

AMENDED ENVIRONMENTAL COMPLIANCE APPROVALNUMBER 1799-ARBJGR
Issue Date: October 31, 2017

The Corporation of Haldimand County
282 Argyle St S
Caledonia, Ontario
N3W 1K7

Site Location: Townsend Lagoons and Townsend Biosolids Storage Facility
Lot 22 & 23, Concession 13
Townsend, Haldimand County

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:

Sewage Works

usage and operation of existing municipal sewage works in accordance with Section 53 of OWRA, for the transmission, treatment of sanitary sewage and disposal of effluent to Nanticoke Creek via a Sewage Treatment Plant (Townsend Lagoons) as follows:

Classification of Collection System: Separate Sewer System

Capacity of Sewage Treatment Plant:

- **Rated Capacity:** 2,095 m³/d

Previous Works:

Main Sewage Pumping Station

- a wet well/dry well type sewage pumping station located on the west side of Townline Road, just south of Nanticoke Creek, equipped with two (2) submersible pumps (one standby), each rated at 81 L/s at 22 m TDH;

- 15 hp centrifugal type air blower for wet well aeration;
- a 165 kW diesel generator set;
- a 400 mm diameter emergency overflow in the upstream sanitary sewer system to the storm sewer system;
- a 900 mm diameter forcemain along Townsend Parkway and easement from the Main Sewage Pumping Station to the Townsend Lagoons;
- two (2) 150 mm diameter magnetic flowmeters, one on each pump discharge pipe;
- composite sampler for raw sewage from the wetwell;

Townsend Lagoons

Influent Distribution Chamber

- influent distribution chamber to receive raw sewage from the Main Sewage Pumping Station and supernatant return as required from the biosolids storage facility;
- 400 mm diameter pipes to the waste stabilization cells;

Waste Stabilization Cells

- three (3) waste stabilization cells with flexibility to operate in parallel or series, with a maximum operating depth of 1.8 m and providing a total storage capacity of approximately 355,500 m³;
- an effluent collection chamber with V-notch slide gate on the outlet box for each cell;

Supplementary Treatment Systems

- Phosphorus Removal
 - provision for batch addition of chemical for phosphorus removal when necessary to achieve the effluent limits for Total Phosphorus prior to discharge of cell content;

Final Effluent Sampling Point

- flow measurement device located in a flow measuring chamber located downstream of the effluent collection chamber;
- sampling location at outlet structure of the discharging cell;

Final Effluent Disposal Facilities

- a 750 mm diameter discharge pipe from the effluent collection chamber, along easements from the site, through Townsend Parkway and Townline Road to the outfall at Nanticoke Creek;

including all other mechanical system, electrical system, instrumentation and control system, piping, pumps, valves and appurtenances essential for the proper, safe and reliable operation of the aforementioned sewage 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.

Waste Disposal Site (Transfer)

a municipal Waste Disposal Site (Transfer) in accordance with Part V of EPA for the transfer of waste as follows:

Townsend Biosolids Storage Facility

- a Waste Disposal Site (Transfer), previously Cell No. 4 of the Townsend waste stabilization pond with a total storage capacity of 129,688 cubic metres (m³), comprising new subdivided storage cells A and B with respective storage capacities of 39,971 m³ and 33,419 m³ and decanting/backup cells C and D which may be used for additional storage in the event of emergency, for the transfer of the following categories of waste:
 - aerobic and anaerobic sewage Biosolids from sewage treatment facilities listed in Schedule F of this Approval.

Note: Use of the Site for any other type of waste is not approved under this Approval, and requires obtaining a separate approval amending this Approval.

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

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

General

1. "Approval" means this entire document and any schedules attached to it, and the application;
2. "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;

3. "EPA" means the *Environmental Protection Act* , R.S.O. 1990, c.E.19, as amended;
4. "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;
5. "Owner" means The Corporation of Haldimand County and its successors and assignees;
6. "OWRA" means the *Ontario Water Resources Act* , R.S.O. 1990, c. O.40, as amended;
7. "Water Supervisor" means the Water Compliance Supervisor for the Safe Drinking Water Branch (SDWB) for the Guelph, Hamilton, and Niagara offices of the Ministry;

Sewage Works

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. "BOD5" (also known as TBOD5) means five day biochemical oxygen demand measured in an unfiltered sample and includes carbonaceous and nitrogenous oxygen demands;
3. "Bypass" means diversion of sewage around one or more unit processes 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;
4. "CBOD5" means five day carbonaceous (nitrification inhibited) biochemical oxygen demand measured in an unfiltered sample;
5. "*E. coli* " refers to the thermally tolerant forms of *Escherichia* that can survive at 44.5 degrees Celsius;
6. "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;
7. "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;
8. "Final Effluent" means effluent that are 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;
9. "Geometric Mean Density" means the geometric mean of all Single Sample Results of density

measurement in the samples taken over the period specified;

10. "Influent" means flows to the Sewage Treatment Plant from the collection system but excluding process return flows;
11. "Limited Operational Flexibility" (LOF) means the protocol under which the Owner shall follow in order to undertake any modification that is pre-approved in this Approval;
12. "Overflow" means a discharge to the environment from the Works at a location other than the approved effluent disposal facilities or via the effluent disposal facilities downstream of the Final Effluent sampling point;
13. "Previous Works" means those portions of the Works included in the Approval that have been constructed previously;
14. "Rated Capacity" means the Annual Average Daily Influent Flow for which the Sewage Treatment Plant is designed to handle;
15. "Sanitary Sewers" means pipes that collect and convey wastewater from residential, commercial, institutional and industrial buildings, and some infiltration and inflow from extraneous sources such as groundwater and surface runoff through means other than stormwater catch basins;
16. "Seasonal Average Effluent Concentration" means the arithmetic mean of all Single Sample Results of the concentration of a contaminant in the Final Effluent sampled or measured, or both, during a seasonal discharge period;
17. "Separate Sewer Systems" means wastewater collection systems that comprised of Sanitary Sewers while runoff from precipitation and snowmelt are separately collected in Storm Sewers;
18. "Sewage Treatment Plant" means the entire sewage treatment excluding the Final Effluent disposal facilities;
19. "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;
20. "Storm Sewers" means pipes that collect and convey runoff resulting from precipitation and snowmelt (including infiltration and inflow);
21. "Works" means the approved sewage works, and includes Previous Works and modifications made under Limited Operational Flexibility;

Waste Disposal Site (Transfer)

1. "Biosolids" means aerobic and anaerobic processed organic waste (sewage biosolids), from industrial or municipal sources that are suitable for application to agricultural land from Ministry approved

sewage treatment facilities, listed in Schedule F of this Approval;

