

AMENDED ENVIRONMENTAL COMPLIANCE APPROVALNUMBER 5657-9D9LYE
Issue Date: December 2, 2013

The Corporation of the Township of Southgate
185667 Grey Road 9 Dundalk
Southgate, Ontario
N0C 1B0

Site Location: Dundalk Sewage Treatment Works
Lot 238 & 239, Concession 2
Southgate Township, County of Grey
N0C 1B0

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:

Upgrade of the Dundalk Sewage Treatment Works (STW) for the collection, transmission, treatment and disposal of domestic sewage from the former Village of Dundalk, located at the above site location, discharging to Foley Drain and ultimately to the Grand River, rated at the capacity mentioned below and consisting of the following *Works* :

Dundalk STW (Rated Capacity)	
<i>Average Daily Flow</i>	1,832 m ³ /d

PROPOSED WORKS**Pumping Station**

- 50 kW diesel generator to provide standby power for the raw sewage pumping station.
- control building to house raw sewage pump control equipment (variable frequency drives, ultrasonic transducer controllers), generator automatic transfer switch and other necessary electrical equipment.

Post Aeration Cell and Blower Building

- blower control equipment (variable frequency drives).

Tertiary Treatment Filter Building

- dissolved oxygen monitoring equipment for blower control
- air piping and fine bubble air diffusers in the effluent channel.

PREVIOUS WORKS

Pumping Station

- a submersible sewage pumping station including a 3.05 m diameter wet well equipped with two (2) submersible pumps, each rated at 47 L/s at 10 m TDH and a 230 mm diameter forcemain discharging to the waste stabilization ponds via an inlet structure

Waste Stabilization Ponds

- four (4) waste stabilization ponds with a total surface area of approximately 146,500 m² at an operating depth of approximately 1.8 m, providing a total storage volume of approximately 208,500 m³ and a retention period of 114 days at an average day flow of 1,832 m³/day, complete with interconnecting piping, influent and effluent flow control structures

Chemical Feed System

- a 2.2 m square single storey chemical metering building housing one (1) chemical metering pump complete with a flow recorder and totalizer
- a 24.5 m³ capacity chemical storage tank (located outdoors) complete with insulation and heat tracing

Post Aeration Cell and Blower Building

- an oval earthen post-aeration cell with an operating depth of approximately 2.1 m, equipped with a fine bubble aeration diffuser system
- a 6.9 m x 5.7 m blower building housing two (2) rotary positive displacement blowers (1 standby) each rated at approximately 235 L/s at 35 kPa

Tertiary Treatment Filter Building

- filter influent pumping station equipped with three (3) submersible pumps with variable frequency drives, two (2) pumps rated at 42.4 L/s at 7.6 m TDH and one (1) pump rated at 24.7 L/s at 5.5 m TDH
- a 5,680 L capacity chemical storage tank (located in the filter building) and two (2) chemical metering pumps capable of feeding alum solution at a maximum rate of 8.3 L/hr and an in-line static mixer

- a polymer feed system comprised of two (2) 450 L capacity day tanks with mixers and two (2) chemical metering pumps capable of feeding polymer solution at a maximum of 2.1 L/hr
- a flocculation tank complete with a mixer, sized for a hydraulic retention time of 10 minutes at an average day flow of 1,832 m³/day
- an automatic backwash filter comprised of two (2) cells with a surface area of 16 m², consisting of 300 mm anthracite layer, 250 mm silica sand layer over a 465 mm gravel bed, complete with lateral underdrain system and an air scour system
- a 50 m³ filter effluent tank equipped with two (2) submersible pumps and one (1) provisional standby pump (for filter backwash), each rated at 53 L/s at 15 m TDH, with discharge to the existing V-notch weir to measure effluent discharge via outfall to the Foley Drain
- a 50 m³ filter backwash waste tank equipped with two (2) submersible pumps (to pump filter backwash water to the raw sewage pumping station located at the head end of the sewage works), each rated at 26 L/s at 10 m TDH.
- effluent flow measuring equipment.

