

Ministry of the Environment, Conservation and Parks Ministère de l'Environnement, de la Protection de la nature et des Parcs

ENVIRONMENTAL COMPLIANCE APPROVAL

NUMBER 6773-CBBRY6 Issue Date: February 4, 2022

Cobalt Camp Refinery Ltd.

333 Bay St W

Post Office Box, No. 20059

Toronto, Ontario

M5H 0A1

Site Location: Cobalt Camp Refinery Ltd.

Lot 1 Con 12 (Silver Centre Road - HWY 567)

Unorganized Township of Lorrain District of Timiskaming, Ontario

You have applied under section 20.2 of Part II.1 of the <u>Environmental Protection Act</u>, R.S.O. 1990, c. E. 19 (Environmental Protection Act) for approval of:

the upgrades/expansion, usage and operation of sewage Works for the collection, transmission, treatment and disposal of Process Effluent including refinery process wastewater, Blowdown Water, Cooling Water Effluent, as well as accumulated stormwater runoff and tailing bleed from the Tailing Area and all other contact stormwater runoff from the drainage areas of the Cobalt Camp Refinery Ltd. (Plant) located at the above Site Location, serving the Plant for a maximum production capacity of 25,000 tonnes per year of cobalt sulphate (or 5,100 tonnes per year of cobalt), having a Rated Capacity of 14,342 cubic meters per day, with Final Process Effluent discharging into Lake Timiskaming, consisting of the following:

PROPOSED WORKS

Wastewater Treatment Facility

Tailings Area (Tailing Storage Facility (TSF))

one (1) existing Tailings Impoundment Area (Autoclave Pond) to be utilized for the storage of historical tailings and up to 1000 cubic metres of water (for emergency water purposes: fire or process make-up water) providing 82,000 cubic metres of total storage with a provision of approximately 1.0 metre of freeboard at all times, to be operated as a zero-discharge facility, with all ponded water pumped back through a pipeline for the refinery make-up water, as necessary, or to be pumped directly to the existing Upper Pond described below under emergency circumstances;

- new Tailings Area, Tailing Storage Facility (TSF), for the storage (dry stack) of tailings, as well as the management storage of stormwater runoff from the TSF Catchment Area, with a total tailing storage capacity of approximately 203,000 cubic meters and water storage capacity of 11,500 cubic metres, consisting of the following:
 - **Stage 1**: tailings storage area consisting of Cells A, B, and C to provide an overall tailings storage and associated water management capacity of 60,000 cubic metres
 - **Stage 2**: additional tailings storage capacity of 76,000 cubic metres provided by raising southern portion of the Main TSF Embankment (around previously excavated Cells A, B and C) to an elevation of approximately 252.5 masl and northern portion raised to an elevation of 250 masl.
 - **Stage 3**: additional tailings storage capacity of 67,000 cubic metres by raising southern portion of Main TSF Embankment to an elevation of approximately 253.7 masl and northern portion to an elevation of 251 masl.
 - managing accumulated stormwater runoff and tailings bleedings via pipeline as described in the table below:

Pipeline No.	1	2	3	4	5	6
	Cell A to	Cell C to	Cell B to	Cell C to TSF	TSF Water	TSF Seepage
Location	Cell C	Refinery	Cell C	Water Pond	Pond to Refinery	Collection Sump to TSF Water Pond
D : D :					Remiery	151 Water Fond
Pumping Rate (m3/hr)	16	47	17	82	94	38
Pipe Size (mm)	75	150	75	150	150	100
Pipe Length (m)	35	500	40	150	650	30

- one (1) emergency spillway located at the Main TSF Embankment (Stage 2 and Stage 3) discharging Overflow Effluent to ground surface west of the TSF Water Pond for Stages 2 and 3;
- Under Stage 1 for the first two (2) operation stages (Stage 1a and Stage 1b), Cell C is to be temporarily operated as a water pond, with collected water to be discharged (via Pipeline 2) to the refinery into an Effluent Treatment Collection Tank;
- one (1) TSF Water Pond (to be constructed during Stage 1b) with a maximum crest elevation of 247 masl and having a design storage capacity of approximately 6,000 cubic metres, receiving water from the TSF and Seepage Collection Sump, complete with an emergency overflow spill way to direct Overflow Effluent to ground surface at the southeast corner of the TSF Water Pond, with accumulated water to be pumped (via Pipeline 5) into the Effluent Collection Tank for treatment; and
- Tailing Area seepage collection system consisting of one (1) TSF Seepage Collection Ditch, one (1) TSF Seepage collection Sump for the collection of groundwater seepage from the Tailing Area, pumping water (via Pipeline 6) into the TSF Water Pond.

