

ENVIRONMENTAL COMPLIANCE APPROVAL

NUMBER 4264-BE8HXP
Issue Date: August 9, 2019

1454411 Ontario Inc.
821 Mersea Road 11
Leamington, Ontario
N0P 2J0

Site Location: 821 Mersea Road 11
Municipality of Leamington
County of Essex, Ontario

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 treatment and subsurface disposal works for the collection, transmission, treatment and disposal of domestic sewage with a Rated Capacity of 70,000 litres per day, for accommodating a total of 256 on-site workers in two (2) bunkhouse units, as well as 26 additional employees at greenhouse and warehouse facilities, located at 821 Mersea Road 11, Municipality of Leamington, consisting of the following:

two (2) sewage treatment and subsurface disposal systems, one is to service Phase 1 development and the other one is to service Phase 2 development, each having a Rated Capacity of 35,000 litres per day, and each consisting of the following:

- one (1) 8,400 litres grease interceptor, receiving sewage from the kitchen of a bunkhouse unit, and discharging into a 29,500 litre septic tank;
- three (3) 29,500 litre septic tanks, operating in series, receiving sewage from the 8,400 litre grease interceptor and the washroom located in the bunkhouse unit, with the third septic tank equipped with two (2) effluent filters, discharging effluent into a Waterloo Biofilter Treatment System;
- One (1) Waterloo Biofilter Treatment System, having a design capacity of 35,000 litres per day and comprising the following:
 - one (1) 31,800 litre Biofilter Dosing Tank, equipped with duplex pumps each having a rated capacity of 222 litres per minute at a Total Dynamic Head (TDH) of 12.0 metres, discharging into a Waterloo Biofilter Treatment Tank;

- one (1) Biofilter Treatment Tank comprising spray unit and three (3) mesh baskets filled with Biofilter media, equipped with a total of 30.6 cubic metres of Biofilter media, discharging via gravity to another Biofilter Treatment Tank (with closed loop recirculation component);
- one (1) 50,000 litre Biofilter Treatment Tank (with closed loop recirculation component) comprising spray units and three (3) mesh baskets filled with Biofilter media, with two (2) baskets dosed from the Biofilter Dosing Tank and the third basket dosed from this Biofilter Treatment Tank operated as closed loop unit, equipped with a total 30.6 cubic metres of Biofilter media and duplex effluent pumps each having a rated capacity of 152 litres per minute at a TDH of 8.5 metres, discharging a portion of treated effluent back to the inlet of the second septic tank, a simplex pump having a rated capacity of 152 litres per minute at a TDH of 8.5 metres to dose a WaterNOx-LS Tank, and a simplex effluent pump having a rated capacity of 152 litres per minute at a TDH of 8.5 metres to dose the closed loop biofilter basket (the third basket);
- one (1) 35,000 litre WaterNOx-LS Tank, equipped with de-nitrifying Biofilter media, receiving treated Biofilter effluent and discharging into a Polishing/Disposal Dosing Tank;
- one (1) Polishing/Disposal Dosing Tank, comprising spray units and two (2) mesh baskets filled with Biofilter media, equipped with a total 17.6 cubic metres of Biofilter media and a total of four (4) pumps, with a simplex pump recirculating a portion of effluent into the polishing Biofilter basket contained within this tank, another simplex pump recirculating effluent to a Closed Loop WaterNOx-LS Tank, and two (duplex) pumps (rated at 222 litres per minute with a TDH of 12.5 metres) discharging final effluent into a Type A Dispersal Bed, via a forcemain routed through a control building for flow metering, at a dosing rate of 1,115 litres per dose;
- one (1) 9,000 litre Closed Loop WaterNOx-LS tank, equipped with de-nitrifying Biofilter media, receiving the effluent from and recirculating back to the Polishing/Disposal Dosing Tank;
- one (1) raised Type A Dispersal Bed, having an active area of 1,656 square metres (12 metres by 138 metres), consisting of a 300 millimetre thick stone layer and a 600 millimetre thick imported sand layer, with the stone layer protected with a permeable Geotextile fabric and divided into four cells with each cell equipped with nine (9) runs of 33 metre long 75 millimetre diameter distribution pipes, with the imported sand layer having a percolation time of 6 to 10 minutes per centimetre, complete with a 4,544 square metre mantle area extending 15 metres beyond the perimeter of stone layer in southern directions with a minimum of 300 millimetre thick sand layer and 150 millimetre thick topsoil;
- one (1) control building with provisions for alkalinity addition and bacteria-seeds addition to treatment system, as well as housing controls and disposal forcemain flow meter; and
- all other controls, electrical equipment, instrumentation, piping, valves and appurtenances essential for the proper operation of the aforementioned sewage Works.

All in accordance with the supporting documents set out in Schedule A attached to this Approval.

