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March 24, 2020

The Corporation of the City of Richmond Hill
1200 Elgin Mills Road East
Richmond Hill, ON
L4S 1M4

Attention: Diogo Oliveira, Manager, Water and Wastewater

RE: Richmond Hill Distribution System (260001968)
Drinking Water Inspection Report 1-N2GAF

Please find attached the Ministry of the Environment, Conservation and Parks' inspection report for the above facility. The report details the findings of the inspection that began on January 27, 2020.

For the 2019-2020 inspection period, the Appendix section of the inspection includes the Stakeholder Appendix A with links to key reference and guidance materials available on the MECP website, Appendix B contains the inspection rating record.

"Actions Required" are linked to incidents of non-compliance with regulatory requirements contained within the Act, a regulation, or site-specific approvals, licenses, permits, orders or instructions. Such violations could result in the issuance of mandatory abatement instruments including Orders, tickets, penalties, or referrals to the ministry's Investigations and Enforcement Branch.

"Recommended Actions" convey information that the owner or operating authority should consider implementing in order to advance efforts already in place to address such issues as emergency preparedness, the availability of information to consumers, and conformance with existing and emerging industrial standards. Please note that items which appear as recommended actions do not, in themselves, constitute violations.

Please note, you will find in the report that bullets are shown in bold print and are the consistent and standard responses to the information gathered during the inspection. Statements shown in regular font provide additional site-specific details.

"Section 19 of the Safe Drinking Water Act (Standard of Care) creates a number of obligations for individuals who exercise decision-making authority over municipal drinking water systems. Please be aware that the Ministry has encouraged such individuals, particularly municipal councillors, to take steps to be better informed about the drinking water systems over which they have decision-making authority. These steps could include asking for a copy of this

inspection report and a review of its findings. Further information about Section 19 can be found in *"Taking Care of Your Drinking Water: A guide for members of municipal council"* found under "Resources" on the Drinking Water Ontario website at www.ontario.ca/drinkingwater.

I would like to thank the City of Richmond Hill staff for the assistance afforded to me during this compliance assessment. If you have any questions or concerns please contact myself or Demetra Koros, Water Program Supervisor, Central Region at 905-409-0496.

Yours truly,



Marc Lamirande

Provincial Officer
Central Region Water Inspector
Drinking Water and Environmental Compliance Division
Ministry of the Environment, Conservation and Parks
Phone: (905) 449-9562

cc:

Steve Duthie, Supervisor, Water and Wastewater, City of Richmond Hill
Barry Kyle, Supervisor, Water and Wastewater, City of Richmond Hill
Slawomir Parol, Water Quality Analyst, Water, City of Richmond Hill
York Public Health, York Region Health Department
Demetra Koros, Supervisor, Central Region MECP

