

**AMENDED ENVIRONMENTAL COMPLIANCE APPROVAL**

NUMBER 8615-DQTL3Q

Issue Date: April 1, 2026

Stelco Inc.  
2330 Haldimand Road 3  
Nanticoke, Ontario  
N0A 1L0

Site Location: 2330 Haldimand Road 3  
County of Haldimand,  
N0A 1L0

*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 sewage works with addition of cooling water for a 65 MW By-Products Energy Recovery Electricity Generation Facility to be constructed at Stelco Lake Erie Works, as well as continued use and operation of existing sewage Works for the collection, transmission, treatment and disposal of process and merged effluent from the following facilities at the Stelco Lake Erie Works site located in Nanticoke, Ontario, having the following wastewater streams;

Pond 4 (Control Point 0100)

- Existing Reservoir Pump House (Two Cooling Towers Blowdown discharge)
- Existing Lagoon E
- Existing Basic Oxygen Furnace (Process Water) - of once through motor bearing cooling water
- Existing Hot Strip Mill non-contact cooling water
- Existing Air Products Plant cooling water blowdown
- By-Products Energy Recovery Electricity Generation Facility (Cooling Tower Blowdown)

Control Point 0400: Blowdown Water Treatment Plant

- Existing Blast Furnace (Process Water - Blast Furnace Water Recirculation System)
- Existing Coke Oven (Process Water - Coke Oven By-Product Plant Water Recirculation System), routed to 0400 through Biological Water Treatment Plant
- Existing Basic Oxygen Furnace (Process Water)

- Existing Hot Strip Mill (Process/Blowdown treated discharge)
- Existing Pig Casting Facility Water Recirculation System to setting pond and then to 0400
- Existing Deslagging Facility Water Recirculation System - via pig caster settling pond (sump)
- Existing Blast Furnace Reservoir pumphouse
- Existing Lagoon C and E
- Existing Quarry Landfill Site wastewater – leachate
- Existing By-Products Cooling Tower (2 cells)

comprising;

### **PROPOSED WORKS**

Replacement of the existing vacuum drum filter with a Belt Filter Press at the Biological Treatment Plant for dewatering of wasted activated sludge rated at 17.41 m<sup>3</sup> per day, comprising;

- One (1) 316L stainless steel polymer injection and polymer/sludge mixing systems;
- One (1) Belt filter press;
- One (1) Electrical Control Panel for all the dewatering system control functions and drives;
- One (1) 2 HP hydraulic power unit with a 20-gallon, 304 stainless steel reservoirs;
- One (1) 15 HP Goulds model 3196 wash water booster pump capable of boosting 491 cm Hg at a flow rate of 250 m<sup>3</sup>/day;

### **EXISTING WORKS**

#### **By-Products Energy Recovery Electricity Generation Facility**

#### **Replacement of the previously approved Co-generation Plant Sewage Works with Cooling Tower Blowdown Water from the proposed By-Products Energy Recovery Electricity Generation Facility**

- Cooling Tower blowdown water from the newly proposed cooling tower, up to a maximum of 2180 m<sup>3</sup>/day, discharging to the existing ditch system directed to the existing Pond 4, as part of a new power generation plant, By-Products Energy Recovery Electricity Generation Facility proposed at the existing Stelco Lake Erie Works Facility;

#### **Blast Furnace Water Recirculation System**

- two (2) 25.91 metre diameter thickeners;
- one (1) flocculation mixing tank;
- one (1) 435.3 cubic metre capacity hot well;
- piping system with a discharge of 3,936 cubic metres per day to No. 1 Blowdown Water Treatment Plant, and,
- one (1) Gas cleaning cooling tower system;
- one (1) Cold well sump;
- one (1) Lagoon sump return;

- one (1) Pump house sump;
- one (1) Elevator sump;
- one (1) chemical injection system including coagulant/polymer, corrosion inhibitor, scale inhibitor, and bio-dispersant injection (as needed);
- two (2) settling lagoons, each having a volume of approximately 8000 m<sup>3</sup>, operating on demand, the east pond is located approximately 300 meters west of the Blast Furnace, while the center of the west settling lagoon is located about 400 meters west of the Blast Furnace. receiving the sludge from the two thickeners at approximately 800 L/min, the two settling lagoons are primarily utilized for dewatering of sludge and return the Process water to the Blast Furnace water recirculation system at approximately 800 L/min;

### **Coke Oven By-Products Plant Water Recirculation System**

One (1) contaminated water storage tank (Weak Ammonia Liquor Storage Tank, located approximately 330 meters east of the Blowdown Wastewater Treatment Plant (0400), and having a volume of approximately 900 m<sup>3</sup>) receiving wastewater from the tar decanting, ammonia recovery and light oil recovery processes, in addition to any stormwater collected from various By-Product Plant containment pads and sumps; the Weak Ammonia Liquor (WAL) Storage Tank which primarily serving as an equalization tank, and discharging to Ammonia Stills from where the effluent is pumped at a flow rate of 400 to 700 L/min to the Biological Treatment Plant for additional treatment, comprising;

- receiving up to 25,000 litres per day of tar residual water
- two (2) tar decanters, each having a volume of 455 cubic metres;
- one (1) interceptor sump;
- one (1) Weak Ammonia Liquor (WAL) tank;
- two (2) ammonia stills (each one consisting of a free and fixed legs); one online and one backup.
- two (2) gravity filters, each 2.74 metres in diameter operated in series;
- piping system with a continuous discharge to the Biological Treatment Plant; and,
- Chemical injection system including demulsifier, pH adjustment (acid/base), corrosion inhibitor, scale inhibitor, and bio-dispersant injection (as needed);

### **Biological Treatment Plant**

Biological Treatment Plant, located about 550 meters east of the Blowdown Wastewater Treatment Plant (0400), receiving effluent from the Coke Oven By-Products Plant, specifically two ammonia stills, that discharge to the Biological Treatment Plant at a flow rate of 400 to 700 L/min; utilizing activated sludge process, discharging to the Blowdown Wastewater Treatment Plant for additional chemical treatment (chlorination); comprising;

- one (1) primary clarifier, having a diameter of 10.36 metres;
- two (2) aeration basins, each having a volume of 710 cubic metres;
- two (2) surface aerators, each having a power rating of 44.7 kW;
- one (1) final clarifier having a diameter of 13.41 metres and a working volume of 460 m<sup>3</sup>;
- one (1) sludge thickener having a diameter of 6.0 metres, and a working volume of 115 m<sup>3</sup>;
- one (1) vacuum filter having a diameter of 3.0 metres and a length of 4.9 metres; **(NOW BEING REPLACED WITH THE PROPOSED WORKS)**

- one (1) emergency lagoon with a working volume of 6,200 cubic metres;
- one (1) emergency holding tank having a volume of 710 cubic metres;
- piping system with a discharge of 940 cubic metres per day to No. 1 Blowdown Water Treatment Plant, piping includes a by-pass to the Coke Oven breeze basin for off-spec or upset conditions; and,
- Chemical injection system including anti-foam, pH adjustment (acid and base), coagulant, and flocculant/polymer (as needed);

### **Pig Casting Facility Water Recirculation System**

Designed to process the contact stormwater and excess water from the Pig Castor Iron facility, collected in a sump from where it is pumped on demand to the Blowdown Water Treatment Plant (0400), comprising;

- one (1) catchbasin;
- one (1) underground pig caster sump;
- piping system with a discharge of 432 cubic metres per day to No. 1 Blowdown Water Treatment Plant;

### **Basic Oxygen Furnace, Slab Casting Facility and Ladle Metallurgy Water Recirculation System**

- two (2) thickeners, each having a diameter of 33.5 metres, and a working volume of approximately 3,800 m<sup>3</sup>;
- one (1) circular scale pit, having a diameter of 17.4 metres and a working volume of 2,140 cubic metres;
- four (4) sand filters;
- one (1) inclined plate solids separator with a design flow rate of 8,467 cubic metres per day, complete with flash mix tank, two (2) mixers, flocculation and chemical addition systems;
- two (2) separator feed pumps;
- two clarified water pumps;
- two (2) sludge pumps, one operating and one standby;
- piping system with a discharge of 13,510 cubic metres per day to No. 1 Blowdown Water Treatment Plant (includes the process blowdown from the Hot Strip Mill); and
- piping system with a discharge of a maximum of 1,440 cubic metres per day of once through motor bearing cooling water to a ditch leading to Final Settling Pond (Pond 4); and,
- Chemical injection system including including demulsifier, pH adjustment (acid/base), corrosion inhibitor, scale inhibitor, and bio-dispersant injection (as needed);

### **Central Power Station**

- one (1) hot water sump;
- one (1) condensate tank;
- one (1) de-aerator sump;
- one (1) cold water sump;
- one (1) dirty water sump;

- one (1) Chemical injection system including pH adjustment (acid and base), coagulant, and polymer/flocculant, scale & deposition inhibitor, -corrosion inhibitor, phosphate, non-oxidizing biocide, dispersant, bleach/chlorine solution (as needed);
- one (1) cross flow cooling tower consisting of four (4) cells;
- two (2) Reining System, including sedimentation tank, sand filters and softners, located at Central Power Station
- piping system with a discharge of 1,636 cubic metres per day to No. 1 Blowdown Water Treatment Plant; and
- piping systems includes the option to discharge the hot water sump directly to Pond 4;