Effluent Treatment System

- one (1) new Effluent Treatment System, having a design capacity of 200 cubic metres per hour, receiving wastewater from refinery process, effluent from the TSF Water Pond/Cell C, the Autoclave Pond and the Upper Pond (in emergency circumstances), consisting of the following:
 - one (1) Effluent Treatment Collection Tank, having dimensions of approximate 5 metres (diameter) by 6 metres (height) with an operation volume of 100 cubic metres, equipped a dual-impeller agitator, discharging into an Effluent Treatment Tank;
 - two (2) Effluent Treatment Tanks, operating in series, each having dimensions of approximate 5 metres (diameter) by 6 metres (height) with an operation volume of 100 cubic metres, and each equipped with a dual-impeller agitator for the mixing of lime, discharging into a clarifier;
 - one (1) lime slurring preparation and dosing system consisting of an existing 130 tonne capacity lime silo and conveyance system including a lime slurry mix tank and one lime slurry addition system consisting of a dual pumping system (duty/standby) for dosing lime slurry to the Effluent Treatment Tanks;
 - one (1) Clarifier complete with feed well, hydraulic driven rake e and rake lift mechanism, equipped with a sludge pump for the conveyance of sludge to a clarifier sludge de-watering system, recirculating a portion of sludge for seeding to the Effluent Treatment Collection Tank, and discharging the treated wastewater via an overflow launder into a Clarifier Overflow Tank and then pumped into an existing settling pond (Upper Pond);
 - one (1) sulphuric acid addition system comprises an existing 190 cubic metre storage tank and a dosing pump, and coagulant/flocculant addition systems each comprising of a mixing and aging tank and a dosing pump;
 - one (1) clarifier sludge de-watering system, consisting of a 20 square metre belt filter, a vacuum pump, a 0.6 cubic metre filtrate tank with a filtrate pump, and a sump pump with a capacity of 20 cubic metres per hour to return spillage from the effluent treatment area, discharging both filtrate and spillage back into the Effluent Treatment Collection Tank;
- one (1) existing primary settling pond (Upper Pond), receiving effluent from the Clarifier as well as stormwater runoff from drainage areas (Catchment Area 1, Catchment Area 2 and Upper Pond Catchment), with a maximum crest elevation of 250.8 metres above sea level (masl), having a design storage capacity of approximately 19,000 cubic metres with an average operational volume of 11,500 cubic metres, discharging effluent via pumping system and pipeline into a secondary clear water pond (Lower Pond) and equipped with a spillway to the Lower Pond;
- one (1) existing secondary settling pond (Lower Pond), with a maximum crest elevation of 246.8 masl, having a design storage capacity of approximately 20,000 cubic metres and an operation volume of 15,000 cubic metres, discharging effluent via pumping system and Lower Pond Pipeline described below into a water collection tank (CCR Discharge Tank), and discharging Overflow Effluent via an

emergency spillway to the ground surface on the west side of the pond; and

• pumping system and Lower Pond Pipeline for the conveyance of effluent from Lower Pond to the CCR Discharge Tank at a flow rate of 139 cubic metres per hour at Normal Operation Conditions (average annual monthly precipitation) and 151 cubic metres per hour for the operation condition with the 20-year Storm Event, and 167 cubic metres per hour during a 24-hour 100 year return interval precipitation event.

Cooling Water Discharge System

• Cooling water discharge system with an annual average hourly design flow rate of 450 cubic metres/hour, discharging into the CCR Discharge Tank.

Final Process Effluent Disposal Facility

- one (1) water collection tank CCR Discharge Tank, with dimensions of 4.5 metres in diameter by 9.0 metres high, equipped with baffles, receiving treated wastewater from the Lower Pond, and cooling water discharge, equipped with dual pumps (duty/standby);
- one (1) 2,300 to 3,000 meter long Discharge Pipeline (forcemain), discharging the Final Process Effluent, via an Outfall equipped with multi-port Diffuser, into Lake Timiskaming;
- Final Process Effluent Sampling Point, on the discharge pipeline down-stream of the Discharge Tank; and
- Final Process Effluent flow measurement device one (1) flow meter, located on the discharge pipeline.

