

Appendix B

Duffin Creek WPCP ECA No. 5531-9FJTS

AMENDED ENVIRONMENTAL COMPLIANCE APPROVALNUMBER 5531-9FJTT5
Issue Date: March 3, 2014

The Regional Municipality of Durham
PO Box 623 Stn Main
Whitby, Ontario
L1N 6A3

The Regional Municipality of York
17250 Yonge St
Newmarket, Ontario
L3Y 6Z1

Site Location: Duffin Creek Water Pollution Control Plant
901 McKay Rd
Pickering, Regional Municipality of Durham
L1W 3A3

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:

expansion of the municipal sewage treatment works for the collection, transmission, treatment and disposal of domestic sewage with with a *Rated Capacity* of 630,000 m³/d and a *Peak Flow Rate* of 1,575,000 m³/d (*Maximum Average Operating Capacity* of 540,000 m³/d subject to outfall/diffuser limitations) consisting of the following:

Proposed Works*STAGES 1 AND 2 LIQUID TREATMENT TRAIN*

Influent Pumping Station

- 22 m diameter wetwell divided into two interconnected compartments, equipped with eight (8) submersible pumps (three standby), each rated at 2,093 L/s at 20 m TDH;

Preliminary Treatment Building

- six (6) screen channels, four channels equipped with mechanical screens each with a *peak flow*

- *rate* of 308,333 m³/d and two channels equipped with emergency manual bar screens;
- two (2) screenings grinder/washer/compactors, screenings conveyor system and screenings storage bins;
- four (4) 18 m x 7.5 m aerated grit tanks each with a *peak flow rate* of 324,000 m³/d, complete with integral grit auger and air distribution system;
- four (4) grit slurry pumps;
- four (4) grit cyclones, two (2) grit classifier/dewatering units, grit conveyor system and grit storage bins;
- two (2) blowers (one standby) for the aerated grit tank;
- three (3) blowers (one standby) for channel aeration system;

Secondary Clarification

- removal of the existing waste activated sludge pumps in the return and waste activated sludge pumping stations no. 1 and no. 2, to be replaced with a new wet well pump station equipped with three (3) waste activated sludge submersible pumps each rated at 20 L/s;
- removal of the existing waste activated sludge pumps in the return and waste activated sludge pumping stations no. 3 and no. 4, to be replaced with a new wet well pump station equipped with three (3) waste activated sludge submersible pumps each rated at 20 L/s;

Phosphorus Removal System

- four (4) 93,000 L chemical tanks;
- six (6) chemical pumps (2 standby) for dosing at the preliminary treatment building, each rated at 860 L/h;
- six (6) chemical pumps (2 standby) for dosing at the secondary treatment trains, each rated at 860 L/h;

Disinfection (Chlorination/Dechlorination)

- replacement of existing gas chlorination and sodium hypochlorite systems with three (3) 51,500 L sodium hypochlorite storage tanks, three (3) sodium hypochlorite feed pumps (1 standby) for the Stage 1 chlorine contact chambers and three (3) sodium hypochlorite feed pumps (1 standby) for the Stage 2 chlorine contact chambers, each pump with a capacity of 417 L/h and provision for two (2) sodium hypochlorite feed pumps for the effluent pumping station discharge header (1 standby) each with a capacity of 16 L/h;
- replacement of existing dechlorination system with two (2) 9,030 L sodium bisulphite storage tanks, two (2) sodium bisulphite feed pumps (1 standby) for the common effluent channel of the Stages 1 and 2 chlorine contact tanks, each with a capacity of 266 L/h and two (2) sodium bisulphite feed pumps for the Stage 1 and 2 effluent pumping station inlet wet well (1 standby) each with a capacity of 16 L/h;

Standby Power Generation

- five (5) 3 MW standby generator sets (one future installation);

- two (2) 80,000 L external diesel fuel storage tanks in spill containment area;

STAGE 3 LIQUID TREATMENT TRAIN

Influent Pumping Station

- 27.0 diameter wetwell divided into two interconnected compartments, equipped with eight (8) submersible pumps (three standby), each rated at 2,099 L/s at 20 m TDH;

PLANT BIOSOLIDS TREATMENT

Sludge Cake Incineration (Reactors 3 and 4)