2. "NMA" means *Nutrient Management Act* , 2002, S.O. 2002, c. 4, as amended;
3. "Operator" means any person, other than the Owner's employees, authorized by the Owner as having the charge, management or control of any aspect of the Site and includes its successors or assigns;
4. "Owner" means any person that is responsible for the establishment or operation of the Site being approved by this Approval, and includes the Corporation of Haldimand County and its successors and assigns;
5. "PA" means the *Pesticides Act* , R.S.O. 1990, c. P-11, as amended;
6. "Provincial Officer" means any person designated in writing by the Minister as a provincial officer pursuant to Section 5 of the OWRA, Section 5 of the EPA, Section 17 of the PA, Section 4 of the NMA, or Section 8 of the SDWA;
7. "Regulation 267" means Regulation 267/03, made under the *Nutrient Management Act*, 2002, S.O. 2002, c. 4 as amended;
8. "Regulation 347" means Regulation 347, R.R.O. 1990, made under the *Environmental Protection Act*, R.S.O. 1990, c.E.19, as amended;
9. "Regulation 903" means Regulation 903, R.R.O. 1990, made under the *Ontario Water Resources Act*, R.S.O. 1990, c. O.40, as amended;
10. "Site" means the waste disposal site (Townsend Biosolids Storage Facility);
11. "Trained Personnel" means personnel knowledgeable in the following through instruction and/or practice:
 - a. relevant waste management legislation, regulations and guidelines;
 - b. major environmental concerns pertaining to the waste to be handled;
 - c. occupational health and safety concerns pertaining to the processes and wastes to be handled;
 - d. management procedures including the use and operation of equipment for the processes and wastes to be handled;
 - e. emergency response procedures;
 - f. specific written procedures for the control of nuisance conditions;

- g. any environmental concerns pertaining to the Site and the Biosolids to be transferred;
- h. specific written procedures for refusal of unacceptable waste loads; and
- i. the requirements of this Approval.

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

TERMS AND CONDITIONS

SEWAGE WORKS

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 OPERATOR

1. The Owner shall, within thirty (30) calendar days of issuance of this Approval, prepare/update and submit to the Water Supervisor the Municipal and Local Services Board Wastewater System Profile Information Form (obtainable from the Water Supervisor) under any of the following situations:
 - a. the form has not been previously submitted for the sewage works;
 - b. this Approval is issued for extension, re-rating or process treatment upgrade of the sewage works;
 - c. every time when a notification is provided to the Water Supervisor in compliance with requirements of change of Owner or operator under this condition.
2. The Owner shall notify the Water Supervisor 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.
3. The Owner shall notify the Water Supervisor, in writing, of any of the following changes within thirty (30) days of the change occurring:
- a. change of address of operator;
 - b. change of operator, including address of new operator.
4. 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 Water Supervisor.
5. The Owner shall ensure that all communications made pursuant to this condition refer to the number at the top 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 retained at the Works for the operational life of the Works.

4. BYPASSES

1. Any Bypass is prohibited, except:
- a. in an emergency situation 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;
 - b. where the Bypass is a direct and unavoidable result of a planned repair and maintenance procedure or other circumstance(s), the Owner having notified the Water Supervisor in writing at least fifteen (15) days prior to the occurrence of Bypass, including an estimated quantity and duration of the Bypass, an assessment of the impact on the quality of the Final Effluent and the mitigation measures if necessary, and the Water Supervisor has given written consent of the

Bypass.

2. 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 date and time of the beginning of the Bypass;
 - b. the location of the Bypass and the treatment process(es) bypassed;
 - c. the reason(s) for the Bypass.
3. Upon confirmation of the end 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 date and time of the end of the Bypass;
 - b. the measured or estimated volume of Bypass.
4. 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, following the same protocol specified in the Monitoring and Recording condition as for the regular samples. The sample(s) shall be in addition to the regular Final Effluent samples required under the monitoring and recording condition, except when the Event occurs on a scheduled routine monitoring day.
5. The Owner shall submit a summary report of the Bypass Event(s) to the Water Supervisor on a quarterly basis, no later than each of the following dates for each calendar year: February 15, May 15, August 15, and November 15. The summary reports shall contain, at a minimum, the types of information set out in Subsections (2), (3) and (4) and assessment of the impact of the Event(s) on Final Effluent, plant operation and the receiver, and planned mitigation strategies, as appropriate.

5. OVERFLOWS

1. Any Overflow is prohibited, except:
 - a. 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;
 - b. where the Overflow is a direct and unavoidable result of a planned repair and maintenance procedure or other circumstance(s), the Owner having notified the Water Supervisor in writing at least fifteen (15) days prior to the occurrence of Overflow, including an estimated quantity and

duration of the Overflow, an assessment of the impact on the environment and the mitigation measures if necessary, and the Water Supervisor has given written consent of the Overflow.

2. At the beginning of an Overflow 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 date and time of the beginning of the Overflow;
 - b. the location of the Overflow and the receiver and disinfection status of the Overflow;
 - c. the reason(s) for the Overflow.
3. Upon confirmation of the end of an Overflow 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 date and time of the end of the Overflow;
 - b. the measured or estimated volume of the Overflow;
 - c. the mitigation measures taken.
4. For any Overflow Event 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, total ammonia nitrogen, nitrate as N, nitrite as N, total Kjeldahl nitrogen, *E. coli*, hydrogen sulphide except that raw sewage and primary treated effluent Overflow shall be analyzed for BOD₅, total suspended solids, total phosphorus and total Kjeldahl nitrogen only. For any Overflow Event 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.
5. The Owner shall submit a summary report of the Overflow Event(s) to the Water Supervisor on a quarterly basis, no later than each of the following dates for each calendar year: February 15, May 15, August 15, and November 15. The summary report shall contain, at a minimum; the types of information set out in Subsections (2), (3) and (4) and assessment of the impact of the Event(s) on plant operation and the receiver, and planned mitigation strategies, as appropriate.

6. DESIGN OBJECTIVES

1. The Owner shall design and 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 Rated Capacity of the Sewage Treatment Plant.
2. The Owner shall make an assessment of the issues and recommendations for pro-active actions if any is required under the following situations and include in the annual report to the Water Supervisor:
 - a. when any of the design objectives is not achieved more than 50% of the time in a year;
 - b. when the Annual Average Daily Influent Flow reaches 80% of the Rated Capacity.

7. COMPLIANCE LIMITS

1. The Owner shall operate and maintain the Sewage Treatment Plant such that the Final Effluent parameters compliance limits listed in the table(s) included in Schedule C are met.

