Ontario

Ministry of the Environment, Conservation and Parks

Ministère de l'Environnement, de la Protection de la nature et des Parcs

ENVIRONMENTAL COMPLIANCE APPROVAL
NUMBER A-500-8367927014
Version: 1.0
Issue Date: November 18, 2026

Pursuant to section 20.3 of the *Environmental Protection Act*, Revised Statutes of Ontario (R.S.O.) 1990, c. E. 19 and subject to all other applicable Acts or regulations this Environmental Compliance Approval is issued to:

SANDUSK CREEK PROPERTIES LTD.

705 FOUNTAIN STREET NORTH
CAMBRIDGE ONTARIO
N3H 4R7

For the following site:

38 Cheapside Road , Selkirk, HALDIMAND, ONTARIO, CANADA, N0A 1L0

Upon issuance of the environmental compliance approval, I hereby revoke Approval No(s) 0006-8VPPS3, issued on July 23, 2012.

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:

Upgrades to, replacement, modification, usage and operation of a Sanitary Sewage Treatment Plant for the collection, transmission, treatment, and disposal of domestic sewage from the existing Shelter Cove development, located at the above site, with the discharge of Final Effluent to the Cheapside Road east ditch (a dry-ditch receiver) upstream of Sandusk Creek, consisting of the following:

Service Area of the Works
• existing Shelter Cove development (Phase 1A) with a total of 180 residential units
• future Phase 1B with additional 180 residential units

Design Daily Flow of the Works

	Units	Maximum Daily Flow	Projected Average Daily Flow
existing development	180	70 cubic metres per day (m^3/day)	56 m^3/day
future Phase 1B	360	140 m^3/day	112 m^3/day

Note: this Approval is for the existing development with a Maximum Daily Flow of 70 m^3/day

PROPOSED WORKS

Replacement of the existing Rotating Biological Contactor (RBC) system with a Moving Bed Biofilm Reactor (MBBR) treatment system designed to operate at a rated treatment capacity to handle 70 m^3/day of Maximum Daily Flow, together with associated process improvements, including chemically enhanced primary sedimentation utilizing the existing primary settlement tank, pre-anoxic denitrification through recirculation of MBBR nitrified effluent to primary treatment at up to 200% of the projected average daily flow; utilizing and retrofitting of the existing flow equalization tank, re-aeration chamber and final clarifiers; and installation of additional instrumentation, controls and other related appurtenances, as follows:

Flow Equalization Tank

- utilization and retrofitting of existing 20 m^3 equalization tank (EQ-1A), receiving raw sewage from the existing influent pumping station and discharging into the primary sedimentation tank;

Primary Sedimentation Tank

- utilization of existing primary sedimentation tank (located under previous RBC unit), having approximate dimensions of 3.65 metres (m) x 6.25 m x 2.36 m deep and an approximate volume of 53.8 m^3, to provide primary clarification as well as primary and secondary sludge storage, and to receive recirculated effluent from the MBBR system at a rate up to 200% of the projected average daily flow of 56 m^3/day;

Influent (to MBBR) Pump Station PS2

- retrofitting of existing west final clarifier, to be operated as influent pump station, complete with duplex submersible pumps, receiving primary and recycled nitrified effluent from the primary sedimentation tank and discharging into the MBBR system via a 50 millimetre (mm) diameter forcemain;

Moving Bed Biofilm Reactor (MBBR) System

- one (1) influent flow meter;
- provision for alkalinity supplement through manual or automated addition of alkali such as sodium carbonate (solubilized soda ash) into the primary sedimentation tank or influent pump station PS2 to MBBR system, as required to support biological nitrification and a provision for a potential future treatment capacity of up to 140 m^3/day at maximum carrier media fill fraction (subject to an amendment of this Approval);

- one (1) containerized Moving Bed Biofilm Reactor (MBBR) consisting of two (2) reactor units, designated as MBBR-1 and MBBR-2, having a rated treatment capacity to handle a Maximum Daily Flow of 70 m^3/day, with a total reactor volume capacity of approximately 55 m^3 (27.8 m^3 for MBBR-1 and 27.2 m^3 for MBBR-2), containing a combined minimum volume of 18 m^3 of engineered plastic carrier media providing a minimum total media surface area of 9,000 square metres (m^2), complete with fine bubble membrane diffuser aeration system, air blowers, and effluent recirculation pump for returning a portion of treated effluent (up to 200% of projected average daily flow of 56 m^3/day) to the primary sedimentation tank, discharging the remaining treated effluent via gravity to the final clarifier;
- one (1) chemical dosing system for the addition of an approved chemical precipitant (alum, PAC, Clariphos or equivalent alternate) with dosing to the primary sedimentation tank, at the discharge of recirculated effluent from the MBBR-2;

