

AMENDED ENVIRONMENTAL COMPLIANCE APPROVALNUMBER 4299-9U8PV6
Issue Date: March 16, 2015Lafleche Environmental Inc.
17125 Lafleche Rd
North Stormont, Ontario
K0C 1W0

Site Location: Eastern Ontario Waste Handling Facility
17125 Lafleche Rd
North Stormont Township, United Counties of Stormont, Dundas and Glengarry
K0C 1W0

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:

the establishment of sewage works for the collection, transmission, treatment and disposal of landfill leachate and stormwater to service the Eastern Ontario Waste Handling Facility located at 17125 Lafleche Road, North Stormont Township, consisting of the following:

LEACHATE TREATMENT FACILITY**PROPOSED WORKS:**

Upgrading the existing **Leachate Treatment Facility** with a Rated Capacity of 833 m³/day (200,000 m³/year) for treatment of leachate which has been pretreated in the **South Aeration Ponds**, consisting of the following works:

Suspended Media BioReactors (SMBR)

Three (3) Suspended Media BioReactors (SMBR) units operating in series providing a total treatment design capacity of 833 m³/day consisting of:

- One (1) Suspended Media BioReactor (SMBR-A) unit with approximate dimensions of 11.25 m long x 5.18 m wide x 3.6 m side water depth, and a working volume of 198 m³, equipped with cylinder-shaped HDPE biofilm carriers providing a total surface area of approximately 74,250 m², sieve to retain the biofilm carriers in the tank, and coarse bubble aeration system,

discharging to SMBR-B described below;

- One (1) Suspended Media BioReactor (SMBR-B) unit with approximate dimensions of 11.25 m long x 5.18 m wide x 3.6 m side water depth, and a working volume of 198 m³, equipped with cylinder-shaped HDPE biofilm carriers providing a total surface area of approximately 74,250 m², sieve to retain the biofilm carriers in the tank, and coarse bubble aeration system, discharging to SMBR-C described below;
- One (1) Suspended Media BioReactor (SMBR-C) unit with approximate dimensions of 11.25 m long x 5.18 m wide x 3.6 m side water depth, and a working volume of 198 m³, equipped with cylinder-shaped HDPE biofilm carriers providing a total surface area of approximately 74,250 m², sieve to retain the biofilm carriers in the tank, and coarse bubble aeration system, discharging to a coagulation tank described below;
- Four (4) 30 HP air blowers (three duty, one standby) providing air to the coarse bubble aeration system in each of SMBRs described above;

Coagulation Tank

- One (1) Coagulation Tank with approximate dimensions of 0.92 m wide x 5.18 m long x 1.41m side water depth, providing a storage volume of approximately 6.7 m³, equipped with two (2) 0.75 HP mechanical mixers, discharging to a dissolved air floatation system described below;

Dissolved Air Floatation (DAF) System

- One (1) Dissolved Air Floatation (DAF) system with approximate dimensions of 2.7 m wide x 4.6 m long x 2.0 m side water depth, providing a total of 7.0 m² operating surface area and maximum flow rate of 1000 m³/day, equipped with two (2) 1.5 HP recirculation pumps (one duty, one standby) and one (1) 9.5 L/sec capacity sludge transfer pump, discharging effluent to an existing effluent storage tank and discharging sludge to a sludge storage tank described below;

Sludge Storage Tank

- One (1) Sludge Storage Tank with approximate dimensions of 6.0 m wide x 5.2 m long x 4.0 m side water depth, and a total storage volume of 94.0 m³ equipped with one (1) 5 HP air blower, discharging supernatant to an existing influent transfer tank described below;

Tertiary Effluent Filtration System

A second skid mounted tertiary effluent filtration system to provide filtration to effluent from the Dissolved Air Floatation System (DAF) described above, consisting of the following:

- one (1) 432.5 m³/day rated capacity membrane microfiltration system (Pall Microza MF model)

consisting of twenty (20) microfiltration modules providing a total of 1,000 m² of membrane filtration area, equipped with one (1) 6.3 L/sec @ 36.6 m TDH rated capacity influent feed pump, one (1) 6.3 L/sec @ 36.6 m TDH rated capacity reverse filtration (backwash) pump discharging filter backwash to the Influent Transfer Tank described below, automatic air scouring system used during reverse filtration, integrated on-line membrane cleaning system consisting of Enhanced Flux Maintenance (EFM) system and an existing chemical Clean-in-Place (CIP) system, discharging final effluent to an existing effluent transfer line which feeds the effluent holding ponds described below;

- including all controls and associated appurtenances.

All in accordance with the documents listed in Schedule 'A'.

PREVIOUS WORKS APPROVED ON APRIL 14, 2011 UNDER ECA No. 5759-8FGS44:

Approval for permanent use of ultrasonic transducers (EZ-Algae AL50 model), which were previously approved for pilot testing purposes at this site, to control algae growth mainly in the **North Leachate Holding Pond** and, as required from time to time, in other ponds located at the site, consisting of the following:

- four (4) ultrasonic transducers (EZ-Algae AL50 model) designed to operate between 25 W to 40 W in the 25 kHz to 40 kHz range each providing an effective treatment radius of 150 m, to be located in each corner of a leachate holding pond positioned at least 20 cm below the pond surface,
- including all controls and associated appurtenances.

All in accordance with the documents listed in Schedule 'A'.

PREVIOUS WORKS APPROVED ON MARCH 9, 2010 UNDER ECA No. 3658-7YXSN6:

Tertiary Effluent Filtration System

A tertiary effluent filtration system to provide filtration to effluent from Dissolved Air Floatation System (DAF) described above, consisting of the following:

- one (1) 432.5 m³/day rated capacity bag filter (Filter Solutions FS450 model) using 5 micrometer to 50 micrometer filter bags, designed to operate in series or in parallel with the Microza MF membrane filtration system described below to permit operation using the FS450 filter during periods of time when the membrane filtration system is temporarily out of service, discharging to the membrane microfiltration system described below;
- one (1) 432.5 m³/day rated capacity membrane microfiltration system (Pall Microza MF model) consisting of twenty (20) microfiltration modules providing a total of 1,000 m² of membrane filtration area, equipped with one (1) 6.3 L/sec @ 36.6 m TDH rated capacity influent feed

pump, one (1) 6.3 L/sec @ 36.6 m TDH rated capacity reverse filtration (backwash) pump discharging filter backwash to the Primary Settling Tank (PST), automatic air scouring system used during reverse filtration, integrated on-line membrane cleaning system consisting of Enhanced Flux Maintenance (EFM) system and chemical Clean-in-Place (CIP) system, discharging final effluent to an existing effluent transfer line which feeds the effluent holding ponds described below;

- including all controls and associated appurtenances.

All in accordance with the documents listed in Schedule 'A'.