8. OPERATION AND MAINTENANCE

1. The Owner shall exercise due diligence in ensuring 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 funding, adequate operator staffing and training, including training in all procedures and other requirements of this Approval and the OWRA and regulations, adequate laboratory facilities, 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 routine operation of the Works;
 - 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. a spill prevention and contingency plan, consisting of contingency plans and procedures for

dealing with equipment breakdowns, potential spills and any other abnormal situations, including notification of the Water Supervisor;

- f. procedures for receiving, responding and recording public complaints, including recording any followup actions taken.
3. The Owner shall maintain the operations manual up-to-date and retain a copy at the location of the Works for the operational life of the Works and upon request, make the manual available to Ministry staff.
 4. The Owner shall provide for the overall operation of the Works an operator who possesses the level of knowledge, training and experience sufficient to allow for the safe and environmentally sound operation of the Works in accordance with the requirements of this Approval and, where required by regulation, holds a licence that is applicable to those type and class of the facilities included in the Works. At least three (3) months prior to commissioning of the Works, the Owner shall submit a statement of qualifications of the person to be appointed as the operator of the Works, including copies of certificates, license as required, to the Water Supervisor for review and approval of the appointment.
 5. The Owner shall operate the Works such that discharge is only conducted during the period(s) as follows:
 - a. spring: discharge commencing after the liquid surface in the lagoon has become approximately 50% free of ice cover and terminating not later than May 15, continuing for not less than 14 discharge days and using reasonable efforts to maximize the discharge rate to coincide with the spring freshet and elevated flows in the receiver;
 - b. fall: discharge commencing not earlier than October 15 and terminating not later than November 30, and continuing for not less than 14 discharge days.

9. MONITORING AND RECORDING

1. The Owner shall, upon commencement of operation of the Works, carry out a routine 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 4.b.
 - c. definitions for frequency:

- i. Monthly means once every month;
 - ii. Quarterly means once every three months;
 - iii. Five (5) times during each seasonal discharge period means at the beginning of the discharge, at 25%, 50% and 75% drawdown and at the end of the discharge;
- 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:
 - 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.
- 3. The temperature and pH of the Final Effluent 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 concentration, pH and temperature using the methodology stipulated in "Ontario's Provincial Water Quality Objectives" dated July 1994, as amended.
- 4. The Owner shall monitor and record the flow rate and daily quantity of the following sewage streams with an accuracy to within plus or minus 15 per cent (+/- 15%) of the actual flowrate:
 - 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.
- 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.

10. LIMITED OPERATIONAL FLEXIBILITY

- 1. The Owner may make pre-authorized modifications to the sewage pumping stations and Sewage Treatment Plant in Works in accordance with the document "Limited Operational Flexibility - Protocol for Pre-Authorized Modifications to Municipal Sewage Works", included as Schedule E of this Approval, 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

E and conform with the Ministry's publication "Design Guidelines for Sewage Works 2008", as amended, MOE 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;
- d. where the pre-authorized modification requires notification, a "Notice of Modifications to Sewage Works" (included in Schedule E) shall be completed with declarations from a Professional Engineer and the Owner and submitted to the Water Supervisor at least thirty (30) days prior to the scheduled implementation date. The notification shall also include technical memorandum, engineering plans and specifications, as applicable and appropriate to support the declarations that the modifications conform with LOF.

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 involves 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 involves addition of or change in technology of a treatment process or that may involve reassessment of the treatment train process design;
- d. Modifications that requires 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.

11. REPORTING

- 1. The Owner shall report to the Water Supervisor orally as soon as possible any non-compliance with the compliance limits, and in writing within seven (7) days of non-compliance.
- 2. The Owner shall, within fifteen (15) days of occurrence of a spill within the meaning of Part X of the *Environmental Protection Act*, submit a full written report of the occurrence to the Water Supervisor describing the cause and discovery of the spill, clean-up and recovery measures taken, preventative measures to be taken and schedule of implementation, in addition to fulfilling the requirements under the EPA and Ont. Reg. 675/98 "Classification and Exemption of Spills and Reporting of Discharges".
- 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 Water Supervisor 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, including sewage characteristics, flow rates and a comparison to the values used in the design of the Works;
- b. a summary and interpretation of all Final Effluent monitoring data, including concentration, flow rates, loading 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 all operating issues encountered and corrective actions taken;
- d. 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;
- e. a summary of any effluent quality assurance or control measures undertaken;
- f. a summary of the calibration and maintenance carried out on all Influent and Final Effluent monitoring equipment;
- g. a summary of efforts made to achieve the design objectives;
- h. an estimate of the sludge volumes in the lagoon cells. Sludge volume is to be measured every five (5) years, but may be estimated in the interim years. A summary of disposal locations and volumes of sludge disposed of must also be provided if sludge was disposed of during the reporting period;
- i. a summary of any complaints received and any steps taken to address the complaints;
- j. a summary of all Bypasses, Overflows, spills within the meaning of Part X of EPA and abnormal discharge events, and other abnormal operating conditions;
- k. a copy of all Notice of Modifications to Sewage Works submitted to the Water Supervisor under paragraph 1.d. of Condition 10, with a summary report on status of implementation of all modification.

WASTE DISPOSAL SITE (TRANSFER)

1. GENERAL

1. Compliance

- a. The Owner and Operator shall ensure compliance with all the conditions of this Approval and shall ensure that any person authorized to carry out work on or operate any aspect of the Site is notified of this Approval and the conditions herein and shall take all reasonable measures to

ensure any such person complies with the same.

- b. Any person authorized to carry out work on or operate any aspect of the Site shall comply with the conditions of this Approval.

2. In Accordance

- a. Except as otherwise provided by this Approval, the Site shall be designed, developed, built, operated and maintained in accordance with the documentation listed in the attached Schedule A.

3. Interpretation

- a. Where there is a conflict between a provision of any document listed in Schedule A in this Approval, and the conditions of this Approval, the conditions in this Approval shall take precedence.
- b. Where there is a conflict between the application and a provision in any document listed in Schedule A, the application shall take precedence, unless it is clear that the purpose of the document was to amend the application and that the Ministry approved the amendment.
- c. Where there is a conflict between any two documents listed in Schedule A, the document bearing the most recent date shall take precedence.
- d. The conditions of this Approval are severable. If any condition of this Approval, or the application of any condition of this Approval to any circumstance, is held invalid or unenforceable, the application of such condition to other circumstances and the remainder of this Approval shall not be affected thereby.

4. Other Legal Obligations

- a. The issuance of, and compliance with, this Approval does not:
 - i. relieve any person of any obligation to comply with any provision of any applicable statute, regulation or other legal requirement; or
 - ii. limit in any way the authority of the Ministry to require certain steps be taken or to require the Owner and Operator to furnish any further information related to compliance with this Approval.

