



**Ministry of the Environment and Climate Change**

**RICHARDS LANDING DRINKING WATER SYSTEM**

**Inspection Report**

<b>Site Number:</b>	220007212
<b>Inspection Number:</b>	1-C1STV
<b>Date of Inspection:</b>	Jun 08, 2015
<b>Inspected By:</b>	Stephen Rouleau

**OWNER INFORMATION:**

**Company Name:** ST. JOSEPH, THE CORPORATION OF THE TOWNSHIP OF  
**Street Number:** 1669 **Unit Identifier:**  
**Street Name:** ARTHUR St  
**City:** RICHARDS LANDING  
**Province:** ON **Postal Code:** P0R 1J0

**CONTACT INFORMATION**

**Type:** Owner **Name:** Carol Trainor  
**Phone:** (705) 246-2625 **Fax:** (705) 246-3142  
**Email:** stjoeadmin@bellnet.ca  
**Title:** Clerk-Administrator

**Type:** Operator **Name:** Barry Elliott  
**Phone:** (705) 246-2625 **Fax:** (705) 246-2256  
**Email:** b.elliott.wtp@gmail.com  
**Title:** Superintendent of Water and Sewer Services

**Type:** Operating Authority **Name:** Carla Buckner  
**Phone:** (705) 759-6518 **Fax:** (705) 759-1758  
**Email:** cbuckner@ssmpuc.com  
**Title:** Supervisor Water Treatment Operations, PUC Services Inc.

**Type:** Health Authority **Name:** Sherri Cleaves  
**Phone:** (705) 541-7347 **Fax:** (705) 541-7346  
**Email:** scleaves@algotmapublichealth.com  
**Title:** Director of Environmental Health

**INSPECTION DETAILS:**

**Site Name:** RICHARDS LANDING DRINKING WATER SYSTEM  
**Site Address:** 1303 RICHARDS ST NW RICHARDS LANDING ON P0R 1J0  
**County/District:** St. Joseph  
**MOECC District/Area Office:** Sault Ste. Marie Area Office  
**Health Unit:** ALGOMA PUBLIC HEALTH  
**Conservation Authority:** N/A  
**MNR Office:** N/A  
**Category:** Large Municipal Residential

**Site Number:** 220007212  
**Inspection Type:** Announced  
**Inspection Number:** 1-C1STV  
**Date of Inspection:** Jun 08, 2015  
**Date of Previous Inspection:**

## COMPONENTS DESCRIPTION

**Site (Name):** CLASSIFICATION

**Type:** Other

**Sub Type:**

**Comments:**

The treatment plant is a Class 1 WT subsystem, and the distribution is a Class 1 WD subsystem. Both systems are owned and operated by the Corporation of the Township of St. Joseph.

The system services a population of approximately 300.

**Site (Name):** WELLS 1&2A

**Type:** Source

**Sub Type:**

**Comments:**

The Richards Landing water works consists of two production wells (Wells 1 and 2A) each with a submersible pump rated at 11.7 L/s at 22.5m TDH. Only one well is used for production at any time. Both wells terminate in fractured limestone bedrock at a depth of 18.3m. A 2003 GUDI study determined that the wells are under the influence of surface water and also indicated that it may be impractical to create an effective well head protection area due to the number of private wells, test wells and springs in the area. The wells are both constructed adjacent to and not within the pumphouse building. A third well (Well 2) is used for monitoring only.

**Site (Name):** PUMP HOUSE

**Type:** Treated Water POE

**Sub Type:**

**Comments:**

The water treatment plant is located at 1303 Richard St., (also known as Highway 548) at the corner of Lewellyn Street.

Within the pumphouse both wells flow into a common header after being metered separately by in-line magnetic flow meters. The flow passes through bag filters and UV disinfection before being directed into the storage reservoir beneath the pumphouse building. The storage reservoir provides a total storage capacity of 750 cubic metres.

Primary disinfection is achieved by UV disinfection and sodium hypochlorite. The sodium hypochlorite is injected into the water as it enters the clear wells. Filter efficiency of the bag filters is not monitored as the filters are not utilized for disinfection credits.

The reservoir system consists of two clearwells, approximately 300 cubic metres each, and two high lift wells. One high lift pump and a fire pump draw from high lift well #1, and three high lift pumps draw from high lift well #2. The pumps are all vertical turbine design.

Two pressure tanks are used on the discharge header to maintain system pressure during periods of low flow.

A 200KW diesel generator is used to supply power during periods of hydro interruption.

An on-line chlorine analyzer monitors treated water being discharged to the distribution system. It is connected to the auto-dialer alarm system for notification if the set point limits are exceeded.

**Site (Name):** DISTRIBUTION (WATER INSPECTION)

**Type:** Other

**Sub Type:**

**Comments:**

There are no additional reservoirs or booster stations associated with the distribution system. The system was commissioned in 1994 and is comprised of PVC piping. The system currently provides water to approximately 190 service connections and has 26 hydrants for fire protection. There are eight dead end water mains. None of these have bleeder lines.

