

AMENDED ENVIRONMENTAL COMPLIANCE APPROVAL

NUMBER 1483-C983AZ
 Issue Date: March 31, 2022

Pure Flavor Farms Inc.
 459 Highway 77 Hwy
 Leamington, Ontario
 N8H 3X4

Site Location: 966 Highway 77
 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:

establishment, usage and operation of new non-municipal sewage Works, for the treatment of **sanitary** sewage from the existing and new bunkhouses, greenhouse, warehouse and office facilities and disposal of Final Effluent to a municipal drain - Lundy Drain via a Sewage Treatment Plant and Final Effluent disposal facilities as follows:

Service Area

- proposed new Phases 3 and 4 greenhouse development for accommodating a total of 240 workers residing on-site, up to 30 staff residing off-site, and 7 loading docks
- existing Phases 1 and 2 greenhouse development for accommodating a total of 130 workers residing on-site, up to 20 staff residing off-site, and 6 loading docks

Design Capacity of Sewage Treatment Plant

Design Capacity with All Treatment Trains in Operation	Prior to Completion of Construction of All Proposed Works	Upon Completion of Construction of All Proposed Works
Rated Capacity	45,000 litres per day	110,000 litre per day (1.27 litres per second)

PROPOSED WORKS

sewage treatment and surface discharge works serving Phases 3 and 4 greenhouse development, having a Rated Capacity of 65,000 litres per day for raw sewage, and additional polishing capacity for accepting the final effluent from Existing Works, consisting of the following:

Primary Treatment

- two (2) oil and grease interceptors (OG1 and OG2), each having a minimum volume capacity of 17,700 litre, receiving sewage from Phase 3 or Phase 4 kitchens, each discharging to a flow equalization tank (EQ/PS1 or EQ/PS2);
- two (2) flow equalization tanks EQ/PS1 and EQ/PS2, operating in parallel, each receiving the effluent from the oil and grease interceptor (OG1 or OG2) and other sanitary sewage, each having a total volume capacity of 33,500 litres including an active storage volume of 26,000 litres and a contingency storage volume of 7,500 litres, each equipped with duplex grinder pumps rated at a discharge rate of 1.80 litres per second over a Total Dynamic Head (TDH) of 4.5 metres (EQ/PS1) and 13.7 metres (EQ/PS2) respectively, discharging into a primary sedimentation tank SS1/PC;
- one (1) primary sedimentation tank SS1/PC comprised of two (2) chambers - one for primary settling and sludge storage and the other for primary clarification, having a total volume capacity of 60,000 litres, accepting nitrified effluent recirculated from the Moving Bed Biofilm Reactor (MBBR) treatment unit and supernatant overflow from the secondary sludge storage tank SS2, as well as flows from the equalization tanks EQ/PS1 and EQ/PS2, with sludge discharged periodically using vacuum truck;
- discharge pipe from the second chamber of primary sedimentation tank SS1/PC, with a forcemain connection accepting final effluent from existing sewage treatment system serving Phases 1 and 2 development, discharging into a MBBR influent pump station (PS3);
- one (1) MBBR influent pump station (PS3), having a volume capacity of 15,000 cubic metres, equipped with duplex pumps each rated at a discharge rate of 2.04 litres per second over an TDH of 5.0 metres, receiving effluent from the primary sedimentation tank SS1/PC and final effluent from existing Phases 1 and 2 sewage treatment system, discharging into MBBR cells;
- one (1) alkalinity dosing unit, injecting chemical into the primary sedimentation tank SS1/PC, or the influent of MBBR influent pump station;

Secondary Treatment

- two (2) Moving Bed Biofilm Reactor (MBBR) cells, operating in series, having a total volume capacity of 59,400 litres, containing a combined volume of 20 cubic metres of engineered plastic carrier media that provides 10,000 square metres of media surface area, equipped with fine bubble diffuser aeration systems, air blowers, and effluent recirculation pump (for flow re-circulating to the primary sedimentation tank SS1/PC), discharging effluent into a final clarifier;