### **Blast Furnace Reservoir Pumphouse**

- piping system with a discharge of 109 cubic metres per day to No. 1 Blowdown Water Treatment Plant;
- One (1) Chemical injection system including pH adjustment (acid and base), coagulant, and polymer/flocculant, scale & deposition inhibitor, -corrosion inhibitor, phosphate, non-oxidizing biocide, dispersant, bleach/chlorine solution (as needed);
- two (2), 5-cell outdoor mounted factory fabricated cooling towers each having a 3.6 metre diameter fan driven by a 60 hp motor, with each bank consisting of an open spray system, a mechanically induced draft system, counterflow mechanism, an access door, interior elevated platform and a plenum walkway for tower inspection, basin floor sloped towards the tower centre for water to flow into a steel sump, and galvanized steel frame with fibreglass members unit;
- blowdown water discharge of approximately 450 to 940 litres per minute from the cooling towers to the internal ditch system to merge with the existing Hot Strip Mill non-contact cooling water, process water from the Blowdown Treatment Plant and stormwater, to discharge through the existing MISA designated Merged Effluent Sampling Point 0100;

### **Hot Strip Mill**

- one (1)  $9 \times 10^6$  litres scale lagoon complete with oil skimmer and oil boom;
- thirteen (13) 6.2 metres by 3.7 metres by 6.3 metres gravity filters with a media volume of 57.35 cubic metres per cell; total media volume 692.15 cubic metres of sand and anthracite;
- two (2) once through water treatment plant cooling systems, one with three (3) cells with a maximum flow rate of 1,693 litres per second and one with two (2) cells with an operational capacity of 570 litres per second per cell;
- one (1) recirculated mill process water system, designed to receive 1693 litres per second from the lagoon to filter plant and from there to mill, including scale pit, filters, cooling towers, oil coolers and air compressors and 510 litres per second from the lagoon to flume flush;
- Chlorine, Polymer, Biodispersant, Anti-scaling and Anti-fouling chemical feed systems;

- transfer of effluent from the wastewater treatment system for the Hot Strip Mill, via the Basic Oxygen Furnace and Slab Caster thickeners or dirty water sump at a combined flow rate of 14,950 cubic metres per day;
- non-contact cooling water from the motor room discharged to the Pond 4 ditch system;
- Two (2) run-out-table strip cooling system each with one cell, one having a capacity of 1,700 litres per second and the other one with a capacity of 800 liters per second; discharging to scale lagoon;

### **Lagoons C&E Piping System**

- Lagoon E/Leachate Basin, located approximately 850m east of the Blowdown Water Treatment Plant (0400), receiving leachate from the existing onsite waste disposal facility and pumping the effluent to the Blowdown Water Treatment Plant (0400);
- an underground piping system consisting of two (2) 101.6 millimetre diameter pipes draining effluent from Lagoon C&E to the No. 1 Blowdown Water Treatment Plant for treatment; the piping system for **Lagoon E** includes the option for discharge directly to Pond 4;

### **Pickle Lines**

- batch transfer of wastewater with a maximum rate of 1 cubic metre per day from Pickle Lines to No. 1 Blowdown Water Treatment Plant

### **Waste Disposal Site**

- batch transfer of wastewater with a maximum rate of 150 cubic metres per day from Waste Disposal Site to No. 1 Blowdown Water Treatment Plant

### **No. 1 Blowdown Water Treatment Plant**

- one (1) polymer injection system comprising of one (1) semi-bulk tank of the product and one (1) poly mixer located within the Blowdown Water Treatment Plant, with polymer being pumped through a line and valve arrangement with appropriate controls to prevent overdosing and injected into the BWTP effluent line for immediate mixing and discharge to the Final Settling Pond (Pond 4) through the connecting stormwater ditch;
- one (1) Blowdown Water Treatment Plant Emergency Lagoon, having a volume of 7,000 cubic metres, to contain and neutralise with lime spent acid generated in the cleaning of ammonia stills and to contain contaminated water requiring treatment in the Blowdown Water Treatment Plant;
- one (1) Lagoon C, having a total area of 36,000 square metres, and capacity of 900 cubic metres, for storage and processing of Basic Oxygen Furnace and Blast Furnace Sludge with a sump, to collect leachate and run-off, transferring the wastewater to the Blowdown Treatment Plant or its Emergency Lagoon;

- three (3) settling Ponds B, C, and D, collecting contact stormwater (iron ore pile run-off, secondary materials storage run-off and coal pile run-off respectively) and discharging to Pond 4);
- one (1) flocculent mixing tank and reactor-clarifier, having a diameter of 18.29 metres and a depth of 4.4 metres, to remove suspended solids from the Basic Oxygen and Slab casting facility, the Blast Furnace Reservoir Pumphouse and the Central Power Station discharging to the filter plant booster pump sump;
- one (1) equalisation tank, having a volume of 454.3 cubic metres, equipped with vertical mechanical mixers for coagulant aids and caustic soda addition;
- two (2) inclined plate solids separators;
- one (1) two-celled Chlorination Unit (using liquid chlorine), discharging to the Filter Plant pump sump, and/or one (1) Two-celled chlorination unit (using bleach) discharging to Filter plant pump sump;
- one (1) Filter Plant with five (5) Vertical Filter Vessels, each having a diameter of 4.57 metres using anthracite coal and sand with a minimum bed depth of 1.68 metres, discharging at a rate of 23,068 cubic metres per day to settling Pond 4;
- Chemical injection system including pH adjustment (acid and base), defoaming chemicals, dechlorinating chemicals, coagulant, and polymer/flocculant (as needed).
- one (1) Final Settling Pond 4 having an area of 56,000 square metres and a storage capacity of 126,000 cubic metres, discharging to to Lake Erie through Centre Creek;
- a dechlorination system for the reduction of residual chlorine prior to discharge to the Pond # 4, consisting of PE storage tank for Dichlorination solution, a chemical supply pump, including motor and controls for dechlorinating effluent stream from the No.1 Blowdown Treatment Plant with a rated output of 28,068 cubic metres per day, and piping, valves, controls and ancillary equipment, as necessary; and,

### **Cooling Tower Blowdown from Air Products Plant #3**

- Discharge 120 to 220 cubic metres per day of non-contact cooling water blowdown from Air Products Plant #3 to surface ditches that drain to Pond #4;
- Two (2) flash mixing tanks;
- Two (2) flocculation tanks;
- Chemical injection system including pH adjustment (acid and base), defoaming chemicals, dechlorinating chemicals, coagulant, and polymer/flocculant (as needed);

and 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 environmental compliance approval including any schedules attached to it, and the application;
2. "Blowdown Water" means water that is discharged from a recirculating cooling water system or a boiler system for the purpose of controlling the level of water in the system or for the purpose of discharging from the system materials contained in the system the further build-up of which would impair the operation of the system;
3. "Bypass" means diversion of sewage around one or more treatment processes within the Wastewater Treatment Facility with the diverted sewage flows being returned to the Wastewater Treatment Facility treatment train upstream of the Control Point and discharged via the approved effluent disposal facilities;
4. "Central Works" means the No.1 Blowdown Treatment Plant sewage works as described in the Owner's application, this approval and in the supporting documentation;
5. "Cooling Water Effluent" means water and associated material that is used in an industrial process for the purpose of removing heat and that has not, by design, come into contact with Process Materials, but does not include Blowdown Water;
6. "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;
7. "District Manager" means the District Manager of the appropriate local district office of the Ministry where the Works is geographically located;
8. "EPA" means the *Environmental Protection Act*, R.S.O. 1990, c.E.19, as amended;
9. "Equivalent Equipment" means a substituted equipment or like-for-like equipment that meets the required quality and performance standards of a named equipment;
10. "Existing Works" means those portions of the Works included in the Approval that have been constructed previously;
11. "Merged Effluent Monitoring Stream" means a stream on which a sampling point is maintained under **Schedule B**;
12. "Merged Effluent Sampling Point" means a sampling point maintained under **Schedule B**;
13. "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;
14. "Notice of Modifications" means the form entitled "Notice of Modifications to Sewage Works";

15. "Licensed Engineering Practitioner" means a person who holds a licence, limited licence or temporary licence under the *Professional Engineers Act*, R.S.O. 1990, c. P.28, as amended;
16. "Limited Operational Flexibility" (LOF) means any modifications that the Owner is permitted to make to the Works under this Approval;
17. "Operating Agency" means the Owner or the entity that is authorized by the Owner for the management, operation, maintenance, or alteration of the Works in accordance with this Approval;
18. "Owner" means Stelco Inc., and its successors and assignees;
19. "OWRA" means the *Ontario Water Resources Act*, R.S.O. 1990, c. O.40, as amended;
20. "Pick-Up", in relation to a sample, means pick-up for the purpose of storage, including storage within an automatic sampling device, and transportation to and analysis at a laboratory;
21. "Plant" means the industrial facility and the developed property, waste disposal sites and wastewater treatment facilities associated with it;
22. "Process Change" means a change in equipment, production processes, process materials or treatment processes;
23. "Process Effluent Monitoring Stream" means a stream on which a sampling point is maintained under **Schedule B**;
24. "Process Effluent Sampling Point" means a sampling point maintained under **Schedule B**;
25. "Process Materials", in relation to the Owner's Plant, means raw materials for use in an industrial process at the Plant, manufacturing intermediates produced at the Plant, or products or by-products of an industrial process at the Plant;
26. "Quarter" means all or part of a period of three (3) consecutive months beginning on the first day of January, April, July or October;
27. "Semi-annual Period" means all or part of a period of six (6) months beginning on the first day of January or July, and,
28. "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**

### **1. GENERAL PROVISIONS**

1. The Owner shall ensure that any person authorized to carry out work on or operate any aspect of the Works is notified of this Approval and the terms and conditions herein and shall take all reasonable measures to ensure any such person complies with the same.
2. The Owner shall design, construct, operate and maintain the Works in accordance with the conditions of this Approval.
3. Where there is a conflict between a provision of this environmental compliance approval and any document submitted by the Owner, the conditions in this environmental compliance approval shall take precedence. Where there is a conflict between one or more of the documents submitted by the Owner, the Application shall take precedence unless it is clear that the purpose of the document was to amend the Application.
4. Where there is a conflict between the documents listed in the Schedule A, 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 terms and conditions of this Approval are severable. If any term and condition of this environmental compliance approval, or the application of any requirement of this environmental compliance 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.
6. 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 approvals from the Ministry of Energy, Northern Development and Mines necessary to construct or operate the sewage 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 AND OPERATING AUTHORITY**

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.17* , as amended, shall be included in the notification;
  - d. change of name of the corporation where the Owner is or at any time becomes a corporation, and a copy of the most current information filed under the *Corporations Information Act, R.S.O. 1990, c. C.39* , as amended, shall be included in the notification.
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 Operating Authority;
    - b. change of Operating Authority, including address of new Operating Authority.
  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 environmental compliance approval number.

