AMENDED ENVIRONMENTAL COMPLIANCE APPROVAL

NUMBER 8117-CUSNXX
Issue Date: April 29, 2024

Waste Management of Canada Corporation
5768 Nauvoo Road
Warwick, Ontario
N0M 2S0

Site Location: Twin Creeks Environmental Centre
5768 Nauvoo Road Watford
Township of Warwick, County of Lambton
N0M 2S0

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:

amendment to the existing industrial sewage works and establishment of new proposed industrial sewage works for usage and operation of condensate collection system, leachate collection, treatment, and disposal facility and stormwater management works to service a proposed Renewable Natural Gas (RNG) facility at the existing Twin Creeks Landfill Site located in the Township of Warwick, County of Lambton, consisting of the following:

PROPOSED WORKS A

Establishment of condensate collection and disposal system and stormwater management Works for a Proposed Renewable Natural Gas Facility (RNG), located at Twin Creeks Landfill Site, comprising;

RNG condensate collection and disposal system

a Proposed RNG condensate system (combined with the existing Landfill Gas (LFG) condensate system) for collection and discharge of the condensate generated at a maximum flow rate of 432 m^3/day, at the newly proposed RNG facility, collected in the two Slop Tanks inside the RNG building to the Proposed Equalization Tank 2 during first year of the operation of Proposed Works, and disposal to Equalization Tank 1 or hauled offsite depending upon the Proposed Sampling Program results, the Proposed Works also include upgrades to the Existing Pump Station 10 (PS10) for pumping of condensate to Equalization Tank, all comprising;

Oil/Water Separator

One (1) oil/water separator (Titan Production Equipment) located upstream of the Slop Discharge Tank, having a total capacity of 1.39 m3, a maximum treatment flow rate of 26.17 L/min, receiving RNG condensate flow from the RNG condensate system through a 75mm diameter pipe, and discharging to the Slop Tank through as 50mm diameter pipe;

Slop Tanks

Two condensate storage tanks (Slop Tanks), each having a volume of 64 m^3, installed in series receiving the condensate from the Proposed new RNG facility, through the 50 mm diameter pipe, generated at a rate of 38,264 L/day, and receiving rejected process water from the compressor room catalytic oxygen removal, generated at a rate of 726 L/day, emptied on an as-needed, discharging on demand, via a slop pump, discharging at a maximum rate of 6.3 L/s, to a proposed new 200 mm HDPE gravity sewer, to CMH1 adjacent to PS10, via manhole CMH2;

LFG Condensate collection and disposal system

collection and conveyance of condensate from the proposed LFG header pipe, from CMH3 to CMH2, at a maximum flow rate of 3.2 L/s in a condensate collection sump CMH3 and convey the flow by gravity, through a 200 mm diameter, 74 m long HDPE gravity sewer and discharging to a 200 mm diameter sewer and CMH1 adjacent to PS10, via manhole CMH2;

Combined Condensate and LFG Condensate Collection Pipes

Combined condensate from the RNG and LFG header, collected at CMH2, flowing by gravity through a 200 mm diameter sewer to manhole CMH1 adjacent to PS10;

Upgrades to Pumping Station 10 (PS10)

- upgrades to the existing pumping Station 10 (PS10), comprising of a new dedicated 4th pump, rated at 9.5 L/s under 28 m TDH, pumping the combined condensate to the Proposed new Equalization Tank 2 for the first operational year and subsequently disposed off as per this Approval, at an maximum flow rate of 5 L/s, complete with a 100mm diameter foot valve to control the flow to be temporarily stored in the equalization tanks;

New Equalization Tank 2

- one proposed steel glass-lined equalization tank 2, proposed to be operational during the first year of its construction, having a capacity of 2,300 m^3, located west of the existing Equalization Tank 1, receiving the combined RNG condensate and LFG condensate through the 4th pump installed in PS10, capable to provide two days storage, and discharging to Equalization Tank 1 or wastewater is to be hauled offsite depending upon the results of the Proposed Sampling program;

B. RNG Stormwater management Works

Proposed use of the existing stormwater management works discharging to Stormwater Management Pond 1, for the quality and quantity control of stormwater generated at the new proposed RNG facility;

PROPOSED WORKS B

LEACHATE TREATMENT AND DISPOSAL FACILITY

use and operation of a leachate collection, treatment, and disposal facility with a Rated Capacity of 400 m^3/day to service Phases 1 to 9 and during closure and post closure period of the Twin Creeks Landfill Site expansion, consisting of the following:

Chemical Feed System

- one (1) 1.0 m^3 capacity phosphoric acid solution storage tank equipped with two (2) metering pumps (one duty for each SBR reactor with interconnecting piping for redundancy) each rated at 32.0 L/hr, dosing phosphoric acid into the SBR reactors as required;

- one (1) 1.0 m^3 capacity flocculent storage tank equipped with two (2) metering pumps (one duty for each SBR reactor with interconnecting piping for redundancy) each rated at 363 L/hr, dosing flocculent upstream of the SBR reactors as required;

- one (1) 1.0 m^3 capacity anti-foam agent storage tank equipped with two (2) metering pumps (one duty for each SBR reactor with interconnecting piping for redundancy) each rated at 32.0 L/hr, dosing anti-foam agent upstream of the SBR reactors as required;

- one (1) 10.0 m^3 capacity methanol storage tank equipped with a spill containment structure and two (2) metering pumps (one duty for each SBR reactor with interconnecting piping for redundancy) each rated at 144 L/hr, dosing methanol upstream of the SBR reactors as required; and

- one (1) 88 m^3 capacity in-ground high strength carbon waste storage tank equipped with two (2) metering pumps (one duty for each SBR reactor with interconnecting piping for redundancy) each rated at 288 L/hr, dosing high strength carbon waste upstream of the SBR reactors as required.

Sequencing Batch Reactor (SBR)

- a sequencing batch reactor system consisting of two (2) reactors each with approximate dimensions of 6.4 m long x 16.2 m wide x 5.5 m SWD providing active reactor volume of 572 m^3, each tank equipped with a jet aeration header and one (1) dry pit jet pump rated at 227 L/sec and a decanter system capable of decanting 69.4 L/sec; and

- three (3) 50 hp positive displacement air blowers each with VFD control and rated at of 462 L/sec at 65.5 kPa supplying the air required for SBR aeration.