PREVIOUS WORKS APPROVED ON MAY 4, 2009:

South Leachate Aeration Ponds

- one (1) leachate aeration pond (**South Leachate Aeration Pond**), located at the south side of the site, with a leachate storage capacity of 16,500 m³ and dimensions of 121 m long x 57 m wide x 3.5 m deep, having internal side slopes of 3H:1V and external side slopes of 3H:1V, receiving raw leachate from existing landfill leachate collection system, equipped with unidirectional floating aerators described below, discharging through an interconnecting 150 mm diameter pipe to a leachate aeration pond described below;
- fifteen (15) unidirectional floating aerators installed approximately 15.0 m apart along both edges of the aeration pond, each aerator equipped with 24 hp 240 cfm capacity submersible air jet pump mounted on a floating structure anchored to an anchoring post located on the sides of the pond with air intake pipe located on top of the float and air discharge outlet submerged approximately 3.0 m below water surface;
- one (1) leachate aeration pond (**South East Leachate Aeration Pond**), located at the south side of the site, with a leachate storage capacity of 10,500 m³ and dimensions of 90 m long x 52 m wide x 3.5 m deep, having internal side slopes of 3H:1V and external side slopes of 3H:1V, equipped with unidirectional floating aerators described below, discharging treated leachate to the **Leachate Treatment Facility** or **North Leachate Holding Pond** described below;
- ten (10) unidirectional floating aerators installed approximately 15.0 m apart along both edges of the aeration pond, each aerator equipped with 24 hp 240 cfm capacity submersible air jet pump mounted on a floating structure anchored to an anchoring post located on the sides of the pond with the air intake pipe located on top of the float and air discharge outlet submerged approximately 3.0 m below water surface;
- one (1) chemical addition system to be used for adding alum, polymer, and phosphoric acid to the South Pond and South East Pond as required;
- one (1) odour control chemical misting system (AirStremeTM) to be used as a back-up in case of failure of available regular odour control measures;

- including all controls and associated appurtenances.

All in accordance with the documents listed in Schedule 'A'.

PREVIOUS WORKS APPROVED ON AUGUST 4, 2005, MAY 4, 2006, MAY 19, 2006, AND NOVEMBER 14, 2008:

North Leachate Holding Pond

- one (1) pretreated leachate holding pond (**North Leachate Holding Pond**), located at the north side of the site, with a total effective storage capacity of 117,400 m³ (at the high water level of 67.9 m) and overall dimensions of 214 m long x 139 m wide x 5 m deep, having internal side slopes of 4H:1V and external side slopes of 3H:1V, pond containment berms constructed using compacted weathered silty clay obtained from on-site excavation, pond bottom consisting of unweathered native grey silty clay, operating with a freeboard of 0.6 m, receiving through a 250 mm diameter forcemain any excess pretreated leachate from the **South Leachate Aeration Ponds** as required when the **Leachate Treatment Facility** is not available to handle;
- one (1) cut-off barrier constructed around the perimeter of the pond by excavating a vertical trench approximately 1.2 m wide to a minimum of 0.5 m into the unweathered native grey silty clay to minimize any seepage of leachate through the weathered native silty clay zone under the pond's containment berm;
- one (1) portable self priming pump to be used on an interim basis to pump leachate from the north leachate holding pond back to the south leachate aeration ponds using the same forcemain that is used to pump leachate from the landfill leachate collection system to the north leachate holding pond;
- one (1) stainless steel 7.5 hp submersible pump to transfer leachate from the north leachate holding pond to the leachate treatment facility (SMBR) via a 75 mm diameter HDPE forcemain;
- two (2) 450 kg O₂/day capacity solar powered surface aerator/mixer (Solar Bee Model SB10000v12) designed to maintain Dissolved Oxygen (DO) levels greater than 2.0 mg/L within the top 0.6 m portion of the 3.0 ha north leachate holding pond to form an odour cap and control potential odour generation, each equipped with 3 x 80 watt photovoltaic solar modules, one (1) on-board battery, and one (1) electrical shore power kit to ensure 24 hours per day operation;
- one (1) chemical addition system to be used for adding calcium nitrate, hydrogen peroxide, 12 %wt sodium hypochlorite, and BiostremeTM "Micronutrient Formulation" to control odours on as-needed basis;
- one (1) odour control chemical misting system (AirStremeTM) to be used as a back-up in case of failure of available regular odour control measures described above;

- including all controls and associated appurtenances.

All in accordance with the documents listed in Schedule 'A'.

PREVIOUS WORKS APPROVED ON JULY 9, 2007:

Constructing a **Leachate Treatment Facility** with a Rated Capacity of 833 m³/day (200,000 m³/year) for treatment of leachate which has been pretreated in the **South Aeration Ponds**, consisting of the following works:

Nutrient Balance and Metals Precipitation

- one (1) 18.9 m³ (5000 gal) capacity caustic soda solution storage tank equipped with a dosing pump adding caustic soda solution into an influent transfer tank described below to maintain pH between 9.0 to 11.5 for the precipitation of heavy metals and into each of the Suspended Media BioReactors (SMBRs) described above;
- one (1) 18.9 m³ (5000 gal) capacity alum solution storage tank equipped with a dosing pump adding alum solution at the second in-line mixer downstream of the transfer tank described above to promote flocculation of precipitated metals;
- one (1) 1.89 m³ (500 gal) capacity phosphoric acid storage tank equipped with a dosing pump adding phosphoric acid solution at the second in-line mixer downstream of the transfer tank described above in an amount required to maintain the BOD:N:P ratio at 100:5:1;
- one (1) 18.9 m³ (5000 gal) capacity sulphuric acid solution storage tank equipped with six (6) dosing pumps adding sulphuric acid solution into the influent transfer tank described below;
- one (1) 33.9 m³ active storage capacity influent transfer tank, equipped with two (2) 9.64 L/sec capacity variable frequency drive (VFD) transfer pumps;

Effluent Storage Tank

- one (1) 16.6 m³ active storage capacity effluent storage tank receiving effluent from the Dissolved Air Flootation (DAF) unit described above, equipped with two (2) 18.9 L/sec (300 gpm) capacity pumps (one on stand-by), and transferring effluent to a tertiary effluent filtration system described above;

Phosphorus Removal

- six (6) additional alum feed pumps adding alum from the 18.9 m³ (5000 gal) alum solution storage tank described above under the "Nutrient Balance and Metals Precipitation" section to the inlet of the Coagulant Tank described above;

Effluent Holding Ponds

- two (2) effluent holding ponds, each pond having approximate bottom dimensions of 85.0 m long x 33.0 m wide x 3.1 m deep, and 4H:1V side slopes, providing a total storage capacity of approximately 9,600 m³, a storage capacity of approximately 6,600 m³ at the regular operating water level, and a storage capacity of approximately 4,400 m³ when operated in conjunction with the Auxiliary Wetland Treatment System described below;
- an effluent holding ponds outlet structure equipped with two (2) 150 mm diameter HDPE discharge pipes, one (1) two-way outlet gate valve, one (1) 50.4 L/sec capacity 60 hp self-priming centrifugal pump with built-in check valve, one (1) 150 mm diameter outlet ball valve (**normally open**) to be used for batch discharge of effluent to Fraser Drain if it meets effluent limits criteria set by this Approval, and one (1) 150 mm diameter outlet ball valve (**normally closed**) to be used for batch discharge of effluent to an auxiliary wetland treatment system described below or to the **North Leachate Holding Pond** described above;

Auxiliary Wetland Treatment System

- one (1) vegetated surface flow wetland having approximate dimensions of 118.0 m long x 59.0 m wide x 0.4 m deep, and 3H:1V side slopes, equipped with 300 mm diameter perforated inlet distribution pipe, a 40 m long wooden baffle lined with clear stone, 0.3 m thick peat layer bottom vegetated with aquatic plants, discharging through a 200 mm thick clear stone layer and a pipe to a non-vegetated surface flow wetland described below;
- one (1) non-vegetated surface flow wetland having approximate dimensions of 97.0 m long x 59.0 m wide x 0.7 m deep, and 4H:1V side slopes, equipped with 300 mm diameter perforated distribution inlet pipe, a 95 m long wooden baffle lined with clear stone, discharging through a 300 mm diameter pipe to a collection chamber upstream of the effluent holding ponds described above;
- including all controls and associated appurtenances.

All in accordance with the documents listed in Schedule 'A'.

