

**AMENDED ENVIRONMENTAL COMPLIANCE APPROVAL**NUMBER 1040-9HAN94  
Issue Date: May 30, 2014

The Corporation of the Township of North Huron  
274 Josephine St P.O. Box 90  
North Huron, Ontario, N0G 2W0

Site Location: 60 Lloyd Street  
Wingham  
North Huron Township, County of Huron  
N0G 2W0

*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:*

Modification to the existing Wingham Sewage Treatment Plant located at the above site location and serving the Township of North Huron (former Town of Wingham), rated at 3,400 cubic metres *Average Daily Flow*, discharging to Maitland River; consisting of the following works:

***PROPOSED WORKS*****Effluent Storage Equalization Lagoons**

- Partition a section of Lagoon No.1 (currently 115,200 cubic meters capacity) by creating a 4,600 cubic metres clay berm within the lagoon in order to provide a sludge storage cell with a capacity of 3,500 cubic metres.

**Emergency Backup Power**

- 10 kW standby diesel generator to provide standby power for the UV disinfection system.

***PREVIOUS WORKS*****Inlet Works**

- An inlet chamber, approximately 5.2 m x 5.2 m equipped with a bar screen, bypass channel, and flow distribution chamber.

### **Aeration Tanks**

- Two (2) aeration tanks, each approximately 25.3 m x 12.2 m x 4.3 m Side Water Depth (SWD) with approximate volume of 1,327 m<sup>3</sup>, equipped with two (2) 15 kW (20 Hp) mechanical surface aerators.

### **Secondary Clarifiers**

- Two (2) rectangular clarifiers, approximately 32.5 m x 6.1 m x 4.14 m SWD, equipped with chain and flight sludge collectors and cross collectors;
- Two (2) sludge pumps, each with a maximum capacity of 80 L/s, equipped with electronic controls; and

### **Disinfection**

- An ultraviolet disinfection system consisting of eight (8) UV modules, each module approximately 1800 mm long by 800 mm high by 760 mm wide and fitted with six (6) lamps.

### **Phosphorus Removal**

- One (1) 27,000 litre tank for storage of phosphorus removal chemical; and
- Two (2) chemical metering pumps, each with a maximum capacity of 25 L/hr.

### **Effluent Storage Equalization Lagoons**

- Two (2) effluent equalization lagoons, with a storage volume of 115,200 cubic meters to be reduced to approximately 107,100 m<sup>3</sup> in cell No. 1 (as per *Proposed Works* ) and 81,600 m<sup>3</sup> in cell No. 2, to be used for storage of effluent from the mechanical plant as required; and
- Flow and level control structures, pipes, and appurtenances.

### **Control Building**

- An approximately 16.8 m x 6.0 m control building housing office/laboratory, washroom, workshop/storage and chemical storage tank.

### **Flow Monitoring**

- An effluent flow monitoring V-notch weir, located in the plant outlet chamber.

and other controls, piping, valves, drains, and appurtenances essential for the proper operation of the aforementioned sewage works,

all in accordance with supporting documents listed in **Schedule B**.

*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;

"Average Daily Flow" means the cumulative total sewage flow to the sewage works during a calendar year divided by the number of days during which sewage was flowing to the sewage works that year;

"BOD<sub>5</sub>" (also known as TBOD5) means five day biochemical oxygen demand measured in an unfiltered sample and includes carbonaceous and nitrogenous oxygen demand;

"Bypass" means diversion of sewage around one or more unit processes within the Sewage Treatment Plant with the diverted sewage flows being returned to the Sewage Treatment Plant treatment train upstream of the Final Effluent sampling location, and discharging to the environment through the Sewage Treatment Plant outfall;

"CBOD<sub>5</sub>" means five day carbonaceous (nitrification inhibited) biochemical oxygen demand measured in an unfiltered sample;

"Daily Concentration" means the concentration of a contaminant in the effluent discharged over any single day, as measured by a composite or grab sample, whichever is required;

"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;

"Emergency Situation" includes a structural, mechanical or electrical failure that causes a temporary reduction in the capacity of the Sewage Treatment Plant and an unforeseen flow condition that may result in:

- a) danger to the health or safety of any person; or,
- b) injury or damage to any property, or serious risk of injury or damage to any property
- c) treatment process biomass washout.