Effluent and Sludge Pumps

- two (2) effluent transfer pumps (one duty for each SBR reactor with interconnecting piping for redundancy) each rated at 69.4 L/sec, transferring effluent from the SBR units to an effluent holding tank, as described below; and

- two (2) activated sludge wasting pumps (one duty for each reactor) each rated at 22 L/sec, transferring activated wasted sludge to aerated sludge tanks, as described below.

Effluent and Sludge Holding Tanks

- one (1) 400 m^3 storage capacity effluent holding tank with approximate dimensions of 9.75 m long x 8.5 m wide x 5.5 m SWD equipped with coarse bubble diffusers, discharging to a reverse osmosis membrane filtration system, as described below;

- two (2) aerated sludge tanks operating in either parallel or series mode, each with approximate dimensions of 11.8 m long x 3 m wide x 5.5 m SWD providing a storage capacity of 200 m^3 equipped with coarse bubble diffusers, two (2) supernatant pumps returning supernatant to the SBR units described above, and two (2) sludge pumps discharging settled sludge to a sludge dewatering press, as described below; and

- three (3) positive displacement air blowers each rated at 141 L/sec and at 65.5 kPa with VFD control providing air required for the effluent tank and sludge holding tanks.

Reverse Osmosis Membrane Filtration System

- one (1) treated effluent storage tank with a capacity of 15.0 m^3, equipped with one (1) pump rated at 8.3 L/sec discharging to a cartridge sand filtration unit, as described below;

- one (1) sulphuric acid storage tank with a capacity of 7,000 L for pH adjustment of effluent at the effluent storage tank, as described above;

- two (2) dual redundant 3.47 L/sec capacity cartridge sand filtration unit discharging to a reverse osmosis membrane filtration system described below;

- one (1) three-staged reverse osmosis membrane filtration system with an overall treatment capacity of 3.47 L/sec consisting of three (3) filtration units, equipped with a 32-piece ST-RO membrane modules, a 20-piece ST-RO membranes modules, a 15 piece ST-NF membrane modules and the following pumps:

    a. four (4) high pressure plunger pumps each rated at 1.8 L/s (1st and 2nd stage RO);
    b. five (5) multistage centrifugal booster pumps with under water motor each rated at.8 L/s (1st and 2nd stage RO);

c. one (1) multi stage vertical centrifugal pump (cleaning pump) rated at 3.47 L/s;
d. one (1) high pressure plunger pump with a capacity of 1.06 L/s (3rd stage NF);
e. three (3) multistage centrifugal booster pumps with under water motor rated at 2.8 L/s each (3rd stage NF); and
f. one (1) multi stage vertical centrifugal pump (cleaning pump) rated at 1,06 L/s.

all discharging final permeate to a treated effluent storage pond described below and final concentrate to a concentrate storage tank described below;

Treated Effluent Storage Ponds

- one (1) clay lined pond **(Inlet cell)** with a capacity of 2,200 m^3, equipped with a floating aerator and one (1) pumping station manhole with a submersible pump rated at 30 m^3/hr;

- one (1) clay lined pond **(Cell 1)** with a capacity of 53,900 m^3 equipped with one (1) interconnecting manhole with a gate valve; and

- one (1) clay lined pond **(Cell 2)** with a capacity of 28,400 m^3, providing storage for treated effluent from the membrane filtration system, equipped with one (1) interconnecting manhole with a gate valve, a pumping station **(Pumping Station 11)** equipped with one (1) VFD submersible pump rated at 56.9 L/sec to be used for truck loading purposes, one (1) submersible effluent return pump rated at 7.3 L/sec , and two (2) VFD submersible irrigation pumps each rated at 45.7 L/sec (one duty, one standby) discharging to a poplar tree land irrigation area described below;

Concentrate Evaporator and Dryer

- one (1) concentrate storage tank with approximate dimensions of 4.4 m long x 4.8 m wide and 5.5 m SWD (total capacity of 102 m^3), equipped with a submersible pump for off-site disposal rated at 9.5 L/sec, also used for off-site disposal slurry, and a pump for transferring concentrate to an evaporator treatment system, as described below, rated at 0.63 L/sec;

- one (1) mechanical vapour compression evaporator rated at 0.63 L/sec, equipped with electric heating element and heat exchangers to remove moisture from concentrate and produce a slurry discharging to a slurry holding tank described below;

- one (1) slurry holding tank with approximate dimensions of 4.4 m long x 4.8 m wide and 5.5 m SWD (total capacity of 102.0 m^3) equipped with one (1) slurry pump rated at 1.57 L/sec, discharging to a slurry dryer described below; and

- one (1) slurry dryer rated at 0.035 L/sec with approximate dimensions of 4.7 m long x 2.1 m wide x 1.5 m high discharging to a salt cake disposal bin (water vapour will be evaporated through the slurry dryer exhaust).

Treated Effluent On-Site Disposal

Upgrades to the disposal system of the treated leachate effluent, as follows:

- two (2) 3.31 ha treated effluent drip-irrigation zones using approximately 250 m long drip-irrigation tubing installed in each zone;

EXISTING WORKS

Raw Leachate Pumping Stations

- four (4) primary leachate pumps (one for each PS1, PS3, PS5 and PS7) and each rated at 7.3 L/sec, together with their associated forcemains discharging to the equalization tank described below.

Secondary Drainage Layer Pumping Stations

- four (4) secondary drainage layer pumps (one for each PS2, PS4, PS6 and PS8) each rated at 3.5 L/sec, together with their associated forcemains discharging to the equalization tank described below.

Pumping Station 10 (PS10)

Pumping Station 10 (PS10) located South of the landfill leachate from Equalization Tank 1 seasonally to the poplar treatment system or hauled offsite, comprising;

- Three (3) additional variable frequency drive (VFD) recirculation pumps each rated at approximately 9.6 L/sec proposed to be pumping leachate to the leachate treatment system;

- two (2) VFD raw leachate pumps (one duty, one standby) each rated at 27.7 L/sec, to be used in combination to fill the Sequencing Batch Reactor (SBR) reactors at a faster rate;

STORMWATER MANAGEMENT FACILITY

a stormwater management facility to service a 146.5 ha drainage area of the Twin Creeks Landfill Site Expansion within the 300 ha area of the Twin Creeks Landfill Site consisting of the following:

Stormwater Management Pond - SWM Pond #1

a stormwater management facility (**SWM Pond #1**) to service a total drainage area of 33.7 ha consisting of the eastern part of the existing landfill site and future excess soil stockpile area, designed to provide quantity and quality control by attenuating peak stormwater flows from storm events up to 1:100 year return frequency including regional storm (Hazel) at or below pre-development levels, consisting of the following:

