

AMENDED ENVIRONMENTAL COMPLIANCE APPROVAL

NUMBER 6606-CAFMQN
Issue Date: March 31, 2022

Lafarge Canada Inc.
6501 Bath Road
Bath, Ontario
K0H 1G0

Site Location: Lafarge Bath Plant
6501 Bath Road
Lot 3, Concession Broken Front
Township of Loyalist, County of Lennox and Addington

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:

Sewage works for the collection, transmission, treatment and disposal of wastewater discharging through Control Point 0400 to Lake Ontario, serving the Lafarge Bath Cement Plant, located at 6501 Bath Road, Township of Loyalist, comprising of the following;

Proposed Works

Stormwater/Ammonia Spill Containment Works

Stormwater/Spill containment works for the collection, transmission, treatment and disposal of stormwater or a spill in to the stormwater management works from a proposed ammonia storage facility, at the existing Lafarge Bath Plant, comprising;

- One (1) dedicated containment area (Containment Pad) having a storage volume of 139,663 L along with an adjacent Truck Unloading Pad (Truck Pad) having a storage volume of 27,362 L, all for the containment of potential spills and stormwater runoff, discharging via a manually activated pump (Liberty model FL155M-2 or equivalent) operating at 60 gpm and 50 ft of head to a proposed 600mm catchbasin discharging to the existing east ditch and ultimately to the existing Main Settling Pond/MISA Pond;
- An online ammonia detection system and an online pH and temperature probe, installed within the Containment Pad's catch basin to allow for continuous or batch discharge of wastewater from the Containment Pad;

Low Carbon Fuel Area

stormwater management works for the collection, transmission, treatment and disposal of stormwater works from an existing Low Carbon Fuel processing pad, comprising;

Sewage works serving the proposed Low Carbon Fuel Area 1 (LCF 1)

a lined stormwater management collection pond for the proposed 1.42 ha the graded aggregate pad called LCF 1 area (Low Carbon Fuel 1) and other adjacent 0.68 ha areas amounting to an overall 2.1 ha area, to manage peak flow rates up to and including the 100-year 24-hour design storm, comprising of a 50 metre by 40 metre collection sump with a permanent pool volume of 530 cubic metre and extended detention volume of 670 cubic metre and a total volume of 3,010 cubic metre at the berm elevation of 90.4 metre, having a hickenbottom structure complete with a 75mm diameter orifice at 88.8m connected to a 250mm diameter HDPE pipe, discharging to the West Quarry Sump;

Existing Works

Limestone Quarry

existing sewage works for the collection, transmission, treatment and disposal of approximately 3200 cubic metres per day (average) of dust suppression water from Lake Ontario and approximately 32 cubic metres per day (average dry weather flow) of sanitary sewage, stormwater runoff from the site and stormwater runoff from the Quarry, consisting of the following;

- Underground storm drainage piping system to provide drainage for non-contact cooling water, roof and pavement drainage to the Main Settling Pond/MISA Pond;

Sanitary Sewage Pumping Station

- Underground drainage piping collecting sanitary sewage from the Main Building and conveying it to the Sanitary Sewage Pumping Station;
- one (1) sanitary sewage pumping station consisting of a precast concrete submersible sewage pumping station, located in MH6, housing two (2) submersible sewage pumps each rated at 6 litres per second at a total dynamic head of 10.7 metres, collecting sanitary sewage from the facility and discharging to an existing Waste Stabilization Pond via approximately 442 metres of 100 millimetre diameter series 125 polyvinyl chloride piping;

Quarry Sump and Dewatering Forcemain

- one (1) sump located in the Quarry with pump and forcemain, routing of surface water runoff from the Quarry to a ditch and storm sewer to the Main Settling Pond/MISA Pond, via one (1) approximately 775 metres long, 200 millimetre diameter forcemain;

Waste Stabilization Pond/Lagoon

- one(1) continuous discharge Waste Stabilization Pond having a volume of 6,228 cubic metres, bottom size of 83.82 metres by 39.62 meters, a liquid operating depth of 1.52 meters with a sludge storage depth of 0.3 metres, 4:1 interior and 3:1 exterior side slopes, inlet and outlet manholes and an emergency overflow having a diameter of 200 millimetres, discharging to the Main Settling Pond through existing storm sewer system;
- Pond Inlet (MH#8) installed with an upturned elbow on the inlet to the 300 millimetre diameter outlet pipe with an overflow elevation of 86.192 metres (local datum) discharging to the Waste Stabilization Pond through existing storm sewer system;

Main Settling Pond/MISA Pond

- one (1) approximately 103 metre long, 675 millimetre diameter concrete storm sewer for diversion of runoff from east ditch to either of the two sediment forebays of the settling pond system via a two manhole diversion system;
- one (1) Main Settling Pond, receiving the effluent discharge from the Waste Stabilization Pond, stormwater runoff from the site, and stormwater runoff from the Quarry with approximate size of 126 metres by 34 metres by 1.5 metres (depth) with approximate capacity of 6,000 cubic metres and approximate hydraulic retention time of 33 hours, complete with two (2) sedimentation forebays each having a capacity of 850 cubic metres with sliding gates between the forebays with a hydraulic retention time of approximately 10 hours, complete with an outlet spillway consisting of a concrete capped trapezoidal section through the east berm approximately 2.7 metres squared cross-section discharging into an outlet channel; the outlet channel is approximately 41 metres in length and 4.5 metres squared in cross-section containing a flow measuring device with discharge of the final effluent to Lake Ontario via the east ditch;

including all other mechanical system, electrical system, instrumentation and control system, standby power system, piping, pumps, valves and appurtenances essential for the proper, safe and reliable operation of the Works in accordance with this Approval, in the context of process performance and general principles of wastewater engineering only; all in accordance with the Schedule A.