5. Adverse Effect

- a. The Owner and Operator shall take steps to minimize and ameliorate any adverse effect on the natural environment or impairment of water quality resulting from the Site, including such accelerated or additional monitoring as may be necessary to determine the nature and extent of

the effect or impairment.

- b. Despite an Owner, Operator or any other person fulfilling any obligations imposed by this Approval the person remains responsible for any contravention of any other condition of this Approval or any applicable statute, regulation, or other legal requirement resulting from any act or omission that caused the adverse effect to the natural environment or impairment of water quality.

6. Change of Ownership

- a. The Owner shall notify the Director, in writing, and forward a copy of the notification to the Water Supervisor, within 30 days of the occurrence of any changes in the following information:
 - i. the ownership of the Site;
 - ii. the Operator of the Site;
 - iii. the address of the Owner or Operator; and
 - iv. the partners, where the Owner or Operator 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.
- b. No portion of this Site shall be transferred or encumbered prior to or after closing of the Site unless the Director is notified in advance and sufficient financial assurance is deposited with the Ministry to ensure that these conditions will be carried out.
- c. In the event of any change in ownership of the Site, other than change to a successor municipality, the Owner shall notify the successor of and provide the successor with a copy of this Approval, and the Owner shall provide a copy of the notification to the Water Supervisor and the Director.

7. Inspections by the Ministry

- a. No person shall hinder or obstruct a Provincial Officer from carrying out any and all inspections authorized by the OWRA, the EPA, the PA, the SDWA or the NMA, of any place to which this Approval relates, and without limiting the foregoing:
 - i. to enter upon the premises where the approved works are located, or the location where the records required by the conditions of this Approval are kept;
 - ii. to have access to, inspect, and copy any records required to be kept by the conditions of this Approval;

- iii. to inspect the Site, related equipment and appurtenances;
- iv. to inspect the practices, procedures, or operations required by the conditions of this Approval;
and
- v. to sample and monitor for the purposes of assessing compliance with the terms and conditions of this Approval or the EPA, the OWRA, the PA, the SDWA or the NMA.

8. Information and Record Retention

- a. Except as authorized in writing by the Director, all records required by this Approval shall be retained at the Site for a minimum of two (2) years from their date of creation.
- b. The Owner shall retain all documentation listed in Schedule A for as long as this Approval is valid.
- c. The Owner shall retain employee training records as long as the employee is working at the Site.
- d. The Owner shall make all of the above documents available for inspection upon request of Ministry staff.
- e. The receipt of any information by the Ministry or the failure of the Ministry to prosecute any person or to require any person to take any action under this Approval or under any statute, regulation or other legal requirement, in relation to the information, shall not be construed as:
 - i. an approval, waiver, or justification by the Ministry of any act or omission of any person that contravenes any term or condition of this Approval or any statute, regulation or other legal requirement; or
 - ii. acceptance by the Ministry of the information's completeness or accuracy.
- f. The Owner shall ensure that a copy of this Approval, in its entirety and including all its Notices of Amendment, and documentation listed in Schedule A, are retained at the Site at all times.
- g. Any information related to this Approval and contained in Ministry files may be made available to the public in accordance with the provisions of the *Freedom of Information and Protection of Privacy Act*, RSO 1990, CF-31.

2. SITE OPERATION

1. General

- a. The Site shall receive/store Biosolids only during inclement weather, when it can not be applied to an approved Organic Soil Conditioning site and when an approved Organic Soil Conditioning

site is not available.

- b. The maximum rate at which Biosolids may be received at the Site shall not exceed 600 m³ per day.
 - c. The total volume of Biosolids stored at the Site shall not exceed 73,390 cubic metres at any time.
 - d. Notwithstanding condition 2(2)(c), with the approval of the Water Supervisor, the Site may receive up to 56,298 m³ on a contingency basis to Cells C and D.
 - e. Biosolids stored at the Site, shall be applied to an approved Organic Soil Conditioning site as soon as possible after receipt, taking into account weather and soil conditions.
 - f. Subject to Condition 2(2)(e), Biosolids shall not be stored at the Site for more than three (3) years from the commencement of the storage.
 - g. With the prior written approval from the Water Supervisor, the storage volumes may be exceeded temporarily as described in section 3.2.1 of the Updated Design and Operations Plan dated May 2017, to accommodate seasonal or unusual quantities of biosolids.
 - h. No Biosolids shall be received and/or applied on land if its quality does not meet the criteria specified in the Regulation 267.
 - i. The Owner shall obtain analyses for the Biosolids from the generators prior to receipt of Biosolids at the Site to ensure the quality meets Regulation 267.
 - j. Prior to land application, Biosolids must be thoroughly mixed and analyzed for the parameters identified in the Regulation 267. The procedure for collecting the samples and the frequency of the analysis must be in accordance with the Regulation 267.
 - k. In the event that Biosolids quality does not meet the criteria specified in the Regulation 267, it must be disposed of at a waste disposal facility which is approved to receive that type of waste.
 - l. Biosolids transferred from the Site shall be sent to a facility with an appropriate approval for treatment, disposal or land application.
 - m. Only Trained Personnel shall operate or inspect the Site.
2. Site Access
- a. Waste shall only be accepted or removed during the following time periods:
 - i. Haulers of Biosolids to and from the Site:

- a. Monday to Friday : 6:00 a.m. - 5:00 p.m.
 - b. Saturday : 6:00 a.m. - 2:00 p.m.
 - b. With the prior written approval from the Water Supervisor, the time periods may be extended to accommodate seasonal or unusual quantities of Biosolids.
 - c. The Site must be maintained in a secure manner, such that unauthorized persons cannot enter the Site.
3. Vermin, Vectors, Dust, Litter, Odour, Noise and Traffic
- a. The Owner shall ensure that the Site is operated in a manner which minimizes the impacts of vermin, vectors, litter, dust, odour and noise on the environment and the public.

3. EMPLOYEE TRAINING

- 1. A training plan for all employees that operate any aspect of the Site shall be developed and implemented by the Owner or the Operator. Only Trained Personnel shall operate any aspect of the Site or carry out any activity required under this Approval.

4. COMPLAINTS RESPONSE PROCEDURE

- 1. If at any time the Owner receives complaints regarding the operation of the Site, the Owner shall respond to these complaints according to the following procedure:
 - a. The Owner shall record and number each complaint, either electronically or in a log book, and shall include the following information: the nature of the complaint, the name, address and the telephone number of the complainant if the complainant will provide this information and the time and date of the complaint;
 - b. The Owner, upon notification of the complaint, shall initiate appropriate steps to determine possible causes of the complaint, proceed to take the necessary actions to eliminate the cause of the complaint and forward a formal reply to the complainant; and
 - c. The Owner shall complete and retain on-site a report written within one (1) week of the complaint date, listing the actions taken to resolve the complaint and any recommendations for remedial measures, and managerial or operational changes to reasonably avoid the recurrence of similar incidents.

