

**ENVIRONMENTAL COMPLIANCE APPROVAL**

NUMBER 5810-BBRJGN

Issue Date: November 8, 2019

Canadian Niagara Power Inc.  
1130 Bertie Street, Fort Erie,  
Ontario, L2A 5Y2

**Site Location:** 397 Fielden Avenue  
City of Port Colborne  
Regional Municipality of Niagara  
Ontario, L3K 4T9.

*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:*

the establishment of sewage works for the collection, transmission, treatment and disposal of stormwater for Canadian Niagara Power Inc. at the Fielden Substation, within a fenced site of 0.0451ha. area, consisting of an existing transformer, three switching stations, a control building and a proposed replacement transformer located near the east side of the property, with cooling oil capacity of 3.944 cubic metres, consisting of the following:

**Proposed Works:**

**Primary spill containment :** one (1) 1200 mm X 600 mm X 1300 deep concrete collection sump pit (well) containing one (1) sump pump (Model SE 100 O/M StanCor Duplex Oil Minder System or approved equivalent) complete with an oil/water sensor installed at floor level prior to an Imbiber Beads discharge control system. The oil sensor is interlocked with sump pump control to prevent pump operation in the event that oil is present in the containment pit and incase the Imbiber discharge control system malfunctions.

**Secondary spill containment :** a rectangular concrete pit approximately 30 m long, width varying between 2.27 m to 1.75 m, with depth of 950 mm filled with fire quenching stones having a minimum volumetric capacity of 36.6 cubic metres, with discharge controlled via an imbiber bead system and a oil/water sensor-controlled pump backup pit as described earlier, to discharge into an existing catch basin leading to an existing 400 mm diameter municipal concrete storm sewer located along Fielden Avenue;

**Existing Works:**

**Spill containment:** a rectangular concrete containment pit, approximately 7.0 m width by 6.0 m long, with a depth of 300 mm, having a volumetric capacity of 12.6 cu.m., complete with flow controlled with an Imbiber Beads Curb Drain Unit and a proprietary 'oil smart sensor' or approved equivalent to shut off the drainage in case of oil spill and

notify the off site Plant Control Centre clean-up crew, prior to discharge of clean drainage water to grade and to flow with overland surface run-off directed to existing catchbasin, leading to an existing 400 mm diameter municipal concrete storm sewer located along Fielden Avenue;

- surface run-off including the overflow run-off from the site pads and building roof, located within the fenced 30 m by 15 m site is being intercepted via a catchbasin and stormsewer discharging to the Fielden Avenue municipal stormsewers and overflows are discharged onto a grassed swale flowing to the west to the roadside ditch along the Fielden Avenue, to finally discharge into Welland Canal approximately 3 km to the east;

including erosion/sedimentation control measures during construction and during operation; and all other controls, electrical equipment, instrumentation, piping and appurtenances essential for the proper operation of the aforementioned Works;

all in accordance with the documentation / information received per the list 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;

"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;

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

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

"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 Canadian Niagara Power Inc. and its successors and assignees;

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

"Works" means the sewage works described in the Owner's application of this Approval.

*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 CONDITION

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 Schedule 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. CHANGES IN PROCESSES OR PROCESS MATERIALS**

- 1.
2. The Owner shall give written notice to the District Manager of any plans to change the processes or process materials in the Owner's enterprise serviced by the Works where the change may significantly alter the quantity or quality of the sewage Works, while complying with the approved effluent quantity and quality criteria and no such change(s) shall be made unless with the written concurrence or approval of the Director.
- 3.
4. The Owner shall only use the type of oil, i.e. mineral-based transformer oil or vegetable-based transformer oil, according to the type of polymer-based oil absorbent material used. If a change is planned to change the type of oil, the Owner shall also change the polymer (Sorbweb Plus or equivalent) and obtain approval from the Director to amend this Approval before any modification is implemented.
- 5.
6. The Owner shall maintain a log or record of the replacement of the oil absorbent material on site; and the record shall be available for inspection by Ministry staff upon request.
- 7.