- one (1) chemical dosing unit injecting coagulant into the MBBR effluent;
- one (1) final clarifier (FC), having a total surface area of 12.8 square metres with hopper bottom and overall dimensions of 4.27 metres x 3.0 metres x 2.7 metres (H), equipped with sludge return pump and surface skimmer pump, discharging sludge into a sludge storage tank SS2, and discharging effluent via gravity into a filter feed well;
- one (1) secondary sludge storage tank SS2, consisting of two chambers and having a total volume capacity of 60,000 litres, accepting waste activated sludge from the final clarifier, with sludge removed periodically by vacuum truck and supernatant discharged to primary sedimentation tank SS1/PC;

Tertiary Treatment

- one (1) filter feed well equipped with duplex effluent pumps to convey secondary effluent from the final clarifier (FC) to a 100 micron bag filter, and an elevated flash mix channel for gravity discharge to a roller cloth filter;
- one (1) chemical dosing unit (provisional) injecting polymer or coagulant into the final clarifier (FC) effluent;
- one (1) 0.91 m wide by 0.53 metre high roller cloth filter with a rated hydraulic capacity of 1.80 litre per second, with 20 micron roughing membrane and 5 micron polishing membrane, discharging filtered effluent into an ultraviolet (UV) disinfection system;
- one (1) Trojan Model UV3050K-PTP UV disinfection unit (or approved Equivalent Equipment), having a maximum treatment capacity of 3.47 litres per second;

Final Effluent Disposal Facilities

- gravity sewer to discharge the Final Effluent from the UV disinfection unit to the Lundy Drain;

Final Effluent Flow Measurement and Sampling Point

- one (1) flow meter on the 50 millimetre diameter pipe from the filter feed well to the roller cloth filter for the measurement of Final Effluent;
- Sampling Point of Final Effluent: downstream of the UV disinfection unit; and

Miscellaneous

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

EXISTING WORKS

sewage treatment and surface discharge works serving Phases 1 and 2 greenhouse development, having a Rated Capacity of 45,000 litres per day, consisting of the following:

- one (1) grease interceptor, having a total working capacity of 6,590 litres, receiving sewage from existing bunkhouse kitchen and discharging into an existing septic tank;
- one (1) Existing Septic Tank No.1, having a total working capacity of 29,500 litres, receiving sewage from existing bunkhouse sewer and the aforementioned existing grease interceptor and discharging into an existing pump tank;
- one (1) dosing tank to be utilized as a pump tank, discharging effluent into proposed new septic tank #3;
- one (1) grease interceptor consisting of two (2) tanks, having a total working capacity of 7,500 litres, receiving sewage from the new bunkhouse kitchen and discharging into septic tanks;
- three (3) septic tanks (New Septic Tanks No.1, 2 and 3), operating in series, each having a total working capacity of 29,500 litres, receiving sewage from the new grease interceptor and other building sewers and discharging into a Biofilter dosing tank;
- one (1) Biofilter dosing tank, having a volume capacity of 31,800 litres, equipped with two pumps each having a rated capacity of 220 litres per minute at a Total Dynamic Head (TDH) of 12.0 metres, discharging into a Waterloo Biofilter tertiary treatment unit:
- one (1) Waterloo Biofilter tertiary treatment unit comprising the following:
 - four (4) 31,800 litre precast tanks (Biofilter Tanks No. 1, 2, 3 and 4), operating in parallel and inter-connected each other, each tank comprising spray unit and mesh baskets filled with Biofilter media, equipped with a total of 80 cubic metres of Biofilter media, complete with one (1) effluent pump to dose the Biofilter polishing media and two (2) alternating effluent pumps recirculating a portion (up to 100%) of the polished effluent to the New Septic Tank No. 2 and discharging effluent into an ultraviolet (UV) disinfection unit;
 - one (1) existing 20,400 litre precast tank to be utilized as a polishing tank, inter-connected with Biofilter Tank No. 1, comprising spray units and mesh baskets filled with Biofilter media, equipped with a total of 15 cubic metres of Biofilter media;
- two (2) Hallett 30 1.5" UV disinfection units to provide 3 log inactivation of fecal coliforms, discharging into a sand filter dosing tank;
- one (1) 9,100 litre sand filter dosing tank, equipped with two (2) effluent pumps each rated at 205 litres per minute to alternate dosing a bag filter;