Final Clarifier

- utilization of an existing east final clarifier, complete with air-lift sludge removal and surface skimmer assembly for return of secondary sludge to the primary sedimentation chamber, with final clarifier effluent discharged by gravity to the filter feed well; and

Re-aeration Chamber

- utilization of an existing re-aeration chamber for effluent dissolved oxygen (DO) entrainment, equipped with fine bubble membrane diffuser or equivalent aeration equipment;

Miscellaneous

- all other mechanical, electrical, instrumentation and control systems, piping, pumps, valves, structures, and appurtenances essential for the proper, safe, and reliable operation of the Proposed Works in accordance with this Approval and generally accepted wastewater engineering practices.

EXISTING WORKS

Influent Pumping Station PS1

- one (1) influent pumping station consisting of a 9.0 m^3 capacity wet well and two (2) submersible pumps, each rated to deliver 4.9 litres per second (L/s) against a total dynamic head (TDH) of 15 m;

Filter Feed Well

- utilization of the existing filter feed well with duplex effluent pump arrangement to convey secondary effluent discharged from the final clarifier to the head tank of a sand filter (DynaSand filter) described below;

Secondary Chemical Addition

- Provisional chemical addition (precipitant or precipitant-flocculant) to the final clarifier or filter feed well;

Tertiary Filtration

- one (1) continuous backwash, up-flow sand filter (DynaSand filter) for supplementary solids polishing and particulate phosphorus removal following final clarification and pre-filtration (provisional), with filtrate discharge to an ultraviolet (UV) disinfection system;

Ultraviolet Disinfection

- one (1) ultra-violet (UV) disinfection treatment unit (Model Trojan PTP3000-3075) within the tertiary treatment and control room for Final Effluent disinfection;

Final Effluent Discharge System

- Final Effluent discharge pipeline from the re-aeration chamber, 150 mm diameter pipeline approximately 600 m in length, discharging Final Effluent by gravity to the Cheapside Road east ditch, upstream of Sandusk Creek;
- one (1) ultrasonic effluent flow meter located on the discharge pipeline for the measurement of Final Effluent;
- one Final Effluent sampling point for the Final Effluent from the re-aeration chamber; and

Miscellaneous

- all other mechanical, electrical, instrumentation and control systems, piping, pumps, valves, structures, and appurtenances essential for the proper, safe, and reliable operation of the Existing Works in accordance with this Approval and generally accepted wastewater engineering practices.

All in accordance with the submitted supporting documents outlined in **Schedule 1.**

DEFINITIONS

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

1. 1. "Approval" means this entire Environmental Compliance Approval and any Schedules attached to it;

   2. "BOD5" (also known as TBOD5) means five day biochemical oxygen demand measured in an unfiltered sample and includes carbonaceous and nitrogenous oxygen demands;

   3. "CBOD5" means five day carbonaceous (nitrification inhibited) biochemical oxygen demand measured in an unfiltered sample;

   4. "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;

   5. "District Manager" means the District Manager of Hamilton District Office, the appropriate local district office of the Ministry where the Works is geographically located;

   6. "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);

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

   8. "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;.

   9. "Existing Works" means those portions of the Works included in the Approval that have been constructed previously;

   10. "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 Sewage Treatment Plant at the Final Effluent sampling point(s);

   11. "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;

   12. "Limited Operational Flexibility" (LOF) means the conditions that the Owner shall follow in order to undertake any modification that is pre-authorized as part of this

Approval;.

13. "Maximum Daily Flow" (also referred to as Peak Daily Flow Rate, Maximum Day Flow, or rated treatment capacity) 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;
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 Average Daily Effluent Flow" means the cumulative total Final Effluent discharged during a calendar month divided by the number of days during which Final Effluent was discharged that month;
17. Monthly Average Daily Effluent Loading" means the value obtained by multiplying the Monthly Average Effluent Concentration of a contaminant by the Monthly Average Daily Effluent Flow over the same 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 6;**
19. "Normal Operating Condition" means the condition when all unit process(es) in a treatment train is operating within its design capacity;
20. "Operating Agency" means the Owner, or the person or entity that is authorized by the Owner for the management, operation, maintenance, or alteration of the Works in accordance with this Approval;
21. "Owner" means Sandusk Creek Properties Ltd., including any successors and assignees;
22. "OWRA" means the *Ontario Water Resources Act*, R.S.O. 1990, c. O.40;
23. "Proposed Works" means those portions of the Works included in the Approval that are under construction or to be constructed;
24. "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; and
25. "Works" means the approved sewage works, and includes Proposed Works, Existing Works and modifications made under Limited Operational Flexibility.

