

ENVIRONMENTAL COMPLIANCE APPROVAL

NUMBER 3391-CZ5SBH
Issue Date: January 23, 2024

2823976 Ontario Limited
520 County Road 14 P.O. Box 251
Leamington, Ontario
N8H 3W2

Site Location: 520 County Road 14
Municipality of Leamington,
County of Essex, Ontario
N8H 3V8

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, usage and operation of Proposed Works for the treatment of sanitary sewage from two (2) proposed bunkhouses and washrooms in the proposed greenhouse buildings (for a maximum of 240 workers and 50 local staff), and disposal of treated effluent to the Reid Drain at the above site location, rated at a Maximum Daily Flow of **65,000 litres per day**, consisting of the following:

Pre-treatment for Proposed Bunkhouse #1

- one (1) 8,400 litre Grease Interceptor #1, located outside of Bunkhouse #1, receiving raw sewage from kitchens located within the bunkhouse unit, and discharging to a proposed Anaerobic Digester #1 as described below;
- two (2) 31,800 litre two-compartment Anaerobic Digesters #1 and #2, connected in series and equipped with a Waterloo Biofilter EC-P unit in the second compartment of Anaerobic Digester #2 to provide phosphorus removal, and equipped with an OBC approved effluent filter (Polylok PL-525 or Equivalent Equipment) on the outlet of Anaerobic Digester #2, receiving effluent from Grease Interceptor #1 and raw sewage from the washrooms located within the bunkhouse unit, and discharging to a proposed Pump Tank #1 as described below;
- one (1) 31,800 litre Pump Tank #1, equipped with duplex effluent pumps each rated at 227 litres per minute at 13.4 metres of total dynamic head (TDH) and a Waterloo Biofilter Basket with 10.3 cubic metres of Biofilter media, receiving effluent from Anaerobic Digester #2, and discharging to the Sludge

Tank of a proposed Waterloo Biofilter treatment system as described below;

Pre-treatment for Proposed Bunkhouse #2

- one (1) 8,400 litre Grease Interceptor #2, located outside of Bunkhouse #2, receiving raw sewage from kitchens located within the bunkhouse unit, and discharging to a proposed Anaerobic Digester #3 as described below;
- two (2) 31,800 litre two-compartment Anaerobic Digesters #3 and #4, connected in series and equipped with a Waterloo Biofilter EC-P unit in the second compartment of Anaerobic Digester #4 to provide phosphorus removal, and complete with an OBC approved effluent filter (Polylok PL-525 or Equivalent Equipment) on the outlet of Anaerobic Digester #4, receiving effluent from Grease Interceptor #2 and raw sewage from the washrooms located within the bunkhouse unit, and discharging to a proposed Pump Tank #2 as described below;
- one (1) 31,800 litre Pump Tank #2, equipped with duplex effluent pumps each rated at 227 litres per minute at 13.4 metres of TDH and a Waterloo Biofilter Basket with 10.3 cubic metres of Biofilter media, receiving effluent from Anaerobic Digester #4, and discharging to the Sludge Tank of the proposed Waterloo Biofilter treatment system as described below;

Pre-treatment for Proposed Greenhouse Washrooms

- one (1) 31,800 litre two-compartment Anaerobic Digester #5, equipped with an OBC approved effluent filter (Polylok PL-525 or Equivalent Equipment) on the outlet of the anaerobic digester, receiving raw sewage from washrooms located within the proposed greenhouse buildings, and discharging to the Sludge Tank of the proposed Waterloo Biofilter treatment system as described below;

Influent Sampling Point

- grab sampling from the Anaerobic Digesters (#1, #3, and #5) described above;