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

1. "Approval" means this entire document and any schedules attached to it, and the application;
2. "Bypass" means diversion of sewage around one or more treatment processes, with the diverted sewage flows being returned to the treatment train upstream of the Final Effluent sampling point(s) and discharged

via the approved final effluent disposal facilities;

3. "CBOD₅" means five day carbonaceous (nitrification inhibited) biochemical oxygen demand measured in an unfiltered sample;
4. "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;
5. "District Manager" means the District Manager of the Kingston District.
6. "E. coli" refers to the thermally tolerant forms of Escherichia that can survive at 44.5 degrees Celsius;
7. "EPA" means the *Environmental Protection Act* , R.S.O. 1990, c.E.19, as amended;
8. "Final Effluent" means effluent that is discharged to the environment through the approved effluent disposal facilities, including all Bypasses, that are required to meet the compliance limits stipulated in the Approval at the Final Effluent sampling point(s);
9. "Ministry" means the ministry of the government of Ontario responsible for the EPA and OWRA and includes all officials, employees or other persons acting on its behalf;
10. "Owner" means Lafarge Canada Inc., and its successors and assignees;
11. "OWRA" means the *Ontario Water Resources Act* , R.S.O. 1990, c. O.40, as amended;
12. "Works" means the sewage works described in the Owner's application, and this Approval, and include Existing Works and any Proposed Works.
13. "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;
14. "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;
15. "Cooling Water Effluent Monitoring Stream" means a cooling water effluent stream on which a sampling point is maintained under Condition 7(2);
16. "Cooling Water Effluent Sampling Point" means a sampling point maintained on a cooling water effluent stream under Condition 7(2);
17. "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;

18. "MEWS" means Ministry of Environment, Conservation and Parks Wastewater System. MEWS is accessible at <https://www.mewsontario.ca/>, as updated from time to time.
19. "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;
20. "Plant" means the industrial facility and the developed property, waste disposal sites and waste water treatment facilities associated with it;
21. "Process Change" means a change in equipment, production processes, Process Materials or treatment processes;
22. "Process Effluent" means,
 - a. effluent that, by design, has come into contact with Process Materials other than Process Materials stored in a materials storage site, including but not limited to a rock salts storage site, a waste rock storage site or a slag storage site;
 - b. Blowdown Water;
 - c. effluent that results from cleaning or maintenance operations at the Plant during a period when all or part of the Plant is shut down, and,
 - d. any effluent described in paragraphs (a) to (c) combined with Cooling Water Effluent or Storm Water Effluent but does not include salt evaporator effluent;
23. "Process Effluent Monitoring Stream" means a process effluent stream on which a sampling point is maintained under Condition 7(2);
24. "Process Effluent Sampling Point" means a sampling point maintained on a process effluent stream under Condition 7(2);
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, but does not include chemicals added to cooling water for the purpose of controlling organisms, fouling and corrosion;
26. "Quarter" means once every three months;

27. "Semi-annual Period" means once every six months;
28. "Storm Water Effluent" means run-off from a storm event or thaw that is not used in any industrial process;
29. "Wastewater Treatment Facility" means a device or structure that is used to improve the quality of wastewater.

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

TERMS AND CONDITIONS

1. GENERAL CONDITION

1. The Owner shall ensure that any person authorized to carry out work on or operate any aspect of the Works is notified of this Approval and the conditions herein and shall take all reasonable measures to ensure any such person complies with the same.
2. Except as otherwise provided by these conditions, the Owner shall design, build, install, operate and maintain the Works in accordance with the description given in this Approval, and the application for approval of the Works.
3. Where there is a conflict between a provision of any document in the schedule referred to in this Approval and the conditions of this Approval, the Conditions in this Approval shall take precedence, and where there is a conflict between the documents in the Schedule, the document bearing the most recent date shall prevail.
4. Where there is a conflict between the documents listed in the Schedule 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 Conditions of this Approval are severable. If any Condition of this Approval, or the application of any requirement of this Approval to any circumstance, is held invalid or unenforceable, the application of such condition to other circumstances and the remainder of this Approval shall not be affected thereby.

2. EXPIRY OF APPROVAL

1. This Approval will cease to apply to those parts of the Works which have not been constructed within five (5) years of the date of this Approval.

3. CHANGE OF OWNER

1. The Owner shall notify the 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. 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.
3. The Owner shall ensure that all communications made pursuant to this condition refer to the environmental compliance approval number.

4. CONSTRUCTION OF PROPOSED WORKS/RECORD DRAWINGS

1. All Proposed 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 Proposed Works, the Owner shall prepare and submit a written statement to the District Manager, certified by a Licensed Engineering Practitioner, that the Proposed Works are 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.

5. COMPLIANCE LIMITS

1. The Owner shall design, construct, operate and maintain the Works such that the concentrations of the materials named as effluent parameters in the Effluent Limits Table in **Schedule B** are not exceeded in the effluent from the Works.

2. For the purposes of determining compliance with and enforcing Condition 5(1), exceedance of a maximum concentration is deemed to have occurred when the concentration of a sample analyzed for a parameter named in Schedule B, is greater than the corresponding maximum concentration set out in Schedule B.
3. The Owner shall include in all reports submitted in accordance with Condition 7, a summary of the efforts made and results achieved under this Condition.
4. The Owner shall ensure that each analytical result obtained for total suspended solids under Condition 7(11) from each sample collected from a Process Effluent Monitoring Stream at the Owner's Plant does not exceed **50 milligrams per litre**.
5. The Owner shall ensure that each monthly average concentration calculated for total suspended solids under Condition 7(7) in connection with the Owner's Plant does not exceed **25 milligrams per litre**.
6. Subject to subsection (7) 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**.
7. Throughout any day on which the Owner has used an alternate sampling point on a Process Effluent Monitoring Stream for sampling required by Condition 7(13), as permitted by Conditions 7(13)(4) and 7(13) (5), 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 (6) of this condition with respect to the stream.
8. The Owner shall control the quality of each Process Effluent Monitoring Stream and each Cooling Water Effluent Monitoring Stream at the Owner's Plant to ensure that each rainbow trout acute lethality test and each *Daphnia magna* acute lethality test performed on any grab sample collected at a Process Effluent Sampling Point or Cooling Water Effluent Sampling Point at the Plant results in mortality for no more than fifty (50) per cent of the test organisms in hundred (100) per cent effluent.