TERMS AND CONDITIONS

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

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.
    4. The issuance of, and compliance with the conditions of this Approval does not:
        a. relieve any person of any obligation to comply with any provision of any applicable statute, regulation or other legal requirement, including, but not limited to, the obligation to obtain approval from the local conservation authority necessary to construct or operate the Works; or
        b. limit in any way the authority of the Ministry to require certain steps be taken to require the Owner to furnish any further information related to compliance with this Approval.

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; and
        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; and

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 the proposed expansion and modification of the Works, the Owner shall prepare and submit a written statement to the District Manager, certified by a Licensed Engineering Practitioner, that the Works is constructed in accordance with this Approval.

3. 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 Works in accordance with the following objectives:

a. Final Effluent parameters design objectives listed in the table included in **Schedule 2.**

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 discolouration on the surface receiving waters.

c. The Final Effluent discharge rate is not exceeding the Maximum Daily Flow of 70

m^3/day for the existing Shelter Cove development.

5. **COMPLIANCE LIMITS**

    1. The Owner shall operate and maintain the Works such that compliance limits for the Final Effluent listed in the table included in **Schedule 3** are met.

    2. The Owner shall operate and maintain the Works such that the Final Effluent is disinfected continuously year-round.

    3. Prior to the future Phase 1B development, the Owner shall submit to the District Manager for approval, a secondary receiver impact assessment of the receiver (Sandusk Creek) for the future rated treatment capacity with Maximum Daily Flow of 140 m^3/day. The assessment shall be completed by a qualified person, and shall include an assimilative capacity study and an assessment of the expected impacts to aquatic life and other water uses downstream.

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; and

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 Agency possesses the level of training and experience sufficient to allow safe and environmentally sound operation of the Works.

5. The Owner shall have a valid written agreement with a hauler that is approved by the Ministry or registered on the Environmental Activity and Sector Registry, for the treatment and disposal of the sludge generated from the Works, at all times during operation of the Works.

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. **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 4** 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 the 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. The measurement frequencies specified in **Schedule 4** in respect to any parameter may, after **three (3) 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 2.a, 2.b and 2.c, the written approval of the District Manager shall be obtained prior to sampling.
3. The Owner shall conduct the approved receiving water monitoring program as outlined in the letter report Re:"Workplan for Water Monitoring at Shelter Cove, Sewage Treatment Plant, Nanticoke, Ontario” dated September 17, 2017, prepared by GHD. Any modifications or changes to the approved monitoring program should be submitted for approval by the Hamilton District Office prior to being implemented.
4. 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
   a. Influent flow to the Sanitary Sewage Treatment Plant by continuous flow measuring devices, or instrumentations/pumping rates; and
   b. Final Effluent discharged from the Sanitary Sewage Treatment Plant by continuous flow measuring devices.
5. The Owner shall retain for a minimum of five (5) years from the date of their creation, all records and information related to or resulting from the monitoring activities required by this Approval.

8. **LIMITED OPERATIONAL FLEXIBILITY**

1. The Owner may make pre-authorized modifications to the Works in accordance with the document"Limited Operational Flexibility - Protocol for Pre-Authorized Modifications to Private Works" (**Schedule 5**), as amended, subject to the following:

    a. the modifications will not involve the addition of any new treatment process or the removal of an existing treatment process, including chemical systems, from the liquid or solids treatment trains as originally designed and approved.

    b. the scope and technical aspects of the modifications are in line with those delineated in **Schedule 5** and conform with the Ministry's publication "Design Guidelines for Sewage Works 2008", as amended, Ministry's regulations, policies, guidelines, and industry engineering standards;

    c. the modifications shall not negatively impact on the performance of any process or equipment in the Works or result in deterioration in the Final Effluent quality; and

    d. where the pre-authorized modification requires notification, a"Notice of Modifications to Sewage Works" (**Schedule 5**), as amended shall be completed with declarations from a Licensed Engineering Practitioner and the Owner and retained on-site prior to the scheduled implementation date. All supporting information including technical memorandum, engineering plans and specifications, as applicable and appropriate to support the declarations that the modifications conform with LOF shall remain on-site for future inspection.

