

AMENDED ENVIRONMENTAL COMPLIANCE APPROVAL

NUMBER 3587-B9QMH6

Issue Date: April 24, 2019

Ontario Power Generation Inc.
8 Trent Drive
Rural Route No. 1
Campbellford, Ontario
K0L 1L0

Site Location: Ranney Falls Generating Station
18A Trent Drive
Municipality of Trent Hills, County of Northumberland
K0L 1L0

You have applied under section 20.2 of Part II.1 of the Environmental Protection Act , R.S.O. 1990, c. E. 19 (Environmental Protection Act) for approval of:

Sewage works, for the collection, transmission, treatment and disposal of Powerhouse accidental oil leakage and floor drainage, and UV disinfection for control of Zebra/Quagga mussels, at Ranney Falls G3 Turbine/Generator Hydroelectric Station, comprising;

Proposed Works

one (1) installation of an ultra violet (UV) system for controlling Zebra and Quagga mussels invasion and infestation in the Renney Falls Hydroelectric Generating Station Unit No. 3, used only for non-contact cooling and fire protection purposes, comprising;

one (1) inline Hydro-Optic Disinfection™ (HOD™) UV system, to deliver uniform UV dose to the Unit 3 Service Water System, comprising;

- one (1) 2.3 kW Medium Pressure (MP) High Intensity (HI) UV lamp surrounded by quartz sleeves, all housed in a 316L stainless steel chamber; and one (1) Deposit Prevention Mechanism (DPM) and TRACS software control system;
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- one Premium Controller – internal controller with a flat touch screen and remote on/off capability;
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Existing Works 1

Sewage works, for the collection, transmission, treatment and disposal of Powerhouse accidental oil leakage and floor drainage, at Ranney Falls G3 Turbine/Generator Hydroelectric Station, comprising;

- **one (1) proposed proprietary Highland Tank Oil Water Separator** located within the new G3 powerhouse with an overall capacity of 3,407 litres, a design flow-rate of up to 284 litres per minute, and a maximum oil storage capacity of 1,136 litres, having dimension of 2.7m x 1m x 1.2m, designed to collect accidental oil leaked from Hydro Power Units, and discharging to Trent River, through a sump;
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- **one proposed Concrete Sump**, approximately 2.2m x 1.6m x 1.1m, having an effective volume of 3.8 m³, complete with oil detection system, alarms and two sump pumps, receiving the treated effluent from the Oil Water Separator, and discharging the effluent to the Trent River;
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and all other controls, electrical equipment, instrumentation, piping, pumps, valves, and appurtenances essential for the proper operation of the proposed sewage works.

Existing Works 2

Sewage works for the collection, transmission, treatment and disposal of storm drainage from the transformer spill containment area serving the main transformer at the Ranney Falls Generating Station, consisting of the following:

one (1) concrete spill containment area, approximately 6.5 metres square, including:

- a polyurethane based sealer coat throughout
- 0.7 metre high concrete curbing around a central foundation block of 2.0 metres by 2.75 metres
- 0.10 metres of pea gravel fill and 0.28 metres of crushed stone to provide an overall containment volume of approximately 15 cubic metres for a transformer with approximately 6.5 cubic metres of non-PCB containing oil;

one (1), 76 millimetre PVC drain pipe at the northeast corner of the containment, positioned at an elevation of approximately 0.1 metres above the concrete floor, with the inlet side, within the containment, covered by a replaceable filter sock, and protected by a perforated steel sheeting frame to ensure a gravel/stone free area around the inlet, to convey storm drainage to a cam-lock-coupled, replaceable oil absorbing filter canister, positioned in a capped plastic tank outside of the containment wall which, in turn, drains to a 102 millimetre diameter solid-walled PVC sewer line below;

one (1) oil absorbing filter canister, containing approximately 2.3 kilograms of an organo-clay backed by a 0.45 kilogram layer of "Rubberizer" compound, to provide an overall capability to absorb approximately 3.8 Litres of oil per

canister, and to plug-off effluent flow when the "Rubberizer" compound becomes saturated with oil, rated for a flow of approximately 8 to 10 Litres per minute, discharging through a screen-protected, 168 millimetre canister outlet face, into the capped plastic tank described directly above;

a sub-drainage system of 102 millimetre diameter perforated PVC pipe around the transformer spill containment area, which also includes subdrainage inputs from similar systems around the adjacent foundations for the Metering Transformer and the Disconnect Switch, all draining via two (2) solid-walled sections at the northeast corner of the spill containment to a solid-walled 102 millimetre PVC sewer line which, in turn, includes two (2) catch basins and discharges to the Trent River;

including all other mechanical system, electrical system, instrumentation and control system, piping, pumps, valves and appurtenances essential for the proper, safe and reliable operation of the Works in accordance with this Approval, in the context of process performance and general principles of wastewater engineering only;

all in accordance with the submitted supporting documents listed in Schedule A.