6. OPERATION AND MAINTENANCE

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

2. The Owner shall prepare/update the operations manual for the Works within thirty (30) days after the completion of construction of the Proposed Works, that includes, but not necessarily limited to, the following information:
 - a. operating procedures for the Works under routine operating conditions;
 - b. inspection programs, including frequency of inspection, for the Works and the methods or tests employed to detect when maintenance is necessary;
 - c. repair and maintenance programs, including the frequency of repair and maintenance for the Works;
 - d. procedures for the inspection and calibration of monitoring equipment;
 - e. operating procedures for the Works to handle situations outside routine operating conditions and emergency situations such as a structural, mechanical or electrical failure, or an unforeseen flow condition, including procedures to minimize Overflows;
 - f. An Emergency Response and Preparedness Plan developed in consultation with District Manager, consisting of contingency plans and procedures for dealing with equipment breakdowns, potential spills and any other abnormal situations, including notification of the Spills Action Centre (SAC) and District Manager;
 - g. procedures for receiving, responding and recording public complaints, including recording any follow-up actions taken.
3. The Owner shall make the manual readily accessible for reference at the Works for the operational life of the Works. Upon request, the Owner shall make the manual available to Ministry staff.
4. The Owner shall undertake an inspection of the condition of the Works at least every quarter of the year,. This shall also include inspection of the sediment and erosion control works, and undertake any necessary cleaning and maintenance to prevent the excessive build-up and potential overflow of sediment or debris, decaying vegetation and/or leachate into the receiving environment.
5. The Owner shall maintain a log book which shall be made available for review by the Ministry upon request. The log shall include the name of the inspector, date of inspection, cleaning and maintenance measures for the Works and any remedial measures undertaken to maintain the sediment and erosion control measures, if any. The log book shall be used until such time that it is no more required by the District Manager.

7. MONITORING AND RECORDING

1. SAMPLING AND ANALYTICAL PROCEDURES

1. The Owner shall, carry out a scheduled monitoring program of collecting samples at the sampling points, at the frequency specified or higher, by means of the specified sample type and analyze for each parameter as included in Condition 7, and those listed in the Tables under the monitoring program included in Schedule C and D and record all results.
2. All samples and measurements are to be taken at a time and at a location characteristic of the quality and quantity of the sewage stream over the time period being monitored.
3. Definitions and preparation requirements for each sample type are included in document referenced in subsection 7(1)(5).
 - A. 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
4. 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 total suspended solids from the Plant.
5. The methods and protocols for sampling, analysis and recording shall conform, in order of precedence, to the methods and protocols specified in the following documents and all analysis shall be conducted by a laboratory accredited to the ISO/IEC:17025 standard or as directed by the District Manager:
 1. the Ministry's publication "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater Version 2.0" (January 2016), PIBS 2724e02, as amended;
 2. the publication "Standard Methods for the Examination of Water and Wastewater", as amended;
 3. 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, subject to the following:

4. the use of pH stabilization in the determination of acute lethality of Final Effluent to Rainbow Trout in accordance with the Environment Canada publication "Procedure for pH Stabilization during the Testing of Acute Lethality of Wastewater Effluent to Rainbow Trout (EPS 1/RM/50)" (2008), as amended, is permitted only if:
 - a. all the three criteria stipulated in the Environment Canada EPS 1/RM/50 are met;
 - b. the Final Effluent is not discharged to a receiver in which the Final Effluent contributes more than 50% of the total flow in the receiving water, unless the District Manager, having reviewed additional information submitted regarding the Final Effluent and the receiving water approves on the use of RM50 on a site-specific basis;
5. For any parameters not mentioned in the documents referenced in (a) and (b), the written approval of the District Manager shall be obtained prior to sampling.
6. Subject to Condition 7(5), 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 Version 2.0" (January 2016), PIBS 2724e02, as amended;
7. 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 total suspended solids from the Plant.
8. Despite Conditions 7(11) to 7(17), the Owner need not collect samples from any Process Effluent or Cooling Water Effluent at the Owner's Plant on a day on which Process Effluent is not being discharged from the Plant.
9. 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.
10. 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.
11. Subject to subsection 7(14) of this condition, the Owner shall pick up all samples required to be picked up at the Owner's Plant under Conditions 7(11) and 7(17) between the hours of 7 a.m. and 10. a.m.

12. 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 Process Effluent, and Cooling Water Sampling Point maintained at the Plant under this Approval within the time period specified in subsection 7(11), the District Manager may give the Owner a written notice in respect of the Plant, varying the time period specified in subsection 7(11).
13. Subject to subsection 7(11) of this condition, where the Owner is required by Conditions 7(11) and 7(17) to pick up samples, the Owner shall pick up samples collected over the 24-hour period immediately preceding the Pick-Up.
14. The twenty-four (24)-hour period referred to in subsection 7(13) of this condition may be shortened or enlarged by up to three hours to permit the Owner to take advantage of the three-hour range specified in subsection 7(11) of this condition.

2. SAMPLING POINTS

1. The Owner shall maintain a sampling point on each Process Effluent, and Cooling Water Effluent at the Owner's Plant, as necessary so that the Plant loadings calculated under Conditions 7(7) and 7(8) for total suspended solids and the concentrations determined under Conditions 7(9) and 7(10) of total suspended solids accurately reflect the level of discharge of total suspended solids from the Plant.
2. The Owner need not establish a sampling point on a bypass.
3. If circumstances change so that a new sampling point is necessary at the Owner's Plant in order to permit the calculation of plant loadings under Conditions 7(7) and 7(8) for total suspended solids and the determination of concentrations under Conditions 7(9) and 7(10) of total suspended solids that accurately reflect the level of discharge of total suspended solids from the Plant, the Owner shall, within thirty (30) days of the change, establish the new sampling point and notify the District Manager in writing.
4. The Owner may, after notifying the District Manager in writing, eliminate a sampling point maintained under subsection 7(2)(1) or established under subsection 7(2)(3) of this condition if the sampling point is no longer necessary to permit the calculation of plant loadings under Conditions 7(7) and 7(8) for total suspended solids and the determination of concentrations under Conditions 7(9) and 7(10) of total suspended solids that accurately reflect the level of discharge of total suspended solids from the Plant.
5. For the purposes of this condition, a plant loading for total suspended solids or a concentration of total suspended solids that is based on analytical results that are significantly affected by dilution or masking due to the merging of streams upstream of a sampling point at the Plant is not a loading or a

concentration that accurately reflects the level of discharge of total suspended solids from the Plant.