### **3. CONSTRUCTION OF PROPOSED WORKS / RECORD DRAWINGS**

1. All Works 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 completion of construction of the Works, the Owner shall prepare and submit a written statement to the District Manager, certified by a Licensed Engineering Practitioner, that the Works is constructed in accordance with this Approval.
3. Within one (1) year of completion of construction of the Proposed Works, a set of record drawings of the Works shall be prepared or updated. These drawings 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. CHANGES IN PROCESSES OR PROCESS MATERIALS**

1. The Owner shall give written notice to the District Manager of any plans to change the processes or process materials in the Owner's enterprise serviced by the Works where the change may significantly alter the quantity or quality of the influent to or effluent from the Works, and no such change(s) shall be made unless with the written concurrence of the District Manager and approval of the Director.

#### **5. BYPASSES**

1. The Owner shall not permit effluent that would ordinarily flow past the Control Point/Effluent Sampling Point maintained under this Approval to be discharged from the Plant without flowing past that Outfall, including during a maintenance operation, a breakdown in equipment or any scheduled or unscheduled event.
2. The Owner shall report orally, as soon as reasonably possible, and in writing, as soon as reasonably possible, any incident in which Process Effluent is discharged from the Plant without flowing past the Control Point/Effluent Sampling Point maintained on a process effluent stream in accordance with this Approval before being discharged.
3. The Owner shall report orally, as soon as reasonably possible, and in writing, as soon as reasonably possible, any incident in which effluent from Lagoon C&E is discharged directly to Pond 4 instead of No. 1 Blowdown Water Treatment Plant.

#### **6. OPERATIONS AND MAINTENANCE**

1. The Owner shall prepare an operations manual prior to the commencement of operation of the sewage 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 sewage works. Upon request, the Owner shall make the manual available for inspection and copying by Ministry personnel.
3. The Owner shall ensure that the effluent from the Biological Treatment Plant shall be directed to the emergency Holding Tank and Lagoon prior to draining to the breeze basin for use in quenching during upset or off-spec conditions until it is acceptable to be treated at the No. 1 Blowdown Water Treatment Plant.
4. The Owner shall notify the District Manager by the next business day if any by-passing as stated in subsection (3) occurs.
5. The Owner may use the water in Pond D for dust suppressant purposes on roadways within the plant site that drains to Pond 4.

## 7. EFFLUENT REQUIREMENTS AND COMPLIANCE LIMITS

1. The Owner shall operate and maintain the Sewage Treatment Plant such that compliance limits for the Effluent parameters listed in the table(s) included in the **Schedule B** are met.
2. The Owner shall ensure that each daily process effluent Plant loading calculated for a parameter under Condition 8(7) in connection with the Owner's Plant does not exceed the daily Plant loading limit specified for the parameter in the Table titled "Effluent Loading Limits - Blowdown Water Treatment Plant" included in **Schedule B** in this Approval.
3. The Owner shall ensure that each monthly average process effluent Plant loading calculated for a parameter under Condition 8(7) in connection with the Owner's Plant does not exceed the monthly average Plant loading limit specified for the parameter in the Table titled "Effluent Loading Limits - Blowdown Water Treatment Plant" included in **Schedule B** in this Approval.
4. The Owner shall ensure that each monthly average concentration calculated for the parameter oil and grease under Condition 8(9) in connection with the Owner's Plant does not exceed 15 milligrams per litre.
5. Subject to subsection 7(6) of this condition, the Owner shall control the quality of each Process Effluent Monitoring Stream at the Owner's Plant to ensure that the pH value of any sample collected at a Process Effluent Sampling Point at the Plant is within the range of 6.0 to 9.5.
6. Throughout any day on which the Owner has used an alternate sampling point on a Process Effluent Monitoring Stream for sampling, as permitted by Condition 8(15)(7) and 8(15)(8), the Owner,

- a. shall control the quality of the stream to ensure that the pH value of any sample collected at the alternate sampling point on the stream is within the range of 6.0 to 9.5; and
  - b. need not comply with subsection 7(5) of this condition with respect to the stream.
7. The Owner shall control the quality of each stream at the Owner's Plant for which a sampling point is listed in **Schedule D** in this Approval, to ensure that each rainbow trout acute lethality test and each *Daphnia magna* acute lethality test performed on any grab sample collected at a sampling point listed in **Schedule D** in this Approval, results in mortality for no more than fifty (50) per cent of the test organisms in hundred (100) per cent effluent.

## 8. SAMPLING, MONITORING AND RECORDING

### 1. MONITORING - GENERAL

1. Where the Owner is required by this Approval to Pick Up a set of samples and analyze it for certain parameters, the Owner shall Pick Up a set of samples sufficient to allow all the analyses to be performed.
2. The Owner shall use all reasonable efforts to ensure that all analyses required by this Approval are completed as soon as reasonably possible and that the results of those analyses are made available to the Owner as soon as reasonably possible.
3. Subject to subsection (4) of this condition, the Owner shall Pick Up all sets of samples required to be picked up at the Owner's Plant under Conditions 8(10), 8(11), 8(12) and 8(13) between the hours of 7 a.m. and 10 a.m.
4. If the District Manager is satisfied, on the basis of written submissions from the Owner, that the circumstances at the Owner's Plant are such that it would be impractical to Pick Up a set of samples from each sampling point maintained at the Plant under this Approval within the time period specified in subsection (3), the District Manager may give the Owner a written notice in respect of the Plant, varying the time period specified in subsection (3).
5. Subject to subsections (6) of this condition, where the Owner is required by Conditions 8(1), 8(11), 8(12) and 8(13) to Pick Up a set of samples the Owner shall Pick Up a set collected over the twenty four (24)-hour period immediately preceding the Pick Up.
6. The twenty four (24)-hour period referred to in subsection (5) of this condition may be shortened or enlarged by up to three (3) hours to permit the Owner to take advantage of the three(3)-hour range specified in subsection (3) of this condition.

## 2. SAMPLING AND ANALYTICAL PROCEDURES

1. The Owner shall carry out a Monitoring Program of collecting samples at the required sampling points, at the frequency specified or higher, by means of the specified sample type and analyzed for each parameter included in Conditions of this Approval and record all results, as follows:
  - a. All samples and measurements are to be taken at a time and in a location characteristic of the quality and quantity of the sewage stream over the time period being monitored.
  - b. Definitions and preparation requirements for each sample type are included in document referenced in subsection 6.a.
  - c. definitions for frequency:
    - i. Thrice Weekly means three (3) days in every week
    - ii. Weekly means once every week
    - iii. Monthly means once every month
    - iv. Quarterly means once every three (1) months
    - v. Semi-annually means once every six months
2. Samples shall be collected and analyzed at the sampling point(s), at the sampling frequencies and using the sample type specified for each parameter required in this Approval;
3. 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" (January 1999), 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" (21st edition) as amended from time to time by more recently published editions;
  - c. the Environment Canada publications "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout" (EPS 1/RM/13 Second Edition - December 2000) and "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to *Daphnia magna* " (EPS 1/RM/14 Second Edition - December 2000), as amended from time to time by more recently published editions;

4. The Owner shall carry out the maintenance of sampling point obligations of this Approval and the sampling and analysis obligations of this Approval, including quality control sampling and analysis obligations, in accordance with the procedures described in the Ministry publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater", as amended from time to time.
5. The Owner shall maintain the sampling equipment used at the Owner's Plant for sampling required by this Approval in a way that ensures that the samples collected at the Plant under this Approval accurately reflect the level of discharge of each Parameter from the Plant.

### 3. SAMPLING POINTS

1. The Owner shall maintain a sampling point at each sampling point location designated as a Process Effluent Sampling Point in **Schedule B** in this Approval.
2. The Owner shall maintain a sampling point at each sampling point location designated as a Merged Effluent Sampling Point in **Schedule B** in this Approval.
3. If the District Manager is satisfied, on the basis of written submissions from the Owner, that one or more of the circumstances described below exist at the Owner's plant, with the result that it is impractical to maintain or use a sampling point maintained at the plant under this Approval, the District Manager may give the Owner written permission to eliminate the sampling point:
  - a. a Process Change or redirection of or change in the character of an effluent stream has occurred or is expected to occur at the Owner's Plant.
  - b. equipment used for sampling or flow measurement at the sampling point is damaged or non-functional.
  - c. the effluent flowing in the stream on which the sampling point maintained under this Approval has been permanently eliminated.
4. Where the Owner is permitted to eliminate a sampling point because of a circumstance described in paragraph 8(3)(1)(a) or 8(3)(1)(b) of this condition, the Owner shall, within ninety (90) days after the day on which the sampling point is eliminated, establish a replacement sampling point.
5. The replacement sampling point shall be established on the effluent stream from which the sampling point was eliminated, at a location approved in writing by the District Manager.
6. The replacement sampling point shall yield results that would reflect the level of discharge of each Parameter from the Owner's Plant as reliably as did monitoring at the eliminated sampling point.

7. If the Owner replaces a sampling point under subsection (5) of this condition the Owner has all the same obligations in connection with the replacement sampling point that the Owner had in connection with the eliminated sampling point.