5. EMERGENCY RESPONSE

- 1. All Spills as defined in the EPA shall be immediately reported to the Ministry's Spills Action Centre at 1-800-268-6060 and shall be recorded in the log book as to the nature of the emergency situation,

and the action taken for clean-up, correction and prevention of future occurrences.

2. In addition, the Owner shall submit, to the Water Supervisor a written report within three (3) business days of the emergency situation, outlining the nature of the incident, remedial measures taken, handling of waste generated as a result of the emergency situation and the measures taken to prevent future occurrences at the Site.
3. All wastes resulting from an emergency situation shall be managed and disposed of in accordance with Reg. 347.
4. All equipment and materials required to handle the emergency situations shall be:
 - a. kept on hand or readily available at all times that waste landfilling and/or handling is undertaken at the Site; and
 - b. adequately maintained and kept in good repair.
5. The Owner shall ensure that the emergency response personnel are familiar with the use of such equipment and its location(s).

6. INSPECTIONS, RECORD KEEPING AND REPORTING

1. Daily Log Book
 - a. A daily log shall be maintained in written or electronic format and shall include the following information:
 - i. the type, date and time of arrival, hauler, and quantity and quality of all biosolids received at the Site or removed from the Site for land application or landfilling when Biosolids did not meet the requirements in Regulation 267;
 - ii. a record of the daily inspections; and
 - iii. a description of any out-of-service period of any control, disposal or monitoring facilities, the reasons for the loss of service, and action taken to restore and maintain service.
 - b. Any information requested, by the Director or a Provincial Officer, concerning the Site and its operation under this Approval, including but not limited to any records required to be kept by this Approval shall be provided to the Ministry, upon request.
2. Daily Inspections and Log Book
 - a. An inspection of the entire Site and all equipment and facilities on the Site shall be conducted each day the Site is in operation to ensure that: the Site is secure; that the operation of the Site is not causing any nuisances; that the operation of the Site is not causing any adverse effects on the

environment and that the Site is being operated in compliance with this Approval. Any deficiencies discovered as a result of the inspection shall be remedied immediately, including temporarily ceasing operations at the Site if needed.

- b. The Owner must ensure that a Trained Personnel, conducts, on each operating day, a visual inspection of the following areas to ensure the Site is secure and that no off-site impacts such as vermin, vectors, odour, dust, litter and noise, result from the operation of the facility:
 - i. visual inspection of external condition of lagoon dykes for evidence of erosion, seepage, or slumping;
 - ii. inspection of fluid level in lagoons to ensure that a minimum 800 mm freeboard (distance between Biosolids/fluid level and top of lagoon dykes) is maintained at all times;
 - iii. loading/unloading area;
 - iv. storage/transfer area; and
 - v. security fence or barriers and property line.
- c. A record of the inspections shall be kept in a daily log that includes:
 - i. the name and signature of person that conducted the inspection;
 - ii. the date and time of the inspection;
 - iii. the list of any deficiencies discovered;
 - iv. the recommendations for remedial action; and
 - v. the date, time and description of actions taken.
- d. A record shall be kept in the daily log of all refusals of waste shipments, the reason(s) for refusal, and the origin of the waste, if known.

3. Annual Report

- a. A written report on the development, operation and monitoring of the Site, shall be completed annually (the "Annual Report"). The Annual Report shall be submitted to the Water Supervisor, by March 31st of the year following the period being reported upon.
- b. The Annual Report shall include but not be limited to the following information:
 - i. the result of water quality analysis from the monitoring wells, including a comparison

- with previous data to determine if there has been any change in groundwater quality;
- ii. an assessment of the Site's compliance with the MOE Guidelines B-7 "Incorporation of the Reasonable Use Concept into MOE Groundwater Management Activities", April 1994;
 - iii. a summary of the operation of the lagoon including maintenance requirements for the lagoon and repair of erosion, or the like, if any;
 - iv. a summary of volumes of the Biosolids and approximate annual quantity from each source;
 - v. the location of each disposal site, approximate volume and dates at which disposal occurred;
 - vi. a report on any operational difficulties during removal and disposal of the Biosolids; and
 - vii. a Site plan identifying the locations of the monitoring wells.

7. SITE MONITORING

1. Compliance

- a. The Site shall be operated in such a way as to ensure compliance with the Reasonable Use Guideline B-7 for the protection of the groundwater at the Site.

2. Groundwater

- a. The Owner shall sample groundwater from all ten (10) wells annually and analyze for parameters listed in Schedule G.
- b. A certified Professional Geoscientist or Engineer possessing appropriate hydrogeologic training and experience shall execute or directly supervise the execution of the groundwater monitoring and reporting program.

3. Groundwater Wells and Monitors

- a. The Owner shall ensure that all groundwater monitoring wells which form part of the monitoring program are properly capped, locked and protected from damage.
- b. Any groundwater monitoring well included in the on-going monitoring program that is damaged shall be assessed, repaired, replaced or decommissioned by the Owner, as required;
 - i. The Owner shall repair or replace any monitoring well which is destroyed or in any way made to be inoperable for sampling such that no more than one regular sampling event is

missed.

- ii. All monitoring wells which are no longer required as part of the groundwater monitoring program, and have been approved by the Director for abandonment, shall be decommissioned by the Owner, as required, in accordance with O.Reg. 903, to prevent contamination through the abandoned well. A report on the decommissioning of the well shall be included in the Annual Report for the period during which the well was decommissioned.

4. Changes to the Monitoring Plan

- a. The Owner may request to make changes to the monitoring program(s) to the Water Supervisor in accordance with the recommendations of the annual report. The Owner shall make clear reference to the proposed changes in a separate letter that shall accompany the annual report.
- b. Within fourteen (14) days of receiving the written correspondence from the Water Supervisor confirming that the Water Supervisor is in agreement with the proposed changes to the environmental monitoring program, the Owner shall forward a letter identifying the proposed changes and a copy of the correspondences from the Water Supervisor and all other correspondences and responses related to the changes to the monitoring program, to the Director requesting the Approval be amended to approve the proposed changes to the environmental monitoring plan prior to implementation.
- c. In the event any other changes to the environmental monitoring program are proposed outside of the recommendation of the annual report, the Owner shall follow current Ministry procedures for seeking approval for amending the Approval.