- one (1) approximately 1,300 m long perimeter trapezoidal ditch along the toe of the eastern side of the closed landfill having a 0.6 m wide bottom and 2H:1V side slopes, discharging collected

stormwater to an extended detention wet pond described below;

- one (1) ditch along the south and west side of the leachate storage lagoon collecting runoff from the excess soil stockpile area, discharging collected stormwater to a forebay described below;

- one (1) forebay with approximate dimensions of 19 m long x 16 m wide bottom, and 4H:1V side slopes, discharging to an extended detention wet pond described below;

- one (1) extended detention wet pond with approximate dimensions of 294.0 m long bottom, 23.5 m wide bottom and 4H:1V side slopes, equipped with a permanent vertical baffle with a minimum elevation of 238.7 m ASL, providing a total storage capacity of 21,429 m³ consisting of a permanent pool storage volume of 3,651 m³ with an average depth of 0.5 m, and an extended storage volume of 17,778 m³ with an extended storage depth of 1.91 m, equipped with an outlet structure described below;

- an outlet structure consisting of two (2) 1500 mm diameter concrete manholes discharging through two (2) 750 mm diameter outlet pipes, each pipe equipped with a 1200 mm x 1200 mm concrete valve chamber and a sluice gate valve, to a perimeter ditch flowing towards a roadside ditch along County Road 79; and,

- one (1) 8.0 m wide emergency overflow structure with weir elevation of 239.55 m ASL discharging to a perimeter ditch flowing towards County Road 79 roadside ditch;

Stormwater Management Pond - SWM Pond #2
a stormwater management facility (**SWM Pond #2**) to service a total drainage area of 67.9 ha consisting of southwestern part of the expanded landfill site, designed to provide quantity and quality control by attenuating peak stormwater flows from storm events up to 1:100 year return frequency including regional storm (Hazel) at or below pre-development levels, consisting of the following:

- two (2) approximately 400 m and 1500 m long perimeter ditches along the southern part of the landfill having a minimum depth of 1.0 m, and 3H:1V & 4H:1V side slopes discharging collected stormwater through two (2) culverts, 3000 mm X 1200 mm concrete box and 1390 x 970 mm CSPA, to a forebay described below;

- one (1) forebay with approximate dimensions of 47 m long x 30 m wide bottom and 4H:1V and 3H:1V side slopes, discharging to an extended detention wet pond described below;

- one (1) extended detention wet pond with approximate dimensions of 413.0 m long x 44.0 m wide bottom and 4H:1V and 3H:1V side slopes, providing a total storage capacity of 51,725 m³ consisting of a permanent pool storage volume of 11,427 m³ with a average depth of 0.60 m, and an extended storage volume of 38,098 m³ with an extended storage depth of 1.75 m, equipped with an outlet structure described below;

- an outlet structure consisting of one (1)1800 mm diameter and one (1) 2400 mm diameter concrete manholes discharging through a 1,050 mm and a 1,200 mm diameter outlet pipes, each pipe equipped with a 2000 mm x 2000 mm concrete valve chamber and a sluice gate valve, to a roadside ditch along County Road 79; and

- one (1) 18 m wide emergency overflow structure with weir elevation of 234.05 m ASL discharging to a roadside ditch along County Road 79.

Stormwater Management Pond - SWM Pond #3
a stormwater management facility (**SWM Pond #3**) to service a total drainage area of 30.5 ha consisting of northwestern part of the expanded landfill site, designed to provide quantity and quality control by attenuating peak stormwater flows from storm events up to 1:100 year return frequency including regional storm (Hazel) at or below pre-development levels, consisting of the following:

- one (1) approximately 650 m long perimeter ditch along the northern part of the expanded landfill and one (1) approximately 500 m long perimeter ditch along the western part of the expanded landfill, each having a minimum of 1.0 m depth and 3H:1V & 4H:1V side slopes, discharging collected stormwater through a 3000 mm x 1200 mm concrete box culvert to a forebay described below;

- one (1) forebay with approximate dimensions of 33 m long x 25 m wide bottom and 4H:1V side slopes, discharging to an extended detention wet pond described below;

- one (1) extended detention wet pond with approximate dimensions of 255.0 m long, 36.0 m wide bottom and 3H:1V and 4H:1V side slopes, providing a total storage capacity of 24,996 m^3 consisting of a permanent pool storage volume of 4,843 m^3 with an average depth of 0.50 m, and an extended storage volume of 20,053 m^3 with an extended storage depth of 1.67 m, equipped with an outlet structure described below;

- an outlet structure consisting of three (3)1200 mm diameter concrete manholes discharging through two (2) 600 mm diameter and one (1) 450 mm diameter outlet pipes, each pipe equipped with 1200 mm x 1200 mm box concrete valve chamber and a sluice gate valve, to a roadside ditch along County Road 79; and,

- one (1) 9 m wide emergency overflow structure with a weir elevation of 238.00 m ASL discharging to a roadside ditch along County Road 79.

Stormwater Management Pond - SWM Pond #4
a stormwater management facility (**SWM Pond #4**) to service a total drainage area of 14.4 ha consisting of the north eastern part of the expanded landfill site and norther part of the existing landfill site, designed to provide quantity and quality control by attenuating peak stormwater flows from storm events up to 1:100 year return frequency including regional storm (Hazel) at or below pre-development levels, consisting of the following:

- four (4) perimeter ditches collecting runoff from the northern side of the expanded landfill and from the northwestern portion of the existing landfill, having a minimum of 1.0 m depth and 3H:1V & 4H:1V side slopes, discharging collected stormwater through two (2) inlet structures to a forebay described below;

- one (1) forebay with approximate dimensions of 16 m long x 16 m wide bottom and 4H:1V side slopes, discharging to an extended detention wet pond described below;

- one (1) extended detention wet pond with approximate dimensions of 165.0 m long bottom, 20.0 m wide bottom and 3H:1V and 4H:1V side slopes, providing a total storage capacity of 8,328 m^3 consisting of a permanent pool storage volume of 1,812 m^3 with an average depth of 0.50 m, and an extended storage volume of 6,516 m^3 with an extended storage depth of 1.32 m, equipped with an outlet structure described below;

- an outlet structure consisting of one (1)1800 mm diameter concrete manhole discharging through one (1)1050 mm diameter outlet pipe equipped with 2000 mm X 2000 mm concrete valve chamber and a sluice gate valve to a perimeter ditch along Zion Line to a roadside ditch along Zion Line;