2. The following modifications are not pre-authorized under Limited Operational Flexibility:

    a. Modifications that involve addition or extension of process structures, tankages or channels;

    b. Modifications that involve relocation of the Final Effluent outfall or any other discharge location or that may require reassessment of the impact to the receiver or environment;

    c. Modifications that involve addition of or change in technology of a treatment process or that may involve reassessment of the treatment train process design;

    d. Modifications that require changes to be made to the emergency response, spill prevention and contingency plan; or

    e. Modifications that are required pursuant to an order issued by the Ministry.

9. **REPORTING**

1. The Owner shall report to the District Manager orally as soon as possible any non-

compliance with the compliance limits specified in this Approval 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 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. the collected Final Effluent monitoring data as well as a summary and interpretation, 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. all receiver monitoring data collected as required under the conditions of the Approval (**Tables 3A and 3B of Schedule 4, condition 7.3 and Condition 10**) including whether data was collected under baseflow conditions.
    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 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 summary of the Sludge/Biosolids Sampling results (required by **Table 4 of Schedule 4**), and 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. a summary of all Notice of Modifications to Sewage Works completed under **Paragraph 1.d. of Condition 8,** including a report on status of implementation of all modification; and

m. any other information the District Manager requires from time to time.

10. **Receiver sediment and biological monitoring**

1. The Owner shall conduct in-stream receiver sediment and biological (using benthic macroinvertebrate community assessment) monitoring in Sandusk Creek on an annual basis for a period of **three (3) years** during the fall sampling window (September-October).

2. The Owner shall use best efforts to ensure that the receiver sediment and biological monitoring is completed in accordance with the methods as described in the letter report Re:"Workplan for Water Monitoring at Shelter Cove, Sewage Treatment Plant, Nanticoke, Ontario" dated September 17, 2017, prepared by GHD.

3. By **Nov 15th, annually over the three-year period,** a letter should be submitted to the District Manager that identifies that the approved sediment and biological monitoring program was completed for that year.

4. Within **three (3) months** of the completion of the three (3) year monitoring program, a detailed final assessment summary report shall be submitted to the District Manager, which shall be completed by a qualified person and shall include, but not be limited to, a) all the collected raw sediment and biological monitoring data as well as the water quality monitoring and flow data collected under **Tables 3A and 3B of Schedule 4** including a summary, review, analysis and interpretation of the data, b) an assessment of the impact of the sewage treatment plant discharge on the receiving waters and any identified receptors including comparison to upstream conditions and historic data and c) conclusions and recommendations including future mitigation and contingency measures to be implemented if applicable.

5. Following submission of the final assessment summary report, receiver sediment and biological monitoring may be eliminated or the frequency modified by the District Manager upon request in writing.

11. **RESPONSIBILITY AGREEMENT**
    1. The Owner shall take all reasonable steps to enter into a duly signed Responsibility Agreement with Municipality of Haldimand prior to the construction of the Works approved herein in accordance with the Ministry Procedure D-5-2 entitled"Application of Municipal Responsibility for Communal Water and Sewage Services".
    2. The Owner shall provide written confirmation that the Responsibility Agreement was entered into, including the effective date of the Responsibility Agreement, to the Director and the District Manager.

REASONS

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/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 and that the Works does not cause any impairment to the receiving watercourse.
8. Condition 8 regarding Limited Operational Flexibility is included to ensure that the Works are constructed, maintained and operated in accordance with the Approval, and that any pre-approved modification will not negatively impact on the performance of the Works.
9. Condition 9 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 so that the Ministry can work with the Owner in resolving any problems in a timely manner.
10. Condition 10 regarding receiver sediment and biological monitoring is included to enable the Owner to evaluate the surface water quality impact of the effluent discharge on the quality of the receiver and any identified receptors to ensure compliance with the ministry’s policies and guidelines and allow for implementation of future recommendations and/or mitigation and contingency measures as applicable.
11. Condition 11 is included to ensure that there is a Responsibility Agreement in place between the Owner and the Municipality prior to construction of the Works so that, in the event that the Owner is unable to continue to provide sewage service, the Municipality may be able to assume ownership and operation of the Works.