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

1. "Annual Average Concentration" is the mean of all Single Sample Concentration of a contaminant in the effluent sampled or measured during a calendar year;
2. "CBOD5" means five day carbonaceous (nitrification inhibited) biochemical oxygen demand measured in an unfiltered sample;
3. "Director" means a person appointed by the Minister pursuant to Section 5 of the EPA for the purposes of Part II.I of the EPA;
4. "District Manager" means the District Manager of the Sarnia/Windsor District Office;
5. "EPA" means the Environmental Protection Act, R.S.O. 1990, c.E.19, as amended;
6. "Licensed Installer" means a person who holds a licence under Article 2.12.3.1 of the Ontario Building Code;
7. "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;
8. "OBC" means the Ontario Building Code;
9. "Owner" means 1454411 Ontario Inc., and its successors and assignees;
10. "OWRA" means the *Ontario Water Resources Act* , R.S.O. 1990, c. O.40, as amended;
11. "Rated Capacity" means design daily sanitary sewage flow for which the Works are approved to handle;
12. "Professional Engineer" means a person entitled to practice as a Professional Engineer in the Province of Ontario under a licence issued under the Professional Engineers Act;
13. "Single Sample Concentration" means the concentration of a parameter in the effluent discharged on any day, as measured by a probe, analyzer or in a composite or grab sample, as required;
14. "Works" means the sewage works described in the Owner's application and 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 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 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. EXPIRY OF APPROVAL

1. 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. CONSTRUCTION

1. The Owner shall ensure that the construction of the Works is supervised by a licensed installer or a Professional Engineer, as defined in the *Professional Engineers Act*.
2. The Owner shall ensure that each of the Waterloo Biofilter Treatment System is installed in accordance with the Manufacturer's Installation Manual.
3. Upon construction of the Works, the Owner shall prepare a statement, certified by a licensed installer or 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 staff.
4. Upon construction of the Works, the Owner shall prepare a set of as-built drawings showing the works "as constructed", which shall be kept up to date through revisions undertaken from time to time and a copy shall be retained at the site for the operational life of the Works.
5. The Owner shall decommission existing on-site sewage system to the satisfaction of the District Manager and upon completion report in writing to the District Manager.

5. 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 (Table 1) listed in **Schedule B** are not exceeded in the effluent being discharged to the each of the Type A dispersal Bed.
2. The Owner shall ensure that the flow of treated effluent from each of the Waterloo Biofilter Treatment System discharged into the each of the Type A Dispersal Bed does not exceed the Rated Capacity of 35,000 litres per day.

6. EFFLUENT LIMITS

1. The Owner shall design, construct, operate and maintain the Works such that the concentrations of the materials named as effluent parameters in the Effluent Limits Table (Table 2) in **Schedule B** are not

exceeded in the effluent from each of the Waterloo Biofilter Treatment System prior to discharging into each of the Type A Dispersal Bed.

2. For the purposes of determining compliance with and enforcing subsection (1):
 - a. the Single Sample Concentration of CBOD5 and TSS named in Column 1 shall not exceed the corresponding maximum concentration set out in Column 2 of Effluent Limits Table (Table 2) listed in **Schedule B**;
 - b. and the Annual Average Concentration of Nitrate Nitrogen named in Column 1 shall not exceed the corresponding maximum concentration set out in Column 2 of Effluent Limits Table (Table 2) listed in **Schedule B**.

7. OPERATIONS AND MAINTENANCE

1. The Owner shall prepare an operations manual within six (6) months of the introduction of sewage to the Works, that includes, but not necessarily limited to, the following information:
 - a. operating procedures for routine operation of all the Works;
 - b. inspection programs, including frequency of inspection, for all 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 all the Works; copies of maintenance contracts for any routine inspections & pump-outs should be included for all the tanks and treatment units;
 - 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 District Manager; and
 - f. procedures for receiving, responding and recording public complaints, including recording any follow-up actions taken.
2. 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.
3. The Owner shall prepare and make available for inspection by Ministry staff, a maintenance agreement with the manufacturer for the treatment process/technology and a complete set of "as constructed" drawings within one (1) year of Substantial Completion of the Works. The maintenance agreement and drawings must be retained at the site and kept current.

4. The Owner shall ensure that all septic tanks are pumped out every 3-5 years or when the tank is 1/3 full of solids and the effluent filters are cleaned out at minimum once a year or more often if required.
5. The Owner shall ensure that grass-cutting is maintained regularly over all the subsurface disposal beds, and the drainage operations in all beds are visually observed on a monthly basis. In the event a break-out is observed from a subsurface disposal bed, the Owner shall ensure that the sewage discharge to the bed is discontinued and the incident immediately reported verbally to the District Manager, followed by a written report within one (1) week. The Owner shall ensure that during the time remedial actions are taking place the sewage generated at the site shall not be allowed to discharge to a surface water body or to the environment, and safely collected and disposed off through a licensed waste hauler to an approved waste disposal site.
6. The Owner shall ensure that adequate steps are taken to ensure that the area of the Works are protected from all forms of vehicle traffic.
7. The Owner shall employ for the overall operation of the Works a person who possesses the level of training and experience sufficient to allow safe and environmentally sound operation of the Works.