Waterloo Biofilter Treatment System

- one (1) 50,000 litre Sludge Tank, equipped with four (4) OBC approved effluent filters (Polylok PL-525 or Equivalent Equipment) on the outlet of the tank, receiving effluent from Pump Tank #1, Pump Tank #2 and Anaerobic Digester #5, recirculated flow from a proposed Closed Loop Biofilter Tank as described below, as well as sludge returns from the Clarifier Tank and Diversion Tank as described below, discharging by gravity to a proposed Aeration Tank as described below;
- one (1) 50,000 litre Aeration Tank, equipped with four (4) Vita-Aer V6 submersible micro-bubble aerators suspended from the concrete risers such that the aerators are fully submerged below the water level, receiving effluent from the Sludge Tank, and discharging by gravity to a proposed Clarifier Tank as described below;
- one (1) 50,000 litre Clarifier Tank, equipped with a sludge return pump below the inlet, rated at 227

litres per minute at 13.4 metres of TDH to return sludge to the inlet of the Sludge Tank, and equipped with four (4) OBC approved effluent filters (Polylok PL-525 or Equivalent Equipment) on the outlet of the tank, receiving effluent from the Aeration Tank, and discharging by gravity to a proposed Biofilter Dosing Tank as described below;

- one (1) 65,000 litre Biofilter Dosing Tank, equipped with duplex effluent pumps rated at 302 litres per minute at 18.9 metres of TDH and a Waterloo Biofilter Basket with 10.3 cubic metres of Biofilter media, receiving effluent from the Clarifier Tank, and discharging to proposed Waterloo Biofilter Tanks as described below;
- four (4) 45,000 litre pre-cast concrete Waterloo Biofilter Tanks #1, #2, #3, and #4, operating in parallel and inter-connected to each other, with each tank comprising spray units and three (3) wire mesh baskets filled with Biofilter media, equipped with a total of 114 cubic meters of Biofilter media, receiving effluent from the Biofilter Dosing Tank, and discharging treated effluent to the proposed Closed Loop Biofilter Tank as described below;
- one (1) 50,000 litre Closed Loop Biofilter Tank, receiving effluent from Waterloo Biofilter Tanks #1, #2, #3, and #4, equipped with a simplex effluent pump rated at 151 litres per minute at 8.5 metres of TDH to dose a portion of treated effluent to three (3) wire mesh Waterloo Biofilter Baskets in the tank with 31.5 cubic metres of Biofilter media, and duplex effluent pumps rated at 302 litres per minute at 18.9 metres of TDH to dose a portion of treated effluent to proposed Sand Filters and Ultraviolet Disinfection Units in the Control Building as described below, and a simplex effluent pump rated at 151 litres per minute at 8.5 metres of TDH to dose a portion of treated effluent to recirculation to the inlet of the Sludge Tank.

Chemical Dosing System

- one (1) Chemical Dosing System with secondary spill containment, located in the Control Building and consisting of metering pumps and chemical storage tank(s), with provision for dosing alkalinity, phosphorus removal agent, and bacteria to the Anaerobic Digester Tanks, Sludge Tank, Clarifier Tank, and Biofilter Dosing Tank;

Sand Filters

- two (2) 100 micron Bag Filters, operating in parallel and located in the Control Building, receiving effluent from the Closed Loop Biofilter Tank and discharging to the proposed Sand Filters as described below;
- two (2) Sand Filters, operating in parallel and located in the Control Building, consisting of 350 millimetre diameter by 1651 millimetre high tanks equipped with Next-Sand filtration media (having a total volume of 0.09 cubic metres and surface area of 0.093 square metres), and clack valve to control flow rates, with backwash discharging to the Sludge Tank and effluent discharging to a proposed Ultraviolet Disinfection System as described below;

Ultraviolet Disinfection System

- three (3) Hallett 750W 1" UV disinfection units, each equipped with a 37.9 litre per minute flow restrictor, receiving effluent from the Sand Filters and discharging to a proposed Diversion Tank as described below;

Final Effluent Flow Measurement and Sampling Point

- one (1) flow meter on the discharge pipe of the Ultraviolet Disinfection System within the Control Building;
- automatic composite sampler drawing Final Effluent from a sampling sump within the Control Building;