APPEAL PROVISIONS

In accordance with Section 139 of the *Environmental Protection Act*, you may by written notice served upon me and the Ontario Land Tribunal, within 15 days after the service of this notice, require a hearing by the Tribunal. You must also provide notice to, the Minister of the Environment, Conservation and Parks in accordance with Section 47 of the *Environmental Bill of Rights*, 1993 who 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:

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

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

The Notice should also include:

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	and	The Director appointed for the purposes of Part II.1 of the *Environmental Protection Act* Ministry of the Environment, Conservation and Parks 40 St. Clair Avenue West, 2nd

	Toronto, Ontario M7A 2J3	Floor Toronto, Ontario M4V 1M2

*** 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 Ontario Land Tribunal's**

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 Environmental Registry of Ontario, 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 18th day of November, 2026



Fariha Pannu

Director

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

c: Matthew Sheedy, SANDUSK CREEK PROPERTIES LTD.
Richard Pellerin, Sco-Terra Consulting Group Limited

The following schedules are a part of this environmental compliance approval:

SCHEDULE 1

Application for Environmental Compliance Approval dated July 14, 2025, 2025 and submitted by Matthew Sheedy, President of SANDUSK CREEK PROPERTIES LTD, for the upgrades and modifications of sanitary sewage treatment plant, including design brief, engineering drawings and specifications.

SCHEDULE 2

Design Objectives for the Final Effluent of the Sanitary Sewage Treatment Plant

Final Effluent Parameter	**Averaging Calculator**	**Concentration Objectives** (maximum unless otherwise indicated)
Total Suspended Solids (TSS)	Monthly Average Effluent Concentration	5.0 mg/L*
CBOD5	Monthly Average Effluent Concentration	5.0 mg/L
Total Phosphorus (TP)	Monthly Average Effluent Concentration	0.2 mg/L
Total Ammonia-Nitrogen (TAN)	Monthly Average Effluent Concentration	1.0 mg/L
E. coli	Monthly Geometric Mean Density	50 CFU/100 mL**
pH	Single Sample Result	6.5-8.5 inclusive
Dissolved Oxygen (DO)	Weekly Average***	greater than 8.0 mg/L

Note*: mg/L means milligrams per litre.
Note**: If the MPN method is utilized for E. coli analysis the objective shall be 50 MPN/100 mL
Note***:"Weekly Average" means the cumulative total of all 30-minute on-line readings of Dissolved Oxygen (DO) divided by the number of readings in a Week.

SCHEDULE 3

Compliance Limits for the Final Effluent of the Sanitary Sewage Treatment Plant

Final Effluent Parameter	**Concentration Limits**		**Loading Limits** (Monthly Average Daily Effluent Loading)
	Averaging Calculator	Concentration Limits	
Total Suspended Solids (TSS)	Monthly Average Effluent Concentration	10.0 mg/L*****	0.7 kg/day*****
CBOD5	Monthly Average Effluent Concentration	10.0 mg/L	0.7 kg/day
Total Phosphorus (TP)	Monthly Average Effluent Concentration	0.2 mg/L (Apr 1 to Oct 31) 0.3 mg/L (Nov 1 to March 31)	0.014 kg/day (Apr 1 to Oct 31) 0.021 kg/day (Nov 1 to March 31)
Total Ammonia Nitrogen (TAN)	Monthly Average Effluent Concentration	2.0 mg/L (Apr 1 to Oct 31) 3.0 mg/L (Nov 1 to March 31)	/
E. coli	Monthly Geometric Mean Density	****** 100 CFU/100 mL	/
pH	Single Sample Result	6.0 to 9.0, inclusive	/
Dissolved Oxygen (DO)	Weekly Average	greater than 6.0 mg/L	/

Note*: mg/L means milligrams per litre; and kg/day mean kilograms per day.
Note**: If the MPN method is utilized for E. coli analysis the objective shall be 100 MPN/100 mL
Note***:"Weekly Average" means the cumulative total of all 30-minute on-line readings of Dissolved Oxygen (DO) divided by the number of readings in a Week.

SCHEDULE 4

Monitoring Program

Table 1 - Influent Monitoring - Sanitary Sewage Treatment Plant

Sampling Point: at the outlet from the existing equalization tank EQ-1A		
Sampling Parameters	**Sampling Type**	**Minimum Frequency**
Total Suspended Solids (TSS)	grab	Monthly
BOD5	grab	Monthly
Total Phosphorus (TP)	grab	Monthly
Total Kjeldahl Nitrogen (TKN)	grab	Monthly