- two (2) fluidized bed process trains each with an installed capacity of 105 dry tonne/d, including reactor, primary heat exchanger, waste heat boiler, wet venture/impingement scrubber, gas conditioner, mercury adsorber, fluidizing blower, ID fan, sand system, boiler feedwater treatment, steam utilities, waste heat boiler blowdown and condensate systems;

Previous Works

PLANT INFLUENT WORKS

- inlet sewer from collection system and flow splitting chamber to Stages 1 and 2 and Stage 3 Liquid Treatment Trains;

STAGES 1 AND 2 LIQUID TREATMENT TRAIN

Raw Sewage Pumping Station (to be replaced)

- three (3) screw pumps each with a capacity of 230,400 m³/d;

Preliminary Treatment (to be replaced)

- Twelve (12) bar screens 1.83 m wide and eight (8) 10.7 m x 10.7 m and 0.8 m deep detritors located in two buildings, complete with all necessary conveyors and storage bins;

Primary Clarification

- eight (8) 64 m x 24.5 m x 3.6 m SWD primary clarifiers equipped with a travelling bridge mechanism;
- sixteen (16) sludge pumps (eight standby) each rated at 45.6 m³/h;
- scum pots each complete with scum pump and grinders;
- two (2) mixing pumps, one for each of the scum chambers no. 3 and no. 4;

Aeration

- eight (8) 91 m x 22.9 m x 5.8 m SWD plug-flow aeration tanks each equipped with fine bubble aeration system and a 3,015 m³/ selector zone at the head of each tank equipped with two (2) submersible mixers and a fine bubble aeration system for operation in either anoxic or aerobic mode;
- four (4) 37,380 m³/h and two (2) 18,690 m³/h capacity air blowers located in two blower buildings;

Secondary Clarification

- sixteen (16) 41.2 m diameter x 3.7 m SWD secondary clarifiers equipped with a mid-radius baffle and equipped with a sludge collecting mechanism;
- two (2) return and waste activated sludge pumping stations no. 1 and no. 2 each equipped with three (3) return sludge screw pumps each rated at 1,900 m³/h and two (2) waste sludge screw pumps each rated at 288 m³/h;
- two (2) return and waste activated sludge pumping stations no. 3 and no. 4 each equipped with two (2) return sludge screw pumps each rated at 1,900 m³/h, two (2) waste screw pumps each rated at 288 m³/h and one (1) submersible return sludge pump rated at 2,180 m³/h;

Phosphorus Removal System (to be replaced)

- three (3) 94,000 L FRP chemical tanks in the chemical building;
- two (2) sets of dosing pumps to provide dual point application, the first set of dosing pumps consisting of three (3) pumps (one standby), each rated at 1,000 L/h dosing to the detritors and second set consisting of three (3) pumps (one standby), each rated at 1,000 L/h dosing to the aeration tank inlet;
- two (2) 90,000 L and one (1) 95,500 L FRP chemical tanks in the preliminary treatment building no. 1;
- two (2) sets of dosing pumps to provide dual point application, the first set of dosing pumps consisting of three (3) pumps (one standby), each rated at 1,000 L/h dedicated to the primary clarifiers and the second set consisting of three (3) pumps (one standby), each rated at 1,000 L/h and dedicated to the mixed liquor conduit upstream of the secondary clarifiers;

Disinfection (Chlorination/Dechlorination)

- two (2) chlorine contact chambers no. 1 and no. 2, each 1,230 m³ together with the existing 270 m³ effluent channel to provide a total volume of 2,730 m³;
- two (2) chlorine contact chambers no. 3 and no. 4, each 1367.5 m³ to provide a total volume of 2,735 m³;
- four (4) 2,720 kg/d capacity and two (2) 1,360 kg/d capacity chlorinators; (to be decommissioned);
- two (2) 45,000 L capacity sodium bisulphite storage tanks and two 680 L/h capacity metering pumps (one standby) with chemical injection mixer downstream of the chlorine contact chambers; (to be decommissioned);

- one (1) 33,000 L sodium hypochlorite tank in the effluent building and two (2) chemical pumps, each with a capacity of 395 L/h; (to be decommissioned);

STAGE 3 LIQUID TREATMENT TRAIN

Imported Wastewater Receiving Station

- imported wastewater receiving station complete with a spill containment pad, a cardlock access system, motorized valve, magnetic flow meter, card reader/billing system and automatic sampler;