Miscellaneous

• all other mechanical system, electrical system, instrumentation and control system, , piping, pumps, valves and appurtenances essential, including erosion/sedimentation control measures during construction, 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 submitted supporting documents listed in Schedule A.

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

- 1. "Assessment Parameter" means a parameter that is listed in **Schedule D (monitoring program)** in this Approval;
- 2. "Approval" means this environmental compliance approval including any schedules attached to it, and the application;
- 3. "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;
- 4. "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 Final Effluent sampling point and discharged via the approved effluent disposal facilities;
- 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. "daily volume of effluent" for a stream volume is the volume that flowed past the sampling point maintained 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.
- 7. 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;
- 8. "District Manager" means the District Manager of the appropriate local district office of the Ministry where the Works is geographically located;
- 9. "Eight(8)-hour Period" means the period between:
 - a. midnight and 8 a.m.;
 - b. 8 a.m. and 4 p.m.; or
 - c. 4 p.m. and midnight
- 10. "EPA" means the *Environmental Protection Act*, R.S.O. 1990, c.E.19, as amended;
- 11. "Equivalent Equipment" means alternate piece(s) of equipment that meets the design requirements and performance specifications of the piece(s) of equipment to be substituted;
- 12. "Event" means an action or occurrence, at a given location within the Works that causes an Overflow. An Event ends when there is no recurrence of Overflow in the 12-hour period following the last Overflow:
- 13. "Final Process Effluent" means Process Effluent that is discharged to the environment through the approved effluent disposal facilities, that are required to meet the compliance limits stipulated in the Approval for the Wastewater Treatment Facility at the Final Process Effluent Sampling Point;
- 14. "Final Process Effluent Monitoring Stream" means a process effluent stream on which a sampling point is maintained under Condition 10 regarding monitoring and recording;
- 15. "Final Process Effluent Sampling Point" means a sampling point maintained on a process effluent stream

- under Condition 10 regarding monitoring and recording;
- 16. "ICP Metal Scan" in the Approval includes: Aluminium, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Tungsten, Uranium, Vanadium, Zinc, and Zirconium.
- 17. "Limited Operational Flexibility" (LOF) means the conditions that the Owner shall follow in order to undertake any modification that is pre-authorized as part of this Approval;
- 18. "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;
- 19. "Limited Parameter" means a parameter for which a limit is specified in **Schedule** C (effluent limits) in this Approval;
- 20. "Metal" means antimony, bismuth, cadmium, chromium, cobalt, copper, gold, iron, lead, manganese, mercury, molybdenum, niobium, nickel, palladium, platinum, silver, tantalum, tellurium, thorium, tin, titanium, tungsten, uranium, vanadium or zinc, or any combination thereof;
- 21. "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;
- 22. "Monthly Average Effluent Concentration" is the mean of all Single Sample Results of the concentration of a contaminant in the Final Process Effluent sampled or measured during a calendar month.
- 23. "Monthly Average Daily Volume of Effluent" means the cumulative total Daily Volume of Effluent discharged during a calendar month divided by the number of days during which the stream effluent was discharged that month;
- 24. "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;
- 25. "Overflow Effluent" means effluent discharged from the Tailing Area and/or the Lower Pond through a spillway or other engineered structure designed to protect the Tailings Area from failure in the event of an extraordinary thaw or storm event;
- 26. "Overflow Effluent Monitoring Stream" means an overflow effluent stream on which a sampling point is maintained under Condition 6 regarding Overflows;
- 27. "Overflow Effluent Sampling Point" means a sampling point maintained on an overflow effluent stream under Condition 6 regarding Overflows;
- 28. "Owner" means Cobalt Camp Refinery Ltd. and its successors and assignees;

- 29. "OWRA" means the Ontario Water Resources Act, R.S.O. 1990, c. O.40, as amended;
- 30. "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;
- 31. "Plant" means the industrial facility that produces Metal, Metal concentrates or Metal-bearing substances and the developed property, waste disposal sites and Wastewater Treatment Facilities and Final Effluent disposal facility associated with it; and it means Cobalt Camp Refinery Ltd. in this Approval;
- 32. "Process Change" means a change in equipment, production processes, Process Materials or treatment processes;