#### **4. REPORTS ON SAMPLING POINTS**

1. The Owner shall keep an updated list and plot plan showing the sampling points maintained under this Approval at the Owner's Plant and submit to the Ministry upon request.

#### **5. USE OF SAMPLING POINTS**

1. Except as permitted or required under Condition 8(15), the Owner shall use the sampling points maintained under this Approval for all sampling required by this Approval.

#### **6. CALCULATION OF LOADINGS - GENERAL**

1. For the purposes of performing a calculation under Conditions 8(7) and 8(8), the Owner shall use the actual analytical result obtained by the laboratory.
2. Despite subsection (1) of this condition, where the actual analytical result is less than one-tenth of the analytical method detection limit set out in the Ministry publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater", as amended from time to time, the Owner shall use the value zero for the purpose of performing a calculation under Conditions 8(7) and 8(8).
3. The Owner shall ensure that each calculation of a process effluent loading required by Condition 8(7) and each calculation of a merged effluent loading required by Condition 8(8) is performed as soon as reasonably possible after the analytical result on which the calculation is based becomes available to the Owner.

#### **7. CALCULATION OF LOADING - PROCESS EFFLUENT**

1. The Owner shall calculate, in kilograms, a daily process effluent stream loading for each Parameter in each Process Effluent Monitoring Stream for each day on which a sample is collected under this Approval from the stream for analysis for the parameter.
2. When calculating a daily stream loading under subsection (1) of this condition, the Owner shall multiply, with the necessary adjustment of units to yield a result in kilograms, the analytical result obtained from the sample for the parameter by the daily volume of effluent, as determined under Condition 8(22), for the stream for the day.

3. The Owner shall calculate, in kilograms, a daily process effluent Plant loading for each Parameter for each day for which the Owner is required to calculate a daily process effluent stream loading for the parameter under subsection (1) of this condition.
4. For the purposes of subsection (3) of this condition, a daily process effluent Plant loading for a parameter for a day is the sum, in kilograms, of the daily process effluent stream loadings for the parameter calculated under subsection (1) of this condition for the day.
5. Where the Owner calculates only one daily process effluent stream loading for a parameter for a day under subsection (1) of this condition, the daily process effluent Plant loading for the parameter for the day for the purposes of subsection (3) of this condition is the single daily process effluent stream loading for the parameter for the day.
6. The Owner shall calculate, in kilograms, a monthly average process effluent stream loading for each Parameter for each month in which a sample is collected under this Approval more than once from a Process Effluent Monitoring Stream at the Owner's Plant for analysis for the parameter.
7. For the purposes of subsection (6) of this condition, a monthly average process effluent stream loading for a parameter for a month is the arithmetic mean of the daily process effluent stream loadings for the parameter calculated under subsection (1) of this condition for the month.
8. The Owner shall calculate, in kilograms, a monthly average process effluent Plant loading for each Limited Parameter for each month in which a sample is collected under this Approval more than once from a Process Effluent Monitoring Stream at the Owner's Plant for analysis for the parameter.
9. For the purposes of subsection (8) of this condition, a monthly average process effluent Plant loading for a parameter for a month is the arithmetic mean of the daily process effluent Plant loadings for the parameter calculated under subsection (3) of this condition for the month.

## **8. CALCULATION OF LOADINGS - MERGED EFFLUENT**

1. The Owner shall calculate, in kilograms, a daily merged effluent stream loading for each Parameter in each Merged Effluent Monitoring Stream of the Owner for each day on which a sample is collected under this Approval from the stream for analysis for the parameter.
2. When calculating a daily stream loading under subsection (1) of this condition, the Owner shall multiply, with the necessary adjustment of units to yield a result in kilograms, the analytical result obtained from the sample for the parameter by the daily volume of effluent, as determined under Condition 8(22), for the stream for the day.

3. The Owner shall calculate, in kilograms, a daily merged effluent Plant loading for each Parameter for each day for which the Owner is required to calculate a merged effluent stream loading for the parameter under subsection (1) of this condition.
4. For the purposes of subsection (3) of this condition, a daily merged effluent Plant loading for a parameter for a day is the sum, in kilograms, of the daily merged effluent stream loadings for the parameter calculated under subsection (1) of this condition for the day.
5. Where the Owner calculates only one daily merged effluent stream loading for a parameter for a day under subsection (1) of this condition, the daily merged effluent Plant loading for the parameter for the day for the purposes of subsection (3) of this condition is the single daily merged effluent stream loading for the parameter for the day.
6. The Owner shall calculate, in kilograms, a monthly average merged effluent stream loading for each Parameter for each month in which a sample is collected under this Approval more than once from a Merged Effluent Monitoring Stream at the Owner's Plant for analysis for the parameter.
7. For the purposes of subsection (6) of this condition, a monthly average merged effluent stream loading for a parameter for a month is the arithmetic mean of the daily merged effluent stream loadings for the parameter calculated under subsection (1) of this condition for the month.
8. The Owner shall calculate, in kilograms, a monthly average merged effluent Plant loading for each Parameter for each month in which a sample is collected under this Approval more than once from a Merged Effluent Monitoring Stream at the Owner's Plant for analysis for the parameter.
9. For the purposes of subsection (8) of this condition, a monthly average merged effluent Plant loading for a parameter for a month is the arithmetic mean of the daily merged effluent Plant loadings for the parameter calculated under subsection (3) of this condition for the month.

## **9. CALCULATION OF CONCENTRATIONS - PROCESS EFFLUENT - OIL AND GREASE**

1. The Owner shall calculate, in milligrams per litre, a monthly average concentration for the parameter oil and grease in each Process Effluent Monitoring Stream of the Owner for each month.
2. For the purposes of subsection (1) of this condition, a monthly average concentration for the parameter for a month is the arithmetic mean of the analytical results obtained for the parameter from the samples collected under Condition 8(11) from the stream for the month.

**10. MONITORING — PROCESS EFFLUENT - DAILY**

1. The Owner shall, on each day, Pick Up a set of samples collected at each Process Effluent Sampling Point at the Owner's Plant and shall, subject to subsection (2) of this condition, analyze each set of samples for Total Suspended Solids.
2. The Owner need not meet the requirements of subsection (1) of this condition where it is impossible to do so because of sampling by a provincial officer.

**11. MONITORING - PROCESS EFFLUENT - WEEKLY**

1. The Owner shall, on one day in each week, Pick Up a set of samples collected at each Process Effluent Sampling Point at the Owner's Plant and shall analyze each set of samples for the parameters for which the frequency of monitoring, as set out in the Table titled "Effluent Monitoring Program - Blowdown Water Treatment Plant" in **Schedule C** in this Approval, is weekly.
2. There shall be an interval of at least four (4) days between successive Pick Up days at the Plant under subsection (1) of this condition.
3. All samples picked up under subsection (1) of this condition in a week shall be picked up on the same day in the week.

**12. MONITORING - MERGED EFFLUENT - WEEKLY**

1. The Owner shall, on one day in each week, Pick Up a set of samples collected at each Merged Effluent Sampling Point at the Plant and shall analyze each set of samples for the parameters for which the frequency of monitoring as set out in the Table titled "Merged Effluent Monitoring Program - Pond 4" in **Schedule C** in this Approval, is weekly.
2. All samples collected and picked up at the Plant under subsection (1) of this condition shall be collected and picked up on a day on which samples are picked up at the Plant under Condition 8(11)(1).

**13. MONITORING - MERGED EFFLUENT - QUARTERLY**

1. The Owner shall, on one day in each Quarter, on the day on which samples are picked up at the Plant under Condition 8(11)(1), Pick Up a set of samples collected at each Merged Effluent Sampling Point at the Owner's Plant and shall, subject to subsection (2) of this condition, analyze each set of samples for the parameters for which the frequency of monitoring, as set out in the Table titled "Merged Effluent Monitoring Program - Pond 4" in **Schedule C** in this Approval, is quarterly.

2. There shall be an interval of at least forty (45) days between successive Pick Up days at the Plant under subsection (1) of this condition.
3. All samples picked up under subsection (1) of this condition in a Quarter shall be picked up on the same day in the Quarter.

#### **14. MONITORING - PROCESS EFFLUENT - QUALITY CONTROL**

1. On one day in each year, on a day on which samples are picked up at the Plant under Condition 8(11)(1), the Owner shall collect and Pick Up a duplicate sample for each sample picked up on that day under Condition 8(11)(1) at one Process Effluent Sampling Point at the Owner's Plant and shall analyze each duplicate sample for the parameters for which the frequency of monitoring, as set out in the Table titled "Effluent Monitoring Program - Blowdown Water Treatment Plant" in **Schedule C** in this Approval, is weekly.
2. The Owner shall prepare a travelling blank and a travelling spiked blank sample for each sample for which a duplicate sample is picked up at the Plant under subsection (1) of this condition and shall analyze the travelling blank and travelling spiked blank samples in accordance with the directions set out in the Ministry publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater", as amended from time to time.
3. There shall be an interval of at least six (6) months between successive Pick Up days at the Plant under subsection (1) of this condition.

#### **15. MONITORING - PROCESS EFFLUENT - pH MEASUREMENT**

1. The Owner shall, on each day, during the time period applicable to the Plant under Condition 8(1)(3) or (4), collect a grab sample from each Process Effluent Sampling Point at the Owner's Plant and shall analyze each sample for the parameter pH.
2. The Owner shall, within each twenty four (24)-hour period beginning with the collection of the first grab sample at the Plant under subsection (1) of this condition on each day, collect two more grab samples from each Process Effluent Sampling Point at the Owner's Plant and shall analyze each sample for the parameter pH.
3. There shall be an interval of at least four (4) hours between each of the three (3) collections at a sampling point under subsections (1) and (2) of this condition in each twenty four (24)-hour period.
4. Each grab sample collected under subsections (1) and (2) of this condition shall be picked up within 24 hours of when it was collected.