Headworks

- six (6) screen channels, four channels equipped with mechanical screens each with a *peak flow rate* of 258,333 m³/d and two channels equipped with emergency manual bar screens;
- two (2) screenings grinder/washer/compactors, screenings conveyor system and screenings storage bins;
- four (4) 17 m x 7 m aerated grit tanks each with a *peak flow rate* of 258,333 m³/d, complete with integral grit auger and air distribution system;
- four (4) grit slurry pumps;
- four (4) grit cyclones, two (2) grit classifier/dewatering units, grit conveyor system and grit storage bins;
- two (2) blowers (one standby) for the aerated grit tank;
- three (3) blowers (one standby) for channel aeration system;

Phosphorus Removal System

- three (3) 93,000 L chemical tanks;
- three (3) chemical pumps (one standby) for dosing at the headworks, each rated at 1,500 L/h;
- six (6) chemical pumps for dosing at the secondary treatment trains, each rated at 556 L/h;

Primary Clarification

- six (6) 65 m x 24 m x 3.7 m SWD primary clarifiers equipped with travelling bridge mechanisms;
- twelve (12) primary sludge pumps (one duty and one standby for each primary clarifier), each rated at 100 m³/h;
- four (4) scum pots and four (4) inline grinders (one for each scum pot), each rated at 100 m³/h;
- eight (8) primary scum pumps (one duty and one standby for each scum pot), each rated at 100 m³/h;

Aeration

- six (6) 105 m x 24.9 m x 5.75 m SWD, three-pass aeration tanks with step-feed gates and equipped with fine bubble aeration system and a baffled zone at the inlet equipped with three (3)

- submersible mixers for operation as anoxic zone as required;
- three (3) blowers, each with a capacity of 37,400 m³/h, located in the blower building;

Secondary Clarification

- six (6) 124 m x 25.8 m x 5.5 m SWD secondary clarifiers equipped with chain and flight mechanisms;
- twelve (12) return activated sludge (RAS) pumps (one duty and one standby for each secondary clarifier), each rated for a variable capacity between 1,610 m³/h and 2,420 m³/h;
- twelve (12) waste activated sludge (WAS) pumps (one duty and one standby for each secondary clarifier), each rated for a variable capacity between 43 m³/h and 100 m³/h;
- six (6) scum pots;
- twelve (12) scum pumps (one duty and one standby for each scum pot), each rated at 72 m³/h;
- two (2) blowers (one standby), each rated at 1,000 m³/h and coarse bubble diffusers for mixed liquor channel aeration;

Disinfection (Chlorination/Dechlorination)

- two (2) chlorine contact chambers (no. 5 and no. 6) with internal baffle walls and a total volume of 9,000 m³.
- three (3) 50,000 L capacity sodium hypochlorite storage tanks, three (3) sodium hypochlorite feed pumps (one standby) each with a capacity of 1,000 L/h;
- two (2) 3,750 L capacity sodium bisulphite storage tanks, two (2) sodium bisulphite feed pumps (one standby) each with a capacity of 54.2 L/h;

Standby Power Generation

- three (3) 1,750 kW standby generator sets with external 37,850 L diesel fuel storage tank;

PLANT POLYMER SYSTEM

- two (2) dry liquid 21 kg/h polymer makedown systems with two 5,680 L mix tanks;
- three (3) dosing pumps (one standby) each rated at 530 L/h for Stage 1 secondary clarifiers;
- three (3) dosing pumps (one standby) each rated at 530 L/h for Stage 2 secondary clarifiers;
- eight (8) dosing pumps (two standby) each rated at 350 L/h for Stage 3 secondary clarifiers;

PLANT FINAL EFFLUENT WORKS

Final Effluent Sampling

- Stages 1 and 2 Final Effluent Sampling Pump equipped with variable speed control for flow-proportioned operation;
- Stage 3 Final Effluent Sampling Pump equipped with variable speed control for flow-proportioned operation;

- final effluent sampling column with a static mixer;

Final Effluent Outfall

- a 3.05 m diameter outfall tunnel, approximately 1,100 m long with a 183 m long diffuser pipe at the end having 63 diffuser ports each 225 mm in diameter for final effluent discharge to Lake Ontario;