Final Effluent Disposal Facilities

- one (1) 65,000 litre Diversion Tank to receive treated effluent, equipped with duplex effluent pumps to discharge Final Effluent to the Reid Drain via a proposed 50 millimetre diameter forcemain and a proposed discharge pipe as described below;
- one (1) approximately 3 metre long, 150 millimetre diameter discharge pipe discharging Final Effluent to the Reid Drain, equipped with rip-rap on filter fabric at the pipe outlet;

all other controls, electrical equipment, instrumentation, piping, pumps, valves and appurtenances essential for the proper operation of the aforementioned Works;

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

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

1. "Annual Maximum Daily Influent Flow" means the maximum Influent collected in a single day during a calendar year;
2. "Approval" means this entire Environmental Compliance Approval and any Schedules attached to it;
3. "BOD5" (also known as TBOD5) means five day biochemical oxygen demand measured in an unfiltered sample and includes carbonaceous and nitrogenous oxygen demands;
4. "CBOD5" means five day carbonaceous (nitrification inhibited) biochemical oxygen demand measured in an unfiltered sample;
5. "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;
6. "District Manager" means the District Manager of the appropriate local district office of the Ministry

where the Works is geographically located;

7. "*E. coli*" refers to coliform bacteria that possess the enzyme beta-glucuronidase and are capable of cleaving a fluorogenic or chromogenic substrate with the corresponding release of a fluorogen or chromogen, that produces fluorescence under long wavelength (366 nm) UV light, or color development, respectively. Enumeration methods include tube, membrane filter, or multi-well procedures. Depending on the method selected, incubation temperatures include $35.5 + 0.5$ °C or $44.5 + 0.2$ °C (to enumerate thermotolerant species). Depending on the procedure used, data are reported as either colony forming units (CFU) per 100 mL (for membrane filtration methods) or as most probable number (MPN) per 100 mL (for tube or multi-well methods);
8. "EPA" means the *Environmental Protection Act*, R.S.O. 1990, c.E.19;
9. "Equivalent Equipment" means alternate piece(s) of equipment that meets the design requirements and performance specifications of the piece(s) of equipment to be substituted;
10. "Existing Works" means those portions of the Works included in the Approval that have been constructed previously;
11. "Final Effluent" means effluent that is discharged to the environment through the approved effluent disposal facilities, that are required to meet the compliance limits stipulated in the Approval for the Works at the Final Effluent sampling point(s);
12. "Grab Sample" or "Grab" means an individual sample of at least 1000 millilitres collected in an appropriate container at a randomly selected time over a period of time not exceeding 15 minutes;
13. "Influent" means flows to Works from the collection system;
14. "Licensed Engineering Practitioner" means a person who holds a licence, limited licence or temporary licence under the *Professional Engineers Act*, R.S.O. 1990, c. P.28;
15. "Maximum Daily Flow" means the largest volume of flow to be received during a one-day period for which the sewage treatment process unit or equipment is designed to handle;
16. "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;
17. "Monthly Average Effluent Concentration" is the mean of all Single Sample Results of the concentration of a contaminant in the Final Effluent sampled or measured during a calendar month;
18. "Monthly Geometric Mean Density" is the mean of all Single Sample Results of *E.coli* measurement in the samples taken during a calendar month, calculated and reported as per the methodology specified in Schedule F;
19. "Normal Operating Condition" means the condition when all unit process(es), excluding Preliminary

Treatment System, in a treatment train is operating within its design capacity;

20. "OBC" means the Ontario Building Code, Ontario Regulation 332/12 (Building Code) as amended to January 1, 2015, made under the *Building Code Act*, 1992, S.O. 1992, c. 23;
21. "Operating Agency" means the Owner, person or the entity that is authorized by the Owner for the management, operation, maintenance, or alteration of the Works in accordance with this Approval;
22. "Owner" means 2823976 Ontario Limited, including any successors and assignees;
23. "OWRA" means the *Ontario Water Resources Act*, R.S.O. 1990, c. O.40;
24. "Proposed Works" means those portions of the Works included in the Approval that are under construction or to be constructed;
25. "Single Sample Result" means the test result 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;
26. "Works" means the approved sewage works, and includes Proposed Works.