- one (1) 8 m wide emergency overflow structure with a weir elevation of 242.00 m ASL discharging to a road side ditch along Zion Line;

Equalization Tank 1

- one (1) 2,300 m^3 capacity steel and glass lined equalization tank enclosed with a clay berm containment area, receiving raw leachate from the landfill leachate collection system, equipped with three (3) variable frequency drive (VFD) recirculation pumps (two duty and one standby) each rated at 9.6 L/sec, all pumping leachate to the leachate treatment system, as described below;

all discharging final permeate to a treated effluent storage pond described below and final concentrate to a concentrate storage tank described below;

Treated Effluent On-Site Disposal <u>(Poplar Plantation)</u>

- one (1) 28.32 ha poplar tree irrigation land established to handle an average of 1,187 m^3/day of treated leachate effluent during suitable irrigation days between the period extending from May 1st to October 15th, consisting of six (6) 3.62 ha treated effluent drip-irrigation zones using approximately 250 m long drip-irrigation tubing installed in each zone;
- a stormwater management system to control the quality of stormwater runoff from the poplar tree irrigation land to Kersey Drain (Brown Creek), consisting of one (1) west furrow approximately 710 m long x 200 mm deep and one (1) east furrow approximately 510 m long x 200 mm deep, running parallel to each other with a grassed area in between, each equipped with a 200 mm high berm for distributing stormwater runoff across the entire length of the furrow, discharging by sheet flow to Kersey Drain; and

Raw/Diluted Leachate Effluent Disposal <u>(Poplar System)</u>

- one (1) existing 9.3 ha poplar tree irrigation system identified as the Poplar System, of approximately 150 m length for each poplar row. Leachate is applied through pressure drip-irrigation tubing at a rate not to exceed 476 mm/m², or 44,000 L/day, during the growing season. The system is subject to conditions as specified in the EPA Section 27 approval for the site. Revised to a 9.3 ha area with a rate of 476 mm/m^2 or 44,000 m^3/year;

- a system of maintenance holes, collector system and leachate sump across the existing site to transfer leachate to the leachate holding tanks via two methods: 1) down-hole leachate pumps transfer leachate through piping units directly to the leachate holding tanks and the Equalization Tank 1 and 2, the use of tanker truck to transfer the leachate into the leachate holding tanks or maintenance holes of the leachate conveyance system.

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 Schedule A.

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

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

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

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

4. "District Manager" means the District Manager of the Sarnia District Office of the Ministry;

5. "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;

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

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

8. "Maximum Daily Flow" means the largest volume of flow to be received during a one-day period for which the sewage treatment process unit or equipment is designed to handle;

9. "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;

10. "Owner" means Waste Management of Canada Corporation and its successors and assignees;

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

12. "Poplar System" is the irrigation area of 9.3 hectares located on top of the cap of the Existing Site (old landfill) that is used for the phytoremediation of leachate that is generated at the Site.

13. "Poplar Plantation" is the irrigation area located on native soil to the south of the Site that is used for the phytoremediation of irrigation liquid that satisfies the Effluent Trigger Limits.

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

15. "Proposed Works B" means unconstructed sewage works that were previously Approved and will be constructed in future"

16. "Township" means the Township of Warwick;

17. "Works" means the sewage works described in the Owner's application, and this Approval, and includes both Proposed Works and Existing Works;

18. "WIFN" refers to Walpole Island First Nation; and

19. "WPLC" refers to the Warwick Public Liaison Committee.

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 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 terms and conditions herein and shall take all reasonable measures to ensure any such person complies with the same.

2. The Owner shall design, construct, operate and maintain the Works in accordance with the conditions of this Approval.

3. Where there is a conflict between a provision of any document referred to in this Approval and the conditions of this Approval, the conditions in this Approval shall take precedence.

4. The issuance of, and compliance with the conditions of, this Approval does not:

    a. relieve any person of any obligation to comply with any provision of any applicable statute, regulation or other legal requirement, including, but not limited to, the obligation to obtain approval from the local conservation authority necessary to construct or operate the Works; or

    b. limit in any way the authority of the Ministry to require certain steps be taken to require the Owner to furnish any further information related to compliance with this Approval.

2. CHANGE OF OWNER

1. The Owner shall notify the District Manager and the Director, in writing, of any of the following changes within **thirty (30) days** of the change occurring:

    a. change of address of Owner;

    b. change of Owner, including address of new owner;

    c. change of partners where the Owner is or at any time becomes a partnership, and a copy of the most recent declaration filed under the Business Names Act, R.S.O. 1990, c. B.17shall be included in the notification;

    d. change of name of the corporation and a copy of the most current information filed under the Corporations Information Act, R.S.O. 1990, c. C.39 shall be included in the notification.

2. The Owner shall notify the District Manager, in writing, of any of the following changes within **thirty (30) days** of the change occurring:

    a. change of address of the Operating Agency;

    b. change of the Operating Agency, including address of the new Operating Agency.

3. In the event of any change in ownership of the Works, the Owner shall notify the succeeding owner in writing, of the existence of this Approval, and forward a copy of the notice to the District Manager.

4. The Owner shall ensure that all communications made pursuant to this condition refer to the number of this Approval.

3. CONSTRUCTION OF PROPOSED WORKS

1. All Proposed Works A included -in this Approval shall be constructed and installed and must commence operation within **five (5) years** of issuance of this Approval, after which time the Approval ceases to apply in respect of any portions of the Works not in operation. In the event that the construction, installation and/or operation of any portion of the Proposed Works is anticipated to be delayed beyond the time period stipulated, the Owner shall submit to the Director an application to amend the Approval to extend this time period, at least six (6) months prior to the end of the period. The amendment application shall include the reason(s) for the delay and whether there is any design change(s).

2. Upon the construction of the Works, the Owner shall prepare a statement, certified by a Licensed Engineering Practitioner, that the Works are constructed in accordance with this Approval, and upon request, shall make the written statement available for inspection by Ministry personnel.

3. Within **six (6)** months of the construction 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.

4. A set of record drawings of the Works shall be kept up to date through revisions undertaken from time to time and a copy shall be readily accessible for reference at the Works.

4. EFFLUENT LIMITS FOR LEACHATE TREATMENT FACILITY

1. The Owner shall design, construct and operate the Works such that the concentrations of the materials listed as effluent parameters in the Effluent Limits Table in **Schedule B** are not exceeded in the effluent from the **Treated Effluent Storage Pond** (Cell 2).