Table 2 - Final Effluent Monitoring -Sanitary Sewage Treatment Plant

Sampling Point: the Final Effluent from the Re-aeration Chamber, prior to discharging into the Cheapside Road east ditch		
Sampling Parameters	**Sampling Type**	**Minimum Frequency**
Total Suspended Solids (TSS)	24-hour composite*****	Weekly
CBOD5	24-hour composite	Weekly
Total Phosphorus (TP)	24-hour composite	Weekly
Total Ammonia Nitrogen (TAN)	24-hour composite	Weekly
Unionized Ammonia******	(Calculated)	Weekly
Nitrate as Nitrogen, and Nitrite as Nitrogen	24-hour composite	Weekly
E. Coli	grab	Weekly
pH (field)	grab/on-site	Weekly/on-line
Temperature (field)	grab	Weekly
Dissolved Oxygen (DO)	on-site	on-line

Note ***:** 24-hour composite sample means a time-composite sample and constitutes of an integrated sample made up of blending 24 hourly aliquots taken by refrigerated autosampler, which are obtained at an hourly frequency having same sample volume

Note ****:** The temperature and pH shall be determined in the field at the time of sampling for Total Ammonia Nitrogen. The concentration of Un-ionized Ammonia shall be calculated using the total ammonia concentrations, pH and temperature using the methodology stipulated in"Ontario's Provincial Water Quality Objectives (PWQO)" dated July 1994, as amended, for Ammonia (unionized).

Table 3A - Sandusk Creek Water Quality Monitoring

Two sampling locations to be sampled under baseflow conditions (if possible):
1) a reference upstream station (approximately 300m upstream): and
2) a reference Downstream station (within 50m of dry-ditch outfall to Sandusk Creek),
as per GHD's September 1, 2017 approved Workplan for Water Monitoring at Shelter Cove.

Sampling Parameters	Sampling Type	Minimum Frequency
Total Suspended Solids (TSS)	grab	Monthly
CBOD5	grab	Monthly
Total Phosphorus (TP)	grab	Monthly
Total Ammonia Nitrogen (TAN)	grab	Monthly
Unionized Ammonia*	(Calculated)	Monthly
Nitrate as Nitrogen and Nitrite as Nitrogen	grab	Monthly
E. Coli	grab	Monthly
pH (field)	grab	Monthly
Dissolved Oxygen (DO) (field)	grab	Monthly
Temperature (field)	grab	Monthly
Hydrogen Sulphide*	grab	As required**

Note*: The temperature and pH shall be determined in the field at the time of sampling for Total Ammonia Nitrogen. The concentration of Un-ionized Ammonia shall be calculated using the total ammonia concentrations, pH and temperature using the methodology stipulated in"Ontario's Provincial Water Quality Objectives (PWQO)" dated July 1994, as amended, for Ammonia (unionized).
Note **:** At least twice during ice cover period.

Table 3B - Sandusk Creek Water Flow Monitoring

Flow monitoring Frequency	Monthly (June to October) during baseflow conditions and on the same date as water quality monitoring
Flow monitoring Location	Should be representative of flow conditions in Sandusk Creek near the dry-ditch discharge outlet location into Sandusk Creek

Table 4 Sludge/Biosolids Sampling

– Primary Sedimentation Tank & Sludge Storage Tanks AA1A and SS1B, as one combined sample

Parameters	Sampling 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, and Zinc.	grab	Annually

SCHEDULE 5

Limited Operational Flexibility
Protocol for Pre-Authorized Modifications to Works

1. **General**
    1. Pre-authorized modifications are permitted only where Limited Operational Flexibility has already been granted in the Approval and only permitted to be made at the pumping stations and sewage treatment plant in the Works, subject to the conditions of the Approval.
    2. Where there is a conflict between the types and scope of pre-authorized modifications listed in this document, and the Approval where Limited Operational Flexibility has been granted, the Approval shall take precedence.
    3. The Owner shall consult the District Manager on any proposed modifications that may fall within the scope and intention of the Limited Operational Flexibility but is not listed explicitly or included as an example in this document.
    4. The Owner shall ensure that any pre-authorized modifications will not:
        a. adversely affect the hydraulic profile of the Sewage Treatment Plant or the performance of any upstream or downstream processes, both in terms of hydraulics and treatment performance;
        b. result in new Overflow or Bypass locations, or any potential increase in frequency or quantity of Overflow(s) or Bypass(es).
        c. result in a reduction in the required Peak Flow Rate of the treatment process or equipment as originally designed.
2. **Modifications that do not require pre-authorization:**
    1. Works that are exempt from Ministry approval requirements;
    2. Modifications to the electrical system, instrumentation and control system.
3. **Pre-authorized modifications that do not require preparation of "Notice of Modification to Sewage Works"**
    1. Normal or emergency maintenance activities, such as repairs, renovations, refurbishments and replacements with Equivalent Equipment, or other improvements to an existing approved piece of equipment of a treatment process do not require pre-authorization. Examples of these activities are:
        a. Repairing a piece of equipment and putting it back into operation, including

replacement of minor components such as belts, gear boxes, seals, bearings;

b. Repairing a piece of equipment by replacing a major component of the equipment such as motor, with the same make and model or another with the same or very close power rating but the capacity of the pump or blower will still be essentially the same as originally designed and approved;

c. Replacing the entire piece of equipment with Equivalent Equipment.

