

**Ministry of
the Environment**

Safe Drinking Water
Branch

Owen Sound District Office
101 17th Street East, 3rd Floor
Owen Sound ON N4K 0A5

**Ministère de
l'Environnement**

Direction du contrôle de la qualité de
l'eau potable

Bureau du secteur d'Owen Sound
101 17e rue Est, 3rd étage
Owen Sound, ON N4K 0A5



March 7, 2014

The Corporation of the Township of Huron Kinloss
21 Queen St., Post Office Box No. 130,
Ripley, ON N0G 2R0

Attention: Mr. Hugh Nicol – Public Works Manager

Re: WW Lucknow Lagoon Ministry of the Environment February 12, 2014 Inspection Report

Attached is the Ministry of the Environment (MOE) inspection report for the above mentioned municipal wastewater system. The report assesses the system's capacity and outlines any non-compliance issues with Ministry legislation, policies, approvals and permits. As well, the report outlines non-compliance issues observed during the inspection and provides associated actions required by the Owner and/or Operating Authority.

You are commended for your efforts to comply with all relative control documents. You are reminded that continuous improvement is always a worthwhile objective.

Should you or your staff have any questions regarding my inspection report, please contact me at 519-376-8522.

Thank you for your time and assistance.

Yours truly,

Scott Gallupe
Senior Environmental Officer
MOE Owen Sound District Office

cc: John Graham, Project Manager, Veolia Water Canada, Goderich

File: SI BR HK C1 441



Ministry of the Environment

WW LUCKNOW LAGOON

Inspection Report

Site Number:	110002764
Inspection Number:	1-ASI3G
Date of Inspection:	Feb 12, 2014
Inspected By:	Scott Gallupe

OWNER INFORMATION:

Company Name: HURON-KINLOSS, TOWNSHIP OF
Street Number: 21 **Unit Identifier:**
Street Name: QUEEN St
City: RIPLEY
Province: ON **Postal Code:** N0G 2R0

CONTACT INFORMATION

Type: Owner **Name:** Hugh Nichol
Phone: (519) 395-3735 **Fax:** (519) 395-4107
Email: hurontwp@hurontel.on.ca
Title: Director of Public Works.

Type: Operating Authority **Name:** John Graham
Phone: (519) 524-6583 xcell5195250204 **Fax:** (519) 524-9358
Email:
Title: Project Manager/Operator, Veolia Water Canada - WWT Class 2 and WWC Class 2.

Type: Operating Authority **Name:** Lawrence (Laurie) Cox
Phone: (519) 524-6583 xcell5194409446 **Fax:** (519) 524-9358
Email: lawrence.cox@veoliawaterna.com
Title: Overall Responsible Operator (ORO), Veolia Water Canada, WWT Class 2.

Type: Operating Authority **Name:** Nancy Mayhew
Phone: (519) 524-6583 **Fax:**
Email: nancy.mahew@veoliawaterna.com
Title: Operator, Veolia Water Canada - WWT Class 1.

Type: Operator **Name:** Bruce Dundas
Phone: (519) 524-6583 **Fax:** (519) 524-9358
Email:
Title: Operator-In Charge, Veolia Water Canada, WWT Class 2.

Type: Operator **Name:** Jeff Johnston
Phone: (519) 524-6583 **Fax:**
Email:
Title: Operator, Veolia Water Canada - Class 1 WWT.