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

"Equivalent equipment" means a substituted equipment or like-for-like equipment that meets the required quality and performance standards of a named equipment;

"E. Coli" refers to the thermally tolerant forms of Escherichia that can survive at 44.5 degrees Celsius;

"Event" means an action or occurrence, at a given location within the Sewage Treatment Plant that causes a Plant Bypass or Plant Overflow. An Event ends when there is no recurrence of a Bypass or Overflow in the 12-hour period following the last Bypass or Overflow. Two Events are separated by at least 12 hours during which there has been no recurrence of a Bypass or Overflow;

"Final Effluent" means sewage discharge via the Sewage Treatment Plant outfall after undergoing the full train of unit processes as listed in the Approval;

"Limited Operational Flexibility" (LOF) means any modifications that the Owner is permitted to make to the Works under this Approval;

"Geometric Mean Density" is the nth root of the product of multiplication of the results of n number of samples over the period specified;

"Grab Sample" means an individual sample of at least 1000 millilitres collected in the approximate container at a randomly selected time over a period of time not exceeding 15 minutes;

"Ministry" means the Ontario Ministry of the Environment;

"Monthly Average Concentration" means the arithmetic mean of all Daily Concentrations of a contaminant in the effluent sampled or measured, or both, during a calendar month;

"Monthly Average Loading" means the value obtained by multiplying the Monthly Average Concentration of a contaminant by the Average Daily Flow over the same calendar month;

"Notice of Modifications" means the form entitled "Notice of Modifications to Sewage Works";

"Owner" means The Township of North Huron (former Town of Wingham), and includes its successors and assignees;

"Previous Works" means those portions of the sewage works previously constructed and approved under an Approval;

"Proposed Works" means the sewage works described in the Owner's application, this Approval, to the extent approved by this Approval;

"Plant Overflow" means a discharge to the environment from the Sewage Treatment Plant at a location other than the plant outfall or into the plant outfall downstream of the Final Effluent sampling location;

"Rated Capacity" means the Average Daily Flow for which the Works are approved to handle;

"Sewage Treatment Plant" means the entire sewage treatment and effluent discharge facility;

"Source Protection Plan" means a drinking water source protection plan prepared under the Clean Water Act, 2006 ;

"Substantial Completion" has the same meaning as "substantial performance" in the Construction Lien Act ;

"Water Supervisor" means the Water Supervisor of the Sarnia and Windsor offices of the Ministry or designate; and

"Works" means the sewage works described in the Owner's application, and this Approval, and includes Proposed Works, Previous Works, and modifications made under Limited Operational Flexibility.

*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 , the application for approval of the works and the submitted supporting documents and plans and specifications as listed in this Approval .
- (3) Where there is a conflict between a provision of any submitted document 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 listed submitted documents, the document bearing the most recent date shall prevail.
- (4) Where there is a conflict between the listed 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 requirements of this Approval are severable. If any requirement of this Approval , or the application of any requirement of this Approval to any circumstance, is held invalid or unenforceable, the application of such requirement to other circumstances and the remainder of this Approval shall not be affected thereby.

### **2. EXPIRY OF APPROVAL**

The approval issued by 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 Water Supervisor 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 Water Supervisor;
  - (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 Informations Act , R.S.O. 1990, c. C39 shall be included in the notification to the Water Supervisor;
- (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 Water Supervisor and the Director.

4. UPON THE SUBSTANTIAL COMPLETION OF THE WORKS

- (1) Upon the Substantial Completion of the Proposed 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 **one (1) year** of the Substantial Completion of the Proposed 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. BYPASSES AND PLANT OVERFLOW

- (1) Any Bypass or Plant Overflow is prohibited, except:
  - (a) in an Emergency Situation;
  - (b) where the approved design and operation of the Works provides for Bypasses / Plant Overflows to be triggered under certain flow conditions and those conditions have been met;

(c) where the Bypass / Plant Overflow is a direct and unavoidable result of a planned maintenance procedure, the Owner notified the Water Supervisor **fifteen (15) days** prior to the Bypass and the Water Supervisor has given written consent of the Bypass;and

(d) where the Bypass / Plant Overflow is planned for research or training purposes, the discharger notified the Water Supervisor **fifteen (15) days** prior to the Bypass / Plant Overflow and the Water Supervisor has given written consent of the Bypass / Plant Overflow.