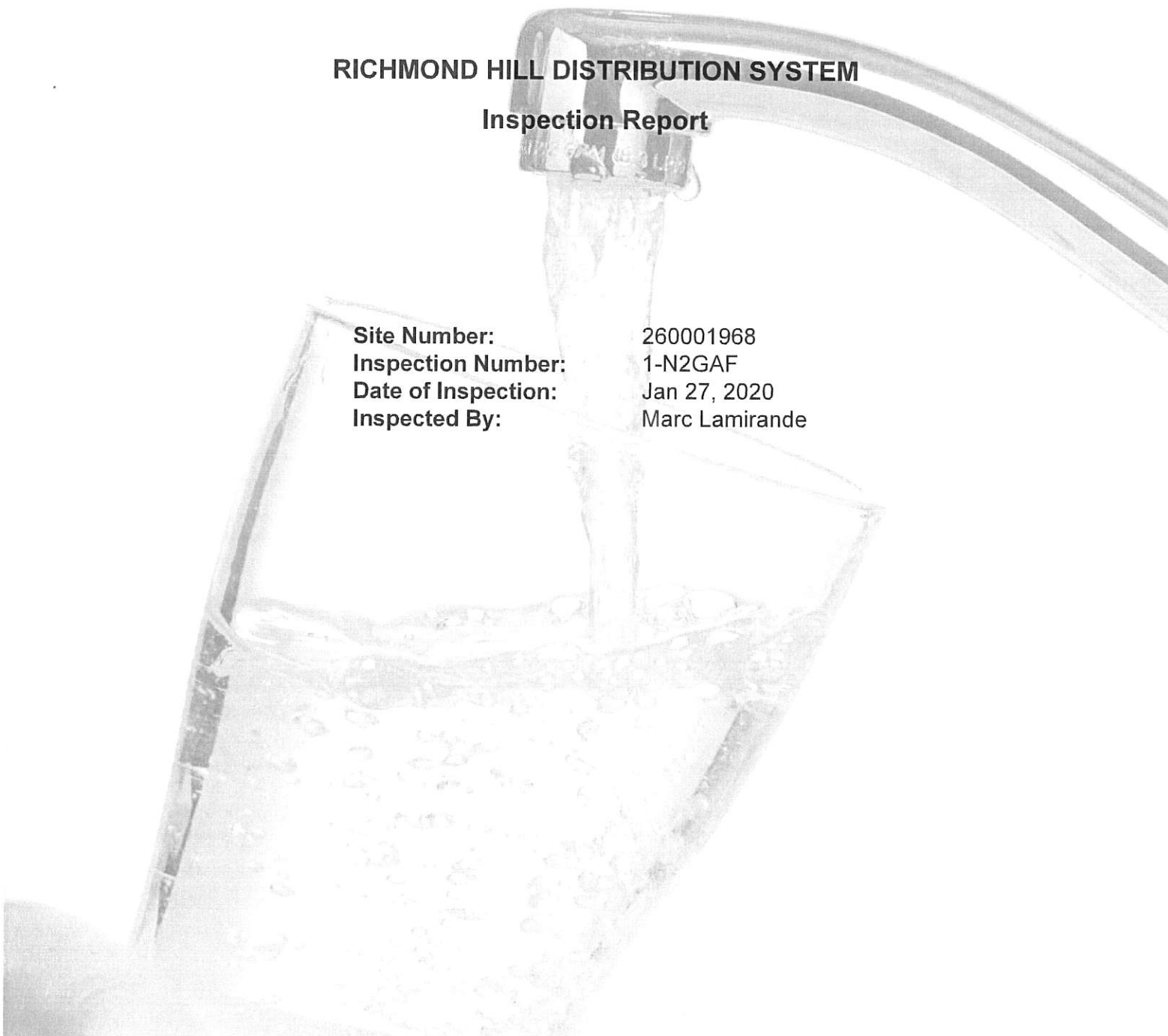


Ministry of the Environment, Conservation and Parks

RICHMOND HILL DISTRIBUTION SYSTEM

Inspection Report

Site Number:	260001968
Inspection Number:	1-N2GAF
Date of Inspection:	Jan 27, 2020
Inspected By:	Marc Lamirande





Ministry of the Environment, Conservation and Parks
Drinking Water Inspection

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Appendix:

- A. Stakeholders Appendix**
- B. Inspection Rating Record**

OWNER INFORMATION:

Company Name:	RICHMOND HILL, THE CORPORATION OF THE TOWN OF		
Street Number:	225	Unit Identifier:	
Street Name:	EAST BEAVER CREEK Rd E		
City:	RICHMOND HILL		
Province:	ON	Postal Code:	L4P 3B4

CONTACT INFORMATION

INSPECTION DETAILS:

Site Name:	RICHMOND HILL DISTRIBUTION SYSTEM
Site Address:	1200 ELGIN MILLS Road East RICHMOND HILL ON L4S 1M4
County/District:	RICHMOND HILL
MECP District/Area Office:	York-Durham District
Health Unit:	YORK REGION HEALTH SERVICES DEPARTMENT
Conservation Authority:	
MNR Office:	
Category:	Large Municipal Residential
Site Number:	260001968
Inspection Type:	Announced
Inspection Number:	1-N2GAF
Date of Inspection:	Jan 27, 2020
Date of Previous Inspection:	Sep 07, 2018