INSPECTION DETAILS:

Site Name: WW LUCKNOW LAGOON
Site Address: ON
County/District: Huron-Kinloss
MOE District/Area Office: Owen Sound Area Office
Health Unit: GREY BRUCE HEALTH UNIT
Conservation Authority: N/A
MNR Office: N/A
Site Number: 110002764
Inspection Type: Announced
Inspection Number: 1-AS13G
Date of Inspection: Feb 12, 2014
Date of Previous Inspection: Dec 22, 2010

COMPONENTS DESCRIPTION
Site (Name):

Type: Lagoon Sewage Treatment System **Sub Type:** Pumping station

Comments:

WASTEWATER PUMPING FACILITY

A sanitary wastewater pumping station located on Mill Site No. 3 at the south end of the southern extension of Inglis Street and consisting of a concrete wet well designed to handle a peak flow rate of 32.5 L/s, equipped with three centrifugal pumps, approximately 2,600 m of 200 mm diameter forcemain located along Inglis Street, Willoughby Street, Bob Street, Campbell Street and Highway No. 86, Kinloss Township Street and access road to treatment plant site.

Site (Name):

Type: Lagoon Sewage Treatment System **Sub Type:** Treatment Facility

Comments:

WASTEWATER TREATMENT SYSTEM

A wastewater treatment facility comprising of a three (3) cell aerated facultative lagoon system, providing a total volume of approximately 32,000 m³ (with 0.9 m freeboard) and including four (4) single-speed mechanical surface aerators out of which two (2) aerators are in Cell #1 and two (2) in Cell #2 and inlet, transfer and outlet structures and pipings; a chemical phosphorus removal system consisting of one 27.0 m³ volume alum storage tank, two metering pumps (one duty one standby) and two feed lines, one discharging into the aerated facultative lagoon inlet structure and the other into the transfer structure between Cells #1 and #2 of the lagoons; an emergency facultative aerated lagoon bypass forcemain discharging raw sewage into the emergency lagoon; one aerated facultative lagoon effluent pumping station equipped with two pumps (one duty one standby), a forcemain discharging into the emergency lagoon or in to the distribution chamber upstream of the rapid infiltration basins; one emergency lagoon, having a total operating volume of 67,500 m³.

Site (Name):

Type: Effluent Discharge Receiver **Sub Type:** Subsurface

Comments:

WASTEWATER DISPOSAL FACILITY

Final wastewater effluent is discharged to six (6) rapid infiltration basins at a total daily flow rate of 1,000 m³/d This includes associated distribution structures, piping and appurtenances.

The sewage treatment works are located in Part Lots 53, 54 and 55, Concession 1, in the former Township of Kinloss, northeast of Lucknow.

INSPECTION SUMMARY

INTRODUCTION

- * The primary focus of this inspection is to confirm compliance with Ministry of the Environment legislation and control documents, as well as conformance with Ministry related policies for the inspection period.

This wastewater treatment and collection system is subject to the legislative requirements of the Ontario Water Resources Act, 1990 (OWRA), the Environmental Protection Act, 1990 (EPA), and the Nutrient Management Act, 2002 (NMA) and regulations made therein. This inspection has been conducted pursuant to Section 15 of the OWRA, Section 156 of the EPA and Section 13 of the NMA.

This inspection does not in any way suggest that all applicable legislation and regulations were evaluated. It is, and remains the responsibility of the owner, to ensure compliance with all applicable legislative and regulatory requirements.

AUTHORIZING/CONTROL DOCUMENTS

- * The owner had a valid Environmental Compliance Approval for the sewage works.

The Owner's Environmental Compliance Approval (ECA) # 3567-999KAF, issued August 6, 2013, was in effect at the time of this inspection.

CAPACITY ASSESSMENT

- * The annual average daily flow was approaching the rated capacity of the sewage works.

The Owner's 2011 and 2012 Annual Reports state an annual average daily flow of 82% and 73% of design capacity, respectively.

- * The owner was in compliance with the conditions associated with maximum flow rate or the rated capacity prescribed by the Environmental Compliance Approval.

- * The owner was in conformance with the designed rated capacity for average daily flow into the sewage works.

The Lucknow WW Lagoon system operated at 82% rated design capacity for average daily flow (618 cubic meters/day) in 2011 and at 73% (546 cubic meters/day) for 2012.