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

TERMS AND CONDITIONS

1. GENERAL PROVISIONS

1. The Owner shall ensure that any person authorized to carry out work on or operate any aspect of the Works is notified of this Approval and the terms and conditions herein and shall take all reasonable measures to ensure any such person complies with the same.
2. The Owner shall design, construct, operate and maintain the Works in accordance with the conditions of this Approval.
3. Where there is a conflict between a provision of any document referred to in this Approval and the conditions of this Approval, the conditions in this Approval shall take precedence.

2. CHANGE OF OWNER AND OPERATING AGENCY

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 address of Owner;

- b. change of Owner, including address of new 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. B.17* shall be included in the notification;
 - d. change of name of the corporation and a copy of the most current information filed under the *Corporations Information Act, R.S.O. 1990, c. C.39* shall be included in the notification.
2. The Owner shall notify the District Manager, in writing, of any of the following changes within **thirty (30) days** of the change occurring:
 - a. change of address of the Operating Agency;
 - b. change of the Operating Agency, including address of the new Operating Agency.
 3. In the event of any change in ownership of the Works, the Owner shall notify the succeeding owner in writing, of the existence of this Approval, and forward a copy of the notice to the District Manager.
 4. The Owner shall ensure that all communications made pursuant to this condition refer to the number of this Approval.

3. CONSTRUCTION OF PROPOSED WORKS

1. All Proposed Works in this Approval shall be constructed and installed and must commence operation within **five (5) years** of issuance of this Approval, after which time the Approval ceases to apply in respect of any portions of the Works not in operation. In the event that the construction, installation and/or operation of any portion of the Proposed Works is anticipated to be delayed beyond the time period stipulated, the Owner shall submit to the Director an application to amend the Approval to extend this time period, at least six (6) months prior to the end of the period. The amendment application shall include the reason(s) for the delay and whether there is any design change(s).
2. Upon completion of construction of the Proposed Works, the Owner shall prepare and submit a written statement to the District Manager, certified by a Licensed Engineering Practitioner, that the Proposed Works is constructed in accordance with this Approval.
3. **One (1) week** prior to the commencement of the operation of the Proposed Works, the Owner shall notify the District Manager (in writing) of the pending start-up date.
4. Within **one (1) year** of completion of construction of the Proposed Works, a set of record drawings of the Works shall be prepared or updated. These drawings shall be kept up to date through revisions undertaken from time to time and a copy shall be readily accessible for reference at the Works.
5. The Owner shall ensure that the treatment technologies are installed in accordance with the

manufacturer's installation manual.

4. DESIGN OBJECTIVES

1. The Owner shall design and undertake everything practicable to operate the Works in accordance with the following objectives:
 - a. Final Effluent 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 discoloration on the receiving waters.
 - b. Annual Maximum Daily Influent Flow does not exceed the Maximum Daily Flow of the Works.

5. COMPLIANCE LIMITS

1. The Owner shall operate and maintain the Works such that compliance limits for the Final Effluent parameters listed in the table(s) included in **Schedule B** are met.
2. The Owner shall operate and maintain the Works such that the Final Effluent is disinfected continuously year-round.