COMPONENTS DESCRIPTION

Site (Name):	MOE DWS Mapping	Sub Type:
Type:	DWS Mapping Point	

Site (Name):	Richmond Hill Operations Centre	Sub Type:
Type:		

Comments:

The Town of Richmond Hill owns and operates the Richmond Hill Distribution system consisting of 606 km of watermain serving approximately 214,100 residents. The water source is surface water that is treated by the City of Toronto and the Regional Municipality of Peel. Drinking water is transmitted from these systems to the Regional Municipality of York which sells it to local municipalities including the Town of Richmond Hill. Chloramination is used by the Regional Municipality of York for the secondary disinfection. The transmission lines and storage facilities within the Richmond Hill distribution system are owned and operated by the Regional Municipality of York.

INSPECTION SUMMARY:

Introduction

- 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.

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 report is based on an inspection of a "stand alone connected distribution system". This type of system receives treated water from a separately owned "donor" system. This report contains the elements required to assess key compliance and conformance issues associated with a "receiver" system. This report does not contain items associated with the inspection of the donor system, such as source waters, intakes/wells and treatment facilities.

This report is based on a "focused" inspection of the system. Although the inspection involved fewer activities than those normally undertaken in a detailed inspection, it contained critical elements required to assess key compliance issues. This system was chosen for a focused inspection because the system's performance met the ministry's criteria, most importantly that there were no deficiencies as identified in O. Reg. 172/03 over the past 3 years. The undertaking of a focused inspection at this drinking water system does not ensure that a similar type of inspection will be conducted at any point in the future.

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.

An announced inspection was conducted at the Richmond Hill Distribution System, herein referred to as the "system", on January 27, 2020. The inspection was conducted by Ministry of the Environment, Conservation and Parks, herein referred to as the "Ministry", Provincial Officer, Marc Lamirande.

The Richmond Hill Distribution System receives water from York Region. The system does not have any treatment equipment, re-chlorination, continuous monitoring, or storage facilities.

The inspection included a compliance assessment with all applicable legislation and legal documents.

The inspection period for this inspection is from September 7, 2018 to January 27, 2020.

Treatment Processes

- The owner had ensured that all equipment was installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit.
- The owner/operating authority was in compliance with the requirement to prepare Form 1 documents as required by their Drinking Water Works Permit during the inspection period.
- 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.

Treatment Processes

A review of flushing records, chlorine residuals records, and laboratory Chain of Custody forms, confirmed that the chlorine in the distribution was never less than 0.25 mg/L combined.

- Where an activity has occurred that could introduce contamination, all parts of the drinking water system were disinfected in accordance with Schedule B, Condition 2.3 of the Drinking Water Works Permit.

Treatment Process Monitoring

- The secondary disinfectant residual was measured as required for the distribution system.

Operations Manuals

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

Logbooks

- Logbooks were properly maintained and contained the required information.
- 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.

Security

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

Certification and Training

- The overall responsible operator had been designated for each subsystem.
- Operators-in-charge had been designated for all subsystems which comprised the drinking water system.
- All operators possessed the required certification.

Water Quality Monitoring

- All microbiological water quality monitoring requirements for distribution samples were being met.
- All haloacetic acid water quality monitoring requirements prescribed by legislation are being conducted within the required frequency and at the required location.

Haloacetic acid (HAA) samples were collected on:

- November 21, 2018 (3 locations)
- February 20, 2019 (3 locations)
- May 14, 2019 (3 locations)
- August 1, 2019 (3 locations)

Water Quality Monitoring

- October 8, 2019 (3 locations)

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

Trihalomethane samples were collected on:

- November 21, 2018 (3 locations)
- February 20, 2019 (3 locations)
- May 14, 2019 (3 locations)
- August 1, 2019 (3 locations)
- October 8, 2019 (3 locations)

- **All water quality monitoring requirements imposed by the MDWL or DWWP issued under Part V of the SDWA were being met.**
- **Records confirmed that chlorine residual tests were being conducted at the same time and at the same location that microbiological samples were obtained.**

A review of laboratory Chain of Custody forms indicated that chlorine residuals were collected at the same time as microbiological sampling.