PLANT BIOSOLIDS TREATMENT

Sludge Stabilization/Digestion

- four (4) 33.5 m diameter, 9.14 m SWD primary digesters with a fixed steel cover, mechanical mixers;
- two (2) 33.5 diameter, 9.14 m SWD secondary digesters with floating steel covers and supernatant selector arms;
- four (4) digested sludge pumps, two (2) for each digester control building, each rated at 76 m³/h;
- two (2) 9,000 m³ sludge blending tanks;
- four (4) blended sludge transfer pumps (two standby), each with a capacity of 76 m³/h to 216 m³/h to transfer blended sludge to the sludge dewatering facility;
- two (2) waste gas burners;

Imported Sludge Pumping

- a pumping station for imported sludge with a 8 m x 8 m x 4.5 m SWD, 288 m³ capacity holding tank with one (1) 15 kW mechanical submersible mixer; a 6 m x 8 m x 4 m pump room with two (2) sludge transfer pumps, each rated for 91 m³/h including variable frequency drive;

Sludge Holding/Blending (Dewatering Building)

- a 15.1 m x 31.3 m x 4.83 m sludge blending tank with four (4) cells with four (4) submersible mixers;
- two (2) sludge blending tanks each with a capacity of 450 m³ and equipped with a mixer;

Sludge Dewatering

- four (4) membrane filter presses 1,500 mm x 1,500 mm plates for dewatering digested sludge in the dewatering building;
- four (4) membrane filter presses with 1,200 mm x 1,200 mm plates (to be decommissioned upon completion of the proposed works);
- three (3) automated membrane filter presses with 2,000 mm x 2,000 mm plates;
- two (2) 17,030 L polypropylene liquid polymer storage tanks, and polymer dilution system;
- filtrate/sanitary pumping station with two (2) submersible pumps and forcemain to inlet of treatment plant;

Sludge Cake Conveyance and Storage

- four (4) twin cylinder reciprocating piston sludge cake pumps;
- four (4) 9.9 m³ sludge cake holding hoppers;
- two (2) sludge cake live bottom bunkers;

Dewatering and Cake Storage Building

- twelve (12) centrifuge feed pumps (four standby), each rated at 110 m³/h and twelve (12) inline sludge grinder pumps (one for each feed pump), each rated at 110 m³/h;
- eight (8) dewatering solid bowl centrifuges, each with a capacity of 2.5 dry tonne/h;
- polymer system consisting of emulsion polymer bulk storage tank, five (5) polymer make-down and mix systems (one standby), four (4) polymer feed pump skids of three (3) pumps each and automated polymer dilution and feed system;
- two (2) centrate wetwells and three (3) centrate pumps each with a capacity of 790 m³/h;
- four (4) cake storage silos, each with an active capacity of approximately 75 m³;
- eight (8) cake pumps (four standby), each with a capacity of 15 m³/h;

Sludge Cake Incineration (Reactors 1 and 2)

- two (2) fluidized bed process trains each with an installed capacity of 105 dry tonne/d, including reactor, primary heat exchanger, waste heat boiler, wet venture/impingement scrubber, gas conditioner, mercury adsorber, fluidizing blower, ID fan, sand system, boiler feedwater treatment, steam utilities, waste heat boiler blowdown and condensate systems;

Ash Collection and Thickening

- two (2) fly ash scrubbing systems each having a scrubber, an ash slurry collection tank with two (2) thin ash slurry transfer pumps;
- two (2) ash thickening tanks, each equipped with a rake mechanism, cover, and each having two (2) slurry pumps;
- three (3) ash thickener overflow replacement pumps to transfer overflow to plant influent works;
- emergency ash overflow tank and pumps;

Ash Dewatering

- two (2) vacuum filter packages for dewatering wet ash;

PLANT STANDBY POWER GENERATION (to be replaced)

- one (1) 150 kW diesel generator set located outside the effluent pumping station;
- one (1) 73 kW diesel generator set in the administration building;
- one (1) 80 kW diesel generator set in the raw lift station;
- one (1) 60 kW diesel generator set in dewatering building, servicing the disinfection building;

- one (1) 300 kW diesel generator set located outside the incineration building;
- all other controls, electrical equipment, instrumentation, piping, pumps, valves and appurtenances essential for the proper operation of the aforementioned sewage works;

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

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

"Annual Average Concentration" means the arithmetic mean of the *Monthly Average Concentrations* of a contaminant in the effluent calculated for any particular calendar year;

"Annual Average Loading" means the value obtained by multiplying the *Annual Average Concentration* of a contaminant by the *Average Daily Flow* over the same calendar year;

"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;

"By-pass" 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;