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

    1. The Average Monthly Concentration of a parameter named in Column 1 of the Effluent Limits Table included in the **Schedule B** shall not exceed the corresponding maximum concentration set out in Column 2 of the Effluent Limits Table in the **Schedule B;**

    2. non-compliance with respect to pH is deemed to have occurred when any single measurement is outside of the indicated range.

5. OPERATIONS AND MAINTENANCE

1. The Owner shall ensure that, at all times, the Works and the related equipment and appurtenances used to achieve compliance with this Approval are properly operated and maintained. Proper operation and maintenance shall include effective performance, adequate funding, adequate staffing and training, including training in all procedures and other requirements of this Approval and the OWRA and regulations, adequate laboratory facilities, process controls and alarms and the use of process chemicals and other substances used in the Works.

2. The Owner shall prepare an operations manual within **six (6) months** of the introduction of sewage to the Works, that includes, but not necessarily limited to, the following information:

    a. operating procedures for routine operation of all the Works;

    b. inspection programs, including frequency of inspection, for all 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 all the Works; copies of maintenance contracts for any routine inspections and pump-outs should be included for all the tanks and treatment units;

    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 Spills Action Centre (SAC) and District Manager; and,

    f. procedures for receiving, responding and recording public complaints, including recording any follow-up actions taken.

3. The Owner shall maintain an up to date operations manual and make the manual readily accessible for reference at the Works for the operational life of the Works. Upon request, the Owner shall make the manual available to Ministry staff.

4. The Owner shall ensure that the oil/grease interceptor is inspected and maintained on regular basis as required, and grease is disposed off site by a licensed hauler.

5. The Owner shall employ for the overall operation of the Works a person who possesses the level of training and experience sufficient to allow safe and environmentally sound operation of the Works.

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

7. RNG AND LFG CONDENSATE COLLECTION WORKS

    1. The Owner shall ensure that Maximum Daily Flow from the RNG and LFG Condensate Collection Works does not exceed 432 cubic metres per day.

    2. During the first year of the operation of RNG and LFG Condensate Collection Works, contents of the Equalization Tank 2 shall be hauled offsite.

    3. The Owner shall compare the **Schedule D** sampling results to Effluent Triggers Table 1 of the **Schedule C**, and accordingly direct RNG/LFG Condensate to the Existing Poplar Plantation or to the Existing Poplar System or haul offsite, upon the confirmation that the effluent water quality meets the requirements in respect to all of the parameters included in the Effluent Trigger Parameters Table 1. In case the effluent water quality does not meet any single parameter concentration as included the Effluent Trigger Parameters Table 1, then the RNG/LFG Condensate may either be directed to the Existing Poplar System, or hauled off-site.

8. STORMWATER MANAGEMENT FACILITY

    1. The Owner shall apply the "Stormwater Contingency and Remedial Action Plan as included in Appendix N.27 of the Operations and Maintenance manual, Warwick Landfill Expansion, WM, May 2008.

    2. The Owner shall operate the Works (**SWM Ponds**) with the outlet sluice gate valve in a **normally open position** during normal operation period.

    3. The Owner shall compare monitoring results obtained under Condition 6.3 with their respective Trigger Limits listed in Table 2 in the **Schedule C** to identify any potential leachate impact to stormwater.

    4. In the event that a monitoring result for any parameter that is listed in Table 2 of **Schedule C** for any of **SWM Ponds** exceeds its Trigger Limits, the Owner shall conduct sampling of the contents of the affected **SWM Pond** within one (1) week to confirm the exceedance of the Trigger Limits for that parameter and identify potential source of contamination. Upon confirmation of exceedance of any Trigger Limits of any parameter that is listed in Table 2 of **Schedule C** and exceedance for the SWM Ponds noted in the EPA Section 27 approval for the site, the Owner shall close the outlet sluice gate valve of the affected Works **(SWM Pond)** and implement an approved "Stormwater Contingency and Remedial Action Plan".

5. The Owner shall dispose of the contents of an affected Work **(SWM Pond)** which failed to meet the quality requirements outlined in Condition 5.8.4 above, in accordance with an approved "Stormwater Contingency and Remedial Action Plan".

6. In the event that a monitoring result for any parameter that is listed in Table 2 of the **Schedule C** for the **Poplar Plantation** exceeds its Trigger Limits, the Owner shall conduct sampling of the stormwater runoff from the affected part of the **Poplar Plantation** as soon as possible to confirm the exceedence of the Trigger Limits for that parameter and identify potential source of contamination. Upon confirmation of the exceedence of any Trigger Limits for any parameter that is listed in Table 2 of the **Schedule C**, the Owner shall implement an approved "Stormwater Contingency and Remedial Action Plan".

7. The Owner shall inspect the Works **(SWM Ponds)** at least once a year and, if necessary, clean and maintain the Works to prevent the excessive build-up of sediments and/or vegetation.

8. 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, SWM Pond #3, and SWM Pond #4);

    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 action/ remedial measures undertaken.

9. POPLAR PLANTATION LAND IRRIGATION OPERATION

    a. The Owner shall apply the "Groundwater Contingency and Remedial Action Plan" for any potential groundwater impact caused by Effluent Storage Ponds and the Poplar Plantation Irrigation Area, as included in Appendix N.26 of the Operation and Maintenance Manual, Warwick Landfill Expansion, WM, May 2008.

    b. The Owner shall compare monitoring results obtained under Condition 6.3 with their respective Trigger Limits listed in Table 3 of **Schedule C** to identify any potential leachate impact to groundwater.

c. In the event that a monitoring result for any parameter that is listed in Table 3 of **Schedule C** exceeds its Trigger Limits, the Owner shall re-sample within one (1) month to confirm the exceedence of the Trigger Limits for that parameter. Upon confirmation of the exceedence of any Trigger Limits for any parameter that is listed in Table 3 of **Schedule C**, the Owner shall conduct a second round re-sampling within six (6) months to re-confirm the exceedence of the Trigger Limits for the parameter of concern.

d. 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 5.9.c above, then, normal groundwater monitoring shall be resumed.

e. In the event that the presence of the parameter(s) of concern is confirmed after the second round of sampling conduced under Condition 5.9.c above, then, it shall constitute as a confirmation of leachate impact to groundwater and the Owner shall immediately implement the "Groundwater Contingency and Remedial Action Plan" included under Condition 5.9.a above.