- one (1) 0.18 metre diameter and 0.8 metres high bag filter, discharging into a sand filter;
- one (1) 0.36 metre diameter and 1.65 metres high sand filter, complete with back-wash system, discharging final effluent to the aforementioned discharge pipe from the second chamber of primary sedimentation tank SS1/PC of Phases 3 and 4 sewage works for further treatment;
- one (1) chemical dosing system, injecting coagulant to the inlet of new Septic Tank No.2 and sand filter dosing tank; and
- including all other mechanical system, electrical system, instrumentation and control system, standby power system, piping, pumps, valves and appurtenances essential for the proper, safe and reliable operation of the Works in accordance with this Approval, in the context of process performance and general principles of wastewater engineering only.

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

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

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. "Final Effluent" means effluent that is discharged to the environment through the approved effluent disposal facilities, including all Bypasses, that are required to meet the compliance limits stipulated in the Approval for the Sewage Treatment Plant at the Final Effluent sampling point(s);
11. "Grab Sample" 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;
12. "Influent" means flows to the Sewage Treatment Plant from the collection system;
13. "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, as amended;
14. "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;
15. "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;
16. "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 D**;
17. "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;
18. "Operating Authority" 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;
19. "Owner" means any person that is responsible for the establishment of the Works being approved by this Approval, and includes Owner's Legal Name and its successors and assignees;
20. "OWRA" means the *Ontario Water Resources Act* , R.S.O. 1990, c. O.40;
21. "Peak Daily Flow Rate" (also referred to as maximum daily flow or maximum day 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;

22. "Proposed Works" means those portions of the Works included in the Approval that are under construction or to be constructed;
23. "Rated Capacity" means designed Peak Daily Flow Rate for which the Works are approved to handle;
24. "Sewage Treatment Plant" means all the facilities related to sewage treatment within the sewage treatment plant site excluding the Final Effluent disposal facilities;
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 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 AUTHORITY

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* , as amended, shall be included in the notification;

- 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. C.39* , as amended, 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 Operating Authority;
 - b. change of Operating Authority, including address of new Operating Authority.
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 environmental compliance approval number.

3. CONSTRUCTION OF PROPOSED WORKS / RECORD DRAWINGS

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. The Owner shall ensure that the treatment technologies are installed in accordance with the manufacturer's installation manual.
3. 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.
4. 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.
5. 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.

4. DESIGN OBJECTIVES

1. The Owner shall design and undertake everything practicable to operate the Sewage Treatment Plant 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 is within the Rated Capacity of the Sewage Treatment Plant.

5. COMPLIANCE LIMITS

1. The Owner shall operate and maintain the Sewage Treatment Plant such that compliance limits for the Final Effluent parameters listed in the table included in **Schedule B** are met.
2. The Owner shall operate and maintain the Sewage Treatment Plant such that the Final Effluent is disinfected continuously year-round, or during operation for seasonal operation.

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 follow-up 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 Authority possesses the level of training and experience sufficient to allow safe and environmentally sound operation of the Works.
 5. 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 prior to discharging the sewage to the flow equalization tanks.
 6. 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.
 7. 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.

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
 - 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/month for the scheduled sampling program, except when the actual scheduled monitoring frequency is three (3) or more times per week.
 - e. The measurement frequencies specified in **Schedule C** in respect to any parameter may, after **two (2) years** of monitoring in accordance with this Condition, be modified by the Director in writing.
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 3.a, 3.b and 3.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 Sewage Treatment Plant by instrumentations/pumping rates;
 - b. Final Effluent discharged from the Sewage Treatment Plant by continuous flow measuring devices.
 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. One week prior to the start up of the operation of the Proposed Works, the Owner shall notify the District Manager (in writing) of the pending start up date.
2. The Owner shall report to the District Manager orally as soon as possible any non-compliance with the effluent compliance limits, and in writing within seven (7) days of non-compliance.
3. 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), the Owner shall, within fifteen (15) days of the occurrence of any reportable spill as provided in Part X of the EPA and Ontario Regulation 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.
4. The Owner shall, upon request, make all manuals, plans, records, data, procedures and supporting documentation available to Ministry staff.
5. The Owner shall prepare performance reports on a calendar year basis and submit to the District Manager in an electronic format by March 31 of the calendar year following the period being reported upon. The reports shall contain, but shall not be limited to, the following information pertaining to the reporting period:
 - 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 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;
- i. a summary of any complaints received and any steps taken to address the complaints;
- j. a summary of all other situations outside Normal Operating Conditions and spills within the meaning of Part X of EPA and abnormal discharge events;
- k. 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; and
- l. any other information the District Manager requires from time to time.