5. Instead of complying with subsections (1) to (4) of this condition with respect to a sampling point, the Owner may use an on-line analyzer at the sampling point on the stream and analyze the effluent at the sampling point for the parameter pH once in each day during the time period applicable to the Plant under Condition 8(1)(3) or (4) and two more times in each twenty four (24)-hour period beginning with the first analysis at the Plant under this subsection in each day.
6. There shall be an interval of at least four (4) hours between each of the three (3) analyses at a sampling point under subsection (5) of this condition in each twenty four (24)-hour period.
7. For the purposes of subsections (1) to (6) of this condition, the Owner shall use either the sampling point maintained under Condition 3(1) on the stream or an alternate sampling point located downstream of the sampling point but before the point of discharge of the stream to surface water or to an industrial sewer used in common with another Plant.
8. Before using an alternate sampling point under subsection (7) of this condition, the Owner shall give the Director,
  1. a written notice that,
    - a. sets out the name of the alternate sampling point,
    - b. describes its location, and
    - c. assigns a number to it; and
    - d. a revised version of the list and plot plan submitted under Condition 4 showing the alternate sampling point.

## **16. MONITORING - ACUTE LETHALITY TESTING - RAINBOW TROUT**

1. Where the Owner is required by this condition to perform a rainbow trout acute lethality test, the Owner shall perform the test according to the procedures described in the Environment and Climate Change Canada publication entitled "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout", as amended from time to time.
2. Each rainbow trout acute lethality test required by this condition shall be carried out as a single concentration test using hundred (100) per cent effluent.
3. On one day in each month, the Owner shall collect and immediately Pick Up a grab sample at each Process Effluent Sampling Point listed in **Schedule D** and shall perform a rainbow trout acute lethality test on each sample.

4. All samples collected and picked up at the Plant under subsection (3) of this condition shall be collected and picked up on a day on which samples are picked up at the Plant under Condition 8(11)(1).
5. There shall be an interval of at least fifteen (15) days between successive Pick Up days at the Plant under subsection (3) of this condition.
6. All samples picked up under subsection (3) of this condition in a month shall be picked up on the same day in the month.
7. Where the Owner has performed tests under subsection (3) of this condition for twelve (12) consecutive months on samples collected from the same sampling point and the mortality of the rainbow trout in each test did not exceed fifty (50) per cent, the Owner is relieved of the obligations under subsection (3) of this condition relating to the sampling point and shall instead collect and immediately Pick Up a grab sample at the sampling point on one day in each Quarter and perform a rainbow trout acute lethality test on each sample.
8. Samples picked up at the Plant under subsection (7) of this condition shall be picked up on a day on which samples are picked up at the Plant under subsection (3) of this condition.
9. If no samples are being picked up at the Plant under subsection (3) of this condition during a Quarter, samples picked up at the Plant during the Quarter under subsection (7) of this condition shall be picked up on a day on which samples are picked up at the Plant under Condition 14(1).
10. There shall be an interval of at least forty five (45) days between successive Pick Up days at the Plant under subsection (7) of this condition.
11. All samples picked up under subsection (7) of this condition in a Quarter shall be picked up on the same day in the Quarter.
12. If a rainbow trout acute lethality test performed under subsection (7) of this condition on any sample from a sampling point results in mortality of more than fifty (50) per cent of the test rainbow trout, subsections (7) to (11) of this condition cease to apply in relation to samples from that sampling point, and the Owner shall instead comply with the requirements of subsection (3) of this condition relating to the sampling point, until the tests performed under subsection (3) of this condition on all samples collected from the sampling point for a further twelve (12) consecutive months result in mortality for no more than fifty (50) per cent of the rainbow trout for each test.
13. The Owner shall notify the Director in writing of any change in the frequency of acute lethality testing under this Approval at the Owner's Plant, within thirty (30) days after the day on which the change begins.

14. Subsections (2) to (13) of this condition apply with necessary modifications to each Merged Effluent Sampling Point listed in **Schedule C** in this Approval and, for the purpose, the reference in subsection (3) of this condition to each Process Effluent Sampling Point listed in **Schedule C** shall be deemed to be a reference to each Merged Effluent Sampling Point listed in **Schedule C** and the reference in subsections (4) and (9) of this condition to Condition 8(11)(1) shall be deemed to be a reference to Condition 8(12)(1).

#### **17. MONITORING - ACUTE LETHALITY TESTING - *DAPHNIA MAGNA***

1. Where the Owner is required by this condition to perform a *Daphnia magna* acute lethality test, the Owner shall perform the test according to the procedures described in the Environment and Climate Change Canada publication entitled "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to *Daphnia magna* ", as amended from time to time.
2. Conditions 8(16)(2) to (14) apply with necessary modifications to *Daphnia magna* acute lethality tests and, for the purpose, a reference to rainbow trout shall be deemed to be a reference to *Daphnia magna* .
3. The Owner shall Pick Up each set of samples required to be collected from a sampling point at the Owner's Plant under this condition on a day on which the Owner collects a sample from the sampling point under Condition 19, to the extent possible having regard to the frequency of monitoring required at the sampling point under this condition and Condition 8(16).

#### **18. MONITORING - ACUTE LETHALITY TESTING - RAINBOW TROUT - SAMPLING POINTS**

1. On one day in each month, on a day on which samples are picked up at the Plant under Condition 8(11), the Owner shall collect and immediately Pick Up a grab sample at each sampling point that is listed in **Schedule D** in this Approval and shall perform a rainbow trout acute lethality test on each sample.
2. Conditions 8(16)(1) and 8(16)(2) apply with necessary modifications to each sample picked up at the Owner's Plant under subsection (1) of this condition.
3. There shall be an interval of at least fifteen (15) days between successive Pick Up days at the Plant under subsection (1) of this condition.

4. All samples picked up under subsection (1) of this condition in a month shall be picked up on the same day in the month.
5. Where the Owner has performed tests under subsection (1) of this condition for twelve (12) consecutive months, on samples collected from the same sampling point, the Owner is relieved of the obligations under subsection (1) of this condition relating to the sampling point and shall instead collect and immediately Pick Up a grab sample at the sampling point on one day in each Quarter and perform a rainbow trout acute lethality test on each sample.
6. Samples picked up at the Plant under subsection (5) of this condition shall be picked up on a day on which samples are picked up at the Plant under subsection (1) of this condition.
7. If no samples are being picked up at the Plant under subsection (1) of this condition during a Quarter, samples picked up at the Plant during the Quarter under subsection (5) of this condition shall be picked up on a day on which samples are picked up at the Plant under Condition 14.
8. There shall be an interval of at least forty five (45) days between successive Pick Up days at the Plant under subsection (5) of this condition.
9. All samples picked up under subsection (5) of this condition in a Quarter shall be picked up on the same day in the Quarter.

#### **19. MONITORING - ACUTE LETHALITY - DAPHNIA MAGNA - SAMPLING POINTS**

1. Where the Owner is required by this condition to perform a *Daphnia magna* acute lethality test, the Owner shall perform the test according to the procedures described in the Environment and Climate Change Canada publication entitled "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to *Daphnia magna* ", as amended from time to time.
2. Each *Daphnia magna* acute lethality test required by this condition shall be carried out as a single concentration test using hundred (100) per cent effluent.
3. On one day in each month, on a day on which samples are picked up at the Plant under Condition 8(11), the Owner shall collect and immediately Pick Up a grab sample at each sampling point that is listed in **Schedule D** in this Approval and shall perform a *Daphnia magna* acute lethality test on each sample.
4. There shall be an interval of at least fifteen (15) days between successive Pick Up days at the Plant under subsection (3) of this condition.
5. All samples picked up under subsection (3) of this condition in a month shall be picked up on the same day in the month.

6. Where the Owner has performed tests under subsection (3) of this condition for twelve (12) consecutive months on samples collected from the same sampling point, the Owner is relieved of the obligations under subsection (3) of this condition relating to the sampling point and shall instead collect and immediately Pick Up a grab sample at the sampling point on one day in each Quarter and perform a *Daphnia magna* acute lethality test on each sample.
7. Samples picked up at the Plant under subsection (6) of this condition shall be picked up on a day on which samples are picked up at the Plant under subsection (3) of this condition.
8. If no samples are being picked up at the Plant under subsection (3) of this condition during a Quarter, samples picked up at the Plant during the Quarter under subsection (6) of this condition shall be picked up on a day on which samples are picked up at the Plant under Condition 8(11).
9. There shall be an interval of at least forty five (45) days between successive Pick Up days at the Plant under subsection (6) of this condition.
10. All samples picked up under subsection (6) of this condition in a Quarter shall be picked up on the same day in the Quarter.

## **20. MONITORING - ACUTE LETHALITY - *DAPHNIA MAGNA* - SAMPLING POINTS**

1. If three (3) consecutive rainbow trout acute lethality tests performed under Condition 8(18)(1) or 8(18)(5) or under a combination of Condition 8(19)(1) and 8(19)(5) on samples picked up at a sampling point result in the mortality of more than fifty (50) per cent of the test rainbow trout, the Owner shall submit to the Director a toxicity elimination report with respect to the stream on which the sampling point is located.
2. A toxicity elimination report with respect to the stream on which the sampling point is located shall set out the following information:
  - a. a detailed analysis of the causes and sources of the mortality of more than fifty (50) per cent of the test rainbow trout at the sampling point.
  - b. a synopsis of any studies conducted to support the analysis.
  - c. a detailed description of the methods by which the quality of the stream could be controlled to eliminate the mortality of more than fifty (50) per cent of the test rainbow trout at the sampling point.
  - d. an evaluation of the technical feasibility of implementing, at the Owner's Plant, each method described under paragraph (c) and a statement of which of the methods are technically feasible.