6. OPERATION AND MAINTENANCE

1. The Owner shall ensure 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 staffing and training, including training in all procedures and other requirements of this Approval and the OWRA and relevant regulations made under the OWRA, process controls and alarms and the use of process chemicals and other substances used in the Works.
2. The Owner shall prepare/update the operations manual for the Works within **six (6) months** of completion of construction of the Proposed Works, that includes, but not necessarily limited to, the following information:
 - a. operating procedures for the Works under Normal Operating Conditions;
 - 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. operating procedures for the Works to handle situations outside Normal Operating Conditions and emergency situations such as a structural, mechanical or electrical failure, or an unforeseen flow

condition;

- f. 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 Spills Action Centre (SAC) and District Manager;
 - g. procedures for receiving, responding and recording public complaints, including recording any followup actions taken.
3. The Owner shall maintain an up to date operations manual and make the manual readily accessible for reference at the Works for the operational life of the Works. Upon request, the Owner shall make the manual available to Ministry staff.
4. The Owner shall ensure that the Operating Agency fulfills the requirements under O. Reg. 129/04, as amended for the Works, including the classification of facilities, licensing of operators and operating standards.
5. The Owner shall maintain a logbook to record the results of all inspections, repair and maintenance undertaken, calibrations, monitoring and spill response or contingency measures undertaken and shall make the logbook available for inspection by Ministry staff. The logbook shall include the following:
 - a. the name of the operator making the entry; and
 - b. the date and results of each inspection, repair, maintenance, calibration, monitoring, spill response and contingency measure.
6. The Owner shall, upon completion of construction, prepare and make available for inspection by Ministry staff, a maintenance agreement with the manufacturer for the treatment process/technology. The maintenance agreement must be retained at the site and kept current for the operational life of the Works.
7. The Owner shall ensure that all Anaerobic Digesters and the Sludge Tank be inspected **at least twice per year**, and the sewage sludge accumulated in the these tanks be periodically withdrawn at the frequency required to maintain efficiency of the treatment system. All effluent filters in this Approval shall be cleaned out at least once every six (6) months, when the tank is pumped out, or as determined by the Operating Agency, whichever comes first.
8. The Owner shall have a valid written agreement with a hauler who is in possession of a Waste Management Systems Approval, for the treatment and disposal of the sludge generated from the Works, at all times during operation of the Works.
9. The Owner shall ensure the grease interceptors be cleaned out **at least once per year**, or more frequently as determined by the Works operator, for removal of fats, oil and grease from the kitchen wastewater.
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 operation and maintenance activities required by this Approval.

7. 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. Weekly means once every week;
 - ii. Monthly means once every month; and
 - iii. Annually means once every year;
 - d. a schedule of the day of the week/month for the scheduled sampling shall be created. The sampling schedule shall be revised and updated every year through rotation of the day of the week for the scheduled sampling program, except when the actual scheduled monitoring frequency is three (3) or more times per week.
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 Procedure F-10-1, "Procedures for Sampling and Analysis Requirements for Municipal and Private Sewage Treatment Works (Liquid Waste Streams Only), as amended;
 - b. the Ministry's publication "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater Version 2.0" (January 2016), PIBS 2724e02, as amended;
 - c. the publication "Standard Methods for the Examination of Water and Wastewater", as amended; and
 - d. for any parameters not mentioned in the documents referenced in Paragraphs 2.a, 2.b and 2.c, the written approval of the District Manager shall be obtained prior to sampling.
3. The Owner shall monitor and record the flow rate and daily quantity using flow measuring devices or other methods of measurement as approved below calibrated to an accuracy within plus or minus 15 per

cent (+/- 15%) of the actual flowrate of the following:

- a. Influent flow to the Works estimated by the Final Effluent flow;
 - b. Final Effluent discharged from the Works by a continuous flow measuring device and instrumentations;
4. 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.