(2) The Owner shall forthwith notify the Spills Action Centre (SAC) and the Medical Officer of Health of all Bypass and Plant Overflow Events except the events occurring under subsection (1)(b). This notice shall include, at a minimum, the following information:

(a) the date, time, and duration of the Event;

(b) the location of the Event;

(c) the measured or estimated volume of the Event (unless the Event is ongoing);

(d) the reason for the Event;and

(e) the level of treatment the Bypass(es) and/or Plant Overflow(s) received and disinfection status of same.

(3) The Owner shall submit Bypass and Plant Overflow Event Reports to the Ministry's local office on a quarterly basis, no later than each of the following dates for each calendar year: February 14, May 15, August 14, and November 15. Event Reports shall be in an electronic format specified by the Ministry. In each Event Report the Owner shall include, at a minimum, the following information on any Events that occurred during the preceding quarter:

(a) the date of the Event(s);

(b) the measured or estimated volume of the Event(s);

(c) the duration of the Event(s);

(d) the location of the Event(s);

(e) the reason for the Event(s); and

(f) the level of treatment the Bypass(es) and/or Plant Overflow(s) received and disinfection status of same.

(4) The Owner shall use best efforts to collect a representative sample consisting of a minimum of two (2) grab samples of the Bypass / Plant Overflow and have it analyzed for parameters outlined in Condition 7, one at the beginning of the Event and the second approximately near the end of the Event, to best reflect the Final Effluent quality of such Bypass or Plant Overflow.

(5) The Owner shall maintain a logbook of all Plant Bypasses and Plant Overflows, which shall contain, at a minimum, the types of information set out in subsection 2 (a) to 2(e) in respect of each Bypass and Plant Overflow.

## 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 in Table 1 as effluent parameters are not exceeded in the effluent from the Works.

<b>Table 1 - Effluent Objectives</b>		
<b>Effluent Parameter</b>	<b>Average Monthly Concentration</b> (milligrams per litre unless otherwise indicated)	<b>Waste Average Monthly Loading</b> (kilograms per day unless otherwise indicated)
Column 1	Column 2	Column 3
CBOD5	15.0	51.0
Total Suspended Solids	15.0	51.0
Total Phosphorus	0.5	1.7
Total Ammonia Nitrogen		
- Non-freezing period	0.8	2.7
- Freezing period <sup>A</sup>	3.0	10.2
Hydrogen Sulphide	Non-detect <sup>B</sup>	-
E. Coli	150 organisms per 100 mL (monthly Geometric Mean Density)	Not applicable

**Note:** Total Phosphorus and Total Ammonia are expressed in mgP/L and mgN/L respectively; <sup>A</sup> "Freezing period" means the period of time during which the temperature of the receiving stream is below or equal to 5 degrees Celsius, normally from December 15 to April 15; <sup>B</sup> "Non-detect" means that the measured value shall be below the lesser of 0.02 mg/L or the Laboratory's Method Detection Limit.

- (2) The Owner shall use best efforts to:
- (a) maintain the pH of the effluent from the Works within the range of 6.5 to 9.0 inclusive, at all times;
  - (b) 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.



(3) Subsections (1) to (2) above shall apply upon the issuance of this Approval.

7. EFFLUENT LIMITS

(1) The Owner shall operate the Works such that the concentrations and waste loadings of the materials named in Table 2 as effluent parameters are not exceeded in the effluent.

Table 2 - Effluent Limits		
Effluent Parameter	Average Monthly Concentration (milligrams per litre unless otherwise indicated)	Waste Average Monthly Loading (kilograms per day unless otherwise indicated)
Column 1	Column 2	Column 3
CBOD5	25.0	85.0
Total Suspended Solids	25.0	85.0
Total Phosphorus	1.5	5.1
Total Ammonia Nitrogen - Non-freezing period - Freezing period <sup>A</sup>	2.0 7.5	6.8 25.0
Hydrogen Sulphide	Non-detect*	-
E. Coli	200 organisms per 100 mL (monthly Geometric Mean Density)	Not applicable
pH of the effluent maintained between 6.0 to 9.0, inclusive, at all times.		

**Note:** Total Phosphorus and Total Ammonia are expressed in mgP/L and mgN/L respectively; <sup>A</sup> "Freezing period" means the period of time during which the temperature of the receiving stream is below or equal to 5 degrees Celsius, normally from December 15 to April 15; <sup>B</sup> "Non-detect" means that the measured value shall be below the Method Detection Limit of 0.02 mg/L.