For the purpose of this environmental compliance approval, the following definitions apply:

"Approval" means this entire document and any schedules attached to it, and the application;

"District Manager" means the District Manager of the Peterborough District Office of the Ministry;

"Director" means a person appointed by the Minister pursuant to section 5 of the EPA for the purposes of Part II.1 of the EPA;

"EPA" means the Environmental Protection Act , R.S.O. 1990, c.E.19, as amended;

"Grab sample" is defined in Section 3.1.1 of the Ministry publication, "Protocol For the Sampling and Analysis of Industrial/Municipal Waste Water" dated January 1999, and as amended;

"mg/L" means milligrams per Litre;

"Ministry" means the ministry of the government of Ontario responsible for the EPA and OWRA and includes all officials, employees or other persons acting on its behalf;

"Owner" means Ontario Power Generation Inc. and its successors and assignees;

"OWRA" means the Ontario Water Resources Act , R.S.O. 1990, c. O.40, as amended;

"Works" means the sewage works described in the Owner's application, and this Approval, and includes Existing and Proposed Works.

You are hereby notified that this environmental compliance approval is issued to you subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

1. GENERAL PROVISIONS

(1) The Owner shall ensure that any person authorized to carry out work on or operate any aspect of the Works is notified of this Approval and the conditions herein and shall take all reasonable measures to ensure any such person complies with the same.

(2) Except as otherwise provided by these conditions, the Owner shall design, build, install, operate and maintain the Works in accordance with the description given in this Approval, and the application for approval of the Works.

(3) Where there is a conflict between a provision of any document in the schedule referred to in this Approval and the conditions of this Approval, the Conditions in this Approval shall take precedence, and where there is a conflict between the documents in the schedule, the document bearing the most recent date shall prevail.

(4) Where there is a conflict between the documents listed in the submitted documents, and the application, the application shall take precedence unless it is clear that the purpose of the document was to amend the application.

(5) The Conditions of this Approval are severable. If any Condition of this Approval, or the application of any requirement of this Approval to any circumstance, is held invalid or unenforceable, the application of such condition to other circumstances and the remainder of this Approval shall not be affected thereby.

2. EXPIRY OF APPROVAL

This Approval will cease to apply to those parts of the Works which have not been constructed within five (5) years of the date of this Approval.

3. CHANGE OF OWNER

(1) The Owner shall notify the District Manager and the Director, in writing, of any of the following changes within thirty (30) days of the change occurring:

(a) change of Owner;

(b) change of address of the Owner;

(c) change of partners where the Owner is or at any time becomes a partnership, and a copy of the most recent declaration filed under the Business Names Act , R.S.O. 1990, c.B17 shall be included in the notification to the District Manager;

(d) change of name of the corporation where the Owner is or at any time becomes a corporation, and a copy of the most current information filed under the Corporations Information Act , R.S.O. 1990, c. C39 shall be included in the notification to the District Manager;

(2) In the event of any change in ownership of the Works, other than a change to a successor municipality, the Owner shall notify in writing the succeeding owner of the existence of this Approval, and a copy of such notice shall be forwarded to the District Manager and the Director.

4. UPON COMPLETION OF THE PROPOSED WORKS

(1) Upon Completion of the Works, the Owner shall prepare a statement, certified by a Professional Engineer, that the works are constructed in accordance with this Approval, and upon request, shall make the written statement available for inspection by Ministry personnel.

(2) Within six (6) months of Completion of the Sewage Works, a set of as-built drawings showing the works “as constructed” shall be prepared. These drawings shall be kept up to date through revisions undertaken from time to time and a copy shall be retained at the Works for the operational life of the Works.

5. OPERATION AND MAINTENANCE

(1) The Owner shall ensure that the works and related equipment and appurtenances which are installed or used to achieve compliance with this Approval are properly operated and maintained.

(2) The Owner shall carry out on a regular basis specific maintenance requirements and scheduling to ensure proper operation of the works .

(3) The Owner shall use best effort to immediately identify and cleanup all losses of oil from the equipment located within the works area.

(4) The Owner shall, upon identification of a loss of oil, take immediate action to prevent the further occurrence of such loss.

6. EFFLUENT OBJECTIVES

(1) The Owner shall use best efforts to design, construct and operate the Works with the objective that the concentrations of the materials named as effluent parameters in the Effluent Objectives Table listed in Schedule B are not exceeded in the effluent being discharged to the Trent River.

(2) In the event of an exceedance of the Effluent Objective set out in Schedule B, the Owner shall,

(a) notify the District Manager as soon as possible during normal working hours

(b) take immediate action to identify the source of contamination, and

(c) take immediate action to prevent further exceedance.

