

AMENDED ENVIRONMENTAL COMPLIANCE APPROVAL

NUMBER 8843-D5WLLX
Issue Date: June 26, 2024

Fern Resort Limited
4432 Fern Resort Rd
Ramara, Ontario
L3V 0Z1

Site Location: 4432 Fern Resort Road
Township of Ramara, County of Simcoe, Ontario
L3V 0Z1

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:

usage and operation of existing non-municipal Works, for the treatment of sanitary sewage from the Fern Resort (including existing facilities and proposed modular housing units described below) and disposal of treated effluent to Sucker Creek (then to Lake Couchiching) via an existing Sewage Treatment Plant (a membrane bioreactor treatment system) and Final Effluent disposal facilities as follows:

Classification of Sewage Treatment Plant: Tertiary

Details of Service Area:

- **Type of Occupancy:** Year-round Commercial Residential
- **Type and Number of Units:**
 - Existing cottages and inns, consisting of a total of one hundred and five (105) units
 - Proposed thirty-five (35) modular housing units (for resort staff)

Design Capacity of Sewage Treatment Plant:

Design Capacity with All Treatment Trains in Operation	Existing Works
Rated Capacity	163 cubic metres per day

Influent and Imported Sewage

Receiving Location	Types
In Collection System	Sanitary sewage
At Sewage Treatment Plant	Not applicable

Proposed Pumping Chamber and Forcemain (Regulated under the OBC)

- a pre-cast pumping chamber equipped with two (2) sewage pumps, receiving raw sewage from the proposed thirty-five (35) modular housing units located near the southeast corner of the site (near the intersection of Rama Road and Fern Resort Road), and discharging via a forcemain to the existing anoxic mixing tank of the existing Sewage Treatment Plant described below;

EXISTING WORKS

Sanitary Sewage Pumping Station (Regulated under the OBC)

- existing 2.4 metres x 2.4 metres x 1.36 metres deep wet well;
- two (2) grinder pumps, each having a rated capacity of 5.1 litres per second at 19 metres total dynamic head;
- existing forcemain to the Sewage Treatment Plant;

Influent Flow Measurement and Sampling Point

- flow measurement device located at the existing pumping station described above;
- sampling of influent at the existing pumping station;

Sewage Treatment Plant - Membrane Bioreactor (MBR)

- a 4.90 metre diameter x 6.10 metre depth sewage treatment tank with a 44.4 cubic metre flow equalization zone, a 19.4 cubic metre anoxic zone and a 50.0 cubic metre aerobic zone;
- a ZenoGem system consisting of the following:
 - nine (9) ZeeBlok membrane modules, with permeate and air scour header manifold pipes;
 - two (2) permeate pumps;

- two (2) air blowers and air diffusers;
- one (1) permeate storage tank and one (1) backwash pump;
- one (1) sodium hydroxide tank and one (1) dosing pump;
- one (1) sodium aluminate dosing pump;
- one (1) airlift pump located in the membrane tank, dosing the anoxic tank;
- a UV disinfection system;

Final Effluent Flow Measurement and Sampling Point

- flow measurement device at the outlet, upstream of the receiver;
- sampling of effluent at the outlet, upstream of the receiver;

Final Effluent Disposal Facilities

- connection to the existing outfall discharging to Sucker Creek to Lake Couchiching;

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 Average Daily Influent Flow" means the cumulative total sewage flow of Influent to the Sewage Treatment Plant during a calendar year divided by the number of days during which sewage was flowing to the Sewage Treatment Plant that 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. "Bypass" means diversion of sewage around one or more treatment processes, excluding Preliminary Treatment System, within the Sewage Treatment Plant with the diverted sewage flows being returned to the Sewage Treatment Plant treatment train upstream of the Final Effluent sampling point(s) and

discharged via the approved effluent disposal facilities;

5. "CBOD5" means five day carbonaceous (nitrification inhibited) biochemical oxygen demand measured in an unfiltered sample;
6. "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;
7. "District Manager" means the District Manager of the appropriate local district office of the Ministry where the Works is geographically located;
8. "*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);
9. "EPA" means the *Environmental Protection Act* , R.S.O. 1990, c.E.19;
10. "Event" means an action or occurrence, at a given location within the Works that causes a Bypass or Overflow. An Event ends when there is no recurrence of Bypass or Overflow in the 12-hour period following the last Bypass or Overflow. Overflows and Bypasses are separate Events even when they occur concurrently;
11. "Existing Works" means those portions of the Works included in the Approval that have been constructed previously;
12. "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);
13. "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;
14. "Influent" means flows to the Sewage Treatment Plant from the collection system;
15. "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;
16. "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, calculated and

reported as per the methodology specified in Schedule E;