(2) For the purposes of determining compliance with and enforcing subsection (1):

(a) The Monthly Average Concentration of a parameter named in Column 1 of subsection (1) shall not exceed the corresponding maximum concentration set out in Column 2 of subsection (1).

(b) The Average Monthly Loading of a parameter named in Column 1 of subsection (1) shall not exceed the corresponding maximum waste loading set out in Column 3 of subsection (1).

(3) Notwithstanding subsection (1), the Owner shall operate and maintain the Works such that all effluent from the plant is continuously disinfected from May 1 to October 31 each year, that the monthly Geometric Mean Density of E. Coli in the effluent does not exceed 200 organisms per 100 millilitres of effluent discharged from the Works.

(4) Subsections (1) to (3) above shall apply upon the issuance of this Approval .

8. OPERATION AND MAINTENANCE

- (1) The Owner shall exercise due diligence in ensuring that, at all times, the Works and the related equipment and appurtenances used to achieve compliance with this Approval are properly operated and maintained. Proper operation and maintenance shall include effective performance, adequate funding, adequate operator staffing and training, including training in all procedures and other requirements of this Approval and the Act and regulations, adequate laboratory facilities, process controls and alarms and the use of process chemicals and other substances used in the Works.
- (2) The Owner shall operate the works within the Rated Capacity of the Works;
- (3) The Owner shall prepare an operation manual 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) Procedures for the inspection and calibration of monitoring equipment;
  - (e) A spill prevention control and countermeasures plan, consisting of contingency plans and procedures for dealing with equipment breakdowns, potential spills and any other abnormal situations, including notification of the Water Supervisor; and
  - (f) Procedures for receiving, responding and recording public complaints, including recording any follow up actions taken.
- (5) The Owner shall maintain the operations manual current and retain a copy at the location of the Works for the operational life of the Works. Upon request, the Owner shall make the manual available to Ministry staff.
- (6) The Owner shall provide for the overall operation of the Works with an operator who holds a licence that is applicable to that type of facility and that is of the same class as or higher than the class of the facility in accordance with Ontario Regulation 129/04.

## 9. MONITORING AND RECORDING

The Owner shall, upon the issuance of this Approval , 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) For the purposes of this condition, bi-weekly means every two (2) weeks, quarterly means every three (3) months at minimum.
- (3) Samples shall be collected at the following sampling points, at the frequency specified, by means of the specified sample type and analyzed for each parameter listed and all results recorded:

<b>Table 3 - Raw Sewage Monitoring</b> (Samples to be collected at the head of the inlet works or at the sewage pumping station <sup>A</sup> )		
<b>Parameters</b>	<b>Sample Type</b>	<b>Minimum Frequency</b>
BOD5	24-hr composite	Bi-weekly
Total Suspended Solids	24-hr composite	Bi-weekly
Total Kjeldahl Nitrogen	24-hr composite	Bi-weekly
Total Phosphorus	24-hr composite	Bi-weekly
Alkalinity	24-hr composite	Bi-weekly

**Note:** <sup>A</sup> Sample may be collected at the sewage pumping only if there is no additional flow contribution between the sewage pumping station and the inlet work.

<b>Table 4 - Effluent Monitoring</b> (Samples to be collected at the outlet of the disinfection facility)		
<b>Parameters</b>	<b>Sample Type</b>	<b>Frequency</b>
CBOD5	24-hr composite	Bi-weekly
Total Suspended Solids	24-hr composite	Bi-weekly
Total Phosphorus	24-hr composite	Bi-weekly
Total Ammonia Nitrogen	24-hr composite	Bi-weekly
Total Kjeldahl Nitrogen	24-hr composite	Bi-weekly
Nitrite	24-hr composite	Bi-weekly
Nitrate	24-hr composite	Bi-weekly
Alkalinity	24-hr composite	Bi-weekly
Hydrogen Sulphide	24-hr composite	Quarterly
E. Coli	Grab	Bi-weekly
pH (measured in the field)	Grab/Probe	Bi-weekly
Temperature (measured in the field)	Grab/Probe	Bi-weekly

- (5) Sampling locations may only be changed or abandoned and new locations may be added

following commencement of operation if, in the opinion of the Water Supervisor, it is necessary to do so to ensure representative samples are being collected.