- * The owner of the sewage works had prepared a written statement certified by a Professional Engineer confirming that the proposed works were constructed in accordance with the Environmental Compliance Approval.

- * Flow measuring devices were installed, calibrated and maintained in accordance with the requirements of the Environmental Compliance Approval.

The Owner has their one and only wastewater influent flow meter calibrated annually by a third party. The last calibration was done on July 23, 2013 by a company called Coulter.

Effluent volumes are assumed to be equal to influent volumes.

- * Flow rates were recorded at a frequency prescribed by the Environmental Compliance Approval.

TREATMENT PROCESSES

- * The owner had ensured that all equipment was installed in accordance with the Environmental Compliance Approval.
- * The works, related equipment and appurtenances were being operated and maintained to achieve compliance prescribed by the Environmental Compliance Approval.
- * The operator-in-charge had ensured that all equipment used in the processes was monitored, maintained, inspected, tested and evaluated.
- * The owner/operating authority was able to demonstrate that best efforts were used to achieve the objectives listed in the Environmental Compliance Approval conditions.
- * The sewage works effluent was essentially free of foreign substances on the day of the inspection.
- * There was no obvious evidence of groundwater or surface water impact from the sewage works on the day of inspection.

EFFLUENT QUALITY AND QUANTITY

- * The sewage works effluent limits were prescribed by the Environmental Compliance Approval.
- * The sewage works effluent sample results demonstrated compliance with BOD5 or CBOD5 limits prescribed by the Environmental Compliance Approval.
- * The sewage works effluent sample results demonstrated compliance with total suspended solids limits prescribed by the Environmental Compliance Approval.
- * The sewage works effluent sample results did not demonstrate compliance with total phosphorous limits prescribed by the Environmental Compliance Approval.

The maximum allowable monthly average concentration for total phosphorous as listed in the Owner's ECA is 0.1 mg/L. The greatest average monthly concentration in 2011 was 0.24 mg/L in August. All other monthly averages were below the ECA limit for this review period.

The Owner states in their 2011 Performance Report that "based on a review of raw sewage strength and other effluent data, there is no obvious reason for the elevated result in August and it is considered anomalous".

- * The sewage works effluent sample results demonstrated compliance with total ammonia/total ammonia nitrogen/un-ionized ammonia limits prescribed by the Environmental Compliance Approval.
- * The sewage works effluent sample results demonstrated compliance with microbiological parameter limits prescribed by the Environmental Compliance Approval.

EFFLUENT QUALITY AND QUANTITY

- * The sewage works effluent sample results met the effluent objectives stated in the Environmental Compliance Approval.

- * The inspector did not collect audit samples during the inspection.

MONITORING REQUIREMENTS

- * The sampling requirements were prescribed by the Environmental Compliance Approval.

- * All sewage works effluent sampling requirements prescribed by the Environmental Compliance Approval were met.

- * All sewage works influent (raw sewage) sampling requirements prescribed by the Environmental Compliance Approval were met.

- * All groundwater sampling requirements prescribed by the Environmental Compliance Approval were met.

- * The owner had maintained the monitoring records for the period prescribed by the Environmental Compliance Approval.

- * The owner had maintained the monitoring records since the date of the last inspection.

- * All exceedances of any parameters were reported in accordance with the Environmental Compliance Approval.

The Owner/OA reported only one (1) exceedance for this review period. That was a monthly average total phosphorous exceedance in August 2011.

REPORTING REQUIREMENTS

- * The reporting requirements were prescribed by an Environmental Compliance Approval.

- * The annual performance reports met the submission and contents requirements of the Environmental Compliance Approval.

- * All reporting requirements prescribed by the Environmental Compliance Approval were met.

- * All reports were submitted in accordance with Ministry recommendations.

BYPASSES AND OVERFLOWS

BYPASSES AND OVERFLOWS

- * Bypasses and/or overflows had not occurred at the sewage works during the inspection period.
- * A process was in place for the monitoring and reporting of bypasses and overflows should they occur.