6. In determining what is necessary to meet the Owner's obligations to establish sampling points under this condition, the Owner shall consider both which streams should have sampling points and where on a stream a sampling point should be located.

3. 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 up on request.

4. USE OF SAMPLING POINTS

1. Subject to Condition 7(13), the Owner shall use the sampling points referenced in this Approval for all sampling required by this Approval.

5. ALTERNATE SAMPLING PROCEDURES

1. Where the Owner is, by virtue of Condition 7(1), required by the Ministry publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater Version 2.0" (January 2016), PIBS 2724e02, as amended from time to time, to collect a composite sample for any sample required to be picked up at a stream at the Owner's Plant under this Approval, the Owner may collect the composite sample by collecting three equal volume grab samples from the stream at intervals of at least two hours and combining them.
2. The Owner who is required to collect a composite sample from a Process Effluent Monitoring Stream under Condition 7(11) may instead collect a single grab sample from the stream if the Process Effluent Monitoring Stream flows from a Wastewater Treatment Facility and the retention time calculated under subsection 7(5)(3) of this condition in relation to the stream is two days or more.
3. A retention time in relation to a Process Effluent Monitoring Stream is the period of time in days that results from dividing the total available volume, expressed in cubic metres, of the wastewater treatment facilities on the stream by the average daily flow, expressed in cubic metres, of the stream.
4. For the purposes of subsection 7(5)(3) of this condition, the total available volume of the wastewater treatment facilities on the Process Effluent Monitoring Stream is the volume of the wastewater treatment facilities that may be occupied by water on any day within the 90-day period preceding the date of the calculation of the retention time, taking into account,
 - a. any requirements that apply in respect of the operation of those facilities in any Act or in any

approval, order, direction or other instrument issued under any Act; and,

- b. any solid waste or sludge contained within those facilities on the day of the calculation of the total available volume of those facilities.
5. For the purposes of subsection 7(5)(3) of this condition, the average daily flow of the Process Effluent Monitoring Stream is the arithmetic mean of the 30 highest daily volumes calculated under Condition 7(18) in relation to the stream within the ninety (90)-day period preceding the date of the calculation of the retention time.
6. The Owner may sample at a Process Effluent Monitoring Stream in the manner described in subsection 7(5)(2) of this condition for the period of time during which the retention time calculated in relation to the stream is in effect.
7. A retention time calculated under this condition expires three hundred sixty five (365) days after the date on which the calculation is made or on the date that a new retention time is calculated under this condition, whichever date is sooner.

6. CALCULATION OF LOADINGS - GENERAL

1. For the purposes of performing a calculation under Conditions 7(7) to 7(10), 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 Version 2.0" (January 2016), PIBS 2724e02, as amended; the Owner shall use the value zero for the purpose of performing a calculation under Conditions 7(7) to 7(10).
3. The Owner shall ensure that each calculation of a process effluent loading required by Condition 7(7) and each calculation of a process effluent concentration required by Condition 7(9) is performed as soon as reasonably possible after the analytical results on which the calculation is based become available to the Owner.
4. The Owner shall ensure that each calculation of a cooling water effluent loading required by Condition 7(8) is performed in time to comply with Condition 10(5)(4) and each calculation of a cooling water effluent concentration required by Condition 7(10) is performed in time to comply with Condition 11(5)(7).

7. CALCULATION OF LOADINGS - PROCESS EFFLUENT

1. The Owner shall calculate, in kilograms, a daily process effluent stream loading for total suspended solids in each process effluent monitoring stream of the Owner for each day on which a sample is collected under this Approval from the stream for analysis for total suspended solids.
2. When calculating a daily stream loading under subsection 7(7)(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 total suspended solids by the daily volume of effluent, as determined under Condition 7(18), for the stream for the day.
3. The Owner shall calculate, in kilograms, a daily process effluent plant loading for total suspended solids for each day for which the Owner is required to calculate a daily process effluent stream loading for total suspended solids under subsection 7(7)(1) of this condition.
4. For the purposes of subsection 7(7)(3) of this condition, a daily process effluent plant loading for total suspended solids for a day is the sum, in kilograms, of the daily process effluent stream loadings for total suspended solids calculated under subsection 7(7)(1) of this condition for the day.
5. Where the Owner calculates only one daily process effluent stream loading for total suspended solids for a day under subsection (1) of this condition, the daily process effluent plant loading for total suspended solids for the day for the purposes of subsection 7(7)(3) of this condition is the single daily process effluent stream loading for total suspended solids for the day.
6. The Owner shall calculate, in kilograms, a monthly average process effluent plant loading for total suspended solids 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 total suspended solids.
7. For the purposes of subsection 7(7)(6) of this condition, a monthly average process effluent plant loading for total suspended solids for a month is the arithmetic mean of the daily process effluent plant loadings for total suspended solids calculated under subsection 7(7)(3) of this condition for the month.

8. CALCULATION OF LOADINGS - COOLING WATER

1. The Owner shall calculate, in kilograms, a daily cooling water effluent stream loading for total suspended solids in each Cooling Water Effluent Monitoring Stream of the Owner for each day on which a sample is collected under this Approval from the stream for analysis for total suspended solids.

2. When calculating a daily stream loading under subsection 7(8)(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 total suspended solids by the daily volume of effluent, as determined under Condition 7(18), for the stream for the day.
3. The Owner shall calculate, in kilograms, a daily cooling water effluent plant loading for total suspended solids for each day for which the Owner is required to calculate a daily cooling water effluent stream loading for total suspended solids under subsection 7(8)(1) of this condition.
4. For the purposes of subsection 7(8)(3) of this condition, a daily cooling water effluent plant loading for total suspended solids for a day is the sum, in kilograms, of the daily cooling water effluent stream loadings for total suspended solids calculated under subsection 7(8)(1) of this condition for the day.
5. Where the Owner calculates only one daily cooling water effluent stream loading for total suspended solids for a day under subsection 7(8)(1) of this condition, the daily cooling water effluent plant loading for total suspended solids for the day for the purposes of subsection 7(8)(3) of this condition is the single daily cooling water effluent stream loading for total suspended solids for the day.
6. The Owner shall calculate, in kilograms, a monthly average cooling water effluent plant loading for total suspended solids for each month in which a sample is collected under this Approval more than once from a Cooling Water Effluent Monitoring Stream at the Owner's Plant for analysis for total suspended solids.
7. For the purposes of subsection 7(8)(6) of this condition, a monthly average cooling water effluent plant loading for total suspended solids for a month is the arithmetic mean of the daily cooling water effluent plant loadings for total suspended solids calculated under subsection 7(8)(3) of this condition for the month.