- (6) 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 Procedure F-10-1, "Procedures for Sampling and Analysis Requirements for Municipal and Private Sewage Treatment Works (Liquid Waste Streams Only)", as amended from time to time by more recently published editions;
  - (b) 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;
  - (c) The publication "Standard Methods for the Examination of Water and Wastewater" (21st edition), as amended from time to time by more recently published editions.
- (7) The Temperature and pH of the effluent from the Works shall be determined in the field at the time of sampling for Total Ammonia Nitrogen. The concentration of un-ionized ammonia shall be calculated using the total ammonia concentration, pH and Temperature using the methodology stipulated in "Ontario's Provincial Water Quality Objectives" dated July 1994, as amended, for ammonia (un-ionized).

For the purposes of determining the concentration of unionized ammonia, single representative values of Temperature and pH obtained through a probe shall be considered complementary to the 24-hour composite Total Ammonia Nitrogen sample.
- (8) If the Owner monitors any of the effluent parameters required by Subsection (3), at the designated locations and in accordance with Subsection (6), more frequently than it is required by Subsection (3), the analytical results of all such samples, both required and additional, shall be included in the calculating and reporting of the values required by this Approval, and the increased frequency, or all dates of sampling, shall be specified in the reports.
- (9) Influent flow measuring devices located at the Josephine Street Pumping Station and the effluent flow measuring devices and recorders located at the Sewage Treatment Plant shall be installed, maintained and operated to measure the quantity of sewage being treated by the sewage works. The flow measuring devices and recorders shall be calibrated at least annually to maintain an accuracy of +/- 5% of the actual rate of flow within the range of 10% to 100% of the full scale reading of the measuring devices.
- (10) The Owner shall retain for a minimum of **five (5) years** from the date of their creation, all records and information related to or resulting from the monitoring activities required by this Approval .

## 10. REPORTING

- (1) **One week** prior to the start up of the operation of the Proposed Works, the Owner shall notify the Water Supervisor in writing of the pending start up date.
- (2) **Ten (10) days** prior to the date of a planned Bypass being conducted pursuant to Condition 5, the Owner shall notify the Water Supervisor (in writing) of the pending start date, in addition to an assessment of the potential adverse effects on the environment and the duration of the Bypass.
- (3) The Owner shall report to the Water Supervisor or designate, any exceedence of any parameter specified in Condition 7 orally, as soon as reasonably possible, and in writing within **seven (7) days** of the exceedence.
- (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 Water Supervisor 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) The Owner shall, upon request, make all manuals, plans, records, data, procedures and supporting documentation available to Ministry staff.
- (6) The Owner shall prepare, and submit to the Water Supervisor, a performance report, on an annual basis, within **ninety (90) days** following the end of the period being reported upon. 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 summary and interpretation of all monitoring data and a comparison to the effluent limits outlined in Condition 7, including an overview of the success and adequacy of the Works. The Owner shall comment on effluent variability of the individual sample results in comparison to the effluent limits;
  - (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 Condition 6.
- (g) A tabulation of the volume of sludge generated in the reporting period, an outline of anticipated volumes to be generated in the next reporting period and a summary of the locations to where the sludge was disposed;
- (h) A summary of any complaints received during the reporting period and any steps taken to address the complaints;
- (i) A summary of all Bypass, spill or abnormal discharge events;
- (j) a copy of all *Notice of Modifications* submitted to the *Water Supervisor* , with a status report on the implementation of *Limited Operational Flexibility* ;
- (k) a report of all modifications arising under section 3 of Schedule A; and;
- (l) Any other information the Water Supervisor requires from time to time.

#### 11. SOURCE WATER PROTECTION

The Owner shall, within **sixty (60) calendar days** of the Minister of the Environment posting approval of a Source Protection Plan on the environmental registry established under the *Environmental Bill of Rights, 1993* for the area in which this Approval is applicable, apply to the Director for an amendment to this Approval that includes the necessary measures to conform with all applicable policies in the approved Source Protection Plan.