8. MONITORING AND RECORDING

1. The Owner shall, upon commencement of operation of the Works, carry out a scheduled monitoring program of collecting samples at the required sampling points, at the frequency specified or higher, by means of the specified sample type and analyzed for each parameter listed in the tables under the monitoring program included in **Schedule C** and record all results, as follows:
 - a. all samples and measurements are to be taken at a time and in a location characteristic of the quality and quantity of the sewage stream over the time period being monitored.
 - b. definitions and preparation requirements for each sample type are included in document referenced in Paragraph 2.b.
 - c. definitions for frequency:
 - i. Monthly means once every month
2. The methods and protocols for sampling, analysis and recording shall conform, in order of precedence, to the methods and protocols specified in the following documents and all analysis shall be conducted by a laboratory accredited to the ISO/IEC:17025 standard or as directed by the District Manager:
 - a. the Ministry's publication "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater Version 2.0" (January 2016), PIBS 2724e02, 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; and

- c. an approved method that meets the same data quality objectives specified in either of the above documents.
3. The Owner shall employ any measurement devices to accurately measure quantity of effluent being discharged to each Type A Dispersal Bed, including but not limited to water/wastewater flow meters, event counters, running time clocks, or electronically controlled dosing, and shall record the daily volume of effluent being discharged to each Type A Dispersal Bed.
4. The measurement parameters, frequencies and locations specified in subsection 1 in respect to any parameter are minimum requirements which may, after **one (1) year** of monitoring in accordance with this Condition, be modified by the Director in writing from time to time when approved by District Manager upon reviewing annual monitoring and performance report.
5. 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.

9. REPORTING

1. 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.
2. In addition to the obligations under Part X of the *Environmental Protection Act*, the Owner shall, within 10 working days of the occurrence of any reportable spill as defined in Ontario Regulation 675/98, 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, on an annual basis, within ninety (90) days following the end of each operational season to the District Manager. 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 (Condition 6) including an overview of the success and adequacy of the Works;
 - b. a review and assessment of performance of Works, including sewage treatment units and subsurface disposal beds;

- c. a description of any operating problems encountered and corrective actions taken at all sewage Works located at the property;
- d. a summary of all maintenance carried out on any major structure, equipment, apparatus, mechanism or thing forming part of all Works located at the property;
- e. a summary of any effluent quality assurance or control measures undertaken in the reporting period;
- f. a summary and description of efforts made and results achieved in meeting the Effluent Objectives of Condition 5;
- g. a summary and interpretation of all flow data and results achieved in not exceeding the maximum daily flow discharged into each subsurface disposal system;
- h. a summary of any complaints received during the reporting period and any steps taken to address the complaints;
- i. a summary of all spill or abnormal discharge events; and
- j. any other information the District Manager requires from time to time.

Schedule A

1. Application for Environmental Compliance Approval dated March 20, 2019 and received on April 5, and submitted by 1454411 Ontario Inc., for the proposed sewage treatment and subsurface disposal systems, including design brief, final plans and specifications.

Schedule B

Table 1 - Objectives Table - Effluent from Each Waterloo Biofilter Treatment System

Final Effluent Parameter	Averaging Calculator	Objectives (milligrams per litre unless otherwise indicated)
CBOD5	Single Sample Concentration	10.0
Total Suspended Solids	Single Sample Concentration	10.0
Nitrate Nitrogen	Single Sample Concentration	10.0

Table 2 - Limits Table - Effluent from Each Waterloo Biofilter Treatment System

Final Effluent Parameter	Averaging Calculator	Limits (milligrams per litre unless otherwise indicated)
CBOD5	Single Sample Concentration	20.0
Total Suspended Solids	Single Sample Concentration	20.0
Nitrate Nitrogen	Annual Average Concentration	15.0

Schedule C

Table 3 - Effluent Monitoring Table

Sample locations	two (2) treated effluent sampling stations at the outlet of Polishing/Disposal Dosing Tank for each Waterloo Biofilter Treatment Systems, prior to discharging into each Type A Dispersal Bed
Sample Type	Grab
Frequency	Monthly during operation
Parameters	CBOD5, Total Suspended Solids (TSS), and Nitrate Nitrogen

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 that apply 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 the works are constructed, and may be operated and maintained such that the environment is protected and deterioration, loss, injury or damage to any person or property is prevented.
5. Condition 5 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.
6. Condition 6 is imposed to ensure that the effluent discharged from the Works to the groundwater meets the Ministry's effluent quality requirements thus minimizing environmental impact on the receiver.
7. Condition 7 is included to require that the Works be properly operated, maintained, and equipped such that the environment is protected. As well, the inclusion of an operations manual, maintenance agreement with the manufacturer for the treatment process/technology and a complete set of "as constructed" drawings 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 information 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.
8. Condition 8 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 specified in the Approval and that the Works does not cause any impairment to the receiving watercourse.
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.

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

*** 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 <https://ero.ontario.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 9th day of August, 2019



Youssouf Kalogo, P.Eng.
Director

appointed for the purposes of Part II.1 of the
Environmental Protection Act

NH/

- c: Area Manager, MECP Windsor Area Office
- c: District Manager, MECP Sarnia District Office
Sandra Swanton, K. Smart Associates Limited