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

"*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*;

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

"*Geometric Mean Density*" is the nth root of the product of multiplication of the results of n number of samples over the period specified;

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

"*Maximum Operating Capacity*" means the *Average Daily Flow* for which the *Works* are approved to handle until the outfall/diffuser limitations are resolved;

"*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;

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

"*Owner*" means The Regional Municipality of Durham and The Regional Municipality of York and includes their respective successors and assignees;

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

"*Partial Treatment*" means any treatment that does not include the full train of unit processes of the *Sewage Treatment Plant* described and approved in the *Approval*;

"*Peak Flow Rate*" means the maximum rate of sewage flow for which the plant or process unit was designed;

"*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;

"*Regional Water Compliance Manager*" means the Regional Water Compliance Manager of the Central Region of the Ministry;

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

"*Source Protection Plan*" means a drinking water source protection plan prepared under the Clean Water Act, 2006;

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

"*Water Supervisor*" means the Water Supervisor for the Toronto, York-Durham, and Halton-Peel offices of the Ministry; and

"*Works*" means the sewage works described in the *Owner* 's application, this *Approval* , including 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 Information 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 *Proposed 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 six months of the *Substantial Completion* of the *Proposed 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. BY-PASSES

(1) Any *By-pass* or *Plant Overflow* is prohibited, except:

(a) in an *Emergency Situation*;

(b) 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

(c) 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* (unless the *Event* is ongoing);

(d) the reason for the *Event*; and

(e) the level of treatment the *By-pass(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 *By-pass(es)* and/or *Plant Overflow(s)* received and disinfection status of same.

(4) The *Owner* shall use best efforts to collect at least one (1) grab sample of the overflow and have it analyzed for parameters outlined in Condition 7 using the protocols specified in Condition 9.

(5) 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 below as effluent parameters are not exceeded in the effluent from the *Works*.

Table 1 - Effluent Objectives	
Effluent Parameter	Average Concentration Objective (milligrams per litre unless otherwise indicated)
<i>CBOD5</i>	15.0
Total Suspended Solids	15.0
Total Phosphorus	0.6
Total Ammonia Nitrogen	5.0
Unionized Ammonia Nitrogen	0.1
<i>E. Coli</i>	100 organisms / 100 mL Monthly <i>Geometric Mean Density</i>
Total Residual Chlorine	non-detectable

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

(a) maintain the pH of the effluent from the *Works* within the range of 6.5 - 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 discoloration on the receiving waters.

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

7. EFFLUENT LIMITS

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

Table 2 - Effluent Limits		
Effluent Parameter	Average Concentration (milligrams per litre unless otherwise indicated)	Average Waste Loading (kilograms per day unless otherwise indicated)
Column 1	Column 2	Column 3
<i>CBOD5</i>	25.0	-
Total Suspended Solids	25.0	-
Total Phosphorus	0.8	311
Total Ammonia Nitrogen	6.0 (May 1 to Oct 31) 10.0 (Nov 1 to Apr 30)	-
Unionized Ammonia Nitrogen	0.2	-
Total Residual Chlorine	0.02	-

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

(a) The *Monthly Average Concentration* of a parameter named in Column 1 of subsection (1) shall not exceed the corresponding maximum concentration set out in Column 2 of subsection (1).

(b) The *Annual Average Loading* of Total Phosphorus named in Column 1 of subsection (1) shall not exceed the corresponding maximum waste loading as set out in Column 3 of subsection (1).

(c) The pH of the effluent shall be maintained within the range of 6.0 - 9.5, inclusive, at all times.

(3) Notwithstanding subsection (1), the *Owner* shall operate and maintain the *Works* such that the effluent is continuously disinfected so that the monthly *Geometric Mean Density* of *E. Coli* does not exceed 200 organisms per 100 millilitres of effluent discharged from the *Works*.