17. "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 E;
18. "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;
19. "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;
20. "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;
21. "Overflow" means a discharge to the environment from the Works at designed location(s) other than the approved effluent disposal facilities or via the effluent disposal facilities downstream of the Final Effluent sampling point;
22. "Owner" means Fern Resort Limited, including any successors and assignees;
23. "OWRA" means the *Ontario Water Resources Act* , R.S.O. 1990, c. O.40;
24. "Preliminary Treatment System" means all facilities in the Sewage Treatment Plant associated with screening and grit removal;
25. "Procedure F-5-1" means the Ministry guidance document titled "Procedure F-5-1 - Determination of Treatment Requirements for Municipal and Private Sewage Treatment Works Discharging to Surface Waters " dated May 2, 2019;
26. "Rated Capacity" means the Annual Average Daily Influent Flow for which the Sewage Treatment Plant is designed to handle;
27. "Sewage Treatment Plant" means all the facilities related to sewage treatment within the sewage treatment plant site excluding the Final Effluent disposal facilities;
28. "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;
29. "Works" means the approved sewage works, and includes Existing 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* , 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 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. RECORD DRAWINGS

1. A set of record drawings of the Works 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. BYPASSES

1. Any Bypass is prohibited, except:
 - a. an emergency Bypass when a structural, mechanical or electrical failure causes a temporary reduction in the capacity of a treatment process or when an unforeseen flow condition exceeds the design capacity of a treatment process that is likely to result in personal injury, loss of life, health hazard, basement flooding, severe property damage, equipment damage or treatment process upset, if a portion of the flow is not bypassed;
2. Notwithstanding the exceptions given in Paragraph 1, the Operating Agency shall undertake everything practicable to maximize the flow through the downstream treatment process(es) prior to bypassing.
3. At the beginning of a Bypass Event, the Owner shall immediately notify the Spills Action Centre (SAC) and the local Medical Officer of Health. This notice shall include, at a minimum, the following information:
 - a. the type of the Bypass as indicated in Paragraph 1 and the reason(s) for the Bypass;
 - b. the date and time of the beginning of the Bypass;
 - c. the treatment process(es) gone through prior to the Bypass and the treatment process(es) bypassed;
 - d. the effort(s) done to maximize the flow through the downstream treatment process(es) and the reason(s) why the Bypass was not avoided.
4. Upon confirmation of the end of a Bypass Event, the Owner shall immediately notify the SAC and the local Medical Officer of Health. This notice shall include, at a minimum, the following information:
 - a. the date and time of the end of the Bypass;
 - b. the estimated or measured volume of Bypass.
5. For any Bypass Event, the Owner shall collect daily sample(s) of the Final Effluent, inclusive of the Event and analyze for all effluent parameters outlined in Compliance Limits condition that require composite samples, following the same protocol specified in the Monitoring and Recording condition for the regular samples. The sample(s) shall be in addition to the regular Final Effluent samples required under the monitoring and recording condition. If the Event occurs on a scheduled monitoring day, the regular sampling requirements prevail. If representative sample for the effluent parameter(s) that require grab sample cannot be obtained, they shall be collected after the Event at the earliest time when situation

returns to normal.

6. The Owner shall develop a notification procedure in consultation with the District Manager and SAC and notify the public and downstream water users that may be adversely impacted by any Bypass Event.

5. OVERFLOWS

1. Any Overflow is prohibited, except:
 - a. an emergency Overflow in an emergency situation when a structural, mechanical or electrical failure causes a temporary reduction in the capacity of the Works or when an unforeseen flow condition exceeds the design capacity of the Works that is likely to result in personal injury, loss of life, health hazard, basement flooding, severe property damage, equipment damage or treatment process upset, if a portion of the flow is not overflowed;
2. Notwithstanding the exceptions given in Paragraph 1, the Operating Agency shall undertake everything practicable to maximize the flow through the downstream treatment process(es) and Bypass(es) prior to overflowing.
3. At the beginning of an Overflow Event, the Owner shall immediately notify the SAC and the local Medical Officer of Health. This notice shall include, at a minimum, the following information:
 - a. the type of the Overflow as indicated in Paragraph 1 and the reason(s) for the Overflow;
 - b. the date and time of the beginning of the Overflow;
 - c. the point of the Overflow from the Works, the treatment process(es) gone through prior to the Overflow, the disinfection status of the Overflow and whether the Overflow is discharged through the effluent disposal facilities or an alternate location;
 - d. the effort(s) done to maximize the flow through the downstream treatment process(es) and Bypass(es) and the reason(s) why the Overflow was not avoided.
4. Upon confirmation of the end of an Overflow Event, the Owner shall immediately notify the SAC and the local Medical Officer of Health. This notice shall include, at a minimum, the following information:
 - a. the date and time of the end of the Overflow;
 - b. the estimated or measured volume of the Overflow.
5. For any Overflow Event
 - a. in the Sewage Treatment Plant, the Owner shall collect grab sample(s) of the Overflow, one near the beginning of the Event and one every eight (8) hours for the duration of the Event, and have them analyzed at least for CBOD5, total suspended solids, total phosphorus, *E. coli.* , except that raw

sewage and primary treated effluent Overflow shall be analyzed for BOD5, total suspended solids, total phosphorus and total Kjeldahl nitrogen only.