(3) The Owner shall use best efforts to ensure that the effluent from the Works is essentially free of floating and settleable solids and does not contain oil or any other

substance in amounts sufficient to create a visible film or sheen or foam or discolouration on the receiving waters.

(4) The Owner shall include in all reports submitted in accordance with Condition 6, a summary of the efforts made and results achieved under this Condition.

7. EFFLUENT QUALITY MONITORING

The Owner shall, upon commencement of operation of the Works, carry out the following monitoring program:

- (1) All samples and measurements taken for the purposes of this Approval are to be taken at a time and in a location characteristic of the quality and quantity of the effluent stream over the time period being monitored.
- (2) Samples shall be collected at the sampling point(s), at the sampling frequencies and using the sample type specified for each parameter listed in the Effluent Monitoring Table included in Schedule B.

(3) The methods and protocols for sampling, analysis and recording shall conform, in order of precedence, to the methods and protocols specified in the following:

- (a) the Ministry's publication "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater" (January 1999), ISBN 0-7778-1880-9, as amended from time to time by more recently published editions;
- (b) the publication "Standard Methods for the Examination of Water and Wastewater" (21st edition), as amended from time to time by more recently published editions;

(4) The measurement frequencies specified in Schedule B in respect to any parameter are minimum requirements which may, after 12 months of monitoring in accordance with this Condition, be modified by the District Manager in writing from time to time.

8. OPERATIONS MANUAL

(1) In furtherance of, but without limiting the generality of the obligation imposed by Condition 5, the Owner shall prepare an operations manual prior to the commencement of the operation of the works.

(2) The Owner shall ensure that the manual includes:

- (a) operating procedures for routine operation of the works and procedures for replacing the inlet filter cloth and the oil absorbing filter canister when required
- (b) inspection programs, including frequency of inspection, for the works and the methods or tests employed to detect when maintenance is necessary
- (c) repair and maintenance programs, including the frequency of

repair and maintenance, for the works, and
(d) a spill prevention, control and countermeasures plan
including procedures for notifying the District Manager

(3) The Owner shall maintain the operations manual current and at the location of the works for as long as they are in operation, and shall make it available for inspection by Ministry staff upon request.

9. REPORTING

(1) The Owner shall report to the District Manager or designate, any exceedence of parameter specified in Schedule B orally, as soon as reasonably possible, and in writing within seven (7) days of the exceedence.

(2) In addition to the obligations under Part X of the Environmental Protection Act , the Owner shall, within thirty (30) working days of the occurrence of any reportable spill as defined in Ontario Regulation 675/98, bypass or loss of any product, by-product, intermediate product, oil, solvent, waste material or any other polluting substance into the environment, submit a full written report of the occurrence to the District Manager describing the cause and discovery of the spill or loss, clean-up and recovery measures taken, preventative measures to be taken and schedule of implementation.

(3) The Owner shall, upon request, make all manuals, plans, records, data, procedures and supporting documentation available to Ministry staff.

(4) The Owner shall prepare and submit a performance report to the District Manager after the first year of operation of sewage works No, 1, within Ninety (90) days after completion of the first year of the proposed sewage works operation. The report shall contain, but shall not be limited to, the following information:

(a) a summary and interpretation of all monitoring data and a comparison to the effluent requirements outlined in Schedule B, including an overview of the success and adequacy of the Works;

(b) a description of any operating problems encountered and corrective actions taken;

(c) a summary of all maintenance carried out on any major structure, equipment, apparatus, mechanism or thing forming part of the Works;

(d) a summary of any effluent quality assurance or control measures undertaken in the reporting period;
(e) a summary of the calibration and maintenance carried out on all effluent monitoring equipment; and

(f) a description of efforts made and results achieved in meeting the Effluent Objectives of Schedule B.

(g) a tabulation of the volume of sludge generated in the reporting period

(h) a summary of any complaints received during the reporting period and any steps taken to address the complaints;

(i) a summary of all By-pass, spill or abnormal discharge events;
and

(j) any other information the District Manager requires from time to time.

The reasons for the imposition of these terms and conditions are as follows:

1. Condition 1 is imposed to ensure that the Works are built and operated in the manner in which they were described for review and upon which approval was granted. This condition is also included to emphasize the precedence of Conditions in the Approval and the practice that the Approval is based on the most current document, if several conflicting documents are submitted for review. The condition also advises the Owners their responsibility to notify any person they authorized to carry out work pursuant to this Approval the existence of this Approval.

2. Condition 2 is included to ensure that the Works are constructed in a timely manner so that standards applicable at the time of Approval of the Works are still applicable at the time of construction, to ensure the ongoing protection of the environment.

3. Condition 3 is included to ensure that the Ministry records are kept accurate and current with respect to the approved works and to ensure that subsequent owners of the Works are made aware of the Approval and continue to operate the Works in compliance with it.