Water Quality Assessment

- **Records did not 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).**

During the inspection period, there were 27 adverse water quality incidents (AWQIs) reported to the Ministry. All incidents were Total coliforms (TC) exceedances.

Reporting & Corrective Actions

- **All specified corrective actions (as per Schedule 17) were not taken to address adverse conditions.**

There were two Adverse Water Quality Incidents (AWQI) in which not all corrective actions were taken in accordance with Schedule 17 of O. Reg. 170/03.

On November 1, 2018, there was a TC exceedance from a resample (downstream) reported, confirming the presence of TC. A resample is defined as a set of water samples from the same location that gave rise to the corrective action, at least one sample that is a significant distance upstream, and at least one sample that is a significant distance downstream. Another resample was collected on November 3, 2018 and did not detect any TC, but a second set of samples were not collected 24 to 48 hours apart as required by Schedule 17-6, of O. Reg. 170/03

On September 12, 2019, there was a TC exceedance confirmed by a resample. Two sets of resamples were collected resulting in no TC presence; however, they were taken over 48 hours apart. The first set was taken on September 14, 2019 and the second set was taken on September 17, 2019.

- **All required notifications of adverse water quality incidents were immediately provided as per O. Reg. 170/03 16-6.**
- **All changes to the system registration information were provided within ten (10) days of the change.**

Other Inspection Findings

Other Inspection Findings

- **The following issues were also noted during the inspection:**

1. In the log entries the Overall Responsible Operator (ORO) was noted as being out on the following days:
 - March 22, 2019
 - September 30, 2019
 - October 28, 2019
 - December 20, 2019
 - December 24, 2019
 - December 27, 2019
 - December 30, 2019
 - January 15, 2020

The inspector was informed that the ORO were still available by phone, capable of fulfilling the duties and obligations of the ORO.

2. The Written notice of Adverse (form 2A) and Notice of Issue Resolution (form 2B) were used to meet the logbook entry requirements for the following:
 - abnormal and unusual observations and related conclusions and/or actions taken with dates and times incident was responded to,
 - a record of equipment taken out of service or ceased to operate, maintenance or repair carried out on the equipment, including the date and time when equipment was repaired and returned to service.

NON-COMPLIANCE WITH REGULATORY REQUIREMENTS AND ACTIONS REQUIRED

This section provides a summary of all non-compliance with regulatory requirements identified during the inspection period, as well as actions required to address these issues. Further details pertaining to these items can be found in the body of the inspection report.

1. All specified corrective actions (as per Schedule 17) were not taken to address adverse conditions.

There were two Adverse Water Quality Incidents (AWQI) in which not all corrective actions were taken in accordance with Schedule 17 of O. Reg. 170/03.

On November 1, 2018, there was a TC exceedance from a resample (downstream) reported, confirming the presence of TC. A resample is defined as a set of water samples from the same location that gave rise to the corrective action, at least one sample that is a significant distance upstream, and at least one sample that is a significant distance downstream. Another resample was collected on November 3, 2018 and did not detect any TC, but a second set of samples were not collected 24 to 48 hours apart as required by Schedule 17-6, of O. Reg. 170/03

On September 12, 2019, there was a TC exceedance confirmed by a resample. Two sets of resamples were collected resulting in no TC presence; however, they were taken over 48 hours apart. The first set was taken on September 14, 2019 and the second set was taken on September 17, 2019.

Action(s) Required:

The City of Richmond Hill shall update their Adverse Procedures to ensure that appropriate corrective actions are followed, as per Schedule 17-6 of O. Reg. 170/03.