- b. at a sewage pumping station in the collection system, the Owner shall collect at least one (1) grab sample representative of the Overflow Event and have it analyzed for BOD5, total suspended solids, total phosphorus and total Kjeldahl nitrogen.
6. The Owner shall develop a notification procedure in consultation with the District Manager and SAC and notify the public and downstream water users that may be adversely impacted by any Overflow Event.

6. 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 parameters design objectives listed in the table(s) included in **Schedule B**.
 - b. 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.
 - c. Annual Average Daily Influent Flow is within the Design Capacity of the Sewage Treatment Plant.

7. 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(s) included in **Schedule C** are met.
2. The Owner shall operate and maintain the Sewage Treatment Plant such that the Final Effluent is disinfected continuously year-round.

8. 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 maintain and follow the operations manual for the 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, including procedures to minimize Bypasses and Overflows;
 - 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 ensure that the flow of sewage into the Sewage Treatment Plant does not exceed the rated capacity of 163 cubic metres per day.
 6. 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. The Owner shall ensure that all grease interceptors on site be cleaned out **at least twice per year**, or more frequently as determined by the Works operator, for removal of fats, oil and grease from the kitchen wastewater.
 8. The Owner shall ensure that any treatment tank(s) containing sludge be inspected **at least twice per**

year, and the sewage sludge accumulated in the tank(s) be periodically withdrawn at the frequency required to maintain efficiency of the treatment system.

9. 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.
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.

9. 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 D** 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. Quarterly means once every three months;
 - 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 Sewage Treatment Plant by continuous flow measuring devices and instrumentations;
 - b. Final Effluent discharged from the Sewage Treatment Plant by continuous flow measuring devices 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.

10. 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 7, 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), 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.
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 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 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 Bypasses, Overflows, other situations outside Normal Operating Conditions and spills within the meaning of Part X of EPA and abnormal discharge events;
- l. a summary of efforts made to achieve conformance with Procedure F-5-1 including but not limited to projects undertaken and completed in the sanitary sewer system that result in overall Bypass/Overflow elimination including expenditures and proposed projects to eliminate Bypass/Overflows with estimated budget forecast for the year following that for which the report is submitted;
- 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 record drawings is included to 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 Bypasses is included to indicate that Bypass is prohibited, except in circumstances where the failure to Bypass could result in greater damage to the environment than the Bypass itself. The notification and documentation requirements allow the Ministry to take action in an informed manner and will ensure the Owner is aware of the extent and frequency of Bypass Events.
5. Condition 5 regarding Overflows is included to indicate that Overflow of untreated or partially treated sewage to the receiver is prohibited, except in circumstances where the failure to Overflow could result in greater damage to the environment than the Overflow itself. The notification and documentation requirements allow the Ministry to take action in an informed manner and will ensure the Owner is aware of the extent and frequency of Overflow Events.
6. Condition 6 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.
7. Condition 7 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.
8. Condition 8 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.
9. Condition 9 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.
10. Condition 10 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 submitted by Fern Resort Limited, dated March 23, 2023 and received on June 16, 2023, for the Municipal and Private Sewage Works, including the design report, final plans and specifications.
2. Letter re. MECP ECA Amendment Application - Fern Resort (ECA No. 8233-CBMM8G) - Revision 1, dated June 10, 2024 and prepared by EnVision Consultants Ltd.

Schedule B

Final Effluent Design Objectives

Concentration Objectives

Final Effluent Parameter	Averaging Calculator	Objective
CBOD5	Monthly Average Effluent Concentration	5.0 mg/L
Total Suspended Solids	Monthly Average Effluent Concentration	5.0 mg/L
Total Phosphorus	Monthly Average Effluent Concentration	0.1 mg/L
(Ammonia + Ammonium) Nitrogen	Monthly Average Effluent Concentration	1.0 mg/L (May 1 - November 31) 3.0 mg/L (December 1 - April 30)
<i>E. coli</i>	Monthly Geometric Mean Density	100 CFU*/100 mL
pH	Single Sample Result	6.5 - 8.5 inclusive

*If the MPN method is utilized for *E. coli* analysis the objective shall be 100 MPN/100 mL