### 3. 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 approved works.
3. The Owner shall use best effort to immediately identify and clean-up all losses of oil from the transformers 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.
5. In furtherance of, but without limiting the generality of, the obligation imposed by Subsection (1), the Owner shall ensure that equipment and material for the containment, cleanup and disposal of oil and materials contaminated with oil are kept on hand and in good repair for immediate use in the event of:
  - a. loss of oil from the Station transformers and equipment;
  - b. a spill within the meaning of Part X of the *Environmental Protection Act*; or
  - c. the identification of an abnormal amount of oil in the sumps or the final catch basin.
6. The Owner shall prepare an operations manual complete with a 'spill prevention and contingency plan' (SPCP), at least sixty days (60) prior to the commencement of operation of the sewage works, that includes, but not necessarily limited to, the following information:
  - a. operating procedures for routine operation of the *works*;
  - 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;
  - d. contingency plans and procedures for dealing with potential spill, bypasses and any other abnormal situations and for notifying the *District Manager*;and
  - e. complaint procedures for receiving and responding to public complaints.
  - f.

7. The Owner shall maintain the operations manual up to date through revisions undertaken from time to time and retain a copy at the location of the sewage works. Upon request, the Owner shall make the manual available for inspection and copying by Ministry personnel.

8.

9. The Owner shall, within six (6) months after the completion of the construction of the transformer/substation spill containment facility, provide the District Manager and Director a report and as-built drawings signed and stamped by an independent Professional Engineer licensed in Ontario which includes the following:

a. as-built drawings of the sewage works for the spill containment facility;

b. a written report signed by the qualified technician confirming the following:

i. on-site supervision during construction;

ii. type of polymer-based oil absorbent material used (for mineral-based transformer oil or vegetable-based transformer oil)

iii. use of stormwater best management practices applied to prevent external surface water run-off from entering the spill containment facility, and

iv. confirm adequacy of the installation in accordance with specifications.

c. operating procedures and emergency procedures manuals pertaining to the installed sewage works;

1.

10. The Owner shall, in the event of finding water accumulation in any PVC inspection pipes after 48 hours of any storm event, replace the oil absorbent material to ensure integrity of the system performance and design objective.

11.

#### 4. 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 included in **Schedule B** are not exceeded in the effluent from the Works.

2. In the event of an exceedence of one of the objectives set out in the effluent objectives table 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 exceedence.
  - d. a log or record of the replacement of the oil absorbent material be kept on site.
  - e.

## 5. EFFLUENT - VISUAL OBSERVATIONS

1. Notwithstanding any other condition in this Approval, the Owner shall 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, sheen or foam on the receiving waters.

## 6. EFFLUENT MONITORING AND RECORDING

1. The Owner shall, upon commencement of operation of the sewage works, carry out a monitoring program, and 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 and analyzed of the effluent from the "flow and plug" oil absorption unit, at the sampling frequencies and using the sample type specified for each parameter listed in the effluent monitoring table in **Schedule B**.
3. In the event of an exceedence of one of the objectives set out in the effluent monitoring table in **Schedule B**, the Owner shall increase the frequency of sampling to once per month for each month that discharge occurs until it is demonstrated to the District Manager that the effluent complies with the said objectives.
4. 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; and

- 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.

5. After twelve (12) months of effluent monitoring under this condition, with no exceedences of the objectives set out in the effluent objectives table in Schedule B, the effluent monitoring frequency specified in this condition may be changed to such frequency as the District Manager may specify in writing from time to time.