STORMWATER MANAGEMENT FACILITY

PREVIOUS WORKS APPROVED ON MAY 25, 2006:

Establishment of stormwater management facility to service a total drainage area of 37.94 ha consisting of parts of Stage I and Stage II development of the landfill site, consisting of the following:

Stormwater Management Pond - SWM Pond #1:

a clay lined stormwater management facility (**SWM Pond #1**) to service a total drainage area of 10.78 ha consisting of southwestern quadrant of Stage I of the landfill site and the southwestern utility area, designed to provide quantity and quality control by attenuating peak stormwater flows from storm events up to 1:5 year return frequency at or below predevelopment levels, consisting of the following:

- one (1) 590 m long perimeter ditch along the toe of the landfill having 1 m bottom width and 2.5H:1V side slopes and 0.4 m to 0.7 m depth discharging collected stormwater to the forebay described below;
- one (1) forebay with approximate dimensions of 102 m long, 11.5 m wide bottom and 4H:1V and 3H:1V side slopes, equipped with a 900 mm diameter inlet pipe, and a rip-rap structure, discharging to an extended detention wet pond described below;
- one (1) extended detention wet pond with approximate dimensions of 186 m long bottom, 11.5 m wide bottom and 4H:1V and 3H:1V side slopes, providing a total storage capacity of 11,161 m³ consisting of a permanent pool storage volume of 4,252 m³ with an average depth of 1.0 m, and an extended storage volume of 6,909 m³ with an extended storage depth of 1.05 m, equipped with an outlet structure described below;
- an outlet structure consisting of one (1) 300 mm diameter Hickenbottom riser enclosed in 2.5 m diameter perforated manhole discharging through a 300 mm diameter 7.5 m long pipe and a 375 mm diameter 338 m long drain pipe to a perimeter channel described below;
- one (1) overflow structure consisting of ditch inlet catch basin equipped with a horizontal 1200 mm x 650 mm grate set at an elevation of 67.0 m discharging to SWM Pond #2 described below; and
- including all controls and appurtenances.

Stormwater Management Pond - SWM Pond #2:

a clay lined stormwater management facility (**SWM Pond #2**) to service a total drainage area of 15.74 ha consisting of northwestern quadrant of Stage I of the landfill site and southwestern quadrant of Stage II of the landfill site, designed to provide quantity and quality control by attenuating peak stormwater flows from storm events up to 1:5 year return frequency at or below predevelopment levels, consisting of the following:

- two (2) 590 m long perimeter ditches along the toe of the landfill having 1 m bottom width and 2.5H:1V side slopes and 0.4 m to 0.7 m depth discharging collected stormwater to the forebay described below;
- one (1) forebay with approximate dimensions of 102 m long, 2.8 m wide bottom and 4H:1V and 1H:1V side slopes, equipped with a 1200 mm diameter inlet pipe, and a rip-rap structure, discharging to an extended detention wet pond described below;

- one (1) extended detention wet pond with approximate dimensions of 192 m long bottom, 2.8 m wide bottom and 4H:1V and 1H:1V side slopes, providing a total storage capacity of 6,527 m³ consisting of a permanent pool storage volume of 1,457 m³ with a average depth of 1.0 m, and an extended storage volume of 5,070 m³ with an extended storage depth of 1.05 m, equipped with an outlet structure described below;
- an outlet structure consisting of one (1) 300 mm diameter Hickenbottom riser enclosed in 2.5 m diameter perforated manhole discharging through a 300 mm diameter 7.5 m long pipe, discharging to a perimeter channel described below;
- one (1) overflow structure consisting of two (2) ditch inlet catch basins equipped with 1200 mm x 650 mm horizontal grates set at an elevation of 67.0 m discharging to a perimeter channel described below; and
- including all controls and appurtenances.

Stormwater Management Pond - SWM Pond #7:

a clay lined stormwater management facility (**SWM Pond #7**) to service a total drainage area of 11.42 ha consisting of southeastern quadrant of Stage I of the landfill site and the southeastern utility area, designed to provide quantity and quality control by attenuating peak stormwater flows from storm events up to 1:5 year return frequency at or below predevelopment levels, consisting of the following:

- one (1) 590 m long perimeter ditch along the toe of the landfill having 1 m bottom width and 2.5H:1V side slopes and 0.4 m to 0.7 m depth discharging collected stormwater to the forebay described below;
- one (1) forebay with approximate dimensions of 102 m long bottom, 6.5 m wide bottom and 4H:1V and 3H:1V side slopes, equipped with a 1200 mm diameter inlet pipe, and a rip-rap structure, discharging to an extended detention wet pond described below;
- one (1) extended detention wet pond with approximate dimensions of 204 m long, 6.5 m wide bottom and 4H:1V side slopes, providing a total storage capacity of 8,117 m³ consisting of a permanent pool storage volume of 2,803 m³ with an average depth of 1.0 m, and an extended storage volume of 5,314 m³ with an extended storage depth of 1.05 m, equipped with an outlet structure described below;
- an outlet structure consisting of one (1) 300 mm diameter Hickenbottom riser enclosed in 2.5 m diameter perforated manhole discharging through a 300 mm diameter 7.5 m long pipe, discharging to a perimeter channel described below;
- one (1) overflow structure consisting of a ditch inlet catch basin equipped with a 1200 mm x

650 mm horizontal grate set an elevation of 67.0 m discharging to a perimeter channel described below; and

- including all controls and appurtenances.

Perimeter Channel

- one (1) perimeter channel which is approximately 4.4 km long, with bottom width that vary between 1 m to 3 m and depth that vary between 1.3 m and 3.0 m, receiving discharges from SWM Ponds #1, #2, #7, and the remaining undeveloped portions of the landfill, providing quantity control by attenuating peak stormwater run-off flows from storm events up to 1:10 year return frequency at or below predevelopment levels, equipped with outlet structure consisting of 3048 mm x 2438 mm x 3268 mm deep concrete manhole equipped with 450 mm diameter concrete stormwater inlet sewer fitted with a gate valve, one (1) 300 mm x 500 mm opening with an invert elevation of 63.95 m, one (1) 500 mm x 1500 mm opening with an invert elevation of 64.50, one (1) 500 mm x 1750 mm opening with an invert elevation of 64.50 m, and one (1) 1500 mm diameter concrete stormwater outlet sewer, discharging to the Fraser Drain; and
- including all controls and associated appurtenances.

All in accordance with the documents listed in Schedule 'A'.

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;

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

"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;

"District Manager" means the District Manager of the Ottawa District Office of the Ministry;

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

"Equivalent Equipment" means a substituted equipment or like-for-like equipment that meets the

required quality and performance standards of a named equipment;

"Limited Operational Flexibility" (LOF) means any 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;

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

"Owner" means Lafleche Environmental Inc. and its successors and assignees;

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

"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;

"Works" means the sewage works described in the Owner's application, and this Approval, and includes Proposed Works, Previous Works, and modifications made under 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

I. GENERAL

1. GENERAL CONDITION

- (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. CHANGE OF OWNER

- (1) The Owner shall notify the District Manager and the Director, in writing, of any of the following changes within thirty (30) days of the change occurring:
 - (a) change of Owner or operating authority, or both;
 - (b) change of address of Owner or operating authority or address of new owner or operating authority;
 - (c) change of partners where the Owner or operating authority is or at any time becomes a partnership, and a copy of the most recent declaration filed under the Partnerships Registration Act;
 - (d) change of name of the corporation where the Owner or operator is or at any time becomes a corporation, and a copy of the most current "Initial Notice or Notice of Change" (Form 1, 2 or 3 of O. Reg. 189, R.R.O. 1980, as amended from time to time), filed under the Corporations Information Act shall be included in the notification to the District Manager;

II. LEACHATE COLLECTION, TREATMENT AND DISPOSAL FACILITY

3. EXPIRY OF APPROVAL

- (1) The approval issued by this Approval will cease to apply to those parts of the Proposed Works which have not been constructed within five (5) years of the issuance date of this Approval.
- (2) The approval issued by this Approval will cease to apply to those parts of the Works (**South Leachate Aeration Ponds**) approved on May 4, 2009 and which have not been

constructed by May 4, 2014.

