required and take appropriate actions?

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

A qualified person responded as required and took appropriate actions.

Question ID DWMR1039001		Question Type	Legislative	
Legislative Requirement(s):				

SDWA | O. Reg. 170/03 | 1-6 | (3);

Question:

If primary disinfection equipment that does not use chlorination or chloramination was used,

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did the owner and operating authority ensure the equipment had a recording device that continuously recorded the performance of the disinfection equipment?

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

The owner and operating authority ensured that the primary disinfection equipment had a recording device that continuously recorded the performance of the disinfection equipment.

Question ID	DWMR1109001	Question Type	Legislative

Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 1-6 | (1); SDWA | O. Reg. 170/03 | 1-6 | (2);

Question:

If the system used equipment for primary disinfection other than chlorination or chloramination and the equipment malfunctioned, lost power, or ceased to provide the appropriate level of disinfection, causing an alarm or an automatic shut-off, did a certified operator respond as required and take appropriate actions?

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

A certified operator responded as required and took appropriate actions.

Question IDDWMR1042001Question TypeLegislative

Legislative Requirement(s):

SDWA | 31 | (1);

Question:

If UV disinfection was used, were duty sensors and reference UV sensors checked and calibrated as per the requirements of Schedule E of the Municipal Drinking Water Licence or at a frequency as otherwise recommended by the UV equipment manufacturer?

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

All UV sensors were checked and calibrated as required.

Question IDDWMR1099001Question TypeInformation

Legislative Requirement(s):

Not Applicable

Question:

Do records show that water provided by the drinking water system met the Ontario Drinking Water Quality Standards?

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

Records showed that all water sample results met the Ontario Drinking Water Quality Standards.

Question ID DWMR1083001 Question 1	ype Legislative
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Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 10-3;

Question:

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

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

Treated microbiological sampling requirements were met.

Question ID	DWMR1081001	Question Type	Legislative
Question ib	DVVIVIIX1001001	Question Type	Logislativo

Legislative Requirement(s):

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

Question:

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

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

Distribution microbiological sampling requirements were met.

Question ID	DWMR1096001	Question Type	Legislative
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Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 6-3 | (1);

Question:

Did records confirm that chlorine residual tests were conducted at the same time and location as microbiological samples?

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

Records confirmed that chlorine residual tests were conducted as required.

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Question ID	DWMR1084001	Question Type	Legislative
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Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 13-2;

Question:

Were inorganic parameter sampling requirements prescribed by Schedule 13-2 of O. Reg. 170/03 met?

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

Inorganic parameter sampling requirements were met.

Inorganic sampling for parameters of Schedule 23, O.Reg. 170 is required every twelve (12) months for GUDI sources. The most current sample event occurred on August 12, 2024 from both Well #1b and #2/2A. All sample results were within the prescribed limits.

-	Question ID	DWMR1085001	Question Type	Legislative
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Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 13-4 | (1); SDWA | O. Reg. 170/03 | 13-4 | (2); SDWA | O. Reg. 170/03 | 13-4 | (3);

Question:

Were organic parameter sampling requirements prescribed by Schedule 13-4 of O. Reg. 170/03 met?

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

Organic parameter sampling requirements were met.

Organic sampling for parameters of Schedule 24, O.Reg. 170 is required every (12) months for GUDI sources. The most current sample event occurred on August 12, 2024 from both Well #1b and #2/2A. All sample results were within the prescribed limits.

Question ID DWMR1086001 Question Type Legislative

Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 13-6.1 | (1); SDWA | O. Reg. 170/03 | 13-6.1 | (2); SDWA | O. Reg. 170/03 | 13-6.1 | (3); SDWA | O. Reg. 170/03 | 13-6.1 | (4); SDWA | O. Reg. 170/03 | 13-6.1 | (5); SDWA | O. Reg. 170/03 | 13-6.1 | (6);

Question:

Were haloacetic acid sampling requirements prescribed by Schedule 13-6 of O. Reg. 170/03 met?

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

Haloacetic acid sampling requirements were met.

All haloacetic acid samples, collected in 2024, had a concentration below the method detection limit of 5.3 ug/L.

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Question ID | DWMR1087001 | Question Type | Legislative

Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 13-6 | (1); SDWA | O. Reg. 170/03 | 13-6 | (2); SDWA | O. Reg. 170/03 | 13-6 | (3); SDWA | O. Reg. 170/03 | 13-6 | (4); SDWA | O. Reg. 170/03 | 13-6 | (5); SDWA | O. Reg. 170/03 | 13-6 | (6);

Question:

Were trihalomethane sampling requirements prescribed by Schedule 13-6 of O. Reg. 170/03 met?