Water Level Recording Station

- a gauging station on the Grand River, complete with a heated stilling well and level recorder.

and other controls, piping, valves, drains, and appurtenances essential for the proper operation of the aforementioned sewage works,

all in accordance with supporting documents listed in **Schedule B**.

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

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

"Average Daily Flow" means the cumulative total sewage flow to the sewage works during a calendar year divided by the number of days during which sewage was flowing to the sewage works that year;

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

"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 location, and discharging to the environment through the *Sewage Treatment Plant* outfall;

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

"*Daily Concentration*" means the concentration of a contaminant in the effluent discharged over any single day, as measured by a composite or grab sample, whichever is required;

"*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*;

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

"*E. Coli*" refers to the thermally tolerant forms of *Escherichia* that can survive at 44.5 degrees Celsius;

"*Emergency Situation*" means a structural, mechanical or electrical failure that causes a temporary reduction in the capacity of the *Sewage Treatment Plant* or an unforeseen flow condition that may result in:

- a) danger to the health or safety of any person; or,
- b) injury or damage to any property, or serious risk of injury or damage to any property;

"*Event*" means an action or occurrence, at a given location within the *Sewage Treatment Plant* that causes a *Plant Bypass* or *Plant Overflow*. An *Event* ends when there is no recurrence of a *Bypass* or *Overflow* in the 12-hour period following the last *Bypass* or *Overflow*. Two *Events* are separated by at least 12 hours during which there has been no recurrence of a *Bypass* or *Overflow*;

"*Equivalent equipment*" means a substituted equipment that meets the required quality and performance standards of a named equipment;

"*Final Effluent*" means sewage discharge via the *Sewage Treatment Plant* outfall after undergoing the full train of unit processes as listed in the *Approval*;

"*Grab Sample*" means an individual sample of at least 1000 millilitres collected in the appropriate container at a randomly selected time over a period of time not exceeding 15 minutes;

"*Limited Operational Flexibility*" (LOF) means the *Modifications* that the *Owner* is permitted to make to the *Works* under this *Approval*;

"*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;

"*Modifications*" means any addition, replacement, alteration, expansion or optimization for the *Works* as specified under *Limited Operational Flexibility*;

"Monthly Average Concentration" means the arithmetic mean of all *Daily Concentrations* of a contaminant in the effluent sampled or measured, or both, during a calendar month;

"Monthly Average Daily Flow" means the cumulative total sewage flow to the sewage works during a calendar month divided by the number of days during which sewage was flowing to the sewage works that month;

"Monthly Average Loading" means the value obtained by multiplying the *Monthly Average Concentration* of a contaminant by the *Monthly Average Daily Flow* over the same calendar month:

"Notice of Modifications" means the form entitled "Notice of Modifications to Sewage Works";

"Owner" means Township of Southgate and its successors and assignees;

"OWRA" means the Ontario Water Resources Act, R.S.O. 1990, c. O.40, as amended;

"Plant Overflow " means a discharge to the environment from the *Sewage Treatment Plant* at a location other than the plant outfall or into the plant outfall downstream of the *Final Effluent* sampling location;

"Previous Works" means those portions of the sewage works previously constructed and approved under an *Approval* ;

"Proposed Works" means the sewage works described in the Owner's application, this *Approval*, to the extent approved by this *Approval*;

"Rated Capacity" means the *Average Daily Flow* for which the *Works* are approved to handle;

"Sewage Treatment Plant" means the entire sewage treatment and effluent discharge facility;

"Substantial Completion" has the same meaning as *"substantial performance"* in the Construction Lien Act;

"Water Supervisor" means the Water Supervisor for the Owen Sound office of the Ministry; and

"Works" means the sewage works described in the *Owner* 's application, and this *Approval* , and includes both *Proposed Works* and *Previous Works* and the *Limited Operational Flexibility*.

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

TERMS AND CONDITIONS

1. GENERAL PROVISIONS

(1) The *Owner* shall ensure that any person authorized to carry out work on or operate any aspect of the *Works* is notified of this *Approval* and the conditions herein and shall take all reasonable measures to ensure any such person complies with the same.