- (3) The approval issued by this Approval will cease to apply to those parts of the Works (**Leachate Treatment Facility**) approved on July 9, 2007 and which have not been constructed by July 9, 2016.

4. OPERATIONS MANUAL

- (1) The Owner shall prepare an operations manual prior to the commencement of operation of the 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) contingency plans and procedures for dealing with potential spill, bypasses and any other abnormal situations and for notifying the District Manager; and
 - (e) complaint procedures for receiving and responding to public complaints.
- (2) The Owner shall maintain the operations manual up to date through revisions undertaken from time to time and retain a copy at the location of the Works. Upon request, the Owner shall make the manual available for inspection and copying by Ministry personnel.

5. DIRECT DISCHARGE OPERATIONS

- (1) **Prior to any direct effluent discharge from any of the Effluent Holding Ponds to Fraser Drain**, the Owner shall collect samples from the Effluent Holding Pond that will be discharged and analyse for the parameters outlined in Condition 6(1). The Owner shall compare the monitoring results obtained under this subsection with the effluent limits for the parameters outlined in Condition 6 (1).
- (2) Based on the comparison completed under Condition 5 (1), the Owner shall allow the discharge of effluent from the **Effluent Holding Ponds** to Fraser Drain **ONLY** if all the parameters listed under Condition 6 (1) comply with their respective effluent limits outlined in Condition 6 (1).
- (3) If any of the parameters listed under Condition 6 (1) fail to comply with its respective effluent limit outlined under Condition 6 (1) based on the comparison completed under Condition 5 (1), the Owner shall ensure that further treatment is provided as required to the contents of the **Effluent Holding Pond** prior to discharge, including using the approved

Auxiliary Wetland Treatment System and Leachate Treatment Facility.

- (4) The Owner shall control the rate of discharge to the Fraser Drain such that erosion and/or flooding does not occur in the receiver downstream, up to a maximum flow rate of 50 litres per second.

6. EFFLUENT LIMITS

- (1) The Owner shall design, construct, and operate the Works (Effluent Holding Ponds) such that the concentrations of the materials named below, with the exception of Dissolved Oxygen, as effluent parameters are not exceeded in **any effluent that will be discharged directly to the Fraser Drain** from the Works. In the case of Dissolved Oxygen, the Owner shall ensure that the concentration of Dissolved Oxygen is higher than the corresponding minimum concentration shown under Column 2 of Table 1.

Table 1 - Effluent Limits	
Effluent Parameter	Concentration Limit (milligrams per litre unless otherwise indicated)
Column 1	Column 2
<i>CBOD₅</i>	10.0
Total Suspended Solids	10.0
Total Phosphorus	0.3
Total Ammonia Nitrogen (TAN)	1.0
Dissolved Oxygen (Minimum Level)	4.0
Iron	1.0
Copper	0.2
Zinc	0.2
Phenols	0.005
pH of the effluent maintained between 6.0 to 8.5, inclusive, at all times	

- (2) For the purposes of determining compliance with and enforcing Condition 6 (1) **WHENEVER effluent is batch discharged from any of the Effluent Holding Ponds to the Fraser Drain:**
- (a) non-compliance with respect to a Concentration Limit is deemed to have occurred when any single sample analysed for a parameter, with the exception of Dissolved Oxygen, named in Column 1 of Condition 6 (1) is greater than the corresponding maximum concentration set out in Column 2 of Condition 6 (1);
- (b) non-compliance with respect to Dissolved Oxygen is deemed to have occurred when any single measurement is lower than the corresponding minimum concentration level shown in Column 2 of Table 1 for Dissolved Oxygen.

- (c) non-compliance with respect to pH is deemed to have occurred when any single measurement is outside of the indicated range set out in Table 1 of Condition 6(1).
- (3) Notwithstanding Conditions 6 (1) and 6 (2), the Owner shall ensure that the effluent from the Works collected **prior to every fourth planned batch discharge** is not acutely lethal, as measured using Rainbow Trout and *Daphnia magna* as per Condition 7 (4).
- (4) For the purposes of Condition 6 (3), the effluent is considered to be acutely lethal if there is a mortality of 50 % or more of any of the test organisms in undiluted effluent.

7. **EFFLUENT MONITORING AND RECORDING**

The Owner shall carry out the following effluent 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) Samples shall be collected from the designated sampling location, at the sampling frequency and the sample type specified, and analysed for each parameter listed in the table below:

Table 2 - Raw Leachate Monitoring	
Location	Raw Leachate Inlet to South Aeration Pond
Frequency	Monthly
Sample Type	Grab
Parameters	General: Alkalinity, CBOD ₅ , Calcium, Chemical Oxygen Demand (COD), Chloride, Conductivity, Dissolved Organic Carbon (DOC), Dissolved Oxygen (DO), Magnesium, Nitrate Nitrogen, Nitrite Nitrogen, Potassium, pH, Sodium, Sulphate, Temperature, Total Ammonia Nitrogen, Total Dissolved Solids, Total Kjeldahl Nitrogen, Total Phosphorus, Total Suspended Solids
	Metals: Barium, Boron, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Zinc
	Organics: Benzene, 1,4-Dichlobenzene, Dichloromethane, Phenols, Toluene, Vinyl Chloride

- (3) **During any direct effluent discharge from any of the Effluent Holding Ponds to Fraser Drain**, samples shall be collected from the Effluent Holding Pond that will be batch discharged from the designated sampling location, at the sampling frequency and the sample type specified, and analysed for each parameter listed in the table below:

Table 3 - Effluent Monitoring	
Location	Effluent Holding Ponds
Frequency	During Every Planned Batch Discharge Event
Sample Type	Composite - Three (3) equal volume grab samples collected from the water surface, 1/3 depth, 2/3 depth of the effluent holding pond.
Parameters	General: Alkalinity, CBOD₅ , Calcium, Chemical Oxygen Demand (COD), Chloride, Conductivity, Dissolved Organic Carbon (DOC), Magnesium, Nitrate Nitrogen, Nitrite Nitrogen, Potassium, Sodium, Sulphate, Total Ammonia Nitrogen , Total Dissolved Solids, Total Kjeldahl Nitrogen, Total Phosphorus, Total Suspended Solids
	Metals: Barium, Boron, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Zinc
	Organics: Benzene, 1,4-Dichlobenzene, Dichloromethane, Phenol , Toluene, Vinyl Chloride
Sample Type	Grab
Parameters	Dissolved Oxygen (DO), pH, Temperature

- (4) **Prior to every fourth planned direct effluent discharge from any of the Effluent Holding Ponds to Fraser Drain**, samples shall be collected from the Effluent Holding Pond that will be batch discharged from the designated sampling location, at the sampling frequency and the sample type specified, and analysed for each parameter listed in the table below:

Table 4 - Effluent Toxicity Monitoring	
Location	Effluent Holding Pond to be discharged
Frequency	Prior to Every Fourth Planned Batch Discharge Event
Sample Type	Composite - three (3) equal volume grab samples collected from the water surface, 1/3 depth, 2/3 depth of the effluent holding pond.
Parameters	Acute Toxicity - Rainbow Trout and <i>Daphnia magna</i>