9. CALCULATION OF CONCENTRATIONS — PROCESS EFFLUENT

1. The Owner shall calculate, in milligrams per litre, a monthly average concentration for total suspended solids in each Process Effluent Monitoring Stream of the Owner for each month.
2. For the purposes of subsection 7(9)(1) of this condition, a monthly average concentration for total suspended solids for a month is the arithmetic mean of the analytical results obtained for total suspended solids from the samples collected under Condition 7(11) from the stream for the month.
3. Where there is only one analytical result obtained for total suspended solids from the stream for a day, the daily concentration for total suspended solids for the stream for the day for the purposes of

subsection 7(9)(1) of this condition is the single analytical result obtained for total suspended solids.

10. CALCULATION OF CONCENTRATIONS — COOLING WATER EFFLUENT

1. The Owner shall calculate, in milligrams per litre, a monthly average concentration for total suspended solids in each Cooling Water Effluent Monitoring Stream of the Owner for each month.
2. For the purposes of subsection 7(10)(1) of this condition, a monthly average concentration for total suspended solids for a month is the arithmetic mean of the analytical results obtained for total suspended solids from the samples collected under Condition 7(17) from the stream for the month.

11. 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 Total Suspended Solids.
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 7(11)(1) of this condition in a week shall be picked up on the same day in the week.

12. 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 15(1), the Owner shall collect and pick up a duplicate sample for each sample picked up on that day under Condition 7(11)(1) at one Process Effluent Sampling Point at the Owner's Plant and shall analyze each duplicate sample for total suspended solids.
2. There shall be an interval of at least six (6) months between successive Pick-Up days at the Plant under subsection 7(12)(1) of this condition.

13. PROCESS EFFLUENT – pH MEASUREMENT

1. The Owner shall, on one day in each week, during the time period applicable to the Plant under Condition 7(1)(11) or 7(1)(12), collect a grab sample from each Process Effluent Monitoring Stream at the Owner's Plant and shall analyze each sample for the parameter pH.
2. There shall be an interval of at least four (4) days between each of the collections at a stream under subsection 7(13)(1) of this condition in each week.
3. All samples collected under this condition shall be collected at the same time as samples collected

under Condition 7(11).

4. Instead of collecting a grab sample under subsection (1) of this condition from a stream, 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 week during the time period applicable to the Plant under Condition 7(1)(11) or 7(1)(12).
5. For the purposes of this condition, the Owner shall use either the sampling point maintained in this Approval under Condition 7(2) 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.
6. Before using an alternate sampling point under subsection 7(13)(5) of this condition, the Owner shall give the Director a written notice describing the location of the alternate sampling point, together with a revised version of the list and plot plan submitted under Condition 4 showing the alternate sampling point.

14. 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, on a day on which samples are picked up at the Plant under Condition 7(11)(1), the Owner shall collect and immediately pick up a grab sample at each Process Effluent Sampling Point at the Owner's Plant and shall perform a rainbow trout 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 7(14)(3) of this condition.
5. All samples picked up under subsection 7(14)(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 7(14)(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 7(14)(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.

7. Samples picked up at the Plant under subsection 7(14)(6) of this condition shall be picked up on a day on which samples are picked up at the Plant under subsection 7(14)(3) of this condition.
8. If no samples are being picked up at the Plant under subsection 7(14)(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 7(11)(1).
9. There shall be an interval of at least forty-five (45) days between successive Pick-Up days at the Plant under subsection 7(14)(6) of this condition.
10. All samples picked up under subsection 7(14)(6) of this condition in a Quarter shall be picked up on the same day in the Quarter.
11. If a rainbow trout acute lethality test performed under subsection 7(14)(6) 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(14)(6) to 7(14)(10) of this condition cease to apply in respect to samples from that sampling point, and the Owner shall instead comply with the requirements of subsection 7(14)(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.
12. 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.
13. Subsections 7(14)(2) to 7(14)(12) of this condition apply with necessary modifications to each Cooling Water Effluent Sampling Point and, for the purpose, the reference in subsection 7(14)(3) of this condition to each Process Effluent Sampling Point shall be deemed to be a reference to each Cooling Water Effluent Sampling Point and the reference in subsections 7(14)(3) and 7(14)(8) of this condition to Condition 7(11)(1) shall be deemed to be a reference to Condition 7(17)(1).

15. 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 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 7(14)(2) to 7(14)(13) 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 7(14), to the extent possible having regard to the frequency of monitoring required at the sampling point under this condition and Condition 7(14).

16. CHRONIC TOXICITY TESTING – FATHEAD MINNOW AND *CERIODAPHNIA DUBIA*

1. Where the Owner is required to perform a seven-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 Owner is required to perform a seven-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 a day on which samples are picked up at the Plant under Condition 7(11)(1), the Owner shall collect and immediately pick up a grab sample from each Process Effluent Sampling Point at the Owner's Plant, and shall perform a seven-day fathead minnow growth inhibition test and a seven-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 7(16)(3) of this condition.
5. All samples picked up under subsection 7(16)(3) of this condition in a Semi-annual Period shall be picked up on the same day in the Semi-annual Period.
6. 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.

17. COOLING WATER EFFLUENT – WEEKLY ASSESSMENT

1. The Owner shall, on one day in each week, pick up a set of samples collected at each Cooling Water Effluent Sampling Point at the Owner's Plant and shall analyze each set of samples for total suspended solids.
2. There shall be an interval of at least four (4) days between successive Pick-Up days at the Plant under subsection 7(17)(1) of this condition.
3. All samples picked up under subsection 7(17)(1) of this condition in a week shall be picked up on the same day in the week.