#### 12. LIMITED OPERATIONAL FLEXIBILITY

- (1) The Owner may make modifications to the Works in accordance with the Terms and Conditions of this Approval and subject to the Ministry's "Limited Operational Flexibility Criteria for Modifications to Sewage Works ", included under **Schedule A** of this Approval, as amended.
- (2) Sewage works proposed under Limited Operational Flexibility shall adhere to the design guidelines contained within the Ministry's publication "Design Guidelines for Sewage Works 2008", as amended.
- (3) The Owner shall ensure at all times, that the Works, related equipment and appurtenances which are installed or used to achieve compliance are operated in accordance with all Terms and Conditions of this Approval.
- (4) For greater certainty, the following are not permitted as part of Limited Operational Flexibility:
  - (a) Modifications to the Works that result in an increase of the Rated Capacity of the Works;

- (b) Modifications to the Works that may adversely affect the approved effluent quality criteria or the location of the discharge/outfall;
  - (c) Modifications to the treatment process technology of the Works, or modifications that involve construction of new reactors (tanks) or alter the treatment train process design;
  - (d) Modifications to the Works approved under s.9 of the EPA, and
  - (e) Modifications to the Works pursuant to an order issued by the Ministry.
- (5) Implementation of Limited Operational Flexibility is not intended to be used for piecemeal measures that result in major alterations or expansions.
- (6) If the implementation of Limited Operational Flexibility requires changes to be made to the Emergency Response, Spill Reporting and Contingency Plan, the Owner shall, as deemed necessary in consultation with the Water Supervisor, provide a revised copy of this plan for approval to the local fire services authority prior to implementing Limited Operational Flexibility.
- (7) For greater certainty, any modification made under the Limited Operational Flexibility may only be carried out after other legal obligations have been complied with, including those arising from the *Environmental Protection Act*, *Niagara Escarpment Planning and Development Act*, *Oak Ridges Moraine Conservation Act*, *Lake Simcoe Protection Act* and *Greenbelt Act*.
- (8) Prior to implementing Limited Operational Flexibility, the Owner shall complete a Notice of Modifications describing any proposed modifications to the Works and submit it to the Water Supervisor.

## **Schedule A**

### **Limited Operational Flexibility Criteria for Modifications to Municipal Sewage Works**

1. The modifications to sewage works approved under an Environmental Compliance Approval (Approval) that are permitted under the Limited Operational Flexibility (LOF), are outlined below and are subject to the LOF conditions in the Approval, and require the submission of the Notice of Modifications. If there is a conflict between the sewage works listed below and the Terms and Conditions in the Approval, the Terms and Conditions in the Approval shall take precedence.

#### **1.1 Sewage Pumping Stations**

- a. Alter pumping capacity by adding or replacing equipment where new equipment is located within an existing sewage treatment plant site or an existing sewage pumping station site, provided that the modifications do not result in an increase of the sewage treatment plant Rated Capacity and the existing flow process and/or treatment train are maintained, as applicable.

#### **1.2 Sewage Treatment Process**

- a. Installing additional chemical dosage equipment including replacing with alternative chemicals for pH adjustment or coagulants (non-toxic polymers) provided that there are no modifications of treatment processes or other modifications that may alter the intent of operations and may have negative impacts on the effluent quantity and quality.
- b. Expanding the buffer zone between a sanitary sewage lagoon facility or land treatment area and adjacent uses provided that the buffer zone is entirely on the proponent's land.
- c. Optimizing existing sanitary sewage lagoons with the purpose to increase efficiency of treatment operations provided that existing sewage treatment plant rated capacity is not exceeded and where no land acquisition is required.
- d. Optimizing existing sewage treatment plant equipment with the purpose to increase the efficiency of the existing treatment operations, provided that there are no modifications to the works that result in an increase of the Rated Capacity, and may have adverse effects to the effluent quality or location of the discharge.
- e. Replacement, refurbishment of previously approved equipment in whole or in part with Equivalent Equipment, like-for-like of different make and model, provided that the firm capacity, reliability, performance standard, level of quality and redundancy of the group of equipment is kept the same. For clarity purposes, the following equipment can be considered under this provision: screens, grit separators, blowers, aeration equipment, sludge thickeners, dewatering equipment, UV systems, chlorine contact equipment, bio-disks, and sludge digester systems.



### 1.3 Sewage Treatment Plant Outfall

- a. Replacement of discharge pipe with similar pipe size provided that the outfall location is not changed.

### 1.4 Sanitary Sewers

- a. Pipe relining and replacement with similar pipe size within the Sewage Treatment Plant site, where the nominal diameter is not greater than 1,200mm.

### 1.5 Pilot Systems

- a. Installation of pilot systems for new or existing technologies provided that:
  - i. any effluent from the pilot system is discharged to the inlet of the sewage treatment plant or hauled off-site for proper disposal,
  - ii. any effluent from the pilot system discharged to the inlet of the sewage treatment plant or sewage conveyance system does not significantly alter the composition/concentration of the influent sewage to be treated in the downstream process; and that it does not add any inhibiting substances to the downstream process, and
  - iii. the pilot system's duration does not exceed a maximum of two years; and a report with results is submitted to the Director and Water Supervisor three months after completion of the pilot project.