WASTEWATER COLLECTION SYSTEMS

- * **The Pollution Prevention and Control Plan (PPCP) is being implemented.**

The Owner has a Contingency Plan for by-passes that was developed as part of the original approval for this facility. This plan, which includes a protocol for by-passes, is a separate document at the facility building.

The Owner/OA were asked to include this plan, digitally, in their current overall Contingency Plan.

BIOSOLIDS MANAGEMENT

- * **The owner of the facility had written contingency plans or other management methods in place to be used in the event that the facility's sludge storage capacity was not sufficient.**

The Owner has a large football field size storage area for any by-passes. If this area is to become full, the Owner would be looking at pumpout and diversion options.

- * **The quality of sewage biosolids intended for land application complied with regulatory requirements.**

The last sludge removal done by the Owner/OA was in 2004. This material went to an approved agricultural site for disposal.

This facility does not accumulate much sludge/biosolids.

- * **The facility did not receive sludge or biosolids from another location.**
- * **The owner had a program for the routine removal of sludge from the lagoon system.**

The Owner/OA conducts sludge removal from the three (3) aerated cells on a rotation of approximately once every ten (10) years.
- * **The owner had maintained haulage records for the biosolids transferred from the sewage works.**
- * **Records confirm that biosolids were transferred to a Ministry approved facility for disposal or utilization.**
- * **Records confirm that biosolids were transported for disposal or utilization by Ministry approved haulers.**

CERTIFICATION AND TRAINING

- * **The classification certificates of the subsystems were conspicuously displayed at the workplace or at premises from which the subsystem was managed.**

CERTIFICATION AND TRAINING

- * **Operator licences were displayed in a conspicuous location at the workplace or at the premises from which the subsystem was managed.**

- * **The overall responsible operator had been designated for the wastewater treatment and collection works.**

Mr. Lawrence (Laurie) Cox, Veolia Water Canada, is the Overall Responsible Operator (ORO) for this facility. See Contacts at the beginning of this report.
- * **An adequately licensed operator was designated to act in place of the overall responsible operator when the overall responsible operator was unable to act.**

- * **All operators had the appropriate level of licences for the wastewater treatment and collection works.**

- * **Only licenced operators made adjustments to the treatment equipment.**

- * **Operators-in-charge were designated for the wastewater treatment plant and all associated collection works.**

The Operator on duty is the Operator-in-Charge (OIC) for that day. See Contacts at the beginning of this report.
- * **The operator-in-charge ensured that records were maintained of all adjustments made to the processes within his or her responsibility.**

LOGBOOKS

- * **The logs and other record keeping mechanisms complied with the record keeping requirements.**

- * **Logs and other record keeping mechanisms were available for at least two (2) years.**

OPERATIONS MANUALS

- * **The operations and maintenance manuals met the requirements of the Environmental Compliance Approval.**

- * **Operators and maintenance personnel had ready access to operations and maintenance manuals.**

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

CONTINGENCY/EMERGENCY PLANNING

CONTINGENCY/EMERGENCY PLANNING

- * A spill prevention control and countermeasures plan was established.

- * Spill containment was provided for the process chemicals and/or standby power generator fuel.

- * The owner had provided security measures for the facility.

The Lucknow WW Lagoon is posted, fenced and locked.

- * The owner was maintaining the monitoring well(s) in a manner to prevent the entry of surface water and other foreign materials.

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. The sewage works effluent sample results did not demonstrate compliance with total phosphorous limits prescribed by the Environmental Compliance Approval.

Action(s) Required:

The Owner and OA is required to operate and maintain the Lucknow WW Lagoon facility to ensure compliance with the ECA effluent limits.

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:

Scott Gallupe

Signature: (Provincial Officer):

Reviewed & Approved By:

John Ritchie

Signature: (Supervisor):

Review & Approval Date:

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.