f. 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.

g. The Owner shall record and report a summary of all trigger exceedence incidents and all remedial action measures taken under Condition 5.9.e above in the Annual Report prepared under Condition 7.

h. The Owner shall dispose off Landfill Leachate and RNG/LGG condensate that meets the Effluent Limits included in the **Schedule B** for treatment and disposal by drip-irrigation on the approved Poplar Tree Land Area during the period between May 1st and October 15th of each calendar year.

i. The Owner shall not allow under any circumstance (including as emergency contingency plan) any direct discharge of leachate, RNG/LFG condensate, or treated leachate effluent from the Works to any receiving surface water including Bear Creek;

j. The Owner shall record the total volume of RNG/LFG Condensate and treated leachate effluent drip-irrigated on the poplar tree land irrigation area on a daily basis.

k. The Owner shall ensure that treated leachate effluent is disposed of via drip-irrigation in the designated six (6) poplar tree drip-irrigation zones initially, and ultimately on eight (8) poplar tree drip-irrigation zones on a planned rotation basis.

l. The Owner shall visually inspect drip-irrigation operations at least twice each day during operation period to ensure that no surface ponding or surface run-off is taking place.

m. The Owner shall retain records of inspections and drip-irrigation operation data collected under subsections 5.9.j, 5.9.k, and 5.9.l above, and make them available for inspection Ministry staff upon request.

n. No drip irrigation is to take place:
   a. on frozen or snow covered ground conditions;
   b. with the occurrence of surface ponding in any area subjected to drip irrigation;
   c. within 100 m of any surface watercourse or drain; and
   d. at an average daily application rate greater than 4.8 mm;

o. The Owner shall notify and provide the Township, WPLC and WIFN with a copy of the proposed "Groundwater Contingency and Remedial Action Plan" required under Condition 5.9.a above.

6. MONITORING AND RECORDING

The Owner shall carry out a 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 purpose of this condition, the following definitions apply:

   1. Daily means once each day;

   2. Weekly means once each week;

   3. Monthly means once every month;

   4. Quarterly means once every three months, and,

   5. Semi-annually means once every six months.

3. Samples shall be collected and analyzed at the sampling point(s), at the sampling frequencies and using the sample type specified for each parameter listed in the effluent monitoring table included in **Schedule D**.

4. 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 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; and

d. in respect of any parameters not mentioned in 6.5.a, b and c, the written approval of the District Manager, which approval shall be obtained prior to sampling.

5. The measurement frequencies specified in **Schedule D** in respect to any parameter are minimum requirements which may, after 24 months of monitoring in accordance with this Condition, be modified by the Director in writing from time to time.

6. The Owner shall provide to the Township, WPLC and WIFN a copy of all requests to be submitted to the District Manager for any changes to the monitoring program specified in **Schedule D** at the same time or prior to the time such request is made to the District Manager.

7. A continuous flow measuring device(s) shall be installed and maintained to measure the flowrate of the effluent from each of the sewage works, with an accuracy to within plus or minus fifteen (15) per cent of the actual flowrate for the entire design range of the flow measuring device and the Owner shall measure, record and calculate the flowrate for each effluent stream on each day of sampling.

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

9. POPLAR PLANTATION LEACHATE TREATMENT WORKS

    1. The Owner shall visually inspect the drip-irrigation pipeline systems at least once per week during operation period to look for leaking and/or failed (broken) lines that would otherwise produce run-off. The inspection should be supported by a log book documenting routine inspection and notes on repair as required.

10. GROUNDWATER MONITORING - POPLAR PLANTATION WORKS (LAND IRRIGATION AREA)

    1. The Owner shall collect grab samples during May and November from the sampling location outlined in the **Schedule E** and analyze for the parameters listed in the **Schedule E.**

2. The methods and protocols for sampling, analysis and recording shall conform to that outlined in Condition 6(5).

3. The measurement frequencies specified in Condition 6.11.1 above and the Schedule E, in respect to any parameter are minimum frequencies which may, after 24 months of monitoring in accordance with this Condition, be modified by the Director, in writing from time to time.

4. The Owner shall provide to the Township, WPLC, and WIFN a copy of all requests to be submitted to the District Manager for any changes to the monitoring program specified in Condition 6.11.3 above at the same time or prior to the time such request is made to the District Manager.

7. 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 orally **as soon as possible** any non-compliance with the compliance limits specified in Condition 4, and in writing within **seven (7) days** of non-compliance.

3. In addition to the obligations under Part X of the EPA and O. Reg. 675/98 (Classification and Exemption of Spills and Reporting of Discharges) made under the EPA, the Owner shall, within **fifteen (15) days** of the occurrence of any reportable spill as provided in Part X of the EPA and O. Reg. 675/98, submit a full written report of the occurrence to the District Manager describing the cause and discovery of the spill, clean-up and recovery measures taken, preventative measures to be taken and a schedule of implementation.

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

5. The Owner shall prepare and submit a performance report to the District Manager on an annual basis within before March 31 of each calendar year. 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 (Condition 4) including an overview of the success and adequacy of the Works, and a contingency plan in the event of non-compliance with the effluent limits.

    b. a summary and interpretation of all monitoring data for constructed and operational Works, including RNG and LFG Condensate Collection works, stormwater management works monitoring data, groundwater monitoring data and leachate treatment facility;

    c. a review and assessment of the performance of all sewage Works

d. a description of any operating problems encountered and corrective actions taken at all Works located at the property;

e. a record of all maintenance carried out on any major structure, equipment, apparatus, mechanism or thing forming part of all Works;;

f. a summary of any effluent quality assurance or control measures undertaken in the reporting period;

g. a summary and interpretation of all daily flow data and results achieved in not exceeding the Maximum Daily Flow discharged from each of the sewage Works excluding the Poplar Plantation, the Poplar System, and Stormwater Management Works;

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

i. a summary of all spill or abnormal discharge events; and

j. any other information the District Manager requires from time to time;

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, 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.

3. Condition 3 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.

4. Condition 4 is included to ensure that the Owner continue to comply with the effluent criteria established for the Works in the previous approval until such time as the Proposed Works are constructed and commissioned.

5. Condition 5 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 Works.

6. Condition 6 is 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 (design objectives and) effluent limits specified in the Approval and that the approved Works does not cause any impairment to the receiving watercourse.