8. CLOSURE PLAN

1. The Owner must submit, for approval by the Director, a written Closure Plan for the Site four (4) months prior to closure of the Site. This plan must include, as a minimum, a description of the work that will be done to facilitate closure of the Site and a schedule for completion of that work; and
2. Within ten (10) days of closure of the Site, the Owner shall notify the Water Supervisor, in writing, that the Site is closed and that the Closure Plan has been implemented.

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

SEWAGE WORKS

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 operator is included to ensure that the Ministry records are kept accurate and current with respect to ownership and operator 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. It is also included to ensure that the treated effluent is discharged to the receiver during periods and at rates that minimizes the environmental impact on the receiver.
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 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.
11. Condition 11 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.

WASTE DISPOSAL SITE (TRANSFER)

1. The reason for Conditions 1.1, 1.3, 1.4, 1.5, 1.8, is to clarify the legal rights and responsibilities of the Owner and Operator under this Approval.
2. The reasons for Condition 1.2 are to ensure that the Site is designed, operated, monitored and maintained in accordance with the application and supporting documentation submitted by the Owner, and not in a manner which the Director has not been asked to consider.
3. The reasons for Condition 1.6.a are to ensure that the Site is operated under the corporate name which appears on the application form submitted for this approval and to ensure that the Director is informed of any changes.
4. The reasons for Condition 1.6.b are to restrict potential transfer or encumbrance of the Site without the approval of the Director and to ensure that any transfer of encumbrance can be made only on the basis that it will not endanger compliance with this Approval.
5. The reason for Condition 1.6.c is to ensure that the successor is aware of its legal responsibilities.
6. The reason for Condition 1.7 is to ensure that appropriate Ministry staff has ready access to the Site for inspection of facilities, equipment, practices and operations required by the conditions in this Approval. This Condition is supplementary to the powers of entry afforded a Provincial Officer pursuant to the Act, the OWRA, the PA, the NMA and the SDWA.
7. The reason for Condition 2.1.a is to ensure that environmental quality, consumer and animal health, food quality and productivity of the land is protected, before Biosolids can be applied on land.
8. The reason for Condition 2.1.b is to specify the amounts of waste received, stored and transferred at the Site based on the Owner's application and supporting documentation.
9. The reason for Conditions 2.1.c to 2.1.l is to ensure that environmental quality, consumer and animal health, food quality and productivity of the land is protected, before Biosolids can be applied on land.
10. The reason for Condition 2.1.m is to ensure that all operators working at the Site have been trained so that the Site is operated in a safe and environmentally acceptable manner and does not pose a threat to the health and safety of people or the natural environment.
11. The reasons for Condition 2.2 are to specify the hours of operation for the landfill site and a mechanism for amendment of the hours of operation, as required.

12. The reason for Condition 2.3 is to ensure that the Site is operated in a manner which does not result in a nuisance or a hazard to the health and safety of people or the environment.
13. The reason for Condition 3 is to ensure that the Site is supervised and operated by properly trained staff in a manner which does not result in a hazard or nuisance to the natural environment or any person.
14. The reason for Condition 4 is to ensure that any complaints regarding landfill operations at this Site are responded to in a timely and efficient manner.
15. Conditions 5.1 and 5.2 are included to ensure that emergency situations are reported to the Ministry to ensure public health and safety and environmental protection.
16. Conditions 5.3, 5.4 and 5.5 are included to ensure that emergency situations are handled in a manner to minimize the likelihood of an adverse effect and to ensure public health and safety and environmental protection.
17. The reason for Condition 6.1 is to ensure that accurate waste records are maintained to ensure compliance with the conditions in this Approval (such as fill rate, site capacity, record keeping, annual reporting, and financial assurance requirements), the EPA and its regulations.
18. The reasons for Condition 6.2.a are to ensure that the Site is operated, inspected and maintained in an environmentally acceptable manner and does not result in a hazard or nuisance to the natural environment or any person.
19. The reason for Conditions 6.2.b, 6.2.c and 6.2.d is to ensure that detailed records of Site inspections are recorded and maintained for inspection and information purposes.
20. The reasons for Conditions 6.3 are to ensure that regular review of site development, operations and monitoring data is documented and any possible improvements to site design, operations or monitoring programs are identified. An annual report is an important tool used in reviewing site activities and for determining the effectiveness of site design.
21. Condition 7.1 is included to provide the groundwater limits to prevent water pollution at the Site.
22. Condition 7.2 is included to require the Owner to demonstrate that the Site is performing as designed and the impacts on the natural environment are acceptable. Regular monitoring allows for the analysis of trends over time and ensures that there is an early warning of potential problems so that any necessary remedial/contingency action can be taken.
23. Condition 7.3 is included to ensure the integrity of the groundwater monitoring network so that accurate monitoring results are achieved and the natural environment is protected.
24. Condition 7.4 is included to streamline the approval of the changes to the monitoring plan.

25. The reason for Condition 8 is to ensure that the Site is closed in accordance with Ministry standards and to protect the health and safety of the public and the environment.

Schedule A

Applications and Documents

SEWAGE WORKS

1. Final plans and design brief prepared by the former Regional Municipality of Haldimand-Norfolk;
2. Application for Approval of Municipal and Private Sewage Works submitted by Edward Martin of the Haldimand County dated October 14, 2003;
3. Additional information submitted by Edward Martin dated December 9, 2003.
4. Application for Approval of Municipal and Private Sewage Works submitted by Melissa Kosterewa of the Haldimand County dated December 23, 2004.
5. Field Alert No. 0140-6VQSGZ notifying the Environmental Assessment and Approvals Branch of changes to the site information.
6. Environmental Compliance Approval Application for Sewage Works submitted by Andrew Tulk of WSP Canada Inc. and received on July 17, 2015 for the proposed upgrades to Townsend Biosolids Storage Facility, including design brief, Environmental Assessment (Schedule A), Zoning information, drawings and specifications, and revised submission via email dated February 23, 2016, including updated site design brief and updated drawing sets.