8. REPORTING

1. The Owner shall report to the District Manager orally **as soon as possible** any non-compliance with the compliance limits specified in Condition 5, and in writing within **seven (7) days** of non-compliance.
2. In addition to the obligations under Part X of the EPA and O. Reg. 675/98 (Classification and Exemption of Spills and Reporting of Discharges) made under the EPA, the Owner shall, within **fifteen (15) days** of the occurrence of any reportable spill as provided in Part X of the EPA and O. Reg. 675/98, submit a full written report of the occurrence to the District Manager describing the cause and discovery of the spill, clean-up and recovery measures taken, preventative measures to be taken and a 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 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 Influent monitoring data, and a review of the historical trend of the sewage characteristics and flow rates;
 - b. a summary and interpretation of all Final Effluent monitoring data, including concentration, flow rates, and a comparison to the design objectives and compliance limits in this Approval, including an overview of the success and adequacy of the Works;
 - c. a summary of any deviation from the monitoring schedule and reasons for the current reporting year and a schedule for the next reporting year;
 - d. a summary of all operating issues encountered and corrective actions taken;
 - e. a summary of all normal and emergency repairs and maintenance activities carried out on any major

structure, equipment, apparatus or mechanism forming part of the Works;

- f. a summary of any effluent quality assurance or control measures undertaken;
- g. a summary of the calibration and maintenance carried out on all Influent and Final Effluent monitoring equipment to ensure that the accuracy is within the tolerance of that equipment as required in this Approval or recommended by the manufacturer;
- h. a summary of efforts made to achieve the design objectives in this Approval, including an assessment of the issues and recommendations for pro-active actions when any of the design objectives is not achieved more than 50% of the time in a year or there is an increasing trend in deterioration of Final Effluent quality;
- i. a tabulation of the volume of sludge generated, 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;
- j. a summary of any complaints received and any steps taken to address the complaints;
- k. a summary of all situations outside Normal Operating Conditions and spills within the meaning of Part X of EPA and abnormal discharge events;
- l. any changes or updates to the schedule for the completion of construction and commissioning operation of major process(es) / equipment groups in the Proposed Works;
- m. any other information the District Manager requires from time to time.

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

1. Condition 1 regarding general provisions is imposed to ensure that the Works are constructed and operated in the manner in which they were described and upon which approval was granted.
2. Condition 2 regarding change of Owner and Operating Agency is included to ensure that the Ministry records are kept accurate and current with respect to ownership and Operating Agency of the 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 regarding construction of Proposed Works is included to ensure that the Works are constructed in a timely manner so that standards applicable at the time of Approval of the Works are still applicable at the time of construction to ensure the ongoing protection of the environment, and that prior to the commencement of construction of the portion of the Works that are approved in principle only, the Director will have the opportunity to review detailed design drawings, specifications and an engineer's report containing detailed design calculations for that portion of the Works, to determine capability to comply with the Ministry's requirements stipulated in the terms and conditions of the Approval, and also ensure that the Works are constructed in accordance with the Approval and that record drawings of the

Works "as constructed" are updated and maintained for future references.

4. Condition 4 regarding design objectives is imposed to establish non-enforceable design objectives to be used as a mechanism to trigger corrective action proactively and voluntarily before environmental impairment occurs.
5. Condition 5 regarding compliance limits is imposed to ensure that the Final Effluent discharged from the Works to the environment meets the Ministry's effluent quality requirements.
6. Condition 6 regarding operation and maintenance 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. 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.
7. Condition 7 regarding monitoring and recording 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 compliance limits.
8. Condition 8 regarding reporting 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 this Approval.

Schedule A

1. Application for Environmental Compliance Approval dated April 25, 2023 and received on May 11, 2023, submitted by K. Smart Associates Limited on behalf of 2823976 Ontario Limited for the proposed sanitary sewage treatment system, including the design report, final plans and specifications.
2. Letter re. Application for Sewage Works MECP Ref. Number 3219-CRQNVZ, 520 County Road 14, Leamington, Ontario, Response to Comments, dated November 20, 2023 and prepared by Sandra Swanton, P.Eng. of K. Smart Associates Limited.