18. 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 referenced in this Approval 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 stream at the Owner's Plant for each day on which a sample is collected under this Approval from the stream.
3. The Owner shall use flow measurement methods that allow the daily volumes for process effluent streams to be determined to an accuracy of within plus or minus fifteen (15) per cent.
4. The Owner shall determine in cubic metres a daily volume of effluent for each cooling water effluent stream at the Owner's Plant for each day on which a sample is collected under this Approval from the stream.
5. The Owner shall use flow measurement methods that allow the daily volumes for cooling water effluent streams to be determined to an accuracy of within plus or minus twenty (20) 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 each flow measurement method used under subsection 7(18)(2) of this condition meets the accuracy requirements of subsection 7(18)(3) of this condition, that each flow measurement method used under subsection 7(18)(4) of this condition meets the accuracy requirements of subsection 7(18)(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 7(18)(3) or 7(18)(5) of this condition, as the case may be, within two (2) weeks after the day on which the new or altered method or system is used.
8. 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.
9. 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.

19. CALCULATION OF 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 7(19)(1) of this condition, a process effluent plant volume for a day is the sum of the daily process effluent volumes determined under Condition 7(18) 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 7(19)(1) of this condition for the month.
4. The Owner shall calculate, in cubic metres, a daily cooling water effluent plant volume for each day.
5. For the purposes of subsection 7(19)(4) of this condition, a cooling water effluent plant volume for a day is the sum of the daily cooling water volumes determined under Condition 7(18) for the day.
6. The Owner shall calculate, in cubic metres, a monthly average cooling water effluent plant volume for each month, by taking the arithmetic mean of the daily cooling water effluent plant volumes calculated under subsection 7(19)(4) of this condition for the month.

8. BYPASSES

1. The Owner shall not permit effluent that would ordinarily flow past the Final Process Effluent Sampling Point maintained under this Approval to be discharged from the Plant without flowing past that Final Process Effluent Sampling Point, 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 Final Process Effluent Sampling Point maintained on a process effluent stream in accordance with this Approval before being discharged.

9. OVERFLOWS

1. The Owner shall not permit Overflow Effluent to be discharged from the Plant unless it is unavoidable as a result of an extraordinary thaw or storm event.
2. The Owner shall establish, a Sampling Point on each Overflow Effluent stream at the Plant. The Owner shall, during each Eight(8)-hour Period in which Overflow Event is discharged, collect a grab sample of the Overflow Effluent Sampling Point and shall analyze each sample for each Assessment Parameter identified in Table D-1 of **Schedule D**. Each grab sample collected under subsection 9(1) of this condition shall be Picked-Up within four (4) hours of when it was collected.
3. At the beginning of an Overflow Event, the Owner shall immediately notify the Ministry Spills Action Centre (SAC) (telephone number: 1-800-268-6060). This notice shall include, at a minimum, the following information;
 - a. the date and time of the beginning of the Overflow;
 - b. the point of the Overflow from the Works, the treatment process(es) gone through prior to the Overflow, and whether the Overflow is discharged through the effluent disposal facilities or an alternate location;
 - c. the effort(s) done to maximize the flow through the downstream treatment process(es) and the reason(s) why the Overflow was not avoided.
4. Upon confirmation of the end of an Overflow Event, the Owner shall immediately notify the SAC. This notice shall include, at a minimum, the following information:
 1. the date and time of the end of the Overflow;
 2. the estimated or measured volume of the Overflow.
5. The Owner shall develop a notification procedure in consultation with the District Manager and SAC and notify the public and downstream water users that may be adversely impacted by any Overflow

Event.

6. The Owner shall forthwith develop a response plan for any Overflows, and document it in the Site Emergency Response and Preparedness Plan.

10. LIMITED OPERATIONAL FLEXIBILITY

1. The Owner may make modifications to the Works in accordance with the Terms and Conditions of this Approval and subject to the Ministry's "Limited Operational Flexibility Criteria for Modifications to Sewage Works ", included under **Schedule E** of this Approval, as amended.
2. Sewage works under Limited Operational Flexibility shall adhere to the design guidelines contained within the Ministry's publication "Design Guidelines for Sewage Works 2008", as amended.
3. The Owner shall ensure at all times, that the Works, related equipment and appurtenances which are installed or used to achieve compliance are operated in accordance with all Terms and Conditions of this Approval.
4. For greater certainty, the following are not permitted as part of Limited Operational Flexibility:
 - a. Modifications to the Works that result in an increase of the 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*

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.

11. REPORTING

1. General

1. The Owner shall report to the District Manager orally as soon as possible any non-compliance with the compliance limits, and in writing within seven (7) days of non-compliance.
2. The Owner shall, within fifteen (15) days of occurrence of a spill within the meaning of Part X of the EPA, submit a full written report of the occurrence to the District Manager describing the cause and discovery of the spill, clean-up and recovery measures taken, preventative measures to be taken and schedule of implementation, in addition to fulfilling the requirements under the EPA and O. Reg. 675/98 "Classification and Exemption of Spills and Reporting of Discharges".
3. The Owner shall prepare performance reports on a calendar year basis and submit to the District Manager by March 31 of the calendar year following the period being reported upon. The reports shall contain, but shall not be limited to, the following information pertaining to the reporting period:
 - a. a summary and interpretation of all monitoring data and Final Effluent monitoring data, including concentration, flow rates and compliance limits in this Approval, including an overview of the success and adequacy of the Works;
 - b. a summary of any deviation from the monitoring schedule and reasons for the current reporting year and a schedule for the next reporting year;
 - c. a summary of all operating issues encountered and corrective actions taken;
 - d. a summary of all normal and emergency repairs and maintenance activities carried out on any major structure, equipment, apparatus or mechanism forming part of the Works;