2. Improvements to equipment efficiency or treatment process control do not require pre-authorization. Examples of these activities are:

a. Adding variable frequency drive to pumps;

b. Adding on-line analyzer, dissolved oxygen probe, ORP probe, flow measurement or other process control device.

4. **Pre-Authorized Modifications that require preparation of "Notice of Modification to Sewage Works"**

1. Pumping Stations

a. Replacement or realignment of existing sewers including manholes, valves, gates, weirs and associated appurtenances provided that the modifications will not add new influent source(s) or result in an increase in flow from existing sources as originally approved.

b. Extension or partition of wetwell to increase retention time for emergency response and improve station maintenance and pump operation;

c. Replacement or installation of inlet screens to the wetwell;

d. Replacement or installation of flowmeters;

e. Replacement, reconfiguration and modifications to pump suctions and discharge pipings including valve, gates, motors, variable frequency drives and associated appurtenances to maintain firm pumping capacity or modulate the pump rate provided that the modifications will not result in a reduction in the firm pumping capacity or discharge head or an increase in the peak pumping rate of the pumping station as originally designed;

f. Replacement or realignment of existing forcemain(s) including valves, gates, and associated appurtenances provided that the modifications will not reduce the flow capacity or increase the total dynamic head and transient in the forcemain.

2. Sewage Treatment Plant

1. Sewers and appurtenances
    a. Replacement or realignment of existing sewers (including pipes and channels), including manholes, valves, gates, weirs and associated appurtenances within the sewage treatment plant, provided that the modifications will not add new influent source(s) or result in an increase in flow from existing sources as originally approved and that the modifications will remove hydraulic bottlenecks or improve the conveyance of sewage into and through the Works.

2. Flow Distribution Chambers/Splitters
    a. Replacement or modification of existing flow distribution chamber/splitters or construction of new flow distribution chamber/splitters, including replacements or installation of sluice gates, weirs, valves for distribution of flows to the downstream process trains, provided that the modifications will not result in a change in flow distribution ratio to the downstream process trains as originally designed.

3. Imported Sewage Receiving Facility
    a. Replacement or relocation of loading bays, connect/disconnect hook-up systems and unloading/transferring systems;
    b. Replacement or relocation of screens, grit removal units and compactors;
    c. Replacement or relocation of pumps, such as dosing pumps and transfer pumps, valves, piping and appurtenances;
    d. Replacement or relocation of storage tanks/chambers and spill containment systems;
    e. Replacement, relocation or installation of flow measurement and sampling equipment.

4. Preliminary Treatment System
    a. Replacement of existing screens and grit removal units with equipment of the same or higher process performance technology, including where necessary replacement or upgrading of existing screenings dewatering washing compactors, hydrocyclones, grit classifiers, grit pumps, air blowers conveyor system, disposal bins and other ancillary equipment to the screening and grit removal processes.
    b. Replacement of channel aeration systems, including air blowers, air supply main, air headers, air laterals, air distribution grids and diffusers.

5. Primary Treatment System

a. Replacement of existing sludge removal mechanism, including sludge chamber;

b. Replacement of scum removal mechanism, including scum chamber;

c. Replacement of primary sludge pumps, scum pumps, provided that:the modifications will not result in a reduction in the firm pumping capacity or discharge head that the primary sludge pump(s) and scum pump(s) are originally designed to handle.

6. Secondary Treatment System

1. Biological Treatment

a. Conversion of complete mix aeration tank to plug-flow multi-pass aeration tank, including modifications to internal structural configuration;

b. Addition of inlet gates in multi-pass aeration tank for step-feed operation mode;

c. Partitioning of an anoxic/flip zone in the inlet of the aeration tank, including installation of submersible mixer(s);

d. Replacement of aeration system including air blowers, air supply main, air headers, air laterals, air distribution grids and diffusers, provided that the modifications will not result in a reduction in the firm capacity or discharge pressure that the blowers are originally designed to supply or in the net oxygen transferred to the wastewater required for biological treatment as originally required.