(2) Except as otherwise provided by these conditions, the *Owner* shall design, build, install, operate and maintain the *Works* in accordance with the description given in this *Approval*, and the application for approval of the *Works*.

(3) Where there is a conflict between a provision of any document in the schedule referred to in this *Approval* and the conditions of this *Approval*, the Conditions in this *Approval* shall take precedence, and where there is a conflict between the documents in the schedule, the document bearing the most recent date shall prevail.

(4) Where there is a conflict between the documents listed in the Schedule submitted documents, and the application, the application shall take precedence unless it is clear that the purpose of the document was to amend the application.

(5) The Conditions of this *Approval* are severable. If any Condition of this *Approval*, or the application of any requirement 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.

2. EXPIRY OF APPROVAL

The approval issued by this *Approval* will cease to apply to those parts of the *Works* which have not been constructed within **five (5) years** of the date of this *Approval*.

3. CHANGE OF OWNER

(1) 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 *Owner*;

(b) change of address of the *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.B17 shall be included in the notification to the *Water Supervisor*;

(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 Informations Act, R.S.O. 1990, c. C39 shall be included in the notification to the *Water Supervisor*;

(2) In the event of any change in ownership of the *Works*, other than a change to a successor municipality, the *Owner* shall notify in writing the succeeding owner of the existence of this *Approval*, and a copy of such notice shall be forwarded to the *Water Supervisor* and the *Director*.

4. UPON THE SUBSTANTIAL COMPLETION OF THE WORKS

(1) Upon the *Substantial Completion* of the *Works*, the *Owner* shall prepare a statement, certified by a Professional Engineer, that the works are constructed in accordance with this *Approval*, and upon request, shall make the written statement available for inspection by Ministry personnel.

(2) Within **one (1) year** of the *Substantial Completion* of the *Works*, a set of as-built drawings showing the works “as constructed” shall be prepared. These drawings 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*.

5. BYPASSES AND OVERFLOWS

(1) Any *Bypass* or *Plant Overflow* is prohibited, except:

(a) in an *Emergency Situation*;

(b) where the approved design and operation of the *Works* provides for *Bypasses / Plant Overflows* to be triggered under certain flow conditions and those conditions have been met and the Plant Peak Flow Rate is not exceeded;

(c) where the *Bypass / Plant Overflow* is a direct and unavoidable result of a planned maintenance procedure, the *Owner* notified the *Water Supervisor* 15 days prior to the *Bypass* and the *Water Supervisor* has given written consent of the *Bypass*; and

(d) where the *Bypass / Plant Overflow* is planned for research or training purposes, the discharger notified the *Water Supervisor* 15 days prior to the *Bypass / Plant Overflow* and the *Water Supervisor* has given written consent of the *Bypass / Plant Overflow*.

(2) The *Owner* shall forthwith notify the Spills Action Centre (SAC) and the Medical Officer of Health of all *Bypass and Plant Overflow Events* except the events occurring under subsection (1)(b). This notice shall include, at a minimum, the following information:

- (a) the date, time, and duration of the *Event*;
- (b) the location of the *Event*;
- (c) the measured or estimated volume of the *Event*;
- (d) the reason for the *Event*; and
- (e) the level of treatment the *Bypass(es)* and/or *Plant Overflow(s)* received and disinfection status of same.

(3) The *Owner* shall submit *Bypass and Plant Overflow Event Reports* to the Ministry's local office on a quarterly basis, no later than each of the following dates for each calendar year: February 14, May 15, August 14, and November 15. Event Reports shall be in an electronic format specified by the Ministry. In each Event Report the *Owner* shall include, at a minimum, the following information on any *Events* that occurred during the preceding quarter:

- (a) the date of the *Event(s)*;
- (b) the measured or estimated volume of the *Event(s)*;
- (c) the duration of the *Event(s)*;
- (d) the location of the *Event(s)*;
- (e) the reason for the *Event(s)*; and
- (f) the level of treatment the *Bypass(es)* and/or *Plant Overflow(s)* received and disinfection status of same.