- e. a summary of any effluent quality assurance or control measures undertaken;
 - f. a summary of the calibration and maintenance carried out on monitoring equipment to ensure that the accuracy is within the tolerance of that equipment as required in this Approval or recommended by the manufacturer;
 - g. a summary of efforts made to achieve the effluent limits in this Approval, including an assessment of the issues and recommendations for pro-active actions required, if any;
 - h. a summary of any complaints received and any steps taken to address the complaints;
 - i. a summary of all Bypasses, Overflows, other situations outside Normal Operating Conditions and spills within the meaning of Part X of EPA and abnormal discharge events.
4. The Owner shall, upon request, make all manuals, plans, records, data, procedures and supporting documentation available to Ministry staff.
 5. Owner shall keep records of all analytical results obtained under Conditions 7(11), 7(13) and 7(17), all calculations performed under Conditions 7(7) to 7(10) and all determinations and calculations made or performed under Conditions 7(18) and 7(19).
 6. Owner shall keep records of all sampling and analytical procedures used in meeting the requirements of Condition 7(1), including, for each sample, the date, the time of Pick-Up, the sampling procedures used, and any incidents likely to affect the analytical results.
 7. Owner shall keep records of all retention times calculated under Condition 7(5).
 8. Owner shall keep records of the results of all monitoring performed under Conditions 7(12), and 7(14) to 7(17).
 9. Owner shall keep records of all maintenance and calibration procedures performed under Condition 7(18).
 10. 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.
 11. Owner shall keep records of any incident in which Process Effluent is discharged from the Owner's Plant without flowing past a sampling point on a process effluent stream in accordance with this Approval before being discharged, stating the date, duration, cause and nature of each incident.

12. 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 referenced in this Approval at the Owner's Plant.
13. The Owner shall keep records of the location of each sampling point referenced in this Approval at the Owner's Plant.
14. 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.
15. 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.

2. REPORTS AVAILABLE TO THE PUBLIC

- a. On or before June 1 in each year, the Owner shall prepare a report relating to the previous calendar year and including,
 - a. a summary of plant loadings calculated under Conditions 7(7) and 7(8);
 - b. a summary of concentrations determined under Conditions 7(9) and 7(10);
 - c. a summary of retention times calculated under Condition 7(5);
 - d. a summary of the results of monitoring performed under Conditions 7(11) and 7(13) to 7(17);
 - e. a summary of calculations performed under Conditions 7(18)(2) and 7(18)(4), Conditions 7(19)(1) and 7(19)(4);
 - f. a summary of the concentrations or other results that exceeded a limit prescribed by Condition 7(11) or 7(12); and
 - g. a summary of the incidents in which Process Effluent was discharged from the Owner's Plant without flowing past a sampling point on a process effluent stream in accordance with this Approval before being discharged.
2. The Owner shall ensure that each report prepared under subsection 11(2)(1) of this condition is available to any person at the Owner's Plant, on request during the Plant's normal office hours.
3. The Owner shall provide the Director, upon request, with a copy of any report that the Owner has

prepared under subsection 11(2)(1) of this condition.

3. 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 referenced in this Approval at the Owner's Plant, within thirty (30) days of the change or redirection.
2. The Owner need not comply with subsection 11(3)(1) of this condition where the effect of the change or redirection on effluent quality is of less than one (1) week's duration.

4. REPORTS TO THE DISTRICT MANAGER - INCIDENT

1. The Owner shall report any incident in which Process Effluent is discharged from the Owner's Plant without flowing past a sampling point on a process effluent stream in accordance with this Approval before being discharged.
2. The Owner shall report any concentration or other result that exceeds a limit prescribed by Condition 7(11) or 7(12).
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.

5. QUARTERLY REPORTS TO THE DISTRICT MANAGER

1. The Owner shall prepare a Quarterly Report, no later than forty five (45) days after the end of each Quarter, and submit to the District Manager in an electronic format, containing information relating to the Owner's Plant throughout the Quarter as required by subsections 11(5)(3) to 11(5)(10) 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(4) during the Quarter.
4. The Owner shall report, for each month in the Quarter, the monthly average plant loadings and the highest and lowest daily plant loadings calculated under Conditions 7(7) and 7(8) for total suspended solids.
5. The Owner shall report, for each month in the Quarter, the monthly average concentrations calculated under Condition 7(9) and the highest and lowest analytical results obtained under Condition 7(15) for total suspended solids in each Process Effluent Monitoring Stream at the

Owner's Plant.

6. For Condition 11(5), the Owner shall submit the data electronically using the current Ministry of Environment, Conservation and Parks Wastewater System (also known as 'MEWS'). MEWS is accessible at <https://www.mewsontario.ca/>, as updated from time to time. The submission type selected in MEWS must be set to "Detail" to complete the data submission. The Owner shall use MEWS to generate and download the Summary Discharges Reports and send those to the District Manager at Environment.Kingston@Ontario.ca.
7. The Owner shall report, for each month in the Quarter, the monthly average concentrations calculated under Condition 7(10) and the highest and lowest analytical results obtained under Condition 7(17) for total suspended solids in each Cooling Water Effluent Monitoring Stream at the Owner's Plant.
8. The Owner shall report, for each month in the Quarter, the monthly average process effluent plant volume and the highest and lowest daily process effluent plant volumes calculated under Condition 7(19).
9. The Owner shall report, for each month in the Quarter, the monthly average cooling water effluent plant volume and the highest and lowest daily cooling water effluent plant volumes calculated under Condition 7(19).
10. The Owner shall report the number of days in each month in the Quarter on which Process Effluent, or Cooling Water Effluent was discharged from the Owner's Plant.
11. The Owner shall report, for each month in the Quarter, the highest and lowest pH results obtained under Condition 7(13) for each Process Effluent Monitoring Stream at the Owner's Plant.

6. 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 11(6)(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-five (25) per cent reduction in growth or reproduction would occur.
3. The report for Condition 11(6) shall be submitted to the District Manager by regular mail or by email using email address, Environment.Kingston@Ontario.ca.

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 regarding change of Owner and Operating Agency is included to ensure that the Ministry records are kept accurate and current with respect to ownership and Operating Agency 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.
4. Condition 4 is included to ensure that the Works are constructed in accordance with the approval and that record drawings of the Works “as constructed” are maintained for future references.
5. Condition 5 regarding compliance limits is imposed to ensure that the Final Effluent discharged from the Works to the environment meets the Ministry's effluent quality requirements.
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 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 compliance limits.
8. Condition 8 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.

9. Condition 9 regarding Overflows is included to indicate that Overflow of untreated or partially treated sewage to the receiver is prohibited, except in circumstances where the failure to Overflow could result in greater damage to the environment than the Overflow 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 Overflow Events.
10. Condition 10 regarding Limited Operational Flexibility is included to ensure that the Works are constructed, maintained and operated in accordance with the Approval, and that any pre-approved modification will not negatively impact on the performance of the Works.
11. Condition 11 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.