- e. an estimate of the financial cost to the Owner of implementing each method identified as technically feasible under paragraph (c).
3. Where the Owner is required by subsection (1) of this condition to submit a toxicity elimination report to the Director, the Owner shall submit the report to the Director no later than twelve (12) months after the day on which the third of three (3) consecutive rainbow trout acute lethality tests was performed that resulted in the mortality of more than fifty (50) per cent of the test rainbow trout at the sampling point on the stream.
4. In addition, where the Owner is required by subsection (1) of this condition to submit a toxicity elimination report with respect to a stream, the Owner shall submit to the Director annual toxicity elimination progress reports with respect to the stream, no later than the anniversary of the day on which the toxicity elimination report with respect to the stream was required to be submitted under subsection (3) of this condition.
5. A toxicity elimination progress report with respect to a stream shall set out the following information:
  - a. a detailed description of any methods, in addition to those described under paragraph (c) of subsection (2) of this condition with respect to the stream, by which the quality of the stream could be controlled to eliminate the mortality of more than fifty (50) per cent of the test rainbow trout at the sampling point.
  - b. an evaluation of the technical feasibility of implementing, at the Owner's Plant, each method described under paragraph (a) and a statement of which of the methods are technically feasible.
  - c. an estimate of the financial cost to the Owner of implementing each method identified as technically feasible under paragraph (b).
6. Where the Owner has performed three (3) consecutive quarterly tests under Condition 21(5) on samples collected from a stream in relation to which the Owner has obligations under subsection (4) of this condition and the mortality of the rainbow trout in each test did not exceed fifty (50) per cent, the Owner is relieved of the obligations under subsection (4) of this condition in relation to that stream.
7. Where the Owner has been relieved by subsection (6) of this condition of the obligation to submit toxicity elimination progress reports in relation to a stream and three (3) consecutive quarterly tests under Condition 21(5) on samples collected from that stream result in the mortality of more than fifty (50) per cent of the test rainbow trout, subsection (6) of this condition ceases to apply and the Owner shall instead comply with the requirements of subsection (4) of this condition relating to the stream, until a further three (3) consecutive quarterly tests under Condition 21(5) on samples collected from the stream result in mortality for no more than fifty (50) per cent of the rainbow trout

in each test.

8. Subsections (1) to (7) of this condition apply with necessary modifications to *Daphnia magna* acute lethality tests performed under Condition 22 and, for the purpose,
  - a. a reference to rainbow trout shall be deemed to be a reference to *Daphnia magna* ; and
  - b. a reference to Condition 8(19)(1) shall be deemed to be a reference to Condition 8(20)(3) and a reference to Condition 8(19)(5) shall be deemed to be a reference to Condition 8(20)(6).

**21. MONITORING - CHRONIC TOXICITY TESTING - FATHEAD MINNOW AND CERIODAPHNIA DUBIA**

1. Where the Owner is required to perform a seven (7)-day fathead minnow growth inhibition test, the Owner shall perform the test according to the procedure described in the Environment and Climate Change Canada publication entitled "Biological Test Method: Test of Larval Growth and Survival Using Fathead Minnows", as amended from time to time.
2. Where the Owner is required to perform a seven (7)-day *Ceriodaphnia dubia* reproduction inhibition and survivability test, the Owner shall perform the test according to the procedure described in the Environment and Climate Change Canada publication entitled "Biological Test Method: Test of Reproduction and Survival Using the Cladoceran *Ceriodaphnia dubia* ", as amended from time to time.
3. On one day in each Semi-annual Period, on the day on which samples are picked up at the Plant under Condition 14, the Owner shall collect and immediately Pick Up a grab sample from each sampling point listed in **Schedule E** for the Owner's Plant, and shall perform a seven (7)-day fathead minnow growth inhibition test and a seven (7)-day *Ceriodaphnia dubia* reproduction inhibition and survivability test on each sample.
4. There shall be an interval of at least ninety (90) days between successive Pick Up days at the Plant under subsection (3) of this condition.
5. All samples picked up under subsection (3) of this condition in a Semi-annual Period shall be picked up on the same day in the Semi-annual Period.
6. The Owner need not collect a sample from a sampling point in accordance with subsection (3) of this condition until twelve (12) consecutive monthly rainbow trout acute lethality tests and twelve (12) consecutive monthly *Daphnia magna* acute lethality tests performed on samples collected at the sampling point at the Owner's Plant result in mortality for no more than fifty (50) per cent of the test organisms in hundred (100) per cent effluent.

## 22. EFFLUENT FLOW MEASUREMENT

1. For the purposes of this condition, a volume of effluent for a stream for a day is the volume that flowed past the sampling point maintained under Condition 8(3) on the stream during the twenty four (24)-hour period preceding the Pick Up of the first sample picked up from the stream for the day.
2. The Owner shall determine in cubic metres a daily volume of effluent for each Process Effluent Monitoring Stream at the Owner's Plant for each day on which a sample is collected under this Approval from the stream, by integration of continuous flowrate measurements. After one year of issuance of this Approval, the Owner shall also measure the flow rate of the proposed Cooling Tower Blowdown water being discharged to Pond 4 from the proposed By-Products Energy Recovery Electricity Generation Facility.
3. Despite subsection (2) of this condition, where a Process Effluent Monitoring Stream discharges on an intermittent basis, the daily volumes for the stream may be determined either by integration of continuous flowrate measurements or by the summation of the individual intermittent volume measurements.
4. The Owner shall determine in cubic metres a daily volume of effluent for each Merged Effluent Monitoring Stream at the Owner's Plant for each day on which a sample is collected under this Approval from the stream.
5. For subsection 8(22)(2) to (4), the Owner shall use flow measurement methods that allow the daily volumes for Merged Effluent Monitoring Streams to be determined to an accuracy of within plus or minus fifteen (15) per cent.
6. The Owner shall determine by calibration or confirm by means of a certified report of a registered professional engineer of the Province of Ontario that,
  - a. each flow measurement method used under subsections (2) and (3) of this condition meets the accuracy requirements of subsection (4) of this condition; and
  - b. each flow measurement method used under subsection (4) of this condition meets the accuracy requirements of subsection (5) of this condition.
7. Where the Owner uses a new flow measurement method or alters an existing flow measurement method, the Owner shall determine by calibration or confirm by means of a certified report of a registered professional engineer of the Province of Ontario that each new or altered flow measurement method meets the accuracy requirements of subsection (5) of this condition, within two (2) weeks after the day on which the new or altered method or system is used. The Owner shall develop and implement a maintenance schedule and a calibration schedule for each flow measurement system installed at the Owner's Plant and shall maintain each flow measurement system according to good operating practices.

8. The Owner shall use reasonable efforts to set up each flow measurement system used for the purposes of this condition in a way that permits inspection by a provincial officer.

### **23. CALCULATION OF STREAM AND PLANT VOLUMES**

1. The Owner shall calculate, in cubic metres, a daily process effluent Plant volume for each day.
2. For the purposes of subsection (1) of this condition, a process effluent Plant volume for a day is the sum of the daily process effluent volumes determined under Condition 8(22) for the day.
3. The Owner shall calculate, in cubic metres, a monthly average process effluent Plant volume for each month, by taking the arithmetic mean of the daily process effluent Plant volumes calculated under subsection (1) of this condition for the month.
4. The Owner shall calculate, in cubic metres, a monthly average volume for each Process Effluent Monitoring Stream at the Owner's Plant for each month, by taking the arithmetic mean of the daily volumes determined under Condition 8(22) for the stream for the month.
5. The Owner shall calculate, in cubic metres, a daily merged effluent Plant volume for each day.
6. For the purposes of subsection (5) of this condition, a merged effluent Plant volume for a day is the sum of the daily merged effluent volumes determined under Condition 8(22) for the day.
7. The Owner shall calculate, in cubic metres, a monthly average merged effluent Plant volume for each month, by taking the arithmetic mean of the daily merged effluent Plant volumes calculated under subsection (5) of this Condition for the month.
8. The Owner shall calculate, in cubic metres, a monthly average volume for each Merged Effluent Monitoring Stream at the Owner's Plant for each month, by taking the arithmetic mean of the daily volumes determined under Condition 8(22) for the stream for the month.

### **24. RECORD KEEPING**

1. The Owner shall keep records of all analytical results obtained, all calculations performed and all determinations and calculations made or performed under Conditions of this Approval.
2. The Owner shall keep records of all sampling and analytical procedures used in meeting the requirements of this Approval, including, for each sample, the date, the time of Pick Up, the sampling procedures used and any incidents likely to affect the analytical results.
3. The Owner shall keep records of the results of all monitoring performed under Conditions of this Approval.

4. The Owner shall keep records of all maintenance and calibration procedures performed under Conditions of this Approval.
5. The Owner shall keep records of all problems or malfunctions, including those related to sampling, analysis, acute lethality testing, chronic toxicity testing or flow measurement, that result or are likely to result in a failure to comply with a requirement of this Approval, stating the date, duration and cause of each malfunction and including a description of any remedial action taken.
6. The Owner shall keep records of any incident in which effluent that would ordinarily flow past a sampling point maintained under this Approval is discharged from the Owner's Plant without flowing past that sampling point, stating the date, duration, cause and nature of each incident.
7. The Owner shall keep records of all Process Changes and redirections of or changes in the character of effluent streams that affect the quality of effluent at any sampling point maintained under this Approval at the Owner's Plant.
8. The Owner shall keep records of the daily production, in tonnes, for the products listed in the Table included in **Schedule F** in this Approval.
9. The Owner shall make each record required by this condition as soon as reasonably possible and shall keep each such record for a period of five (5) years.
10. The Owner shall ensure that all records kept under this condition are available to Ministry staff at the Owner's Plant on request during the Plant's normal office hours.