WASTE DISPOSAL SITE (TRANSFER)

1. Application for Approval of a Waste Disposal Site, dated June 29, 1999, from Regional Municipality of Haldimand-Norfolk, signed by Eric D'Hondt, Commissioner of Engineering.
2. Letter and its attachment from Douglas Gunton, Regional Municipality of Haldimand-Norfolk to Andy Dominski, MOE, dated November 30, 1999, Re: Temporary Sludge Storage Facilities
3. Letter from Brad Ross, MOE to Eric D'Hondt, Regional Municipality of Haldimand-Norfolk, dated December 9, 2000, Re: Application for Approval of Waste Site
4. Letter from Bernard Dawtrey, Regional Municipality of Haldimand-Norfolk to Brad Ross, MOE, dated December 17, 2000, Re: Application for Approval of Waste Site.
5. Letter from Mohsen Keyvani, MOE to Bernard Dawtrey, Regional Municipality of Haldimand-Norfolk, dated January 18, 2000, Re: Application for Approval of Waste Site.
6. Letter from Mohsen Keyvani, MOE to Robert Prowse, the City of Nanticoke, dated January 19,

- 2000, Re: Application for Approval of Waste Site.
7. Letter from W. J. Powell, City of Nanticoke to Mohsen Keyvani, MOE, dated January 31, 2000, Re: Application for Approval of Waste Site, Conc. 13, Lots 22 & 23, Townsend.
 8. Letter from Mohsen Keyvani, MOE to Eric D'Hondt, Regional Municipality of Haldimand-Norfolk, dated May 1, 2000, Re: Application for Approval of Waste Site.
 9. Letter and its attachment from John D. Vallee, Douglas Vallee Limited to Mohsen Keyvani, MOE, dated May 17, 2000, Re: Modification to Townsend Sewage Lagoon.
 10. Letter from Mohsen Keyvani, MOE to Eric D'Hondt, Regional Municipality of Haldimand-Norfolk, dated June 1, 2000, Re: Application for approval of Waste Site.
 11. Letter and its attachment "Design Report, Proposed Modification for Temporary Sludge Storage, Townsend Sewage Lagoons, Revised June 13, 2000" from G. Douglas Vallee, G. Douglas Vallee Limited to Mohsen Keyvani, MOE, dated June 13, 2000, Re: Modifications to Townsend Sewage Lagoons for Temporary Sludge Storage.
 12. Letter from Dennis W. Kerr, Peto MacCallum Ltd. To Eric D'Hondt, Regional Municipality of Haldimand-Norfolk, dated June 14, 2000, Re: Monitoring Program, Temporary Sludge Storage Facility.
 13. letter from G. Douglas Vallee, G. Douglas Vallee Limited to Mohsen Keyvani, MOE, dated June 14, 2000, Re: Modifications to Townsend Sewage Lagoons for Temporary Sludge Storage.
 14. Letter and its attachment from G. Douglas Vallee, G. Douglas Vallee Limited to the Director, MOE, dated November 9, 2000, Re: Modifications to Townsend Sewage Lagoons for Temporary Sludge Storage Certificate of Approval 6132-4M6GRK.
 15. Cover letter dated July 3, 2002 from Edward W. Martin, Manager, Environmental Services Division, Haldimand County, to Ian Parrott, MOEE, enclosing the application, letter, and sludge analysis for the Port Rowan Facility.
 16. Letter dated April 26, 2002 from Doug Gunton, Manager of Engineering, Norfolk County, to Ed Martin, Haldimand County, re: Townsend Lagoons.
 17. Application for a Provisional Certificate of Approval for a Waste Disposal Site dated February 13, 2006 and signed by Melissa Kosterewa, including all supporting documentation.
 18. Environmental Compliance Approval Application dated August 15, 2016 and signed Philip Wilson, Project Manager (Water and Wastewater Infrastructure), The Corporation of Haldimand County, including the attached supporting documentation.

19. Report titled "Townsend Biosolids Lagoon Storage Upgrades, Updated Design and Operations Report" dated May 2017 and prepared by WSP Canada Inc.

Schedule B

Sewage Works Final Effluent Design Objectives

Concentration Objectives

Final Effluent Parameter	Averaging Calculator	Objective (milligrams per litre unless otherwise indicated)
CBOD5	Seasonal Average Effluent Concentration	25.0 mg/L
Total Suspended Solids	Seasonal Average Effluent Concentration	25.0 mg/L
Total Phosphorus	Seasonal Average Effluent Concentration	0.8 mg/L
Total Ammonia Nitrogen	Seasonal Average Effluent Concentration	4.5 mg/L
pH	Single Sample Result	6.5 - 8.5 inclusive

Schedule C

Sewage Works Final Effluent Compliance Limits

Concentration Limits

Final Effluent Parameter	Averaging Calculator	Limit (maximum unless otherwise indicated)
CBOD5	Single Sample Result	40.0 mg/L
CBOD5	Seasonal Average Effluent Concentration	25.0 mg/L
Total Suspended Solids	Single Sample Result	40.0 mg/L
Total Suspended Solids	Seasonal Average Effluent Concentration	30.0 mg/L
Total Phosphorus	Seasonal Average Effluent Concentration	1.0 mg/L
Total Ammonia Nitrogen	Single Sample Result	5.5 mg/L
Hydrogen Sulphide	Single Sample Result	0.3 mg/L
pH	Single Sample Result	between 6.0 - 9.5 inclusive

Loading Limits

Final Effluent Parameter	Averaging Calculator	Limit (maximum unless otherwise indicated)
CBOD5	Seasonal Average Daily Effluent Loading	52.4 kg/d
Total Suspended Solids	Seasonal Average Daily Effluent Loading	62.9 kg/d
Total Phosphorus	Seasonal Average Daily Effluent Loading	2.1 kg/d

Schedule D

Sewage Works Monitoring Program

Influent - Influent sampling point

Parameters	Sample Type	Frequency
BOD5	8 hour composite	Monthly
Total Suspended Solids	8 hour composite	Monthly
Total Phosphorus	8 hour composite	Monthly
Total Kjeldahl Nitrogen	8 hour composite	Monthly

Lagoon Content - each discharge cell at least seven days prior to a scheduled discharge

Parameters	Sample Type	Frequency
CBOD5	Grab	Once
Total Suspended Solids	Grab	Once
Total Phosphorus	Grab	Once
Total Kjeldahl Nitrogen	Grab	Once
pH	Grab	Once
Hydrogen Sulphide	Grab	Once (if odour is present)
Dissolved Oxygen	Grab	Once (if odour is present)

Final Effluent - Final Effluent sampling point

Parameters	Sample Type	Frequency
CBOD5	Grab	Five times during discharge
Total Suspended Solids	Grab	Five times during discharge
Total Phosphorus	Grab	Five times during discharge
Total Ammonia Nitrogen	Grab	Five times during discharge
Total Kjeldahl Nitrogen	Grab	Five times during discharge
Nitrate as Nitrogen	Grab	Five times during discharge
Nitrite as Nitrogen	Grab	Five times during discharge
<i>E. coli</i>	Grab	Five times during discharge
Hydrogen Sulphide	Grab	Five times during discharge (if odour is present)
Temperature	Grab	Five times during discharge
pH	Grab	Five times during discharge

Schedule E

Limited Operational Flexibility

Protocol for Pre-Authorized Modifications to Municipal Sewage 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 Water Supervisor 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. Sewage 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 prior notification
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 notification
1. Pumping Stations
 - a. Replacement, 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, construction of station bypass;
 - e. Replacement, reconfiguration or addition of pumps and modifications to pump suction 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, realignment of existing forcemain(s) 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, realignment of existing sewers (including pipes and channels) or construction of new sewers, including manholes, valves, gates, weirs and associated appurtenances within the a 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 sewage 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 and 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. 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 and 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 and installation of channel aeration systems, including air blowers, air supply main, air headers, air laterals, air distribution grids and diffusers.