(4) The effluent limits set out in this condition shall apply upon issuance of 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 or update the 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) Weekly means once each week;

(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 - Imported Wastewater Monitoring		
Parameters	Sample Type	Frequency
<i>BOD5</i>	Grab	weekly
Total Suspended Solids	Grab	weekly
Total Phosphorus	Grab	weekly
Total Kjeldahl Nitrogen	Grab	weekly

Table 4 - Raw Sewage Monitoring		
Parameters	Sample Type	Frequency
<i>BOD5</i>	Composite	weekly
Total Suspended Solids	Composite	weekly
Total Phosphorus	Composite	weekly
Total Kjeldahl Nitrogen	Composite	weekly

Table 5 - Final Effluent Monitoring		
Parameters	Sample Type	Frequency
<i>CBOD5</i>	Composite	weekly
Total Suspended Solids	Composite	weekly
Total Phosphorus	Composite	weekly
Total Ammonia Nitrogen	Composite	weekly
<i>E. Coli</i>	Grab	weekly
Total Residual Chlorine	Grab	weekly
pH	Grab	weekly
Temperature	Grab	weekly
Unionized Ammonia Nitrogen	Calculated	weekly

(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;

(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 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) The *Owner* shall install and maintain continuous flow measuring device, to measure the flowrate of the influent to or 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. 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 *By-pass* being conducted pursuant to Condition 5 and as soon as possible for an unplanned *By-pass*, 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 *By-pass*.

(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 *By-pass*, spill or abnormal discharge events;
- (j) a copy of all *Notice of Modifications* submitted to the *Water Supervisor* , with a status report on the implementation of *Limited Operational Flexibility* ; and
- (k) any other information the *Water Supervisor* may require from time to time.

11. SOURCE WATER PROTECTION

The *Owner* shall, within sixty (60) calendar days of the Minister of the Environment posting approval of a *Source Protection Plan* on the environmental registry established under the Environmental Bill of Rights, 1993 for the area in which this *Approval* is applicable, apply to the *Director* for an amendment to this *Approval* that includes submission of a plan for action to comply with all applicable policies in the approved *Source Protection Plan*.

12. 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 B 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*.

13. OUTFALL CAPACITY LIMITATIONS

(1) The *Owner* shall commence construction of the preferred alternative to address the limitations in the existing outfall/diffuser within one (1) year of obtaining the necessary approvals.

(2) The *Owner* shall not operate the Duffin Creek WPCP at an *Average Daily Flow* above 520,000 m³/d until the preferred alternative to address the limitations in the existing outfall/diffuser has been completed, with the exception permitted in subsection (3).

(3) Notwithstanding subsection (2), the *Owner* may operate the Duffin Creek WPCP at an *Average Daily Flow* up to 540,000 m³/d if the *Regional Water Compliance Manager* is satisfied that the effluent limits imposed in Condition 7 can still be met, adequate reason is provided as to why the preferred solution to address the limitations of the outfall/diffuser has not yet been implemented and the *Regional Water Compliance Manager* provides written consent.

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 Lake Ontario 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 covered by this *Approval* will conform to the significant threat policies and designated Great Lakes policies in the *Source Protection Plan*.
12. Condition 12 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.
13. Condition 13 is included due to the capacity limitations of the existing outfall/diffuser and to ensure that the Provincial Water Quality Objectives will be met at the end of the dilution zone from the outfall/diffuser for the effluent discharge from the Duffin Creek WPCP at the approved *Rated Capacity*.