Schedule B

Final Effluent Compliance Limits

Effluent Parameter	Monthly Average Effluent Concentration ¹ Limits (milligrams per litre unless otherwise indicated)	
	Summer (May 1 to October 31)	Winter (November 1 to April 30)
<i>Column 1</i>	<i>Column 2</i>	<i>Column 3</i>
CBOD5	10.0	15.0
Total Suspended Solids (TSS)	10.0	15.0
Total Phosphorus (TP)	0.3	0.3
Total Ammonia Nitrogen (TAN) ²	2.0	3.0
<i>E. coli.</i>	100 CFU/100 millilitres ³	100 CFU/100 millilitres ³
pH	6.0 - 9.5	6.0 - 9.5

Note 1: The limit of *E.coli.* is calculated as Monthly Geometric Mean Density specified in **Schedule D**.

Note 2: During the commissioning stage within **six (6) months** of the date of start-up, an interim compliance limit applies for the Total Ammonia Nitrogen (TAN) as: 4.0 milligrams per litre during Summer (May 1 to October 31), or 6.0 milligrams per litre during Winter (November 1 to April 30).

Note 3: If the MPN method is used for *E. coli* analysis, the limit shall be 100 MPN/100 millilitres.

Schedule C

Monitoring Program

Influent - Influent sampling point (Page 2)

Parameters	Sample Type	Minimum Frequency
BOD5	Grab	Monthly
Total Suspended Solids	Grab	Monthly
Total Phosphorus	Grab	Monthly
Total Ammonia Nitrogen	Grab	Monthly
Total Kjeldahl Nitrogen	Grab	Monthly
pH	Grab/Probe/Analyzer	Monthly

Final Effluent - Final Effluent sampling point (Page 4)

Parameters	Sample Type	Minimum Frequency
CBOD5	8 hour composite	Weekly
Total Suspended Solids	8 hour composite	Weekly
Total Phosphorus	8 hour composite	Weekly
Total Ammonia Nitrogen	8 hour composite	Weekly
<i>E. coli</i>	Grab	Weekly
pH*	Grab/Probe/Analyzer	Weekly
Temperature*	Grab/Probe/Analyzer	Weekly

*pH and temperature of the Final Effluent shall be determined in the field at the time of sampling for Total Ammonia Nitrogen.

Schedule C (Cont'd)

Sludge/Biosolids – Sludge Tank

Parameters	Sample Type	Minimum Frequency
Total Solids	Grab	Annually
Total Phosphorus	Grab	Annually
Total Ammonia Nitrogen	Grab	Annually
Nitrate as Nitrogen	Grab	Annually
Metal Scan - Arsenic - Cadmium - Cobalt - Chromium - Copper - Lead - Mercury - Molybdenum - Nickel - Potassium - Selenium - Zinc	Grab	Annually

Schedule D

Methodology for Calculating and Reporting Monthly Geometric Mean Density

Geometric mean is defined as the n^{th} root of the product of n numbers. In the context of calculating Monthly Geometric Mean Density for *E. coli*, the following formula shall be used:

$$\sqrt[n]{x_1 x_2 x_3 \cdots x_n}$$

in which,

" n " is the number of samples collected during the calendar month; and

" x " is the value of each Single Sample Result.

For example, four weekly grab samples were collected and tested for *E. coli* during the calendar month. The *E. coli* densities in the Final Effluent were found below:

Sample Number	<i>E. coli</i> Densities* (CFU/100 mL)
1	10
2	100
3	300
4	50

The Geometric Mean Density for these data:

$$\sqrt[4]{10 \times 100 \times 300 \times 50} = 62$$

*If a particular result is zero (0), then a value of one (1) will be substituted into the calculation of the Monthly Geometric Mean Density. If the MPN method is utilized for *E. coli* analysis, values in the table shall be MPN/100 mL.

In accordance with Section 139 of the *Environmental Protection Act*, you may by written notice served upon me, the Ontario Land 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 ("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:

Registrar*
Ontario Land Tribunal
655 Bay Street, Suite 1500
Toronto, Ontario
M5G 1E5
OLT.Registrar@ontario.ca

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 Ontario Land Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349 or 1 (866) 448-2248, or www.olt.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 23rd day of January, 2024



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

SW/

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