- (5) The methods and protocols for sampling, analysis, toxicity testing, and recording shall conform, in order of precedence, to the methods and protocols specified in the following:
- (a) the Ministry's publication "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater" (August 1994), ISBN 0-7778-1880-9, as amended from time to time by more recently published editions;
 - (b) the publication "Standard Methods for the Examination of Water and Wastewater" (21th edition) as amended from time to time by more recently published editions; and,

- (c) the Environment Canada publications "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout" (July 1990) and "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Daphnia magna" (July 1990).
- (6) 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).
- (7) The measurement frequencies specified in subsection (2) in respect of any parameter are minimum requirements which may, after 12 months of monitoring in accordance with this Condition, be modified by the District Manager in writing from time to time.
- (8) The Owner shall install and maintain a continuous flow measuring device to measure the flow rate of effluent from the Works (**South Aeration Ponds**) with an accuracy to within plus or minus 15 per cent (+/- 15%) of the actual flow rate for the entire design range of the flow measuring device, and record the flow rate at a daily frequency.
- (9) The Owner shall retain for a minimum of three (3) years from the date of their creation, all records and information related to or resulting from the monitoring activities required by this Approval.

8. RECEIVER MONITORING AND RECORDING

The Owner shall, upon commencement of operation of the Works, carry out the following receiver 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 of the receiver.
- (2) Samples shall be collected from the designated sampling location, at the sampling frequency and the sample type specified, and analysed for each parameter listed in the table below:

Table 5 - Receiver Monitoring	
Locations	SW-3 (upstream) and SW-2 (downstream), as identified on the Site Plan of Appendix F of the <u>Application for Approval of Industrial Sewage Works</u> submitted by Jean-Marie Lafleche of Lafleche Environmental Inc. dated July 2, 2002
Frequency	During Every Fourth Planned Batch Discharge Event of the Effluent Holding Ponds

Sample Type	Composite
Parameters	General: Alkalinity, CBOD ₅ , Calcium, Chemical Oxygen Demand (COD), Chloride, Conductivity, Dissolved Organic Carbon (DOC), Dissolved Oxygen (DO), Magnesium, Nitrate Nitrogen, Nitrite Nitrogen, Potassium, pH, Sodium, Sulphate, Temperature, Total Ammonia Nitrogen, Total Dissolved Solids, Total Kjeldahl Nitrogen, Total Phosphorus, Total Suspended Solids
	Metals: Barium, Boron, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Zinc
	Organics: Benzene, 1,4-Dichlobenzene, Dichloromethane, Phenols, Toluene, Vinyl Chloride

- (3) The methods and protocols for sampling, analysis and recording shall conform to that outlined in Condition 7 (5).
- (4) The temperature, pH and dissolved oxygen of the receiver 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).
- (5) The measurement frequencies specified in subsection (2) in respect of any parameter are minimum requirements which may, after 12 months of monitoring in accordance with this Condition, be modified by the District Manager in writing from time to time.
- (6) The Owner shall retain for a minimum of three (3) years from the date of their creation, all records and information related to or resulting from the monitoring activities required by this Approval.

9. GROUNDWATER MONITORING - NORTH LEACHATE HOLDING POND, AUXILIARY WETLAND TREATMENT SYSTEM and EFFLUENT HOLDING PONDS

- (1) The Owner shall establish multilevel groundwater monitoring wells installed in the weathered silty clay, unweathered silty clay, glacial till, and bedrock around the perimeter of the north leachate holding pond designated as **P1-1, P1-2, P1-3, and P1-4**, as shown in Figure 'A' - Proposed Leachate Holding Pond and Monitoring Well Locations, dated June 15, 2005. (Drawing File: 05-1120-775-5100-A.dwg).
- (2) The Owner shall establish groundwater monitoring wells installed in the upper silty clay around the perimeter of the auxiliary wetland treatment system and treated effluent holding ponds designated as **TF1-1, TF1-3, and TF1-4**, and a multilevel groundwater monitoring well installed in the weathered silty clay, unweathered silty clay, glacial till and bedrock designated as **TF1-2**, as shown in Figure 3 - Site Plan - Lafleche

Environmental Inc., Eastern Ontario Waste Handling Facility, Well Locations, dated December 13, 2006, File No: 061122153-5100-LAYOUT.dwg, prepared by Golder Associates, Ottawa, Ontario.

- (3) The Owner shall collect groundwater samples at the locations outlined in Condition 9 (1) and Condition 9 (2) in May, August and November of each calendar year.
- (4) All samples collected in May of each calendar year shall be analysed for the same parameters as outlined in Table 5 of Condition 8 (2).
- (5) All samples collected in August and November of each calendar year shall be analysed for Alkalinity, Total Ammonia Nitrogen, Barium, Boron, Calcium, Chloride, Conductivity, Iron, Magnesium, Nitrate, pH, Sodium, Total Dissolved Solids, Sulphate, 5-day Biochemical Oxygen Demand (nitrogen inhibited), Chemical Oxygen Demand and Dissolved Organic Carbon.
- (6) The methods and protocols for sampling, analysis and recording shall conform to that outlined in Condition 7 (5).

10. OPERATION AND MAINTENANCE - NORTH LEACHATE HOLDING POND, AUXILIARY WETLAND TREATMENT SYSTEM and EFFLUENT HOLDING PONDS

- (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.
- (2) The Owner shall compare monitoring results obtained under Condition 9 (4) and Condition 9 (5) with the trigger concentration of the trigger parameters listed in table below to identify any potential leachate impact to groundwater.

Table 6		
North Leachate Holding Pond and Auxiliary Wetland Treatment System		
Geological Strata	Trigger Parameter & Trigger Level	
	Chloride	Boron
Upper Silty Clay ¹	127 mg/L	1.41 mg/L
Glacial Till / Lower Silty Clay ²	148 mg/L	1.57 mg/L
Bedrock ³	153 mg/L	1.52 mg/L

Notes:

- 1. Applicable to groundwater monitors P1-1D, P1-2D, P1-3D, P1-4D, TF1-1, TF1-2, TF1-3, and TF1-4.
- 2. Applicable to groundwater monitors P1-1B, P1-1C, P1-2B, P1-2C, P1-3B, P1-3C, P1-4B, and P1-4C.

3. Applicable to groundwater monitors P1-1A, P1-2A, P1-3A, and P1-4A.
- (3) In the event that a monitoring result for any parameter that is listed in Table 6 exceeds its trigger level, the Owner shall re-sample within one (1) month to confirm the exceedence of the trigger level for that parameter. Upon confirmation of the exceedence of any trigger level for any parameter that is listed in Table 6, the Owner shall conduct a second round re-sampling within three (3) months to re-confirm the exceedence of the trigger level for the parameter of concern.
 - (4) In the event that the presence of the parameter(s) of concern is (are) not confirmed after the second round of sampling conducted under Condition 10 (3), then, normal groundwater monitoring shall be resumed.
 - (5) In the event that the presence of the parameter(s) of concern is confirmed after the second round of sampling conducted under Condition 10 (3), then, it shall constitute as a confirmation of leachate impact to groundwater and the Owner shall immediately stop using the affected Works (**North Leachate Holding Pond, Auxiliary Wetland Treatment System, and Effluent Holding Pond**) and implement a pre-approved contingency and remedial action plan.
 - (6) The Owner shall notify the District Manager orally, as soon as possible, and in writing within seven days of the confirmation of leachate impact to groundwater including an assessment of the relative severity and extent of leachate impact and proposed remedial actions.
 - (7) By July 9, 2008, the Owner shall prepare and submit for an approval to the District Manager a "Groundwater Contingency and Remedial Action Plan" for any potential groundwater impact caused by the north leachate holding pond, auxiliary wetland treatment system, and effluent holding ponds.
 - (8) By July 9, 2008, the Owner shall prepare and submit for an approval to the District Manager a "List of Trigger Parameters and Trigger Levels" to augment or replace those established under Condition 10 (2) to effectively manage any potential groundwater impact caused by the north leachate holding pond, auxiliary wetland treatment system, and effluent holding ponds.