(4) The *Owner* shall maintain a logbook of all *Plant Bypasses* and *Plant Overflows*, which shall contain, at a minimum, the types of information set out in subsection 2 (a) to 2(e) in respect of each *Bypass* and *Plant Overflow*.

6. EFFLUENT OBJECTIVES

(1) The *Owner* shall use best efforts to design, construct and operate the *Works* with the objective that the concentrations of the materials named in Table 1 as effluent parameters are not exceeded in the effluent from the *Works*.

Table 1 - Effluent Objectives	
Effluent Parameter	Concentration Objective (milligrams per litre unless otherwise indicated)
CBOD5	5.0
Total Suspended Solids	5.0
Total Phosphorus	0.30 ^A 0.60 ^B
Dissolved Oxygen	5.0
Unionized Ammonia	0.05

Note: ^A Period when stream temperature is greater than 5°C; ^B Period when stream temperature is greater than 5°C

(2) The *Owner* shall use best efforts to:

- (a) maintain the pH of the effluent from the *Works* within the range of 6.5 to 8.5, inclusive, at all times;
- (b) operate the works within the *Rated Capacity* of the *Works*;
- (c) ensure that the effluent from the *Works* 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 receiving waters.

(3) Stipulation made in Conditions 7.2(a), (c) and (d) for the effluent limits applies for the effluent objective.

(4) The *Owner* shall include in all reports submitted in accordance with Conditions 10 a summary of the efforts made and results achieved under this Condition.

7. EFFLUENT LIMITS

(1) The *Owner* shall design and construct and operate and maintain the *Works* such that the concentrations of the materials named in Table 2 as effluent parameters are not exceeded in the effluent from the *Works*.

Table 2 - Effluent Limits

Effluent Parameter	Monthly Average Concentration (milligrams per litre unless otherwise indicated)	Monthly Average Loading (kilograms per day unless otherwise indicated)
Column 1	Column 2	Column 3
<i>CBOD₅</i>	10.0	18.32
Total Suspended Solids	10.0	18.32
Total Phosphorus	0.40 ^A 0.80 ^B	0.73 ^A 1.47 ^B
Dissolved Oxygen	4	/
Unionized Ammonia	0.1 ^C	/

Note: ^A Period when stream temperature is greater than 5°C; ^B Period when stream temperature is greater than 5°C; ^C Single Sample result

(2) For the purposes of determining compliance with and enforcing subsection (1):

(a) The *Monthly Average Concentration* of *CBOD₅*, Total Suspended Solids and Total Phosphorus as named in Column 1 of Table 2 of subsection (1) shall not exceed the corresponding maximum concentration set out in Column 2 of Table 2 of subsection (1).

(b) The *Monthly Average Loading* of *CBOD₅*, Total Suspended Solids and Total Phosphorus as named in Column 1 of Table 2 of subsection (1) shall not exceed the corresponding maximum concentration set out in Column 3 of Table 2 of subsection (1).

(c) The calculated concentration of Unionized Ammonia, as named in Column 1 of Table 2 of subsection (1) shall not exceed the corresponding maximum concentration set out in Column 2 of Table 2 of subsection (1) in any single sample.

(d) The *Monthly Average Concentration* of Dissolved Oxygen as named in Column 1 of Table 2 of subsection (1) shall not be less than the corresponding concentration set out in Column 2 of Table 2 of subsection (1).

(e) The pH of the effluent shall be maintained within 6.0 to 9.5 at all times.

(3) Paragraphs (a), (b), (c) and (e) of subsection (2) shall apply upon the issuance of this Approval.

(4) The effluent limits set out in subsection (1) shall apply upon the issuance of this Approval.

(5) Only those monitoring results collected during the corresponding time period shall be used in calculating the *Monthly Average Concentration* for this Approval.

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 *Act* 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 an operations manual **within six (6) months** of *Substantial Completion* 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 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 *Water Supervisor*; and

(f) procedures for receiving, responding and recording public complaints, including recording any followup actions taken.

(3) The *Owner* shall maintain the operations manual current and retain a copy at the location of 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 provide for the overall operation of the *Works* with an operator who holds a licence that is applicable to that type of facility and that is of the same class as or higher than the class of the facility in accordance with Ontario Regulation 129/04.