33. "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 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;
- 34. "Process Materials", in relation to the 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;
- 35. "Proposed Works" means those portions of the Works included in the Approval that are under construction or to be constructed.
- 36. "Quarter" means a period of three (3) consecutive months beginning on the first day of January, April, July or October;
- 37. "Rated Capacity" means the Monthly Average Daily Volume of Effluent for which the sewage works are approved to handle;
- 38. "Single Sample Result" means the test result of a parameter in the effluent discharged on any day, as measured by a probe, analyzer or in a composite or grab sample, as required;
- 39. "Tailings Area" means an area that is confined by artificial or natural structures or both and that is used for the disposal of finely divided solid waste materials produced as a result of the processing of Metal,

Metal concentrates or Metal-bearing substances.

- 40. "Wastewater Treatment Facility" means all the facilities related to sewage treatment within Plant includes Tailing Area (Tailing Storage Facility TSF), excluding the Final Effluent disposal facility; and
- 41. "Works" means the approved sewage works, and includes Proposed Works, existing 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 any document referred to in this Approval and the conditions of this Approval, the conditions in this Approval shall take precedence.
- 4. The issuance of, and compliance with the conditions of this Approval does not:
 - a. relieve any person of any obligation to comply with any provision of any applicable statute, regulation or other legal requirement, including, but not limited to, the obligation to obtain 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 AGENCY

- 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 Agency;
 - b. change of Operating Agency, including address of new Operating Agency.
- 3. In the event of any change in ownership of the Works, the Owner shall notify the succeeding owner in writing, of the existence of this Approval, and forward a copy of the notice to the District Manager.
- 4. The Owner shall ensure that all communications made pursuant to this condition refer to the 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 **ten** (10) 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. PROCESS CHANGE in FEEDSTOCK

1. When new feedstock or combination of feedstocks are accepted at the Plant, the Owner shall provide a notification to the District Manager, in writing, within thirty (30) days of the acceptance of the new feedstock.

- 2. To add a new feedstock to Table C-1, the following minimum test work shall be submitted to the District Manager for concurrence: x-ray diffraction, trace metals (include but are not limited to the ICP Metal Scan) analysis, acid-base accounting, shake flask extraction analysis and modelling of the waste water treatment and refinery processes. The results of this test and its interpretation shall be provided to the District Manager for concurrence, in writing, regarding using the Table C-1 of Schedule C for the new feedstock, before processing of the new feedstock is initiated.
- 3. Based on the test work above, if it is necessary to add one or two parameters from the comprehensive Table C-2 to the shorter Table C-1, to enable the shorter list to apply to a new feedstock, the Owner shall apply for an amendment to the Environmental Compliance Approval.
- 4. The Owner need not comply with subsection 1 where the effect of the change of feedstock (Process Material) is of less than one week's duration.

5. 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.

6. 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 (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:
 - a. the date and time of the end of the Overflow;
 - b. 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.

7. DESIGN OBJECTIVES

- 1. The Owner shall design and undertake everything practicable to operate the Wastewater Treatment Facilities in accordance with the following objectives:
 - a. Final Process Effluent parameters objectives listed in the Table B-1 included in **Schedule B**.
 - b. Final Process Effluent is essentially free of floating and settleable solids and does not contain oil or any other substance in amounts sufficient to create a visible film or sheen or foam or discolouration on the receiving waters.
 - c. Rated Capacity of 14,342 cubic meters per day for the Final Process Effluent from the Wastewater Treatment Facility.
- 2. In the event that the effluent water quality consistently exceeds any one or more of the objectives noted in Table B-1 of Schedule B (three consecutive monthly average sampling results are above the monthly average concentration objective for a given parameter) or does not meet the objectives in subsection 1(b) or 1(c) above over a period of three consecutive months, the Owner shall, within **four (4) months** of occurrence, submit to District Manager, a study reporting on the causes and impacts of the higher concentration(s) or un-achieved objectives, along with a corrective action plan developed in consultation with District Manager.