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## INSPECTION SUMMARY

### INTRODUCTION

- \* The primary focus of this inspection is to confirm compliance with Ministry of the Environment and Climate Change (MOECC) legislation as well as evaluating conformance with ministry drinking water related 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 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.

### SOURCE

- \* 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.
- \* Measures were in place to protect the groundwater and/or GUDI source in accordance with a Permit and Licence or Approval issued under Part V of the SDWA.

### CAPACITY ASSESSMENT

- \* There was sufficient monitoring of flow as required by the Permit and Licence or Approval issued under Part V of the SDWA
- \* The owner was in compliance with the conditions associated with maximum flow rate or the rated capacity conditions in the Permit and Licence or Approval issued under Part V of the SDWA.

### TREATMENT PROCESSES

**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.
- \* 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.
- \* The owner/operating authority was in compliance with the requirement to prepare Form 3 and associated documents as required by their Drinking Water Works Permit during the inspection period.
- \* Records indicated that the treatment equipment was operated in a manner that achieved the design capabilities required under Ontario Regulation 170/03 or a Permit, Licence or Approval issued under Part V of the SDWA at all times that water was being supplied to consumers.
- \* 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.
- \* The primary disinfection equipment was equipped with alarms or shut-off mechanisms that satisfied the standards described in Section 1-6 (1) of Schedule 1 of Ontario Regulation 170/03.
- \* The Operator-in-Charge had ensured that all equipment used in the processes was monitored, inspected, and evaluated.

**TREATMENT PROCESS MONITORING**

- \* Primary disinfection chlorine monitoring was being conducted at a location approved by Permit, Licence or Approval issued under Part V of the SDWA, or at/near a location where the intended CT had just been achieved.
- \* The secondary disinfectant residual was measured as required for the distribution system.
- \* Operators were examining continuous monitoring test results and they were examining the results within 72 hours of the test.
- \* All continuous monitoring equipment utilized for sampling and testing required by O. Reg. 170/03, or approval or order, were equipped with alarms or shut-off mechanisms that satisfied the standards described in Schedule 6.

### TREATMENT PROCESS MONITORING

- \* 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.
- \* All continuous analysers were calibrated, maintained, and operated, in accordance with the manufacturer's instructions or the regulation.

### 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 did meet the requirements of the Permit and Licence or Approval issued under Part V of the SDWA.

### LOGBOOKS

- \* 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.
- \* Only certified operators made adjustments to the treatment equipment.

### WATER QUALITY MONITORING

- \* All microbiological water quality monitoring requirements for distribution samples were being met.
- \* All microbiological water quality monitoring requirements for treated samples were being met.

**WATER QUALITY MONITORING**

- \* All inorganic water quality monitoring requirements prescribed by legislation were conducted within the required frequency.
- \* All organic water quality monitoring requirements prescribed by legislation were conducted within the required frequency.
- \* All trihalomethanes water quality monitoring requirements prescribed by legislation were conducted within the required frequency.
- \* All nitrate/nitrite water quality monitoring requirements prescribed by legislation were conducted within the required frequency for the DWS.
- \* All sodium water quality monitoring requirements prescribed by legislation were conducted within the required frequency.
- \* All fluoride water quality monitoring requirements prescribed by legislation were conducted within the required frequency.
- \* The owner was required to increase frequency of monitoring as a result of having exceeded half the value of an applicable ODWQS of a Schedule 13-2 or 13-4 parameter(s) and that increased monitoring was conducted.
- \* All water quality monitoring requirements imposed by the Permit and Licence or Approval issued under Part V of the SDWA were being met.
- \* All sampling requirements for lead prescribed by schedule 15.1 of O. Reg. 170/03 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.

**WATER QUALITY ASSESSMENT**

- \* Records show that all water sample results taken during the review period met the Ontario Drinking Water Quality Standards (O. Reg. 169/03).

**REPORTING & CORRECTIVE ACTIONS**

- \* Corrective actions (as per Schedule 17) had been taken to address adverse conditions, including any other steps that were directed by the Medical Officer of Health.
- \* All required notifications of adverse water quality incidents were immediately provided as per O. Reg. 170/03 16-6.



**REPORTING & CORRECTIVE ACTIONS**

- \* All reporting requirements for lead sampling were complied with as per schedule 15.1-9 of O. Reg. 170/03.
  
- \* 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.
  
- \* When the primary disinfection equipment, other than that used for chlorination or chloramination, has failed causing an alarm to sound or an automatic shut-off to occur, a certified operator responded in a timely manner and took appropriate actions.

**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.

Not Applicable

**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.

Not Applicable

**SIGNATURES**

Inspected By:

Stephen Rouleau

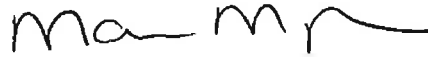


Signature: (Provincial Officer):

Reviewed &amp; Approved By:

Marnie Managhan

Signature: (Supervisor):



Review &amp; Approval Date:

July 13/15

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.