9. MONITORING AND RECORDING

The *Owner* shall, upon commencement of operation of the *Works*, carry out the following monitoring program:

(1) All samples and measurements taken for the purposes of this *Approval* are to be taken at a time and in a location characteristic of the quality and quantity of the effluent stream over the time period being monitored.

(2) For the purposes of this condition, the following definitions apply:

- (a) Daily means once each day;
- (b) Monthly means once every month;

(3) Samples shall be collected at the following sampling points, at the frequency specified, by means of the specified sample type and analyzed for each parameter listed and all results recorded:

Table 3 - Raw Sewage Monitoring (Samples to be collected at the head of the inlet works)		
Parameters	Sample Type	Frequency
<i>BOD5</i>	<i>Grab Sample</i>	Monthly
Total Suspended Solids	<i>Grab Sample</i>	Monthly
Total Phosphorus	<i>Grab Sample</i>	Monthly
Total Kjeldahl Nitrogen	<i>Grab Sample</i>	Monthly

Table 4 - Effluent Monitoring (Samples to be collected at the outlet of the tertiary treatment filter)		
Parameters	Sample Type	Frequency
<i>CBOD5</i>	<i>Grab Sample</i>	Twice a month
Total Suspended Solids	<i>Grab Sample</i>	Twice a month
Total Phosphorus	<i>Grab Sample</i>	Twice a month
Total Ammonia Nitrogen	<i>Grab Sample</i>	Twice a month
<i>E. Coli</i>	<i>Grab Sample</i>	Twice a month
pH	<i>Grab Sample /Probe</i>	Twice a month
Temperature	<i>Grab Sample /Probe</i>	Twice a month

(4) The methods and protocols for sampling, analysis and recording shall conform, in order of precedence, to the methods and protocols specified in the following:

- (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 from time to time by more recently published editions;
- (b) the Ministry's publication "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater" (January 1999), ISBN 0-7778-1880-9, as amended from time to time by more

recently published editions; and

(c) the publication "Standard Methods for the Examination of Water and Wastewater" (21st edition), as amended from time to time by more recently published editions.

(5) The temperature and pH of the effluent from the *Works* 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 Nitrogen concentration, pH and Temperature using the methodology stipulated in "Ontario's Provincial Water Quality Objectives" dated July 1994, as amended, for Ammonia (un-ionized).

(6) If the calculated value of Un-ionized Ammonia in the final effluent exceeds 0.05 mg/L and/or the Dissolved Oxygen levels in the final effluent drop to less than 5.0 mg/L, then on-site testing shall be done daily until the Un-ionized Ammonia and Dissolved Oxygen values return to the aforementioned values. If the Un-ionized Ammonia and the Dissolved Oxygen levels reach non-compliance criteria as stipulated in Condition 7(1), Table 2, then the *Owner* shall notify the District Office and also provide remediation measures/procedures to be undertaken.

(7) Sampling locations may only be changed or abandoned and new locations may be added following commencement of operation if, in the opinion of the *Water Supervisor*, it is necessary to do so to ensure representative samples are being collected.

(8) If the *Owner* monitors any of the effluent parameters required by subsection (3), at the designated locations and in accordance with subsection (4), more frequently than it is required by that condition, the analytical results of all such samples, both required and additional, shall be included in the calculating and reporting of the values required by this *Approval*, and increased frequency, or all dates of sampling, shall also be specified in the reports.

(9) The *Owner* shall install and maintain (a) continuous flow measuring device(s), to measure the flowrate of the effluent from the *Works* with an accuracy to within plus or minus 15 per cent (+/- 15%) of the actual flowrate for the entire design range of the flow measuring device, and record the flowrate at a *daily* frequency.

(10) The *Owner* shall retain for a minimum of **five (5) years** from the date of their creation, all records and information related to or resulting from the monitoring activities required by this *Approval*.

10. REPORTING

(1) **One week** prior to the start up of the operation of the *Proposed Works*, the *Owner* shall notify the *Water Supervisor* (in writing) of the pending start up date.