Schedule A

1. Application for Environmental Compliance Approval April 6, 2021 and received on April 7, 2021.

Schedule B

Final Effluent Compliance Limits - Proposed Ammonia Containment Pad

sampled at: Containment Pad Catch Basin

Final Effluent Parameter	Averaging Calculator	Limit (maximum unless otherwise indicated)
Oil/Grease	Single Sample Result	15 mg/L
Un-ionized Ammonia	Single Sample Result	0.02 mg/L

Final Effluent Compliance Limits - Waste Stabilization Pond/Lagoon

Sample Point/Process Effluent Sample Point - Discharge to the storm sewer system - SMH #9
downstream of Waste Stabilization Pond

Final Effluent Parameter	Averaging Calculator	Limit (maximum unless otherwise indicated)
CBOD5	Monthly Average Effluent Concentration	30.0 mg/L
Total Suspended Solids	Monthly Average Effluent Concentration	25.0 mg/L
pH	Single Sample Result	between 6.0 - 9.5 inclusive

Final Effluent Compliance Limits - Main Settling Pond/MISA Pond

A. Compliance Limits Prior to the Construction of LCF 1

Process Effluent Sample Point/sample point: Control Point 0400

Final Effluent Parameter	Averaging Calculator	Limit (maximum unless otherwise indicated)
Total Suspended Solids	Monthly Average Effluent Concentration	25.0 mg/L
Total Suspended Solids	Single Sample Result	50.0 mg/L
pH	Single Sample Result	between 6.0 - 9.5 inclusive
Un-ionized Ammonia	Single Sample Result	0.02 mg/L

B. Compliance Limits After Construction of LCF 1

Process Effluent Sample Point/sample Point: Control Point 0400

Final Effluent Parameter	Averaging Calculator	Limit (maximum unless otherwise indicated)
CBOD5	Single Sample Result	30.0 mg/L
Total Suspended Solids	Monthly Average Effluent Concentration	25.0 mg/L
Total Suspended Solids	Single Sample Result	50.0 mg/L
pH	Single Sample Result	between 6.0 - 9.5 inclusive
Un-ionized Ammonia	Single Sample Result	0.02 mg/L
Benzo(a)pyrene	Single Sample Result	0.21 microgram per Litre
Pentachlorophenol	Single Sample Result	4.95 microgram per Litre at pH 6.7

Schedule C

Monitoring Program For Sewage Works

Ammonia Containment Pad

Sample Point: : Containment Pad Catch Basin

Parameters	Sample Type	Minimum Frequency
Oil/Grease	Grab	Weekly***
Un-ionized Ammonia	Online Monitor**	Weekly*

* When there is discharge to storm sewer system going to the MISA Pond

** calculated using online monitoring system (ammonia, pH, Temperature). Grab samples may be collected weekly in case Online Monitor is not available

***To be collected only if a visible sheen is present on surface of effluent to be discharged, when there is discharge during that week.

Waste Stabilization Pond

Process Effluent Sample Point/sample point: SMH #9 downstream of Waste Stabilization Pond

Parameters	Sample Type	Minimum Frequency
CBOD5	Grab	Weekly*
Total Suspended Solids	Grab	Weekly*
<i>E. coli</i>	Grab	Weekly*
pH	Grab	Weekly*

* a minimum of once per week when there is discharge to the storm sewer system

Monitoring Program For Sewage Works - Main Settling Pond

Final Effluent Process Effluent Sample Point/Sampling point: Control Point 0400

Parameters	Sample Type	Minimum Frequency
pH	Grab	Weekly*
Temperature	Grab	Weekly*
Un-ionized Ammonia	Calculated	Weekly*
Total Suspended Solids	Grab	Weekly

* The pH of the effluent from the Works shall be determined using the online pH monitor installed in the field.

Surface Water Monitoring for the Proposed LCF 1* - Process Effluent Sample Point/Sampling point: Control Point 0400

Parameters	Sample Type	Minimum Frequency
Total Suspended Solids	Grab	Quarterly
CBOD ₅	Grab	Quarterly
pH	Grab	Quarterly
E. Coli	Grab	Quarterly
Polycyclic Aromatic Hydrocarbons	Grab	Quarterly
Semi-volatile Hydrocarbons	Grab	Quarterly
Pentachlorophenol	Grab	Quarterly
Total Metals	Grab	Quarterly

*The samples shall be collected after the grading pad and run-off collection pond at LCF 1 are constructed and commencement of the shredding operations as part of the Low Carbon Fuels Project, at the Lafarge Bath Plant.

Schedule D

Groundwater Monitoring Program For Sewage Works - LCF 1*

Parameters	Sample Type	Minimum Frequency
polycyclic aromatic hydrocarbons	Grab	Semi-annually
semi-volatile hydrocarbons	Grab	Semi-annually
dissolved metals	Grab	Semi-annually
dissolved phenols	Grab	Semi-annually

*The samples shall be collected after the grading pad and run-off collection pond are constructed and commencement of the shredding operations as part of the Low Carbon Fuels Project, at the Lafarge Bath Plant, however, at least one sample shall be collected prior to the construction of grading pad and run-off collection pond.

Schedule E

Limited Operational Flexibility Criteria for Modifications to Industrial Sewage Works

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

C. Sewage Treatment Plant Outfall

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

D. 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.

E. 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.

F. 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.

Upon issuance of the environmental compliance approval, I hereby revoke Approval No(s). 7690-B9CP5U issued on February 27, 2020 and Notice No. 1 dated January 27, 2021.

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

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

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

The Notice should also include:

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

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

This Notice must be served upon:

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

and

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

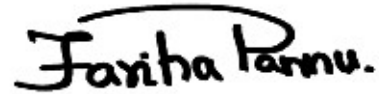
and

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

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

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

The above noted activity is approved under s.20.3 of Part II.1 of the *Environmental Protection Act*.
DATED AT TORONTO this 31st day of March, 2022



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

KH/
c: District Manager, MECP Kingston District.
Ian Hutcheson, P.Eng., Pinchin Ltd.