4. Primary Treatment System

- a. Replacement of existing sludge removal mechanism, including sludge chamber;
- b. Replacement and installation of scum removal mechanism, including scum chamber;
- c. Replacement and installation 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.

5. 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 and installation of scum removal mechanism, including scum chamber;
- c. Replacement and installation 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.

6. Tertiary 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.

7. Disinfection System

1. UV Irridation

- a. Replacement of UV irroration 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 and installation of chemical storage tanks, provided that the tanks are provided with effective spill containment.

8. Supplementary Treatment Systems

1. Chemical systems

- a. Replacement, relocation and installation of chemical storage tanks for existing chemical systems only, provided that the tanks are sited with effective spill containment;
- b. Replacement and installation 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..

9. Final Effluent Disposal Facilities

- a. Replacement and 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.

10. Sludge Management System

1. Sludge Holding and Thickening

- a. Replacement and installation 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 and installation 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
- 1. Replacement and 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. Pilot Study
- 1. Small side-stream pilot study for existing or new technologies, alternative treatment process or chemical, provided:
 - i. all effluent from the pilot system is hauled off-site for proper disposal or returned back to the sewage treatment plant for at a point no further than immediately downstream of the location from where the side-stream is drawn;
 - ii. no proprietary treatment process or propriety chemical is involved in the pilot study;
 - iii. the effluent from the pilot system returned to the sewage treatment plant does not significantly alter the composition/concentration of or add any new contaminant/inhibiting substances to the sewage to be treated in the downstream process;
 - iv. the pilot study will not have any negative impacts on the operation of the sewage treatment plant or cause a deterioration of effluent quality;
 - v. the pilot study does not exceed a maximum of two years and a notification of completion shall be submitted to the Water Supervisor within one month of completion of the pilot project.
13. 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 and install interconnecting pipes and chambers between cells, provided that the process

design operating sequence is not changed;

- d. replace and install 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.

This page contains an image of the form entitled "Notice of Modification to Sewage Works"



Notice of Modification to Sewage Works

RETAIN COPY OF COMPLETED FORM AS PART OF THE ECA AND SEND A COPY TO THE WATER SUPERVISOR (FOR MUNICIPAL) OR DISTRICT MANAGER (FOR NON-MUNICIPAL SYSTEMS)

Part 1 – Environmental Compliance Approval (ECA) with Limited Operational Flexibility <i>(Insert the ECA's owner, number and issuance date and notice number, which should start with "01" and consecutive numbers thereafter)</i>		
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 <i>(Attach a detailed description of the sewage works)</i>
<p>Description shall include:</p> <ol style="list-style-type: none"> 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	
<p>I hereby declare that I have verified the scope and technical aspects of this modification and confirm that the design:</p> <ol style="list-style-type: none"> 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. <p>I hereby declare that to the best of my knowledge, information and belief the information contained in this form is complete and accurate</p>	
Name (Print)	PEO License Number
Signature	Date (mm/dd/yy)
Name of Employer	

Part 4 – Declaration by Owner	
<p>I hereby declare that:</p> <ol style="list-style-type: none"> 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 <i>Environmental Assessment Act</i>. <p>I hereby declare that to the best of my knowledge, information and belief the information contained in this form is complete and accurate</p>	
Name of Owner Representative (Print)	Owner representative's title (Print)
Owner Representative's Signature	Date (mm/dd/yy)

Schedule F

Waste Disposal Site (Transfer)

List of sewage treatment facilities accepted regularly

Name of Plant	Municipality	OWRA Works Number or Approval Number
Simcoe WPCP	Simcoe	110000677
Caledonia WPCP	Haldimand	120001452
Cayuga WPCP	Haldimand	110000089
Delhi WPCP	Delhi	120001425
Port Dover WPCP	Nanticoke	110000604
Hagersville WPCP	Haldimand	110001024
Dunnville WPCP	Dunnville	120001443
Port Rowan WPCP	Norfolk	0041-56HJMS
Nanticoke WTP	Nanticoke	3-0150-80-006

List of sewage treatment facilities accepted on contingency basis

Name of Plant	Municipality	OWRA Works Number or Approval Number
Paris WPCP	County of Brant	4668-5NCHWF
St. George WPCP	County of Brant	7620-97CPND
Brantford WWTP	City of Brantford	1860-9Q7LK9

Schedule G

Waste Disposal Site (Transfer)

Groundwater Monitoring Test Parameters

Parameters	Sample Type	Frequency
Nitrates (NO ₃)	Phosphorus	Sodium
Nitrite (NO ₂)	Conductivity	Chloride
Ammonia (NH ₃)	Total Coliform	
Total Kjeldahl Nitrogen	Fecal Coliform	

**Upon issuance of the environmental compliance approval, I hereby revoke Approval No(s).
1628-A2LRAY, 6132-4M6GRK issued on June 28, 2016, July 17, 2000.**

In accordance with Section 139 of the Environmental Protection Act, you may by written Notice served upon me and the Environmental Review Tribunal within 15 days after receipt of this Notice, require a hearing by the Tribunal. Section 142 of the Environmental Protection Act provides that the Notice requiring the hearing shall state:

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

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:

The Secretary*
Environmental Review Tribunal
655 Bay Street, Suite 1500
Toronto, Ontario
M5G 1E5

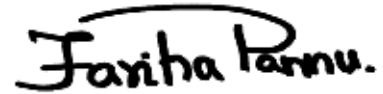
AND

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

*** Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349, Fax: (416) 326-5370 or www.ert.gov.on.ca**

The above noted activity is approved under s.20.3 of Part II.1 of the Environmental Protection Act.

DATED AT TORONTO this 31st day of October, 2017



Fariha Pannu, P.Eng.

Director

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

FL/

c: District Manager, MOECC Hamilton

DWMD Supervisor, MOECC - Hamilton

Rekha Chetlur, Registration and Compliance Section, MOECC Drinking Water Programs Branch -
IMBS

Andrew Tulk, WSP Canada