By April 30, 2020, the City of Richmond Hill shall submit the updated procedures to the undersigned officer at Marc.Lamirande@Ontario.ca.

SUMMARY OF RECOMMENDATIONS AND BEST PRACTICE ISSUES

This section provides a summary of all recommendations and best practice issues identified during the inspection period. Details pertaining to these items can be found in the body of the inspection report. In the interest of continuous improvement in the interim, it is recommended that owners and operators develop an awareness of the following issues and consider measures to address them.

1. The following issues were also noted during the inspection:

1. In the log entries the Overall Responsible Operator (ORO) was noted as being out on the following days:
 - March 22, 2019
 - September 30, 2019
 - October 28, 2019
 - December 20, 2019
 - December 24, 2019
 - December 27, 2019
 - December 30, 2019
 - January 15, 2020

The inspector was informed that the ORO were still available by phone, capable of fulfilling the duties and obligations of the ORO.

2. The Written notice of Adverse (form 2A) and Notice of Issue Resolution (form 2B) were used to meet the logbook entry requirements for the following:

- abnormal and unusual observations and related conclusions and/or actions taken with dates and times incident was responded to,
- a record of equipment taken out of service or ceased to operate, maintenance or repair carried out on the equipment, including the date and time when equipment was repaired and returned to service.

Recommendation:

1. It is recommended that the City of Richmond Hill adjust their logbooks to specify if a potential ORO is out of the office, or unavailable to meet the duties and obligations of an ORO.

2. It is recommended that the City of Richmond Hill includes a more detailed summary of actions taken and results achieved in form 2B. Specific details should include the actions taken, the location where corrective actions were taken, the date and time the actions were taken, the name(s) of the operator(s) responding, and the results of the resamples, or a statement informing the reader if the results met the Ontario Drinking Water Quality Standards.

SIGNATURES

Inspected By:

Marc Lamirande

Signature: (Provincial Officer)



Reviewed & Approved By:

Demetra Koros

Signature: (Supervisor)



Review & Approval Date:

March 24, 2020

Note: This inspection does not in any way suggest that there is or has been compliance with applicable legislation and regulations as they apply or may apply to this facility. It is, and remains, the responsibility of the owner and/or operating authority to ensure compliance with all applicable legislative and regulatory requirements.



APPENDIX A

STAKEHOLDER APPENDIX

Key Reference and Guidance Material for Municipal Residential Drinking Water Systems

Many useful materials are available to help you operate your drinking water system. Below is a list of key materials owners and operators of municipal residential drinking water systems frequently use.

To access these materials online click on their titles in the table below or use your web browser to search for their titles. Contact the Ministry if you need assistance or have questions at 1-866-793-2588 or waterforms@ontario.ca.

For more information on Ontario's drinking water visit www.ontario.ca/drinkingwater



PUBLICATION TITLE	PUBLICATION NUMBER
FORMS: Drinking Water System Profile Information Laboratory Services Notification Adverse Test Result Notification	012-2149E 012-2148E 012-4444E
Taking Care of Your Drinking Water: A Guide for Members of Municipal Councils	Website
Procedure for Disinfection of Drinking Water in Ontario	Website
Strategies for Minimizing the Disinfection Products Trihalomethanes and Haloacetic Acids	Website
Filtration Processes Technical Bulletin	Website
Ultraviolet Disinfection Technical Bulletin	Website
Guide for Applying for Drinking Water Works Permit Amendments, & License Amendments	Website
Certification Guide for Operators and Water Quality Analysts	Website
Guide to Drinking Water Operator Training Requirements	9802E
Community Sampling and Testing for Lead: Standard and Reduced Sampling and Eligibility for Exemption	Website
Drinking Water System Contact List	7128E01
Ontario's Drinking Water Quality Management Standard - Pocket Guide	Website
Watermain Disinfection Procedure	Website
List of Licensed Laboratories	Website

Principaux guides et documents de référence sur les réseaux résidentiels municipaux d'eau potable

De nombreux documents utiles peuvent vous aider à exploiter votre réseau d'eau potable. Vous trouverez ci-après une liste de documents que les propriétaires et exploitants de réseaux résidentiels municipaux d'eau potable utilisent fréquemment. Pour accéder à ces documents en ligne, cliquez sur leur titre dans le tableau ci-dessous ou faites une recherche à l'aide de votre navigateur Web. Communiquez avec le ministère au 1-866-793-2588, ou encore à waterforms@ontario.ca si vous avez des questions ou besoin d'aide.