11. ANNUAL INSPECTION OF STRUCTURES

The Owner shall undertake an annual visual inspection of the structural integrity and stability of the berm side slopes for all wetland cells, the peat filter cell, the effluent holding ponds, south leachate holding pond, south east leachate holding pond, and north leachate holding pond and provide a report of these inspections, including any necessary corrective actions taken, in the Annual Report required by Condition 16.

III - STORMWATER MANAGEMENT FACILITY

12. EXPIRY OF APPROVAL

The approval issued by this Approval will cease to apply to those parts of the Works (Stormwater Management Facility) approved on May 25, 2006 and which have not been constructed by May 25, 2016.

13. MONITORING AND RECORDING

The Owner shall carry out the following monitoring program:

- (1) All samples and measurements taken for the purposes of this Approval shall 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) The Owner shall collect a grab samples of stormwater from the outlets of **SWM Pond #1, SWM Pond #2, and SWM Pond #7** at least **four times annually*** and analyse for the parameters listed in table below:

Table 7 - Stormwater Monitoring		
Sampling Locations: Outlets of SWM Ponds #1, #2, and #7		
Parameter	Parameter	Field -Parameter
Alkalinity	Barium	Conductivity
Total Ammonia Nitrogen	Boron	Dissolved Oxygen
Nitrate	Cadmium	pH (Field)
Nitrite	Total Chromium	Temperature
TKN	Copper	
Chloride	Lead	
Sulphate	Iron	
Sodium	Magnesium	
Potassium	Manganese	
Calcium	Mercury	
pH (Lab)	Zinc	
BOD5	Benzene	
Total Phosphorus	1,4-Dichlorobenzene	
Conductivity (Lab)	Dichloromethane	
DOC	Toluene	
Total Dissolved Solids	Vinyl Chloride	
Total Suspended Solids		
Phenols		
Chemical Oxygen Demand		

* **Note:** Samples shall be collected within twenty four hours after a rainfall event (preferably more than 10 mm rainfall in 24 hour period) resulting in a stormwater discharge from each SWM Pond during the period between April 1 and October 31 at a minimum interval of one (1) month between consecutive sampling events.

(3) The methods and protocols for sampling, analysis and recording shall conform to that outlined in Condition 7 (5).

14. OPERATION AND MAINTENANCE.

- (1) The Owner shall inspect the Works at least once a year and, if necessary, clean and maintain the Works to prevent the excessive build-up of sediments and/or vegetation;
- (2) The Owner shall maintain a logbook to record the results of these inspections and any cleaning and maintenance operations undertaken, and shall keep the logbook at the site or Owner's operational head quarter for inspection by the Ministry. The logbook shall include the following:
 - (a) the name of the Works (SWM Pond #1, SWM Pond #2, and SWM Pond #7);
 - (b) the date and results of each inspection, maintenance and cleaning, including an estimate of the quantity of any materials removed; and
 - (c) the occurrence date of each spill within the catchment area of a given SWM Pond, including follow-up actions / remedial measures undertaken.
- (3) The Owner shall compare monitoring results obtained under Condition 13 (2) with the trigger concentration of the trigger parameters listed in table below to identify any potential leachate impact to stormwater.

Table 8	
Trigger Parameter	Trigger Level - PWQO (mg/L)
Ammonia (unionized)	0.02
Copper	0.005
Phenols	0.001
Zinc	0.03

(4) In the event that a monitoring result for any parameter that is listed in Table 8 exceeds its trigger level, the Owner shall conduct sampling of the contents of the affected **SWM Pond** forthwith to confirm the exceedence of the trigger level for that parameter and identify potential source of leachate contamination. Upon confirmation of the exceedence of any trigger level for any parameter that is listed in Table 8, the Owner shall implement an approved contingency and remedial action plan to control any identified source of leachate contamination.

- (5) The Owner shall notify the District Manager orally, as soon as possible, and in writing within seven days of the confirmation of leachate impact to stormwater including an assessment of the relative severity and extent of leachate impact and proposed remedial actions.
- (6) By November 25, 2006, the Owner shall prepare and submit for an approval by the District Manager a "Stormwater Contingency and Remedial Action Plan" for the Works (**SWM Ponds**).
- (7) Within one (1) year of the commencement of operation of the Works (**SWM Ponds**), the Owner shall prepare and submit for approval by the Director a report on " Assessment of Stormwater Management Facility Trigger Parameters and Trigger Levels" which will be used as a basis for evaluating the list of trigger parameters and their respective trigger levels outlined in Condition 14 (3).
- (8) The Owner shall maintain the operations manual up to date through revisions undertaken from time to time and retain a copy at the location of the Works. Upon request, the Owner shall make the manual available for inspection and copying by Ministry personnel.

15. RECORD KEEPING

The Owner shall retain for a minimum of three (3) years from the date of their creation, all records and information related to or resulting from the operation and maintenance and monitoring activities required by this Approval.

IV - GENERAL

16. REPORTING

- (1) One week prior to the start up of the operation of the Proposed Works, the Owner shall notify the District Manager (in writing) of the pending start up date.
- (2) The Owner shall report to the District Manager or designate, any exceedence of any parameter specified in Condition 6 orally, as soon as reasonably possible, and in writing within seven (7) days of the exceedence.
- (3) In addition to the obligations under Part X of the *Environmental Protection Act* , the Owner shall, within 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 District Manager 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.

- (4) The Owner shall prepare and submit a performance report to the District Manager on an annual basis within ninety (90) days following the end of the calendar year. The first such report shall cover the part of the calendar year following the commencement of operation of the works and subsequent reports shall be submitted to cover successive calendar years following thereafter. The reports shall contain, but shall not be limited to, the following information:
- (a) a summary and interpretation of all monitoring data collected pursuant to Conditions 7, 8, 9 and 13 and a comparison to the associated effluent limits outlined in Condition 6, or Provincial Water Quality Objectives (PWQO), or Drinking Water Quality Standards (DWQS) 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; and
 - (f) annual structures inspection report as required by Condition 11.

17. TOTAL PHOSPHORUS MANAGEMENT AGREEMENT

The Owner shall abide by the "Total Phosphorus Management Agreement" between South Nation River Conservation Authority (SNC) and Lafleche Environmental Inc. to finance non-point source of phosphorus to reduce phosphorus loading to the South Nation River and its tributaries as outlined in the letters dated February 1, 2007 and April 11, 2007 as amended from time to time.

18. AGREEMENT FOR OFF-SITE DISPOSAL OF TREATED LEACHATE

The Owner shall keep the agreement entered with CRI Environmental Inc. for off-site disposal of pre-treated leachate from the Works during emergency up to date. The Owner shall inform the District Manager forthwith in writing if any changes are made to the current off-site disposal agreement entered with CRI Environmental Inc.

19. 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, that the Works, 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 may adversely affect the approved effluent quality criteria or the location of the discharge/outfall;
 - (c) Modifications to the treatment process technology of the Works, or modifications that involve construction of new reactors (tanks) or alter the treatment train process design;
 - (d) Modifications to the Works approved under s.9 of the EPA, and
 - (e) 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 modification 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) At least thirty (30) days 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 District Manager.
- (9) The Owner shall not proceed with implementation of Limited Operational Flexibility until the District Manager has provided written acceptance of the Notice of Modifications or a minimum of thirty (30) days have passed since the day the District Manager acknowledged the receipt of the Notice of Modifications.