(2) **Ten (10) days** prior to the date of a planned *Bypass* being conducted pursuant to Condition 5 and as soon as possible for an unplanned *Bypass*, the *Owner* shall notify the *Water Supervisor* (in writing) of

the pending start date, in addition to an assessment of the potential adverse effects on the environment and the duration of the *Bypass*.

(3) The *Owner* shall report to the *Water Supervisor* or designate, any exceedence of any parameter specified in Condition 7 orally, as soon as reasonably possible, and in writing within **seven (7) days** of the exceedence.

(4) In addition to the obligations under Part X of the Environmental Protection Act, the *Owner* shall, within **ten (10) working days** of the occurrence of any reportable spill as defined in Ontario Regulation 675/98, bypass or loss of any product, by-product, intermediate product, oil, solvent, waste material or any other polluting substance into the environment, submit a full written report of the occurrence to the *Water Supervisor* describing the cause and discovery of the spill or loss, clean-up and recovery measures taken, preventative measures to be taken and schedule of implementation.

(5) The *Owner* shall, upon request, make all manuals, plans, records, data, procedures and supporting documentation available to *Ministry* staff.

(6) The *Owner* shall prepare and submit to the *Water Supervisor*, a performance report, on an annual basis, within **ninety (90) days** following the end of the period being reported upon. The first such report shall cover the first annual period following the commencement of operation of the *Works* and subsequent reports shall be submitted to cover successive annual periods following thereafter. The reports shall contain, but shall not be limited to, the following information:

(a) a summary and interpretation of all monitoring data and a comparison to the effluent limits outlined in Condition 7, including an overview of the success and adequacy of the *Works*;

(b) a description of any operating problems encountered and corrective actions taken;

(c) a summary of all maintenance carried out on any major structure, equipment, apparatus, mechanism or thing forming part of the *Works*;

(d) a summary of any effluent quality assurance or control measures undertaken in the reporting period;

(e) a summary of the calibration and maintenance carried out on all effluent monitoring equipment;

(f) a description of efforts made and results achieved in meeting the Effluent Objectives of Condition 6;

(g) a tabulation of the volume of sludge generated in the reporting period, 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;

(h) a summary of any complaints received during the reporting period and any steps taken to address the complaints;

(i) a summary of all *Bypass*, spill or abnormal discharge events; and

(j) any other information the *Water Supervisor* requires from time to time.

11. LIMITED OPERATIONAL FLEXIBILITY

(1) The *Owner* may make *Modifications* to the *Works* in accordance with the terms and conditions of this *Approval* and subject to the Ministry's "Limited Operational Flexibility Criteria for Modifications to Sewage Works", included under Schedule A of this *Approval*, as amended.

(2) Sewage works under *Limited Operational Flexibility* shall adhere to the design guidelines contained within the Ministry's publication "Design Guidelines for Sewage Works 2008", as amended.

(3) The *Owner* shall ensure at all times, the *Works* and related equipment and appurtenances which are installed or used to achieve compliance are operated in accordance with all terms and conditions of this *Approval*.

(4) For greater certainty, the following are not permitted as part of *Limited Operational Flexibility*:

(a) *Modifications* to the *Works* that result in an increase of the *Rated Capacity* of the *Works*;

(b) *Modifications* to the *Works* that adversely affect the approved effluent quality criteria or the location of the discharge/outfall;

(c) *Modifications* to the *Works* approved under s.9 of the EPA, and

(d) *Modifications* to the *Works* pursuant to an order issued by the *Ministry*.

(5) Implementation of *Limited Operational Flexibility* is not intended to be used for piecemeal measures that result in major alterations or expansions.

(6) If the implementation of *Limited Operational Flexibility* requires changes to be made to the Emergency Response, Spill Reporting and Contingency Plan, the *Owner* shall provide a revised copy of this plan for approval to the local fire services authority prior to implementing *Limited Operational Flexibility*.

(7) For greater certainty, any alteration made under the *Limited Operational Flexibility* may only be carried out after other legal obligations have been complied with including those arising from the

Environmental Protection Act , Niagara Escarpment Planning and Development Act , Oak Ridges Moraine Conservation Act , Lake Simcoe Protection Act and Greenbelt Act.