9. DECOMMISSIONING OF UN-USED SEWAGE WORKS

- 1. The Owner shall properly abandon any portion of unused existing sewage works, as directed below, and upon completion of decommissioning report in writing to the District Manager.
 - a. any sewage pipes leading from building structures to unused sewage works components shall be disconnected and capped; and
 - b. any unused septic tanks, holding tanks and pump chambers shall be completely emptied of its content by a licensed hauler and either be removed, crushed and backfilled, or be filled with granular material.

Schedule A

1. Application for Environmental Compliance Approval dated July 30, 2021 and received on August 3, 2021, and submitted by Jamie Moracci, President, Pure Flavor Farms Inc., for the proposed expansion of sanitary sewage treatment and surface discharge works, including design brief, engineering drawings and specifications.

Schedule B

Table 1 - Final Effluent Compliance Limits

Effluent Parameter	Monthly Average Concentration*¹ Limits (milligrams per litre unless otherwise indicated)	
	Summer (May 01 to October 31)	Winter (November 01 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

Note*¹: The limit of *E.coli.* is for monthly Geometric Mean Density.

Note*²: During commissioning stage, **six (6) months** after the date of start-up, an interim compliance limit applies for the Total Ammonia Nitrogen (TAN) as: 4.0 mg/l during Summer (May 01 to October 31), or 6.0 mg/L during Winter (November 01 to April 3).

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

Schedule C - Monitoring Program

Table 2 - Influent Monitoring

Sample locations	1) Equalization Tank EQ/PS1 or EQ/PS2 (Phases 3 and 4); and 2) The outlet of either New or Existing Septic Tank No.1 (Phases 1 and 2)
Frequency	Monthly
Sample Type	Grab
Parameters	BOD5, Total Suspended Solids, Total Phosphorus, Total Ammonia Nitrogen, Total Kjeldahl Nitrogen, pH

Table 3 - Final Effluent Monitoring

Sample location	Final Effluent from the UV disinfection unit, prior to discharging into the Lundy Drain
Frequency	Weekly
Sample Type	Minimum 8-hour Composite (except <i>E.Coli.</i> , pH, and Temperature)
Parameters	CBOD5, Total Suspended Solids, Total Ammonia Nitrogen, Total Phosphorus, <i>E. coli.</i> (grab), pH*(grab/probe/analyzer), and Temperature*(grab/probe/analyzer)

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

Table 4 - Sludge/Biosolids Sampling

– Primary Sedimentation Tank (SS2/PC) & Sludge Storage Tank (SS2), as one combined sample

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.

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 Authority is included to ensure that the Ministry records are kept accurate and current with respect to ownership and Operating Authority 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/record drawings 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.
9. Condition 9 is included to ensure that any components of un-used sewage works are properly decommissioned.

Upon issuance of the environmental compliance approval, I hereby revoke Approval No(s). 0623-AHAKQE issued on February 10, 2017.

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 Notice") shall state:

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

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

The Notice should also include:

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

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

This Notice must be served upon:

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

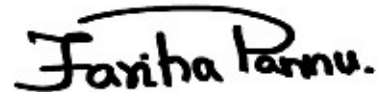
The Director appointed for the purposes of
Part II.1 of the *Environmental Protection Act*
Ministry of the Environment,
Conservation and Parks
135 St. Clair Avenue West, 1st Floor
Toronto, Ontario
M4V 1P5

* **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 31st day of March, 2022



Fariha Pannu, 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
Richard Pellerin, Sco-Terra Consulting Group Limited