## **9. STORM WATER CONTROL STUDY**

1. The Owner shall complete a storm water control study in respect of the Owner's Plant, in accordance with the requirements of the Ministry publication entitled "Protocol for Conducting a Storm Water Control Study" dated August, 1994 as amended from time to time.
2. The Owner need not comply with subsection (1) of this condition in respect of the Owner's Plant if,
  - a. the Plant meets the exemption criteria set out in the Ministry publication entitled "Protocol for Conducting a Storm Water Control Study" dated August, 1994 as amended from time to time; and
  - b. the Owner notifies the Director in writing, before October 30, 2022, that the Plant meets the exemption criteria referred to in paragraph (a).
3. The Owner shall ensure that a copy of each study completed under this condition is available to Ministry staff at the Owner's Plant on request during the Plant's normal office hours.

## **10. REPORTING**

### **1. REPORTS AVAILABLE TO THE PUBLIC**

1. On or before June 1 in each year, the Discharger shall prepare a report relating to the previous calendar year and including,
  - a. a summary of Plant loadings calculated under Conditions of this Approval;
  - b. a summary of concentrations determined under Condition of this Approval;
  - c. a summary of the results of monitoring performed under Conditions of this Approval;
  - d. a summary of calculations performed under Conditions of this Approval;
  - e. a summary of the loadings or other results that exceeded a limit under Conditions of this Approval; and
  - f. a summary of the incidents in which effluent that would ordinarily flow past a sampling point maintained under this Approval is discharged from the Discharger's Plant without flowing past that sampling point.
2. The Discharger shall ensure that each report prepared under subsection (1) of this condition is available to any person at the Discharger's Plant on request during the Plant's normal office hours.
3. The Discharger shall provide the Director, upon request, with a copy of any report that the Discharger has prepared under subsection (1) of this condition.
4. The Discharger shall ensure that each report prepared under Condition 10(1) is available to any person at the Discharger's Plant on request during the Plant's normal office hours.

### **2. REPORTS TO THE DISTRICT MANAGER – GENERAL**

1. The Owner shall notify the District Manager in writing of any Process Change or redirection of or change in the character of an effluent stream that affects the quality of effluent at any sampling point maintained under this Approval at the Owner's Plant, within thirty (30) days of the change or redirection.
2. The Owner need not comply with subsection (2) of this condition where the effect of the change or redirection on effluent quality is of less than one week's duration.

3. The Owner shall notify the District Manager in writing if the Owner's Plant has, for ninety (90) consecutive days, operated at less than seventy five (75) per cent of the production rate specified in the table titled "Process Subcategories, products and Reference Production Rate" in **Schedule F** in this Approval, within thirty (30) days of the end of the ninety (90)-day period.

### **3. REPORTS TO THE DISTRICT MANAGER**

1. Owner shall report to the District Manager any incident in which effluent that would ordinarily flow past a sampling point maintained under this Approval is discharged from the Owner's Plant without flowing past that sampling point.
2. Owner shall report to the District Manager any loading or other result that exceeds a limit prescribed by Conditions of this Approval.
3. A report required under subsection (1) or (2) of this condition shall be given orally, as soon as reasonably possible, and in writing, as soon as reasonably possible.
4. 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.
5. The Owner shall report to the District Manager or designate, any exceedance of any parameter specified in Condition 7 orally, as soon as reasonably possible, and in writing within seven (7) days of the exceedance.
6. In addition to the obligations under Part X of the EPA, the Owner shall, within ten (10) working days of the occurrence of any reportable spill as defined in Ontario Regulation 675/98, bypass or loss of any product, by-product, intermediate product, oil, solvent, waste material or any other polluting substance into the environment, submit a full written report of the occurrence to the 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.
7. The Owner shall prepare and submit a performance report to the District Manager on an annual basis within 90 (ninety) days following the end of the period being reported upon. The first such report shall cover the first annual period following the commencement of operation of the Works and subsequent reports shall be submitted to cover successive annual periods following thereafter. The reports shall contain, but shall not be limited to, the following information:
  - a. a summary of Plant loadings calculated under Conditions of this Approval;
  - b. a summary of concentrations determined under Condition of this Approval;
  - c. a summary of the results of monitoring performed under Conditions of this Approval;

- d. a summary of calculations performed under Conditions of this Approval;
  - e. a summary of the loadings or other results that exceeded a limit under Condition of this Approval; and
  - f. a summary of the incidents in which effluent that would ordinarily flow past a sampling point maintained under this Approval is discharged from the Owner's Plant without flowing past that sampling point.
  - g. a summary and interpretation of all monitoring data and a comparison to the effluent limits outlined in Condition 7, including an overview of the success and adequacy of the sewage Works;
  - h. a description of any operating problems encountered and corrective actions taken;
  - i. a summary of all maintenance carried out on any major structure, equipment, apparatus, mechanism or thing forming part of the sewage works;
  - j. a summary of any effluent quality assurance or control measures undertaken in the reporting period;
  - k. a summary of the calibration and maintenance carried out on all effluent monitoring equipment;
  - l. a description of efforts made and results achieved in meeting the Effluent Limits of Condition 7.
8. The Owner shall ensure that each report prepared under subsection (1) of this condition is available to any person at the Owner's Plant on request during the Plant's normal office hours.
  9. The Owner shall provide the Director, upon request, with a copy of any report that the Owner has prepared under subsection (1) of this condition.
  10. The Owner shall ensure that each report prepared under Condition 24 is available to any person at the Owner's Plant on request during the Plant's normal office hours.

#### **4. QUARTERLY REPORTS TO THE DISTRICT MANAGER**

1. No later than forty (45) days after the end of each Quarter, the Owner shall submit a report to the District Manager, in an electronic format, acceptable to the ministry, containing information relating to the Owner's Plant throughout the Quarter as required by subsections (3) to (7) of this condition.
2. A report under this condition shall be submitted to the District Manager in the manner and form the District Manager specifies from time to time.

3. A report under this condition shall include all information included in a report given under Condition 10(3) during the Quarter.
4. The Owner shall report, for each month in the Quarter,
  - a. the monthly average stream loadings for each stream and the highest and lowest daily stream loadings for each stream calculated under Condition 8(7) for each Limited Parameter;
  - b. the monthly average Plant loadings and the highest and lowest daily Plant loadings calculated under Condition 8(7) for each Limited Parameter;
  - c. the monthly average stream loadings for each stream and the highest and lowest daily stream loadings for each stream calculated under Condition 8(8) for each Merged Parameter; and,
  - d. the monthly average Plant loadings and the highest and lowest daily Plant loadings calculated under Condition 8(8) for each Merged Parameter.
5. The Owner shall report, for each month in the Quarter,
  - a. the monthly average stream volumes for each stream and the highest and lowest daily stream volumes for each stream calculated under Conditions 8(22) and 8(23);
  - b. the monthly average process effluent Plant volume and the highest and lowest daily process effluent Plant volumes calculated under Condition 8(23); and
  - c. the monthly average merged effluent Plant volume and the highest and lowest daily merged effluent Plant volumes calculated under Condition 8(23).
6. The Owner shall, for each sampling point maintained under this Approval at the Owner's Plant, report the number of days in each month in the Quarter on which effluent flowed past the sampling point.
7. The Owner shall report, for each month in the Quarter, the highest and lowest pH results obtained under Condition 18 for each Process Effluent Monitoring Stream at the Owner's Plant.

## **5. REPORTS TO THE DISTRICT MANAGER – CHRONIC TOXICITY TESTING**

1. A report under this condition shall be submitted to the District Manager in the manner and form the District Manager specifies from time to time.

2. A report under subsection (1) of this condition shall include a plot of percentage reduction in growth or reproduction against the logarithm of test concentration and shall include a calculation of the concentration at which a twenty (25) per cent reduction in growth or reproduction would occur.

## **11. LIMITED OPERATIONAL FLEXIBILITY**

1. The Owner may make modifications to the Works in accordance with the Terms and Conditions of this Approval and subject to the Ministry's "Limited Operational Flexibility Criteria for Modifications to Works", included under Schedule G of this Approval, as amended.
2. 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 approved 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 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.

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

1. Condition 1 regarding general provisions is imposed to ensure that the Works are constructed and operated in the manner in which they were described and upon which approval was granted.
2. Condition 2 regarding change of Owner and Operating Authority is included to ensure that the Ministry records are kept accurate and current with respect to ownership and Operating Authority of the Works and to ensure that subsequent owners of the Works are made aware of the Approval and continue to operate the Works in compliance with it.
3. Condition 3 is included to ensure that the Works are constructed in accordance with the approval and that record drawings of the Works “as constructed” are maintained for future references.
4. Conditions 4 regarding process change is included to ensure that the Works are operated in accordance with the information submitted by the Owner relating to the process and materials which are served by the Works, and to ensure that any contemplated changes in them which could potentially affect the characteristics of effluent from the Works will be properly reviewed and approved.
5. Condition 5 regarding Bypasses is included to indicate that Bypass is prohibited, except in circumstances where the failure to Bypass could result in greater damage to the environment than the Bypass itself. The notification and documentation requirements allow the Ministry to take action in an informed manner and will ensure the Owner is aware of the extent and frequency of Bypass Events.
6. Condition 6 regarding operation and maintenance is included to require that the Works be properly operated, maintained, funded, staffed and equipped such that the environment is protected and deterioration, loss, injury or damage to any person or property is prevented. As well, the inclusion of a comprehensive operations manual governing all significant areas of operation, maintenance and repair is prepared, implemented and kept up-to-date by the Owner. Such a manual is an integral part of the operation of the Works. Its compilation and use should assist the Owner in staff training, in proper plant operation and in identifying and planning for contingencies during possible abnormal conditions. The manual will also act as a benchmark for Ministry staff when reviewing the Owner's operation of the Works.
7. Condition 7 regarding effluent requirements and compliance limits is imposed to ensure that the Final Effluent discharged from the Works to the environment meets the Ministry's effluent quality requirements.
8. Condition 8 regarding sampling, monitoring and recording is included to enable the Owner to evaluate and demonstrate the performance of the Works, on a continual basis, so that the Works are properly operated and maintained at a level which is consistent with the design objectives and compliance limits.
9. Condition 9 regarding stormwater control study is included to enable the owner to demonstrate on a continual basis the quality of the effluent being discharged from the approved works.