(8) Prior to implementing *Limited Operational Flexibility*, the *Owner* shall complete a *Notice of Modifications* describing any proposed *Modifications* to the *Works* and submit it to the *Water Supervisor*.

Schedule A

Limited Operational Flexibility Criteria for Modifications to Sewage Works

The *Modifications* to sewage works approved under an Environmental Compliance Approval (ECA) that are permitted under the *Limited Operational Flexibility* (LOF), are outlined below and are subject to the LOF conditions in the ECA. For clarity proposes, *Modifications* of equipment **does not** include process equipment where treatment unit operations occur, including but not limited to: screens, grit separators, blowers, oxygen diffusers, sludge thickeners and dewatering equipment, UV systems, chlorine contact tanks, bio-disks, digester gas handling systems, and process reactors.

Modifications of sewage works that are exempt from section 53 of the OWRA by O. Reg. 525/98 continue to be exempt and are not required to follow the notification process under this *Limited Operational Flexibility*. If there is a conflict between the list of sewage works listed below and the conditions in the ECA, the conditions in the ECA shall take precedence.

The following sewage works are permitted under *Limited Operational Flexibility*, and as per the conditions in the *Approval*:

1.0 Sewage Pumping Stations

- 1.1 Alter pumping capacity by adding or replacing equipment where new equipment is located within an existing sewage treatment plant site or an existing sewage pumping station site, where the facility rated capacity is not exceeded and while maintaining the existing flow process and/or treatment train, if applicable.
- 1.2 Replacing existing minor equipment with *Equivalent equipment* of different make and model, provided that there are no treatment process changes as a result of the replacement.

2.0 Inlet Works

- 2.1 Replacing existing minor equipment with *Equivalent equipment* of different make and model.

3.0 Sewage Treatment Process

- 3.1 Install or replace instrumentation or chemical dosage equipment for operational or maintenance purposes including replacing chemicals for pH adjustment or coagulants (non-toxic polymers) provided that there are no *Modifications* of treatment processes or other *Modifications* that may alter the intent of operations and may have negative impacts on *Works'* effluent quantity and quality.
- 3.2 Expansion of buffer zone between a sanitary sewage lagoon facility or land treatment area and adjacent uses where the buffer zone is entirely on the proponent's land.
- 3.3 Optimize existing sanitary sewage lagoons with the purpose to increase efficiency of treatment operations provided that existing sewage treatment plant rated capacity is not exceeded and where

no land acquisition is required.

- 3.4 Replacing existing minor equipment with *Equivalent equipment* of different make and model, provided that there are no treatment process changes as a result of the replacement.

4.0 Sewage Treatment Process Outfall

- 4.1 Replacement of discharge pipe with similar pipe size provided that the outfall location is not changed.

5.0 Sanitary Sewers

- 5.1 Pipe relining and replacement with similar pipe size to the approved site location's existing sanitary sewers and forcemains sewage collection system. The sewer main *Modifications* shall **not** include **combined sewers**.
- 5.2 Sanitary gravity sewers and forcemains within the approved site location, except those with a nominal diameter greater than 1,200 mm.

6.0 Stormwater Management System

- 6.1 *Modifications* of stormwater management works to service the existing approved drainage area located within the site, provided that there is no increase in the average impervious area established in the original design and the discharges from the site will not exceed the attenuated flows established in the original design.
- 6.2 Installation of new oil grit separators.