Pour plus de renseignements sur l'eau potable en Ontario, consultez le site www.ontario.ca/eaupotable

TITRE DE LA PUBLICATION	NUMÉRO DE PUBLICATION
Renseignements sur le profil du réseau d'eau potable	012-2149F
Avis de demande de services de laboratoire	012-2148F
Avis de résultats d'analyse insatisfaisants et de règlement des problèmes	012-4444F
Prendre soin de votre eau potable - Un guide destiné aux membres des conseils municipaux	Site Web
Marche à suivre pour désinfecter l'eau potable en Ontario	Site Web
Stratégies pour minimiser les trihalométhanes et les acides haloacétiques de sous-produits de désinfection	Site Web
Filtration Processes Technical Bulletin (en anglais seulement)	Site Web
Ultraviolet Disinfection Technical Bulletin (en anglais seulement)	Site Web
Guide de présentation d'une demande de modification du permis d'aménagement de station de production d'eau potable	Site Web
Guide sur l'accréditation des exploitants de réseaux d'eau potable et des analystes de la qualité de l'eau de réseaux d'eau potable	Site Web
Guide sur les exigences relatives à la formation des exploitants de réseaux d'eau potable	9802F
Échantillonnage et analyse du plomb dans les collectivités : échantillonnage normalisé ou réduit et admissibilité à l'exemption	Site Web
Liste des personnes-ressources du réseau d'eau potable	Site Web
L'eau potable en Ontario - Norme de gestion de la qualité - Guide de poche	Site Web
Procédure de désinfection des conduites principales	Site Web
Laboratoires autorisés	Site Web



APPENDIX B

INSPECTION RATING RECORD

Ministry of the Environment - Inspection Summary Rating Record (Reporting Year - 2019-2020)

DWS Name: RICHMOND HILL DISTRIBUTION SYSTEM
DWS Number: 260001968
DWS Owner: Richmond Hill, The Corporation Of The City Of
Municipal Location: Richmond Hill

Regulation: O.REG 170/03
Category: Large Municipal Residential System
Type Of Inspection: Adhoc
Inspection Date: January 27, 2020
Ministry Office: York-Durham District

Maximum Question Rating: 255

Inspection Module	Non-Compliance Rating
Treatment Processes	0 / 60
Operations Manuals	0 / 28
Logbooks	0 / 18
Certification and Training	0 / 28
Water Quality Monitoring	0 / 51
Reporting & Corrective Actions	24 / 49
Treatment Process Monitoring	0 / 21
TOTAL	24 / 255

Inspection Risk Rating 9.41%

FINAL INSPECTION RATING: 90.59%

Ministry of the Environment - Detailed Inspection Rating Record (Reporting Year - 2019-2020)

DWS Name: RICHMOND HILL DISTRIBUTION SYSTEM
DWS Number: 260001968
DWS Owner: Richmond Hill, The Corporation Of The City Of
Municipal Location: Richmond Hill

Regulation: O.REG 170/03
Category: Large Municipal Residential System
Type Of Inspection: Adhoc
Inspection Date: January 27, 2020
Ministry Office: York-Durham District

Non-compliant Question(s)	Question Rating
Reporting & Corrective Actions	
Have corrective actions (as per Schedule 17) been taken to address adverse conditions, including any other steps as directed by the Medical Officer of Health?	24
TOTAL QUESTION RATING	24

Maximum Question Rating: 255

Inspection Risk Rating	9.41%
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FINAL INSPECTION RATING:	90.59%
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