2. Secondary Sedimentation

a. Replacement of sludge removal mechanism, including sludge chamber;

b. Replacement of scum removal mechanism, including scum chamber;

c. Replacement of return activated sludge pump(s), waste activated sludge pump(s), scum pump(s), provided that the modifications will not result in a reduction in the firm pumping capacity or discharge head that the activated sludge pump(s) and scum pump(s) are originally designed to handle.

7. Post-Secondary Treatment System

a. Replacement of filtration system with equipment of the same filtration

technology, including feed pumps, backwash pumps, filter reject pumps, filtrate extract pumps, holding tanks associated with the pumping system, provided that the modifications will not result in a reduction in the capacity of the filtration system as originally designed.

8. Disinfection System
    1. UV Irradiation
        a. Replacement of UV irradiation system, provided that the modifications will not result in a reduction in the design capacity of the disinfection system or the radiation level as originally designed.
    2. Chlorination/Dechlorination and Ozonation Systems
        a. Extension and reconfiguration of contact tank to increase retention time for effective disinfection and reduce dead zones and minimize short-circuiting;
        b. Replacement of chemical storage tanks, provided that the tanks are provided with effective spill containment.
9. Supplementary Treatment Systems
    1. Chemical systems
        a. Replacement or relocation of chemical storage tanks for existing chemical systems only, provided that the tanks are sited with effective spill containment;
        b. Replacement of chemical dosing pumps provided that the modifications will not result in a reduction in the firm capacity that the dosing pumps are originally designed to handle.
        c. Relocation and addition of chemical dosing point(s) including chemical feed pipes and valves and controls, to improve phosphorus removal efficiency;
        d. Use of an alternate chemical provided that it is a non-proprietary product and is a commonly used alternative to the chemical approved in the Works, provided that the chemical storage tanks, chemical dosing pumps, feed pipes and controls are also upgraded, as necessary.
10. Sludge Management System
    1. Sludge Holding and Thickening

a. Replacement of sludge holding tanks, sludge handling pumps, such as transfer pumps, feed pumps, recirculation pumps, provided that modifications will not result in reduction in the solids storage or handling capacities;

2. Sludge Digestion
    a. Replacement of digesters, sludge handling pumps, such as transfer pumps, feed pumps, recirculation pumps, provided that modifications will not result in reduction in the solids storage or handling capacities;
    b. replacement of sludge digester covers.

3. Sludge Dewatering and Disposal
    a. Replacement of sludge dewatering equipment, sludge handling pumps, such as transfer pumps, feed pumps, cake pumps, loading pumps, provided that modifications will not result in reduction in solids storage or handling capacities.

11. Standby Power System
    a. Replacement or installation of standby power system, including feed from alternate power grid, emergency power generator, fuel supply and storage systems, provided that the existing standby power generation capacity is not reduced.

12. Lagoons
    a. installing baffles in lagoon provided that the operating capacity of the lagoon system is not reduced;
    b. raise top elevation of lagoon berms to increase free-board;
    c. replace interconnecting pipes and chambers between cells, provided that the process design operating sequence is not changed;
    d. replace mechanical aerators, or replace mechanical aerators with diffused aeration system provided that the mixing and aeration capacity are not reduced;
    e. removal of accumulated sludge and disposal to an approved location offsite.

3. Final Effluent Disposal Facilities
    a. Replacement or realignment of the Final Effluent channel, sewer or forcemain,

including manholes, valves and appurtenances from the end of the treatment train to the discharge outfall section, provided that the sewer conveys only effluent discharged from the Sewage Treatment Plant and that the replacement or re-aligned sewer has similar dimensions and performance criteria and is in the same or approximately the same location and that the hydraulic capacity will not be reduced.

The following contains an image of the form entitled"Notice of Modification to Sewage Works". A digital copy can be obtained from the District Manager.

Ontario

Ministry of the Environment, Conservation and Parks

Notice of Modification to Sewage Works

RETAIN COPY OF COMPLETED FORM AS PART OF THE ECA ON-SITE PRIOR TO THE SCHEDULED IMPLEMENTATION DATE.

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

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

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

ECA Owner	Municipality

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

(Attach a detailed description of the sewage works)

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

Part 3 – Declaration by Professional Engineer

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

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

Name (Print)	PEO License Number

Signature	Date (mm/dd/yy)

Name of Employer

Part 4 – Declaration by Owner

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

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

Name of Owner Representative (Print)	Owner representative's title (Print)

Owner Representative's Signature	Date (mm/dd/yy)

EAPB Form July 26, 2018

SCHEDULE 6

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	E. coli 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.