- 2. Sewage works that are exempt from section 53 of the OWRA by O. Reg. 525/98 continue to be exempt and are not required to follow the notification process under this Limited Operational Flexibility.
- 3. Normal or emergency operational modifications, such as repairs, reconstructions, or other improvements that are part of maintenance activities, including cleaning, renovations to existing approved sewage works equipment, provided that the modification is made with Equivalent Equipment, are considered pre-approved.
- 4. The modifications noted in section (3) above are not required to follow the notification protocols under Limited Operational Flexibility, provided that the number of pieces and description of the equipment as described in the Approval does not change.

## Notice of Modification to Sewage Works

RETAIN COPY OF COMPLETED FORM AS PART OF THE ECA AND SEND A COPY TO THE WATER SUPERVISOR (FOR MUNICIPAL) OR DISTRICT MANAGER (FOR NON-MUNICIPAL SYSTEMS)

### Part 1 – Environmental Compliance Approval (ECA) with Limited Operational Flexibility

*(Insert the ECA's owner, number and issuance date and notice number, which should start with "01" and consecutive numbers thereafter)*

ECA Number	Issuance Date (mm/dd/yy)	Notice number (if applicable)
ECA Owner		Municipality

### Part 2: Description of the modifications as part of the Limited Operational Flexibility

*(Attach a detailed description of the sewage works)*

Description shall include:

1. A detail description of the modifications and/or operations to the sewage works (e.g. sewage work component, location, size, equipment type/model, material, process name, etc.)
2. Confirmation that the anticipated environmental effects are negligible.
3. List of updated versions of, or amendments to, all relevant technical documents that are affected by the modifications as applicable, i.e. submission of documentation is not required, but the listing of updated documents is (design brief, drawings, emergency plan, etc.)

### Part 3 – Declaration by Professional Engineer

I hereby declare that I have verified the scope and technical aspects of this modification and confirm that the design:

1. Has been prepared or reviewed by a Professional Engineer who is licensed to practice in the Province of Ontario;
2. Has been designed in accordance with the Limited Operational Flexibility as described in the ECA;
3. Has been designed consistent with Ministry's Design Guidelines, adhering to engineering standards, industry's best management practices, and demonstrating ongoing compliance with s.53 of the Ontario Water Resources Act; and other appropriate regulations.

I hereby declare that to the best of my knowledge, information and belief the information contained in this form is complete and accurate

Name (Print)	PEO License Number
Signature	Date (mm/dd/yy)
Name of Employer	

### Part 4 – Declaration by Owner

I hereby declare that:

1. I am authorized by the Owner to complete this Declaration;
2. The Owner consents to the modification; and
3. This modifications to the sewage works are proposed in accordance with the Limited Operational Flexibility as described in the ECA.
4. The Owner has fulfilled all applicable requirements of the *Environmental Assessment Act*.

I hereby declare that to the best of my knowledge, information and belief the information contained in this form is complete and accurate

Name of Owner Representative (Print)	Owner representative's title (Print)
Owner Representative's Signature	Date (mm/dd/yy)

## **Schedule B**

Environmental Compliance Approval (ECA) supporting documents:

1. Environmental Study Report, Design Brief and final plans and specifications prepared by B.M. Ross & Associates Ltd., Consulting Engineers, at a total estimated cost, including engineering and contingencies, of Two Million Three Hundred Eighty Seven Thousand Two Hundred Fifty Five Dollars (\$2,387,255);
2. Report dated June 8, 1992 and prepared by B.M. Ross & Associates Ltd;
1. Application for Approval of Sewage Works dated June 03, 2011, with cover letter submitted by Andrew Garland of B.M.Ross and Associates Limited, Consulting Engineers, dated June 06, 2011;
2. A document entitled "Township of North Huron Wingham STP CofA Amendment Design Brief and Notes", dated June 2, 2011;
3. A letter dated July 12, 2011 from Andrew Garland of B.M.Ross and Associates Limited to the Ontario Ministry of the Environment (MOE);
4. An email dated August 2, 2011 from Andrew Garland of B.M.Ross and Associates Limited to Youssouf Kalogo, P.Eng., of MOE;
5. An email dated August 15, 2011 from Andrew Garland of B.M.Ross and Associates Limited to Youssouf Kalogo, P.Eng., of MOE;
6. Environmental Compliance Approval Application for Sewage Works dated October 22, 2013 signed by Don Nicholson, and cover letter submitted by Andrew Garland, P.Eng., dated October 23, 2013;
7. A document entitled "Township of North Huron Wingham STP Sludge Storage Design Brief and Notes", dated July 8, 2013;
8. Engineering Drawing No. G1 entitled "Township of North Huron – Wingham Sewage Treatment Plant Sludge Holding Cell", dated October 22, 2013 and prepared by B.M.Ross, Consulting Engineers; and
9. Email dated March 13, 2014 from Andrew Garland, P.Eng., of B.M.Ross, Consulting Engineers to Youssouf Kalogo, P.Eng. of the Ontario Ministry of the Environment.