Schedule A

1. design report and design brief prepared by Proctor and Redfern Limited for the four stage construction of a sewage treatment plant with an ultimate capacity of 727,376 m³/d to serve the York-Durham Sewage System approved in 1975;
2. final plans and specifications prepared by Proctor and Redfern Limited for the first stage of the sewage works approved in 1976 and 1978;
3. final plans and specifications prepared by Proctor and Redfern Limited for the Central Control and supervisory System approved in 1982;
4. Application for Approval dated March 17, 1987 for the emergency digested storage facilities submitted by the Regional Municipality of Durham;
5. Application for Approval dated June 16, 1988 for the Stage II of the sewage works and the Environmental Study Report of December 1986 prepared by Proctor and Redfern Limited;
6. submission prepared by Proctor and Redfern Limited for the process control upgrade and miscellaneous electrical works approved in 1993;
7. report prepared by MacViro Consultants Inc., and design brief, final plans and specifications prepared by Proctor and Redfern Limited for the upgrading of sludge handling facilities approved in 1994;
8. Application for Approval dated September 26, 2000 for the modification of the emergency digested storage facilities submitted by Earth Tech Canada;
9. Application for Approval dated February 8, 2002 for the upgrading of the ash thickening system submitted by Earth Tech Canada, including Design Brief, final drawings and specification;
10. Application for Approval of Municipal and Private Sewage Works submitted by Eric Czarnecki of the Ontario Clean Water Agency dated January 31, 2003, including Final Pre-Design Report, final drawings and specifications for the Liquid Train Capacity Upgrades, Pre-Design Report for the Solids Train Capacity Upgrades and Report on the Existing Condition of the Chlorine Gas System;
11. Application for Approval of Municipal and Private Sewage Works submitted by Eric Czarnecki of the Ontario Clean Water Agency dated April 28, 2003, including final plans and specifications;
12. Application for Approval of Municipal and Private Sewage Works submitted by Eric Czarnecki of the Ontario Clean Water Agency dated June 16, 2004, including final plans and specifications;
13. Letter from Eric Czarnecki of the Ontario Clean Water Agency dated July 9, 2004;
14. Application for Approval of Municipal and Private Sewage Works submitted by Robert Hook of CH2M HILL Canada Limited dated February 2, 2007, including Class Environmental Assessment Environmental Study Report, final draft Pre-Design Reports and preliminary engineering plans;
15. Final engineering plans and specifications for Site Preparation Contract submitted by Ansel Bather of Earth Tech Canada Inc. dated April 12, 2007;
16. Application for Approval of Municipal and Private Sewage Works submitted by Ansel Bather of Earth Tech Canada Inc. on September 25, 2007, including final engineering plans and specifications for Liquid Modules Expansion Contract;
17. Application for Approval of Municipal and Private Sewage Works submitted by Ansel Bather of Earth Tech Canada Inc. received on January 28, 2008, including final engineering plans and

- specifications for the Preliminary Treatment Contract and the North Dewatering Building Contract;
18. Application for Approval of Municipal and Private Sewage Works submitted by Ansel Bather of Earth Tech Canada Inc. received on April 29, 2008, including final engineering plans and specifications for the Excavation and Subgrade Construction for the New Dewatering and Incineration Facilities Contract;
 19. Final engineering plans and specifications for the Electrical Substation Contract, the Digester Modifications & Boiler Building and SCADA Upgrade Contract submitted by Ansel Bather of Earth Tech Canada Inc. received on June 12, 2008;
 20. Application for Approval of Municipal and Private Sewage Works submitted by Ansel Bather of Earth Tech Canada Inc. on May 13, 2009, including final engineering plans and specifications for the New Dewatering and Incineration Contract and SCADA Upgrade Contract and supporting information for application for amendment to permit earlier capacity release;
 21. Application for Approval of Municipal and Private Sewage Works submitted by Tony Petrucci of CH2M HILL Canada Limited received May 28, 2010 and final engineering plans received June 24, 2010 for the Stage 2 Primary Clarifiers scum chambers upgrade;
 22. Application for Approval of Municipal and Private Sewage Works submitted by Ian Smith of AECOM received May 26, 2011 for the Stage 3 Influent Pumping Station, including Design Brief and preliminary engineering plans and final engineering plans for the Stage 3 Pumping Station submitted by Vi Lam of AECOM and received August 4, 2011 and final engineering plans for the Phosphorus Removal System Upgrades submitted by submitted by Bob Hook of CH2MHILL Canada Limited and received August 12, 2011;
 23. Environmental Compliance Approval Application received on June 5, 2012 for the Stage 1 and 2 electrical upgrades, including reports and plans prepared by Team Duffin;
 24. Environmental Compliance Approval Application received on October 26, 2012 for the Stage 1 and 2 disinfection (chlorination/dechlorination) upgrades, including reports and plans prepared by Team Duffin;
 25. Environmental Compliance Approval Application received on March 11, 2013 for the Stage 1 and 2 raw sewage pumping station and preliminary treatment building, including reports and plans prepared by Team Duffin;
 26. Environmental Compliance Approval Application received on March 11, 2013 for the Stage 1 and 2 raw sewage pumping station and preliminary treatment building, including reports and plans prepared by Team Duffin.

Schedule B

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 Pilot Systems

5.1 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.

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.63 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)

Upon issuance of the environmental compliance approval, I hereby revoke Approval No(s). 1718-97BPFY issued on June 14, 2013.

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 3rd day of March, 2014

A handwritten signature in black ink, consisting of a large, stylized 'E' followed by a series of vertical and diagonal strokes, ending in a long horizontal flourish.

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

FL/

c: DWMD Supervisor, MOE York-Durham
Water Standards Section, MOE Standards Development Branch
Chris Wilson, CH2M Hill Canada Limited