10. Condition 10 regarding reporting is included to provide a performance record for future references, to ensure that the Ministry is made aware of problems as they arise, and to provide a compliance record for this Approval.
11. Condition 11 is included to ensure that the Works are operated in accordance with the application and supporting documentation submitted by the Owner, and not in a manner which the Director has not been asked to consider. These Conditions are also included to ensure that a Professional Engineer has reviewed the proposed modifications and attests that the modifications are in line with that of Limited Operational Flexibility, and provide assurance that the proposed modifications comply with the Ministry's requirements stipulated in the Terms and Conditions of this Approval, MOE policies, guidelines, and industry engineering standards and best management practices.

## **Schedule A**

1. Application for Environmental Compliance Approval dated April 16, 2025 and received on April 16, 2025 and supporting documentation.

## Schedule B

Effluent Stream	Location
Process Water Effluent Compliance Point	Blowdown Treatment Point (MISA Control Point 0400)
Merged Effluent Compliance Point	Pond 4 (MISA Control Point 0100)

### Process Effluent Compliance Limits - Blowdown Water Treatment Plant

#### Sample Point/Process Effluent Sample Point - MISA Control Point 0400

Effluent Parameter	Averaging Calculator	Limit (maximum unless otherwise indicated)
Oil and Grease	Monthly Average Effluent Concentration	15 mg/L
pH	Single Sample Result	between 6.0 - 9.5 inclusive
Acute Toxicity to Rainbow Trout and Daphnia Magna	Single Sample Result	Non-acutely lethal (no more than 50% mortality)

### Merged Effluent Compliance Limits - Pond 4

#### Sample Point/Merged Effluent Sample Point - MISA Control Point 0100

Effluent Parameter	Averaging Calculator	Limit (maximum unless otherwise indicated)
Oil and Grease	Monthly Average Effluent Concentration	15 mg/L
pH	Single Sample Result	between 6.0 - 9.5 inclusive
Acute Toxicity to Rainbow Trout and Daphnia Magna	Single Sample Result	Non-acutely lethal (no more than 50% mortality)
Chronic Toxicity (seven-day Fathead Minnows growth inhibition test and seven-day <i>Ceriodaphnia dubia</i> inhibition and survivability test)	Single Sample Result	Pass

## **Effluent Loading Limits - Blowdown Water Treatment Plant**

**Sample Point/Process Effluent Sample Point - MISA Control Point 0400**

<b>Parameters</b>	<b>Daily Plant Loading Limit (kilograms per day)</b>	<b>Monthly Average Plant Loading Limit (kilograms per day)</b>
Total Cyanide	26.0	10.3
Ammonia plus Ammonium	21.8	9.88
Total Suspended Solids	679	281
Total Lead	14.0	4.65
Total Zinc	20.9	6.99
Phenolics (4AAP)	0.370	0.185
Benzene	0.0553	0.0184
Benzo (a) Pyrene	0.0553	0.0184
Naphthalene	0.0553	0.0184

## **Merged Effluent Compliance Limits - Pond 4**

**Sample Point/Merged Effluent Sample Point - MISA Control Point 0100**

<b>Parameters</b>	<b>Monthly Average Plant Loading Limit (kilograms per day unless otherwise indicated )</b>
Free Chlorine	18.85
Suspended Solids	565.5
Solvent Extractable	237.51
Phenol	0.75
Ammonia (Total)	35.82
Zinc	22.62
Lead	15.08
Total Phosphorus	37.7
pH	6 to 9.5

## Schedule C - Monitoring Program

### Effluent Monitoring Program - Blowdown Water Treatment Plant

#### Sample Point/Process Effluent Sample Point - MISA Control Point 0400

Item	Parameter	Monitoring Frequency
1.	Total Cyanide	Weekly
2.	Ammonia plus Ammonium	Weekly
3.	Total Suspended Solids (TSS)	Daily
4.	Total Lead	Weekly
5.	Total Zinc	Weekly
6.	Phenolics (4AAP)	Weekly
7.	Benzene	Weekly
8.	Benzo(a)pyrene	Weekly
9.	Naphthalene	Weekly
10.	pH	Daily
11.	Oil and Grease	Weekly

## **Merged Effluent Monitoring Program - Pond 4**

### **Sample Point/Process Effluent Sample Point - MISA Control Point 0100**

Item	Parameter	Monitoring Frequency
1.	Total Cyanide	Weekly
2.	Total Suspended Solids (TSS)	Weekly
3.	Total Lead	Weekly
4.	Total Zinc	Weekly
5.	Phenolics (4AAP)	Weekly
6.	Benzene	Quarterly
7.	Benzo(a)pyrene	Quarterly
8.	Total Phosphorus	Weekly
9.	Total Ammonia	Weekly
10.	Free Chlorine	Weekly
11.	Naphthalene	Quarterly
12.	Oil and Grease/Solvent Extractable	Weekly

**Schedule D**  
**Acute Lethality - Sampling Points**

1	0400, Blowdown Water Treatment Plant Effluent (Process Effluent)
2	0100, #4 Pond Discharge (Merged Effluent)

**Schedule E**  
**Chronic Toxicity - Sampling Points**

1	0100, #4 Pond Discharge (Merged Effluent)
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## Schedule F

### Process Subcategories, Products and Reference Production Rate

Item	Column 1 Process Subcategory	Column 2 Product	Column 3 Reference Production Rate in tonnes per day
1.	Cokemaking Process	Metallurgical Coke	1,734
2.	Ironmaking Process	Molten Iron	5,960
3.	Steelmaking Process	Raw Steel	6,800
4.	Vacuum Degassing	Refined Steel	6,800
5.	Continuous Casting Process	Slabs	6,800
6.	Hotforming Process	Plates and Strip	7,500

## **Schedule G**

### **Limited Operational Flexibility Criteria for Modifications to 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. Alter pumping capacity by adding or replacing equipment where new equipment is located within an existing sewage treatment plant site or an existing sewage pumping station site, provided that the modifications do not result in an increase of the sewage treatment plant Rated Capacity and the existing flow process and/or treatment train are maintained, as applicable.
- b. Forcemain relining and replacement with similar pipe size where the nominal diameter is not greater than 1,200mm.

#### 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 approved 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 purposes, the following equipment can be considered under this provision: pumps, 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 Stormwater Management System

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

### 1.5 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.

### 1.6 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.



## Notice of Modification to Sewage Works

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

<b>Part 1 – Environmental Compliance Approval (ECA) with Limited Operational Flexibility</b> <i>(Insert the ECA's owner, number and issuance date and notice number, which should start with "01" and consecutive numbers thereafter)</i>		
ECA Number	Issuance Date (mm/dd/yy)	Notice number (if applicable)
ECA Owner		Municipality

<b>Part 2: Description of the modifications as part of the Limited Operational Flexibility</b> <i>(Attach a detailed description of the sewage works)</i>
<p>Description shall include:</p> <ol style="list-style-type: none"> <li>1. A detail description of the modifications and/or operations to the sewage works (e.g. sewage work component, location, size, equipment type/model, material, process name, etc.)</li> <li>2. Confirmation that the anticipated environmental effects are negligible.</li> <li>3. List of updated versions of, or amendments to, all relevant technical documents that are affected by the modifications as applicable, i.e. submission of documentation is not required, but the listing of updated documents is (design brief, drawings, emergency plan, etc.)</li> </ol>

<b>Part 3 – Declaration by Professional Engineer</b>	
<p>I hereby declare that I have verified the scope and technical aspects of this modification and confirm that the design:</p> <ol style="list-style-type: none"> <li>1. Has been prepared or reviewed by a Professional Engineer who is licensed to practice in the Province of Ontario;</li> <li>2. Has been designed in accordance with the Limited Operational Flexibility as described in the ECA;</li> <li>3. Has been designed consistent with Ministry's Design Guidelines, adhering to engineering standards, industry's best management practices, and demonstrating ongoing compliance with s.53 of the Ontario Water Resources Act; and other appropriate regulations.</li> </ol> <p>I hereby declare that to the best of my knowledge, information and belief the information contained in this form is complete and accurate</p>	
Name (Print)	PEO License Number
Signature	Date (mm/dd/yy)
Name of Employer	

<b>Part 4 – Declaration by Owner</b>	
<p>I hereby declare that:</p> <ol style="list-style-type: none"> <li>1. I am authorized by the Owner to complete this Declaration;</li> <li>2. The Owner consents to the modification; and</li> <li>3. This modifications to the sewage works are proposed in accordance with the Limited Operational Flexibility as described in the ECA.</li> <li>4. The Owner has fulfilled all applicable requirements of the <i>Environmental Assessment Act</i>.</li> </ol> <p>I hereby declare that to the best of my knowledge, information and belief the information contained in this form is complete and accurate</p>	
Name of Owner Representative (Print)	Owner representative's title (Print)
Owner Representative's Signature	Date (mm/dd/yy)

**Upon issuance of the environmental compliance approval, I hereby revoke Approval No(s). 1547-CB2RL4 issued on April 14, 2022.**

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

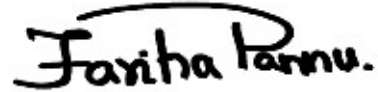
and

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](http://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 1st day of April, 2026



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Fariha Pannu, P.Eng.

Director

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

KH/

c: District Manager, MECP Hamilton - District  
Hojat Seyedy, P.Eng., GHD Limited