7.0 Pilot Systems

- 7.1 Installation of pilot systems for new or existing technologies provided that:
 - (a) any effluent from the pilot system is discharged to the inlet of the main sewage treatment plant or hauled off-site for proper disposal,
 - (b) any effluent from the pilot system discharged to the inlet of the main sewage treatment plant does not significantly alter the composition/concentration of the influent sewage to be treated in the downstream process; and that it does not add any inhibiting substances to the downstream process, and
 - (c) the pilot system's duration be of up to a maximum of **two years**; and a report with results is submitted to the *Director* and *Water Supervisor* **three months** after completion of the pilot project



Ministry of
the Environment

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 SYSTEMS) OR DISTRICT MANAGER (FOR INDUSTRIAL SYSTEMS)

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 Owner	ECA number	Issuance Date (mm/dd/yy)	Notice number
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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)

Schedule B

Environmental Compliance Approval (ECA) supporting documents:

1. Environmental Study Report (dated September 1999), design report (dated January 2000), final plans and specifications prepared by Triton Engineering Services Limited;
2. Environmental Compliance Approval Application for Sewage Works dated September 10, 2013 signed by Dave Milliner, and cover letter submitted by Christine M. Furlong, P.Eng. of Triton Engineering Services Limited, Consulting Engineers , dated September 19, 2013;
3. Design Brief entitled “Community of Dundalk Sewage Treatment Works Energy Efficiency Upgrades”, dated September, 2013 and prepared, Triton Engineering Services Limited; and
4. A set of Engineering Drawings entitled “Upgrades to Dundalk Sewage Lagoons Township of Southgate”, Project No. 4607-00, dated September 2013.

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

1. Condition 1 is imposed to ensure that the *Works* are built and operated in the manner in which they were described for review and upon which approval was granted. This condition is also included to emphasize the precedence of Conditions in the *Approval* and the practice that the Approval is based on the most current document, if several conflicting documents are submitted for review. The condition also advises the Owners their responsibility to notify any person they authorized to carry out work pursuant to this *Approval* the existence of this *Approval*.
2. Condition 2 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.
3. Condition 3 is included to ensure that the *Ministry* records are kept accurate and current with respect to the approved 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.
4. Condition 4 is included to ensure that the *Works* are constructed in accordance with the approval and that record drawings of the *Works* “as constructed” are maintained for future references.
5. Condition 5 is included to indicate that by-passes of untreated sewage to the receiving watercourse is prohibited, save in certain limited circumstances where the failure to *Bypass* could result in greater injury to the public interest than the *Bypass* itself where a *Bypass* will not violate the approved effluent requirements, or where the *Bypass* can be limited or otherwise mitigated by handling it in accordance with an approved contingency plan. 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.
6. Condition 6 is imposed to establish non-enforceable effluent quality objectives which the *Owner* is

obligated to use best efforts to strive towards on an ongoing basis. These objectives are to be used as a mechanism to trigger corrective action proactively and voluntarily before environmental impairment occurs and before the compliance limits of Condition 7 are exceeded.

7. Condition 7 is imposed to ensure that the effluent discharged from the *Works* to the receiver meets the *Ministry* 's effluent quality requirements thus minimizing environmental impact on the receiver and to protect water quality, fish and other aquatic life in the receiving water body.
8. Condition 8 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 and made available to the *Ministry*. 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 work.
9. Condition 9 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 effluent limits specified in the *Approval* and that the *Works* does not cause any impairment to the receiving watercourse.
10. Condition 10 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 all the terms and conditions outlined in this *Approval*, so that the *Ministry* can work with the *Owner* in resolving any problems in a timely manner.
11. Condition 11 is included to ensure that the *Works* are operated 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. These conditions are also included to ensure that a Professional Engineer has reviewed the proposed *Modifications* and attests that the *Modifications* are in line with that of *Limited Operational Flexibility* , and provide assurance that the proposed *Modifications* comply with the Ministry's requirements stipulated in the terms and conditions of this *Approval*, MOE policies, guidelines, and industry engineering standards and best management practices.

**Upon issuance of the environmental compliance approval, I hereby revoke Approval No(s).
7585-4GYHR7 issued on March 16, 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:

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:

3. The name of the appellant;
4. The address of the appellant;
5. The environmental compliance approval number;
6. The date of the environmental compliance approval;
7. The name of the Director, and;
8. 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
2 St. Clair Avenue West, Floor 12A
Toronto, Ontario
M4V 1L5

*** 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) 314-4506 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 2nd day of December, 2013



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

YK/

c: DWMD Supervisor, MOE Owen Sound
Christine Furlong, P. Eng., Triton Engineering Services Limited