8. COMPLIANCE LIMITS

1. The Owner shall operate and maintain the Wastewater Treatment Facilities such that compliance limits

for the Final Effluents parameters listed in following tables included in **Schedule C** are met:

- a. Table C-1 of **Schedule C**, when the Mutanda Feedstock is processed, or another feedstock that has had geochemical analysis completed as detailed in Condition 4.2 regarding process change in Feedstock, and concurrence has been obtained from the MECP in writing, for this feedstock to be covered by Table C-1; and
- b. Table C-2 of **Schedule C**, when any feedstocks other than the Mutanda Feedstock (or another feedstock approved in accordance with subsection 1 above to have Table C-1 apply to) and/or combinations of feedstocks are processed.

9. 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 maintain an up to date operations manual and make the manual readily accessible for reference at the Works for the operational life of the Works. Upon request, the Owner shall make the manual available to Ministry staff.
- 4. The Owner shall ensure that the Operating Agency possesses the level of training and experience sufficient to allow safe and environmentally sound operation of the Works.

10. MONITORING AND RECORDING

- 1. The Owner shall, upon commencement of operation of the Proposed Works, carry out a scheduled 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 listed in the tables under the monitoring program included in **Schedule D** 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
 - d. For Thrice Weekly sampling, there shall be an interval of at least twenty (24) hours between successive Pick-Up days at the Plant; and all the samples picked up in a week shall be picked up on the same three (3) days in the week.
 - e. For Weekly sampling, there shall be an interval of at least four (4) days between successive Pick-Up days at the Plant; and all the samples picked up in a week shall be picked up on the same day in the week.
 - f. For Monthly sampling, there shall be an interval of at least fifteen (15) days between successive Pick-Up days at the Plant; and all the samples picked up in a month shall be picked up on the same day in the month.
 - g. For Quarterly, there shall be an interval of at least forty-five (45) days between successive Pick-Up

days at the Plant; and all the samples picked up in a quarter shall be picked up on the same day in the quarter.

- h. For Semi-annually, there shall be an interval of at least ninety (90) days between successive Pick-Up days at the Plant; and all the samples picked up in a semi-annual shall be picked up on the same day in the Semi-annual period.
- i. Where picking-up samples are required for parameters requiring Thrice Weekly or Weekly sampling, the Owner shall pick up samples collected over the twenty-four (24) hour period immediately preceding the Pick-Up.
- j. The Owner shall undertake the Final Process Effluent monitoring quality control measures as outlined in Table D-2 Quality Control Final Process Effluent Monitoring of **Schedule D**.
- k. The sampling points, measurement frequencies, and sampling parameters specified in the monitoring program outlined in **Schedule D** in respect to any parameter may, after on (1) year of monitoring in accordance with this Condition, be modified by the Director in writing.
- 2. The Owner shall download water level data from the Water Survey of Canada Station #02JE011, Lake Timiskaming at Haileybury, on a quarterly basis.
- 3. The Owner shall develop in consultation with and submit to the District Manager within 60 days of the issuance of this Approval, a plan or terms of reference for effluent mixing zone validation, as follows
 - a. This sampling plan shall include, but not be limited to the following:
 - i. In-situ conductivity and temperature measurements in the water column taken at regular intervals across the mixing zone in a transect or a radius to delineate the extent of the mixing zone;
 - ii. The sampling shall occur during effluent discharge over a range of wind speeds and wind directions, while attempting to target the modelled worst-case scenario; and
 - iii. Reporting requirements and proposed additional monitoring.
 - b. Following acceptance of the plan by the District Manager, the Owner shall carry out the mixing zone assessment including sampling within 8-12 months, or as soon as possible once the water treatment system is operating at full capacity and the modelled worst-case scenario is targetable in Lake Timiskaming.
- 4. The Owner shall keep an updated list and plot plan showing the sampling points maintained under this Approval at the Plant and submit to the Ministry upon request.
- 5. Despite Subsection 1, the Owner need not collect samples from any stream at the Plant on a day on which Process Effluent is not being discharged from the Plant.