## **7. REPORTING**

- 1.
2. One week prior to the start up of the operation of the works, the Owner shall notify the District Manager(in writing) of the pending start up date.
- 3.
4. In addition to the obligations under Part X of the Environmental Protection Act, the Owner shall, within ten (10) 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.
- 5.
6. The Owner shall prepare and submit a performance report to the District Manager on an annual basis within ninety (90) days following the end of the period being reported upon for the initial five years of operations and biannually thereafter. The first such report shall cover the first annual period following the commencement of operation of the works and subsequent reports shall be submitted to cover successive annual periods following thereafter. The reports shall contain, but shall not be limited to, the following information:
  - a. a description of any operating problems encountered and corrective actions taken;
  - b. a summary of all maintenance carried out on any major structure, equipment, apparatus, mechanism or thing forming part of the sewage works;
  - c. a summary of any effluent quality assurance or control measures undertaken in the reporting period;

- d. a description of efforts made and results achieved in meeting the Effluent Objectives of Condition 4; and
- e. any additional information requested by the District Manager 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.
2. Condition 2 is included to ensure that the Ministry records are kept accurate and current with respect to 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.
3. Condition 3 is included to ensure that installation of the sewage works is completed as per design and specifications and to ensure that a comprehensive operations manual governing all significant areas of operation, maintenance and repair is prepared, implemented and kept up-to-date by the owner and made available to the Ministry. 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 plant operation and in identifying and planning for contingencies during possible abnormal conditions. The manual will also act as a benchmark for Ministry staff when reviewing the owner's operation of the works.
4. Conditions 4 and 5 are imposed to ensure that the effluent discharged from the works meets the Ministry's effluent quality objectives thus minimizing potential negative impacts on the environment.
5. Condition 6 is included to require the owner to demonstrate on a continual basis that the quality of the effluent from the approved works is consistent with the design objectives specified in the Approval and that the approved works does not cause any impairment to the environment.
6. Condition 7 is included to provide a performance record for future references and to ensure that the Ministry is made aware of problems as they arise, so that the Ministry can work with the Owner in resolving the problems in a timely manner.

#### **Schedule -A.**

1. Application for Environmental Compliance Approval, dated March 1, 2019, submitted by John McDonald, P.Eng., Tulloch Engineering Inc.on behalf of the Owner.
- 2.



Design Brief, Fielden Substation - Oil Containment System and drawings dated February 2019 prepared and submitted by John McDonald, P.Eng., Tulloch Engineering Inc.

3. Information Brief and Drawing - Existing Fielden Substation - Oil Containment System description and drawing dated October 28, 2019 prepared and submitted by Amir Altaf, P.Eng., Distribution Engineer of Canadian Niagara Power Inc.

4.

5.

6.

7.

**Schedule -B.**

<b>Table 1 - Effluent Objectives</b>	
<b>Effluent Parameter</b>	<b>Concentration Objective</b>
Oil and grease/Hydrocarbons	15 mg/L
Phenolics (4AAP)	20ug/L

**Schedule -C.**

<b>Table 2 - Effluent Monitoring - (Sample Point at the Pump Sump Pit before pumping)</b>		
<b>Effluent Parameter</b>	<b>Frequency</b>	<b>Sample Type</b>
Oil and grease / Hydrocarbons and Phenolics (4AAP).	Quarterly. Four times over a year, relatively evenly spaced. At a minimum two (2) of these samples have to be taken within 48 hours after a 10mm rainfall event.	Grab

*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, the Minister of the Environment, Conservation and Parks, within 15 days after receipt of this Notice, require a hearing by the Tribunal. The Minister of the Environment, Conservation and Parks 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.

*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* Environmental Review Tribunal 655 Bay Street, Suite 1500 Toronto, Ontario M5G 1E5	AND	The Minister of the Environment, Conservation and Parks 777 Bay Street, 5th Floor Toronto, Ontario M7A 2J3	AND	The Director appointed for the purposes of Part II.1 of the Environmental Protection Act Ministry of the Environment, Conservation and Parks 135 St. Clair Avenue West, 1st Floor Toronto, Ontario M4V 1P5
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**\* 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](http://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](http://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 8th day of November,  
2019

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

MN/

c: District Manager, MECP Niagara

John McDonald, P.Eng., Tulloch Engineering Inc.