Schedule 'A'

I. PREVIOUS WORKS APPROVED ON MAY 25, 2006 UNDER ECA No.

1. Application for Approval of Industrial Sewage Works dated May 24, 2005 submitted by Lafleche Environmental Inc., design specifications and drawings prepared by J. F. Sabourin and Associates Inc. Ottawa, Ontario.
2. "Stormwater Management Design Brief, SWM Ponds 1, 2, and 7 for the Eastern Ontario Waste Handling Facility, Moose Creek, Ontario" dated May 2005 and updated April 2006, prepared by J. F. Sabourin and Associates Inc. Ottawa, Ontario.

II. PREVIOUS WORKS APPROVED ON JULY 9, 2007 UNDER ECA No.

1. Application for Approval of Industrial Sewage Works submitted by Lafleche Environmental Inc. dated January 25, 2006 and design specifications and drawings submitted by Golder Associates Ltd, Kanata, Ontario and Seprotech Systems Incorporated, Ottawa, Ontario.
2. "Technical Support Document - Amendment to Certificate of Approval Industrial Sewage Works No. 9322-68JRDA - Proposed Full Scale Leachate Treatment Module and Operational Modifications - Lafleche Environmental Inc. - Eastern Ontario Waste Handling Facility" date January 2006, prepared by Golder Associates Ltd., Kanata, Ontario.
3. "Performance Evaluation - Third Year of Operation Pilot Leachate Treatment Facility - Lafleche Environmental Inc., Eastern Ontario Waste Handling Facility" dated April 2005, prepared by Golder Associates Ltd., Kanata, Ontario.
4. "Revised Request for Amendment to Certificate of Approval Industrial Sewage Works No. 9791-6PHQZH, Lafleche Environmental Inc., Eastern Ontario Waste Handling Facility, Township of North Stormont, Ontario" dated September 2006, prepared by Golder Associates Ltd., Kanata, Ontario.
5. Response to an additional information request letter dated June 14, 2006 from Stefanos Habtom, P. Eng., MOE to Andre Lafleche, Lafleche Environmental Inc. Re: "Application for Approval Industrial Sewage Works Landfill Leachate Treatment Facility" dated June 30, 2006, prepared by Golder Associates Ltd., Kanata, Ontario.
6. Response to an additional information request letter dated November 27, 2006 from Stefanos Habtom, P. Eng., MOE to Andre Lafleche, Lafleche Environmental Inc. Re: "Application for Approval Industrial Sewage Works Full Scale Landfill Leachate Treatment Facility" dated December 19, 2006, prepared by Golder Associates Ltd., Kanata, Ontario.
7. Rotating Biological Contactor (RBC) design calculations submitted by Seprotech Systems Inc. as attachment "A" of item #5 of this supporting documentation list.

8. Memorandum from B.W. Metcalfe, MOE, Eastern Region Technical Support Section - Re: Application for Amendment to Certificate of Approval Industrial Sewage Works C of A No. 9322-68JRDA - Proposed Full Scale Treatment Module and Operational Modifications, Eastern Ontario Waste Handling Facility, Lafleche Environmental Inc., dated March 23, 2006.
9. Memorandum from B.W. Metcalfe, MOE, Eastern Region Technical Support Section - Re: Revised Application for Amendment to Certificate of Approval Industrial Sewage Works C of A No. 9791-6PHQZH, Lafleche Environmental Inc., Eastern Ontario Waste Handling Facility, Township of North Stormont, dated December 1, 2006.
10. Memorandum from G. Faaren, MOE, Eastern Region Technical Support Section - Re: Application for Amendment to Certificate of Approval Industrial Sewage Works C of A No. 9322-68JRDA - Lafleche Environmental Inc., Eastern Ontario Waste Handling Facility, Township of North Stormont, dated April 18, 2006.
11. Memorandum from G. Faaren, MOE, Eastern Region Technical Support Section - Re: Revised Application for Amendment to Certificate of Approval Industrial Sewage Works C of A No. 9791-6PHQZH, Lafleche Environmental Inc., Eastern Ontario Waste Handling Facility, Township of North Stormont, dated November 20, 2006.
12. Letter from Andrew Benson and Nural Kuyucak, Golder Associates dated February 16, 2007 - Re: Comments on the first Draft Certificate of Approval and response to an additional information request e-mail from Stefanos Habtom, P. Eng., MOE dated February 5, 2007.
13. Letter from Andrew Benson and Nural Kuyucak, Golder Associates dated March 12, 2007 - Re: Comments on the second Draft Certificate of Approval and response to an additional information request letter from Stefanos Habtom, P. Eng., MOE dated February 27, 2007.
14. Letter from Andrew Benson and Nural Kuyucak, Golder Associates dated April 12, 2007 - Re: Comments on the third Draft Certificate of Approval and response to an additional information request letter from Stefanos Habtom, P. Eng., MOE dated March 22, 2007.
15. Letter from Andrew Benson and Paul Smolkin, Golder Associates, dated May 23, 2007 - Re: Evaluation of BATEA and proposed effluent treatment limits for non conventional leachate parameters for the full-scale leachate treatment system.

III. PREVIOUS WORKS APPROVED ON AUGUST 4, 2005, MAY 4, 2006, MAY 19, 2006, AND NOVEMBER 14, 2008:

1. Applications for Approval of Industrial Sewage Works submitted by Lafleche Environmental Inc. dated August 12, 2004, April 20, 2006, May 19, 2006, and July 16, 2008 design specifications and drawings prepared by Golder Associates Ltd., Ottawa, Ontario, and ASI Group Ltd., St. Catherines, Ontario.
2. "Design Brief - Proposed New Leachate Holding Pond, Lafleche Environmental Inc., Eastern

Ontario Waste Handling Facility, Moose Creek, Ontario" dated August 2004, prepared by Golder Associates Ltd.

3. Letter and attachments dated December 7, 2004 from Andrew Benson and Nural Kuyucak, Golder Associates Ltd. to Stefanos Habtom, Ministry of the Environment - response to request for additional information letter dated November 22, 2004;
4. Letter and attachments dated February 23, 2005 from Andrew Benson and Nural Kuyucak, Golder Associates Ltd. to Stefanos Habtom, Ministry of the Environment - response to request for additional information as per telephone conversation on January 14, 2005;
5. "Performance Evaluation - Second Year of Operation - Pilot Leachate Treatment Facility - Lafleche Environment Inc. - Eastern Ontario Waste Handling Facility" dated April 2004, prepared by Golder Associates Ltd.
6. An E-mail from Jerry Myers, Applications Engineer, SolarBee Division of Pump Systems, Inc., dated November 8, 2006 addressed to Stefanos Habtom, MOE Senior Water Engineer, Re: SolarBee Recommendation for Lafleche Environmental Leachate Ponds, Moose Creek, Ontario, and the following attachments: Solar Circulator Odour Control 050206.doc; and OCE-LaFleche-ON-110106.xls.
7. Drawing No. 3 - File No. 061122153-5100-D2.dwg, - Leachate Pond System, prepared by Golder Associates, dated February 13, 2007, showing design details of the new submersible leachate pump for the North Leachate Holding Pond.
8. Letter from John Levie, M. Eng., P. Eng., ASI Group Ltd., to Stefanos Habtom, P. Eng., MOE, dated October 10, 2008 regarding application of ultrasound in wastewater treatment and installation and operation manual for EZ-Algae.