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

Trihalomethane sampling requirements were met.

The current running annual average trihalomethane concentration is 4.6 ug/L. The Ontario Drinking Water Quality Standard for THMs is 100 ug/L.

Question IDDWMR1088001Question TypeLegislative

Legislative Requirement(s):

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

Question:

Were nitrate/nitrite sampling requirements prescribed by Schedule 13-7 of O. Reg. 170/03 met?

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

Nitrate/nitrite sampling requirements were met.

Question ID DWMR1089001 Question Type Legislative

Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 13-8;

Question:

Were sodium sampling requirements prescribed by Schedule 13-8 of O. Reg. 170/03 met?

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

Sodium sampling requirements were met.

Sodium sampling is required every sixty (60) months; the most current sodium sample date was August 4, 2020 with results of 6.2 and 11 mg/L at Well #1b & #2/2A respectively. The results are below the O.Reg. 170/03 reporting limit of 20.0 mg/L.

Question ID	DWMR1090001	Question Type	Legislative
	equirement(s): eg. 170/03 13-9;		

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Question:

Where fluoridation is not practiced, were fluoride sampling requirements prescribed by Schedule 13-9 of O. Reg. 170/03 met?

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

Fluoride sampling requirements were met.

Fluoride sampling is required every sixty (60) months. The last sample event occurred on August 30, 2021 with a result of 0.20 and 0.67 mg/L at Well #1b & #2/2A respectively, which are within the prescribed limits of 1.5 mg/L.

Question ID	DWMR1113001	Question Type	Legislative
Legislative Requirement(s):			
SDWA O. Reg. 170/03 10.1 (3);			

Question:

Were changes to the system registration information provided to the ministry within ten (10) days of the change?

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

Changes to the system registration information were provided as required.

Question ID	DWMR1045001	Question Type	Legislative
Legislative Requirement(s):			

SDWA | 31 | (1);

Question:

Did the owner update the document describing the distribution components within 12 months of completion of alterations to the system in accordance with the Drinking Water Works Permit?

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

The owner had up-to-date documents describing the distribution components.

Question ID	DWMR1060001	Question Type	Legislative
Legislative Requirement(s):			
SDWA 31 (1	1);		

Question:

Did the operations and maintenance manual(s) meet the requirements of the Municipal Drinking Water Licence?

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

The operations and maintenance manual(s) met the requirements of the Municipal Drinking Water Licence.

Question ID	DWMR1062001	Question Type	Legislative
Legislative Requirement(s):			

SDWA | O. Reg. 170/03 | 7-5;

Question:

Did records or other record keeping mechanisms confirm that operational testing not performed by continuous monitoring equipment was done by a certified operator, water quality analyst, or person who met the requirements of Schedule 7-5 of O. Reg. 170/03?

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

Records or other record keeping mechanisms confirmed that operational testing not performed by continuous monitoring equipment was done by a certified operator, water quality analyst, or person who met the requirements of Schedule 7-5 of O. Reg. 170/03.

Question ID	DWMR1071001	Question Type	BMP
Legislative Requirement(s):			

Not Applicable

Question:

Did the owner provide security measures to protect components of the drinking water system?

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

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

Question ID DWMR1073001 **Question Type** Legislative Legislative Requirement(s):

SDWA | O. Reg. 128/04 | 23 | (1);

Question:

Was an overall responsible operator designated for all subsystems which comprise the drinking water system?

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

An overall responsible operator was designated for all subsystem.

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Question IDDWMR1074001Question TypeLegislative

Legislative Requirement(s):

SDWA | O. Reg. 128/04 | 25 | (1);

Question:

Were operators-in-charge designated for all subsystems which comprise the drinking water system?

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

Operators-in-charge were designated for all subsystems.

Question ID DWMR1075001 Question Type Legislative

Legislative Requirement(s):

SDWA | O. Reg. 128/04 | 22;

Question:

Were all operators certified as required?

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

All operators were certified as required.

Question IDDWMR1076001Question TypeLegislative

Legislative Requirement(s):

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

Question:

Were adjustments to the treatment equipment only made by certified operators?

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

Adjustments to the treatment equipment were only made by certified operators.

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