*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, when the Works are constructed, the Works will meet the 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 4 is included to ensure that record drawings of the Works "as constructed" are maintained for future references.
5. Conditions 5 is included to indicate that Bypass(es) is prohibited unless there is an emergency situation or the Owner has permission from the Water Supervisor to do so and the Bypass will not violate the approved Final Effluent requirements. Condition 5 is also included to indicate that Plant Overflow of untreated and/or partially treated sewage to the environment is prohibited, save in certain limited circumstances where the failure to do so could result in greater injury to the public interest than the Plant Overflow itself, or where the Plant Overflow can be limited or otherwise mitigated by handling it in accordance with an approved contingency plan. The notification and documentation requirements allow the Ministry to take action in an informed manner and will ensure the Owner is aware of the extent and frequency of Bypass / Plant Overflow Event(s).
6. Condition 6 is imposed 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 and before the compliance limits of Condition 7 are exceeded.
7. Condition 7 is imposed to ensure that the effluent discharged from the Works to the receiving River meets the Ministry's effluent quality requirements thus minimizing environmental impact on the receiver and to protect water quality, fish and other aquatic life in the receiving River.
8. Condition 8 is included to require that the Works be properly operated, maintained, funded, staffed and equipped such that the environment is protected and deterioration, loss, injury or damage to any person or property is prevented. As well, the inclusion of 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 work.

9. Condition 9 is included to enable the Owner to evaluate and demonstrate the performance of the Works, on a continual basis, so that the Works are properly operated and maintained at a level which is consistent with the design objectives and effluent limits specified in the Approval and that the Works does not cause any impairment to the receiving River.
10. Condition 10 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.
11. Condition 11 is included to ensure that the works covered by this Approval will conform to the significant threat policies and designated Great Lakes policies in the Source Protection Plan.
12. Condition 12 is included to ensure that the Works are operated in accordance with the application and supporting documentation submitted by the Owner, and not in a manner which the Director has not been asked to consider. These Conditions are also included to ensure that a Professional Engineer has reviewed the proposed modifications and attests that the modifications are in line with that of Limited Operational Flexibility, and provide assurance that the proposed modifications comply with the Ministry's requirements stipulated in the Terms and Conditions of this Approval, MOE policies, guidelines, and industry engineering standards and best management practices.

**Upon issuance of the environmental compliance approval, I hereby revoke Approval No(s). 9403-8KSJ9D issued on September 6, 2011**

*In accordance with Section 139 of the Environmental Protection Act, you may by written Notice served upon me and the Environmental Review Tribunal within 15 days after receipt of this Notice, require a hearing by the Tribunal. Section 142 of the Environmental Protection Act provides that the Notice requiring the hearing shall state:*

1. 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;
2. 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:*

3. The name of the appellant;
4. The address of the appellant;
5. The environmental compliance approval number;
6. The date of the environmental compliance approval;

7. The name of the Director, and;
8. 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 Director appointed for the purposes of  
Part II.1 of the Environmental Protection Act  
Ministry of the Environment  
2 St. Clair Avenue West, Floor 12A  
Toronto, Ontario  
M4V 1L5

**\* 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) 314-4506 or [www.ert.gov.on.ca](http://www.ert.gov.on.ca)**

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

DATED AT TORONTO this 30th day of May, 2014



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Edgardo Tovilla  
Director  
appointed for the purposes of Part II.1 of the  
*Environmental Protection Act*

YK/

c: DWMD Supervisor, MOE Sarnia and Windsor offices  
Andrew Garland, B. M. Ross and Associates Limited