Schedule C

Final Effluent Compliance Limits

Concentration Limits

Final Effluent Parameter	Averaging Calculator	Limit (maximum unless otherwise indicated)
CBOD5	Monthly Average Effluent Concentration	10.0 mg/L
Total Suspended Solids	Monthly Average Effluent Concentration	10.0 mg/L
Total Phosphorus	Monthly Average Effluent Concentration	0.25 mg/L
(Ammonia + Ammonium) Nitrogen	Monthly Average Effluent Concentration	2.0 mg/L (May 1 - November 31) 4.0 mg/L (December 1 - April 30)
<i>E. coli</i>	Monthly Geometric Mean Density	200 CFU*/100 mL
pH	Single Sample Result	between 6.0 - 9.5 inclusive

*If the MPN method is utilized for *E. coli* analysis the limit shall be 200 MPN/100 mL

Schedule D

Monitoring Program

Influent - Influent sampling point

Parameters	Sample Type	Minimum Frequency
BOD5	Composite	Quarterly
Total Suspended Solids	Composite	Quarterly
Total Phosphorus	Composite	Quarterly
Total Kjeldahl Nitrogen	Composite	Quarterly

Final Effluent - Final Effluent sampling point

Parameters	Sample Type	Minimum Frequency
CBOD5	Composite	Weekly
Total Suspended Solids	Composite	Weekly
Total Phosphorus	Composite	Weekly
(Ammonia + Ammonium) Nitrogen	Composite	Weekly
<i>E. coli</i>	Grab	Weekly
pH	Grab	Weekly
Temperature	Grab	Weekly

Schedule E

Methodology for Calculating and Reporting Monthly Average Effluent Concentration and Monthly Geometric Mean Density

1. Monthly Average Effluent Concentration

- Step 1: Calculate the arithmetic mean of all Single Sample Results of the concentration of a contaminant in the Final Effluent sampled or measured during a calendar month and proceed as follows depending on the result of the calculation:
- If the arithmetic mean does not exceed the compliance limit for the contaminant, then report and use this arithmetic mean as the Monthly Average Effluent Concentration for this parameter where applicable in this Approval;
 - If the arithmetic mean exceeds the compliance limit for the contaminant and there was no Bypass Event during the calendar month, then report and use this arithmetic mean as the Monthly Average Effluent Concentration for this parameter where applicable in this Approval;
 - If the arithmetic mean exceeds the compliance limit for the contaminant and there was Bypass Event(s) during the calendar month, then proceed to Step 2;
 - If the arithmetic mean does not exceed the compliance limit for the contaminant and there was Bypass Event(s) during the calendar month, the Owner may still elect to proceed to Step 2 calculation of the flow-weighted arithmetic mean.
- Step 2: Calculate the flow-weighted arithmetic mean of all Single Sample Results of the concentration of a contaminant in the Final Effluent sampled or measured during a calendar month and proceed depending on the result of the calculation:
- Group No Bypass Days (**NBPD**) data and Bypass Days (**BPD**) data during a calendar month separately;
 - Calculate the arithmetic mean of all Single Sample Results of the concentration of a contaminant in the Final Effluent sampled or measured on all NBPD during a calendar month and record it as **Monthly Average NBPD Effluent Concentration**;
 - Obtain the “**Total Monthly NBPD Flow**” which is the total amount of Final Effluent discharged on all NBPD during the calendar month;
 - Calculate the arithmetic mean of all Single Sample Results of the concentration of a contaminant in the Final Effluent sampled or measured on all BPD during a calendar month and record it as **Monthly Average BPD Effluent Concentration**;

- e. Obtain the “**Total Monthly BPD Flow**” which is the total amount of Final Effluent discharged on all BPD during the calendar month;
- f. Calculate the flow-weighted arithmetic mean using the following formula:

$$\frac{[(\text{Monthly Average NBPD Effluent Concentration} \times \text{Total Monthly NBPD Flow}) + (\text{Monthly Average BPD Effluent Concentration} \times \text{Total Monthly BPD Flow})]}{(\text{Total Monthly NBPD Flow} + \text{Total Monthly BPD Flow})}$$

It should be noted that in this method, if there are no Bypass Event for the month, the calculated result would be the same as the non-flow-weighted arithmetic mean method;

- g. Report and use the lesser of the flow-weighted arithmetic mean obtained in Step 2 and the arithmetic mean obtained in Step 1 as the Monthly Average Effluent Concentration for this parameter where applicable in this Approval.

2. 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.

**Upon issuance of the environmental compliance approval, I hereby revoke Approval No(s).
8233-CBMM8G issued on March 14, 2022.**

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 26th day of June, 2024

A handwritten signature in black ink that reads "Aziz Ahmed". The signature is written in a cursive style and is underlined with a single horizontal line.

Aziz Ahmed, P.Eng.

Director

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

SW/

c: District Manager, MECP Barrie District Office
Michael Varty, P.Eng., EnVision Consultants Ltd.