4. Condition 5 is included to ensure that the works will be operated and maintained in a manner enabling compliance with the terms and conditions of this Certificate, such that the environment is protected and deterioration, loss, injury or damage to any person or property is minimized and/or prevented.

5. Condition 5 is included to ensure that the Works are constructed in accordance with the approval and that record drawings of the Works "as constructed" are maintained for

future references.

6. Condition 6 is included to establish non-enforceable effluent quality objectives which the Owner is obligated to use best efforts to strive towards on an ongoing basis. These objectives are to be used as a mechanism to trigger corrective action proactively and voluntarily before environmental impairment occurs.

7. Condition 7 is included to ensure that the effluent discharged from the works meets the Ministry's effluent quality objectives thus minimizing potential negative impacts on the environment.

8. Condition 8 is included to ensure that a comprehensive operations manual governing all significant areas of operation, maintenance and repair is prepared, implemented and kept current by the Owner and made available to the Ministry, upon request. Such a manual is an integral part of the operation of the works. Its compilation and use should assist the Owner in staff training, in proper works operation and in identifying and planning for contingencies during possible abnormal conditions. The manual will also act as a bench-mark for Ministry staff when reviewing the Owner's operation of the works.

9. Condition 9 is included to provide a performance record for future references, to ensure that the Ministry is made aware of problems as they arise, and to provide a compliance record for all the terms and conditions outlined in this Approval, so that the Ministry can work with the Owner in resolving any problems in a timely manner.

Schedule 'A' forms part of this *Approval* and contains a list of supporting documentation / information received, reviewed and relied upon in the issuance of this *Approval*.

SCHEDULE 'A'

1. Application for approval of sewage works, August 21, 2018 and received on October 17, 2018, complete with supporting documentation, reports, and drawings.

SCHEDULE 'B'

Effluent Objectives Table

Effluent Parameter	Concentration Objective (milligrams per litre unless otherwise indicated)
Oil and Grease	15

Effluent Monitoring Table

Effluent Parameter	1. Concrete Sump downstream of Oil/Water Separator (Existing Works 1) 2. Oil absorbing Filter Canister outlet (Existing Works 2)
Frequency	Quarterly for Existing Works 1 Annually for Existing Works 2
Sample Type	Grab
Parameters	Oil and Grease

Upon issuance of the environmental compliance approval, I hereby revoke Approval No(s). 9512-B2ZMDJ issued on July 31, 2018.

In accordance with Section 139 of the Environmental Protection Act, you may by written Notice served upon me, the Environmental Review Tribunal and in accordance with Section 47 of the Environmental Bill of Rights, 1993, S.O. 1993, c. 28 (Environmental Bill of Rights), the Environmental Commissioner, within 15 days after receipt of this Notice, require a hearing by the Tribunal. The Environmental Commissioner will place notice of your appeal on the Environmental Registry. Section 142 of the Environmental Protection Act provides that the Notice requiring the hearing shall state:

- a. The portions of the environmental compliance approval or each term or condition in the environmental compliance approval in respect of which the hearing is required, and;
- b. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

Pursuant to subsection 139(3) of the Environmental Protection Act, a hearing may not be required with respect to any terms and conditions in this environmental compliance approval, if the terms and conditions are substantially the same as those contained in an approval that is amended or revoked by this environmental compliance approval.

The Notice should also include:

1. The name of the appellant;
2. The address of the appellant;
3. The environmental compliance approval number;
4. The date of the environmental compliance approval;
5. The name of the Director, and;
6. The municipality or municipalities within which the project is to be engaged in.

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

The Secretary*		The Environmental		The Director appointed for the purposes of
Environmental Review Tribunal		Commissioner		Part II.1 of the Environmental Protection Act
655 Bay Street, Suite 1500	AND	1075 Bay Street, Suite 605	AND	Ministry of the Environment, Conservation
Toronto, Ontario		Toronto, Ontario		and Parks
M5G 1E5		M5S 2B1		135 St. Clair Avenue West, 1st Floor
				Toronto, Ontario
				M4V 1P5

*** Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349, Fax: (416) 326-5370 or www.ert.gov.on.ca**

This instrument is subject to Section 38 of the Environmental Bill of Rights, 1993, that allows residents of Ontario to seek leave to appeal the decision on this instrument. Residents of Ontario may seek leave to appeal within 15 days from the date this decision is placed on the Environmental Registry. By accessing the Environmental Registry at www.ebr.gov.on.ca, you can determine when the leave to appeal period ends.

The above noted activity is approved under s.20.3 of Part II.1 of the Environmental Protection Act.

DATED AT TORONTO this 24th day of April,
2019

Youssof Kalogo, P.Eng.
Director
appointed for the purposes of Part
II.1 of the *Environmental Protection
Act*

KH/
c: District Manager, MECP Peterborough District.
Nicole Elliott, Ontario Power Generation