7. Condition 7 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.

Schedule A

1. Application for Environmental Compliance Approval dated April 28, 2023 and received on May 19, 2023.

Schedule B

Effluent Limits for Leachate Treatment Facility

Sampling Location: Discharge Point from Treated Effluent Storage Pond

Effluent Parameter	**Average Monthly Concentration** (milligrams per litre unless otherwise indicated)
Column 1	Column 2
Total Ammonia Nitrogen	68.7
Total Phosphorus	0.72
Phenols	0.2
Chlorides	247
Copper	0.014
Iron	27.0
pH of the effluent maintained between 6.0 to 9.5, inclusive, at all times	

Schedule C

TABLE 1

Effluent Trigger Concentration for RNG AND LFG Condensate Collection Works

Effluent Trigger Concentration to direct the sewage flow to the Existing Poplar System or Existing Plantation Irrigation disposal or hauled offsite

Sampling Location: Equalization Tank 2

Effluent Parameter	**Single Sample Concentration** (milligrams per litre unless otherwise indicated)
Column 1	Column 2
Total Ammonia Nitrogen	68.7
Total Phosphorus	0.72
Phenols	0.2
Chlorides	247
Copper	0.014
Iron	27.0
pH of the effluent maintained between 6.0 to 9.5, inclusive, at all times	

TABLE 2

Trigger Limits for Stormwater Management Works

Sampling Location: SS10 and SS16

Trigger Parameter	Trigger Limits [SS10 & SS16 - 90th percentile] (mg/L)
Ammonia (unionized)	0.020
Boron	0.20
Boron (SP1 only)	0.39
Chloride	210
Chromium (Total)	0.024
Nickel	0.027
Phenols	0.001
Zinc	0.06

*Note: Annually, a Trigger Limit for a parameter listed above will be replaced by the corresponding 90th percentile of background surface water concentration where background surface water concentrations collected upstream of the landfill (Sampling Locations SS10 and SS16).

TABLE 3

Trigger Limits for Poplar Plantation Land Irrigation

Sampling Location: OW40, OW60 and OW79, OW16, OW61 and OW62

Trigger Parameter	Trigger Limits (mg/L)		
	Active Aquitard	Interstadial Silt and Sand	Interface Aquifer
Chloride	106	116	134
Nitrate	2.3	2.3	2.3
Boron	1.1	2.1	2.6
Cadmium	0.001	0.001	0.001
Lead	0.002	0.002	0.002
Benzene	0.001	0.001	0.001
1,4-Dichlorobenzene	0.001	0.001	0.001
Dichloromethane	0.01	0.01	0.01
Vinyl Chloride	0.0004	0.0004	0.0004

Schedule D

Monitoring Program

Table 1

RNG AND LFG CONDENSATE COLLECTION WORKS

Sampling Location: Equalization Tank 2

Parameters	Sample Type	Frequency[8]
BOD5	Grab	Quarterly
Dissolved Organic Carbon (DOC)	Grab	Quarterly
Total Phosphorus	Grab	Quarterly
Total Kjeldahl Nitrogen	Grab	Quarterly
BTEX	Grab	Quarterly
pH	Grab	Quarterly
PLIL-SW	Grab	Semi-Annually
SLIL-SW	Grab	Semi-Annually
LS	Grab	Semi-Annually
General Chemistry	Grab	Semi-Annually

Notes: 1.PLIL-SW indicates: chloride, ammonia (total and unionized), phenols, boron, nickel, chromium (total), zinc.

2.SLIL-SW indicates: alkalinity, sulfate, calcium, magnesium, potassium, sodium, total phosphorus, iron, nitrate, TKN, TDS, pH, conductivity. Field parameters of temperature, pH, conductivity, turbidity, DO.

3.LS indicates: arsenic, barium, cadmium, copper, lead, manganese, mercury, nitrite, TSS, volatiles, semi-volatiles, BOD5, COD.

4.Volatiles should include the following at a minimum: benzene, 1,4-dichlorobenzene, dichloromethane, toluene, ethylbenzene, xylenes, and vinyl chloride.

5.Semi-volatiles should include the following at a minimum: 1,2,4-trichlorobenzene, 1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, hexachlorobenzene, diethylphthalate, dimethyiphthalate, di-n-butyl phthalate, phenol, benzo(a)pyrene, 2,4,6-trichlorophenol, 2,4-dichlorophenol, pentachlorophenol.

6.General Chemistry includes Alkalinity, Calcium, Chloride, Conductivity, COD, Nitrate, Nitrite, Magnesium, pH, Potassium, Sodium, Sulfate, Total Dissolved Solids, TKN, Temperature, Turbidity, Total Phosphorus, TSS, Phenols, Dissolved Oxygen.

7.QA/QC to include one (1) blind duplicate for each 15 samples or once per event, whichever is greater.

8. Notwithstanding the monitoring frequencies included in this table, the monitoring frequency in the first year of the operation of these RNG/LFG condensate sewage works in respect of all of the parameters shall be monthly.

Table 2

Stormwater Monitoring Program

Sampling Locations: SWM Pond Outlets - SP1, SP2, SP3, SP4. Irrigation Area - SS17A, SS17B, SS18A and SS18B

Parameter	Parameter	Parameter	Field -Parameter
Alkalinity	Magnesium	Toluene	Conductivity
Total Ammonia Nitrogen	Potassium	Ethylbenzene	Dissolved Oxygen
Un-ionized Ammonia	Sodium	Xylene	pH (Field)
Chloride	Arsenic	Vinyl Chloride	Temperature
Conductivity (Lab)	Barium	1,2,4-Trichlorobenzene	Turbidity
Nitrate Nitrogen	Boron	1,2-Dichlorobenzene	
Nitrite Nitrogen	Cadmium	1,3-Dichlorobenzene	
TKN	Chromium (Total)	1,4-Dichlorobenzene	
pH (Lab)	Copper	Hexachlorobenzene	
Total Phosphorus	Iron	Diethylphthalate	
Total Suspended Solids	Lead	Dimethylphthalate	
Total Dissolved Solids	Mercury	Di-n-butyl phthalate	
Sulfate	Nickel	Phenol	
CBOD5	Zinc	Benzo(a)pyrene	
Chemical Oxygen Demand	Benzene	2,4,6-Trichlorophenol	
Phenols	1,4-Dichlorobenzene	2,4-Dichlorophenol	
Calcium	Dichloromethane	Pentachlorophenol	

Note: Irrigation Area locations for the Poplar Plantation will be monitored when the Poplar Plantation is operational. The Owner shall collect at least one sample per calendar month of representative runoff from any precipitation event that exceeds 10 mm in a 24 hour period for the poplar plantation while irrigation is operational between May 1 through October 15 every year. In case where there is insufficient precipitation to produce a runoff event in a calendar month , the owner shall record that no runoff occurred and therefore no sample was collected.