IV. PREVIOUS WORKS APPROVED ON MAY 4, 2009:

1. Application for Approval of Industrial Sewage Works submitted by Lafleche Environmental Inc. dated January 16, 2009 and design specifications and drawings prepared by Environmental Remediation Equipment Inc., Montreal, Quebec.
2. Letter from Damian Rodrigues, Lafleche Environmental Inc., dated March 9, 2009 as a response to an additional information request letter dated February 18, 2009 from Stefanos Habtom, P. Eng., MOE providing aeration design brief and design calculations for the proposed South Leachate Aeration Ponds.
3. Letter from Brian King, P. Eng., Lafleche Environmental Inc., dated March 30, 2009 as a response to an additional information request letter dated March 20, 2009 from Stefanos Habtom, P. Eng., MOE providing aeration design brief and design calculations for the proposed South Leachate Aeration Ponds.

V. PREVIOUS WORKS APPROVED ON MARCH 9, 2010 UNDER CofA # 3658-7YXSN6:

1. Application for Approval of Industrial Sewage Works submitted by Lafleche Environmental Inc. dated November 13, 2009 and design specifications and drawings prepared by ASI Group Ltd., St. Catherines, Ontario.
2. "Design Brief: Wastewater Tertiary Filtration System and Associated Equipment" dated November 13, 2009, prepared by ASI Group Ltd., St. Catherines, Ontario.

VI. PREVIOUS WORKS APPROVED ON APRIL 14, 2011 UNDER ECA No. 5759-8FGS44:

1. Application for Approval of Industrial Sewage Works submitted by Lafleche Environmental Inc. dated February 9, 2011.
2. "Ultrasonic Transducer: Report on Performance for Algae Control Pursuant to Certificate of Approval No. 3658-7YXSN6 Condition 19(2)b" dated February 10, 2011, prepared by ASI Group Ltd., St. Catherines, Ontario.

VII. PROPOSED WORKS:

1. Application for Environmental Compliance Approval submitted by Lafleche Environmental Inc. dated May 21, 2014.
2. Design brief and drawings titled " Engineering Report for the Upgrade of the Lafleche Leachate Treatment Facility" prepared by BPR Infrastructure Inc., Boucherville, Quebec dated September 17, 2014.

Schedule B

Limited Operational Flexibility Criteria for Modifications to Industrial Sewage Works

1. The modifications to sewage works approved under an Environmental Compliance Approval (Approval) that are permitted under the Limited Operational Flexibility (LOF), are outlined below and are subject to the LOF conditions in the Approval, and require the submission of the Notice of Modifications. If there is a conflict between the sewage works listed below and the Terms and Conditions in the Approval, the Terms and Conditions in the Approval shall take precedence.

1.1 Sewage Pumping Stations

- a. Adding or replacing equipment where new equipment is located within an existing sewage treatment plant site or an existing sewage pumping station site, provided that the facility Rated Capacity is not exceeded and the existing flow process and/or treatment train are maintained, as applicable.

1.2 Sewage Treatment Process

- a. Installing additional chemical dosage equipment including replacing with alternative 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 the effluent quantity and quality.
- b. Expanding the buffer zone between a sanitary sewage lagoon facility or land treatment area and adjacent uses provided that the buffer zone is entirely on the proponent's land.
- c. Optimizing 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.
- d. Optimizing existing sewage treatment plant equipment with the purpose to increase the efficiency of the existing treatment operations, provided that there are no modifications to the works that result in an increase of the Rated Capacity, and may have adverse effects to the effluent quality or location of the discharge.
- e. Replacement, refurbishment of previously approved equipment in whole or in part with Equivalent Equipment, like-for-like of different make and model, provided that the firm capacity, reliability, performance standard, level of quality and redundancy of the group of equipment is kept the same. For clarity proposes, the following

equipment can be considered under this provision: screens, grit separators, blowers, aeration equipment, sludge thickeners, dewatering equipment, UV systems, chlorine contact equipment, bio-disks, and sludge digester systems.

1.3 Sewage Treatment Plant Outfall

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

1.4 Sanitary Sewers

- a. Pipe relining and replacement with similar pipe size within the Sewage Treatment Plant site, where the nominal diameter is not greater than 1,200mm.

1.5 Pilot Systems

- a. Installation of pilot systems for new or existing technologies provided that:
 - i. any effluent from the pilot system is discharged to the inlet of the sewage treatment plant or hauled off-site for proper disposal,
 - ii. any effluent from the pilot system discharged to the inlet of the sewage treatment plant or sewage conveyance system 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
 - iii. the pilot system's duration does not exceed a maximum of two years; and a report with results is submitted to the Director and District Manager three months after completion of the pilot project.
2. 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.
3. Normal or emergency operational modifications, such as repairs, reconstructions, or other improvements that are part of maintenance activities, including cleaning, renovations to existing approved sewage works equipment, provided that the modification is made with Equivalent Equipment, are considered pre-approved.
4. The modifications noted in section (3) above are not required to follow the notification protocols under Limited Operational Flexibility, provided that the number of pieces and description of the equipment as described in the Approval does not change.

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.
2. Condition 2 is included to ensure that the Ministry records are kept accurate and current with respect to 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.
3. Conditions 3 and 12 are included to ensure that, when the Works are constructed, the Works will meet the standards that apply at the time of construction to ensure the ongoing protection of the environment..
4. Condition 4 is included to ensure that 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.
5. Condition 6 is imposed to ensure that the effluent discharged from the Works to the local drainage ditches meets the Ministry's effluent quality requirements thus minimizing environmental impact on the receiver.
6. Conditions 7, 8, 9 and 13 are included to require the owner to demonstrate on a continual basis that the quality and quantity of the effluent from the approved Works is consistent with the effluent limits specified in the Approval and that the approved Works does not cause any impairment to the receiving watercourse and/or the groundwater.
7. Conditions 5, 10, and 14 are included to ensure that the Works is properly operated and maintained to minimize and potential impact to the natural environment;
8. Condition 11 is included to ensure that the berms for the treated water holding pond and wetland cells are maintained to ensure long-term structural stability and that the holding ponds will not excessively exfiltrate.
9. Condition 15 is included to require that all records are retained for a sufficient time period to adequately evaluate the long-term operation and maintenance of the Works.
10. Condition 16 is included to provide a performance record for future references and to ensure that the Ministry is made aware of problems as they arise, so that the Ministry can work with the Owner in

resolving the problems in a timely manner.

11. Condition 17 is included to ensure that the Total Phosphorus Management Agreement is implemented and the affected receiving surface water is protected.
12. Condition 18 is included to ensure that an off-site sewage disposal agreement is place to allow sewage disposal from the Works during emergency conditions and minimize any potential impacts to the natural environment due to such emergencies.
13. Condition 19 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.



Notice of Modifications Dec-2013.pdf

Upon issuance of the environmental compliance approval, I hereby revoke Approval No(s). 5759-8FGS44 issued on April 14, 2011

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

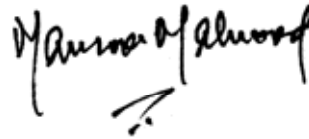
AND

The Director appointed for the purposes of
Part II.1 of the Environmental Protection Act
Ministry of the Environment and
Climate Change
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 16th day of March, 2015



Mansoor Mahmood, P.Eng.
Director
appointed for the purposes of Part II.1 of the
Environmental Protection Act

SH/

c: Area Manager, MOECC Cornwall
c: District Manager, MOECC Ottawa
Annie Lefebvre, BPR-Infrastructure Inc.



Notice of Modifications Dec-2013.pdf