Table 3

LANDFILL LEACHATE

Sampling Location: Equalization Tank 1

Parameters	Sample Type	Frequency
CBOD5	Grab	Quarterly
Dissolved Organic Carbon (DOC)	Grab	Quarterly
Total Phosphorus	Grab	Quarterly
Total Kjeldahl Nitrogen	Grab	Quarterly
BTEX	Grab	Quarterly
pH	Grab	Quarterly
VOCs [Note 1]	Grab	Semi-Annually
Semi-VOCs [Note 2]	Grab	Semi-Annually
Metals [Note 3]	Grab	Semi-Annually
General Chemistry [Note 4]	Grab	Semi-Annually

Table 4

Leachate Treatment Plant Effluent Monitoring

Sampling Location: Discharge to Treated Effluent Storage Pond

Parameters	Sample Type	Frequency
CBOD5	Grab	Weekly
Dissolved Organic Carbon (DOC)	Grab	Weekly
Total Ammonia Nitrogen	Grab	Weekly
Chloride	Grab	Weekly
BTEX	Grab	Weekly
pH	Grab	Weekly
VOCs [Note 1]	Grab	Monthly
Semi-VOCs [Note 2]	Grab	Monthly
Metals [Note 3]	Grab	Monthly
General Chemistry [Note 4]	Grab	Monthly
PCB	Grab	Semi-Annually
Organochlorides	Grab	Semi-Annually

Table 5

Treated Effluent Storage Pond Effluent Monitoring

Sampling Location: Discharge to Poplar Plant Irrigation Area

Treated Effluent Storage Pond Effluent Monitoring Sampling Location: **Discharge to Poplar Plant Irrigation Area**		
Parameters	**Sample Type**	**Frequency**
CBOD5	Grab	Weekly
Dissolved Organic Carbon (DOC)	Grab	Weekly
Total Ammonia Nitrogen	Grab	Weekly
Chloride	Grab	Weekly
BTEX	Grab	Weekly
pH	Grab	Weekly
VOCs Note 1	Grab	Monthly
Semi-VOCs Note 2	Grab	Monthly
Metals Note 3	Grab	Monthly
General Chemistry Note 4	Grab	Monthly

Note 1: VOCs: Benzene, 1,4-Dichlorobenzene, Dichloromethane, Toluene, Ethylbenzene, Xylenes, and Vinyl Chloride.

Note 2: Semi-VOCs: 1,2,4-Trichlorobenzene, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Hexachlorobenzene, Diethylphthalate, Dimethylphthalate, Di-n-butyl phthalate, Phenol, Benzo(a)pyrene, 2,4,6- Trichlorophenol, 2,4-Dichlorophenol, Pentachlorophenol.

Note 3: Metals: Arsenic, Barium, Boron, Cadmium, Chromium, Copper, Iron, Lead, Manganese, Mercury, Nickel, Zinc.

Note 4: G. Chemistry: Alkalinity, Calcium, Chloride, Conductivity, COD, Nitrate, Nitrite, Magnesium, pH, Potassium, Sodium, Sulfate, Total Dissolved Solids, TKN, Temperature, Turbidity, Total Phosphorus, TSS, Phenols, Dissolved Oxygen.

Schedule E

Groundwater Monitoring Program

Sampling Locations: OW40, OW60 and OW79, OW16, OW61 and OW62

Parameters	Parameters	Field Parameters
Alkalinity	Boron	pH
Conductivity	Cadmium	Conductivity
Chloride	Lead	Turbidity
pH	Iron	
Dissolved Organic Carbon	Barium	
Total Dissolved Solids	Benzene	
Total Ammonia	1,4-Dichlorobenzene	
Total Kjeldahl Nitrogen	Dichloromethane	
Sulfate	Ethylbenzene	
Nitrate	Vinyl Chloride	
Calcium	Toluene	
Potassium	Xylenes	
Sodium		
Magnesium		

Note:
Sampling Location OW40, OW60 and OW79, to be monitored Annually
Sampling Location: OW16, OW61, and OW62 to be monitored Semi-Annually (OW61, and OW62 to be monitored Semi-Annually while Poplar Plantation is operational)

Upon issuance of the environmental compliance approval, I hereby revoke Approval No(s). 2403-BE6LZ4 issued on August 21, 2019.

In accordance with Section 139 of the *Environmental Protection Act,* you may by written notice served upon me, the Ontario Land Tribunal and in accordance with Section 47 of the *Environmental Bill of Rights,* 1993, the Minister of the Environment, Conservation and Parks, within 15 days after receipt of this notice, require a hearing by the Tribunal. The Minister of the Environment, Conservation and Parks will place notice of your appeal on the Environmental Registry. Section 142 of the *Environmental Protection Act* provides that the notice requiring the hearing ("the Notice") shall state:

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

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

The Notice should also include:

1. The name of the appellant;
2. The address of the appellant;
3. The environmental compliance approval number;
4. The date of the environmental compliance approval;
5. The name of the Director, and;
6. The municipality or municipalities within which the project is to be engaged in.

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

Registrar*
Ontario Land Tribunal
655 Bay Street, Suite 1500
Toronto, Ontario
M5G 1E5
OLT.Registrar@ontario.ca

and

The Minister of the Environment, Conservation and Parks
777 Bay Street, 5th Floor
Toronto, Ontario
M7A 2J3

and

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

*** Further information on the Ontario Land Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349 or 1 (866) 448-2248, or www.olt.gov.on.ca**

This instrument is subject to Section 38 of the *Environmental Bill of Rights,* 1993, that allows residents of Ontario to seek leave to appeal the decision on this instrument. Residents of Ontario may seek leave to appeal within 15 days from the date this decision is placed on the Environmental Registry. By accessing the Environmental Registry at https://ero.ontario.ca/, you can determine when the leave to appeal period ends.

The above noted activity is approved under s.20.3 of Part II.1 of the *Environmental Protection Act.*
DATED AT TORONTO this 29th day of April, 2024

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

KH/
c: District Manager, MECP Sarnia District.
Cristina Olarte, P.Eng., WSP Canada Inc.
Brent Lengille, P.Geo., RWDI Consulting Engineers.