- 6. 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:
 - a. the Ministry's publication "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater Version 2.0" (January 2016), PIBS 2724e02, as amended;
 - b. the publication "Standard Methods for the Examination of Water and Wastewater", as amended;
 - 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, subject to the following:
 - i. 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;
 - d. Environment Canada publication entitled "Biological Test Method: Test of Larval Growth and Survival Using Fathead Minnows", and/or "Biological Test Method: Test of Reproduction and Survival Using the Cladoceran Ceriodaphnia dubia ", as amended from time to time; and
 - e. for any parameters not mentioned in the documents referenced in Paragraphs 6.a, 6.b, 6.c and 6.d, the Owner shall ensure that those parameters are analysed by a laboratory accredited, by the Canadian Association for Laboratory Accreditation, to analyse that particular parameter.
- 7. The minimum monitoring frequency with respect to acute lethality to Rainbow Trout and Daphnia magna shall, after twelve (12) consecutive monthly monitoring results not indicating acute lethality, be reduced to Quarterly. If any Final Process Effluent sample indicates acute lethality to Rainbow Trout or Daphnia magna, the monitoring frequency shall revert back to Monthly and the Owner shall carry out the following immediately:
 - a. Review the following:
 - i. Final Process Effluent quality and confirm that concentrations of ammonia are within the limits;

- ii. plant operations around the time of the toxicity event; and
- iii. all data available regarding plant operations and Final Process Effluent quality.
- b. If the observed effluent toxicity is not associated with ammonia, an investigation shall be undertaken to determine the cause or source of the toxicity.
- c. Upon determination of cause or source of acute lethality to Rainbow Trout or Daphnia magna, the Owner shall, in consultation with Ministry District Manager, identify appropriate control measures to achieve non-acutely lethal effluent, specify time lines for the implementation of these measures, and carry out their implementation.
- 8. The Owner shall notify the Director in writing of any change in the frequency of acute lethality testing under this Approval, within thirty (30) days after the day on which the change begins.
- 9. The Owner need not collect a sample from a sampling point in accordance with subsection 1 for Chronic Toxicity (seven-day Fathead Minnows growth inhibition test and seven-day *Ceriodaphnia dubia* inhibition and survivability test) 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 Final Process Effluent Sampling Point result in mortality for no more than fifty (50) per cent of the test organisms in hundred (100) per cent effluent.
- 10. The Owner shall carry out baseline benthic invertebrate monitoring at one or more exposure and one or more reference sites in Lake Timiskaming, before discharge from the Refinery industrial sewage works (ISW) to Lake Timiskaming commences, in accordance with the following:
 - a. Each Exposure and Reference Site sample shall be composed of 5 replicate samples, taken at a distance of about 20 meters apart, each made up of 3 sub-samples;
 - b. Sediment samples shall be collected at each of the 5 replicate stations and analyzed at minimum for total organic carbon (TOC) and particle size;
 - c. At each site, sediment samples shall also be analysed for the metals (include but are not limited to the ICP Metal Scan); and
 - d. The Exposure Site shall be located as close as possible to the effluent discharge point but beyond the area of initial mixing of effluent with receiving waters.
- 11. The Owner shall carry out baseline benthic invertebrate monitoring at one or more exposure and one or more reference sites in Slate Creek, before discharge from the sewage works to Lake Timiskaming commences, in accordance with the following:
 - a. Each Exposure and Reference Site sample shall be composed of 5 replicate samples, taken at a distance of about 20 meters apart, each made up of 3 sub-samples;

- b. Sediment samples shall be collected at each of the 5 replicate stations and analyzed at minimum for total organic carbon (TOC) and particle size;
- c. At each site, sediment samples shall also be analysed for metals (include but are not limited to the ICP Metal Scan);
- d. The Exposure Site shall be located just down-gradient of where potentially seep impacted groundwater, from the facility, may discharge into Slate Creek, and the Reference Site shall be located up-gradient of the Sites.
- 12. Ongoing benthic invertebrate monitoring shall be carried out during operation of the Plant and discharge from the Works. The Owner shall submit a Biological Monitoring Plan to the District Manager for concurrence within twelve (12) months of issuance of this Approval. The plan may be, as much as possible, harmonized with the federal EEM program, but must also include additional Ministry requirements. The plan shall include, at minimum, the following:
 - a. methods for assessing the potential impact from Plant operations on biological communities in Lake Timiskaming (benthic invertebrates and fish) and in Slate Creek (benthic invertebrates); For ongoing biological monitoring in Slate Creek (beyond baseline sampling), the Owner may propose triggers that would lead to a requirement for further sampling and analysis.
 - b. at least one reference and one exposure area, each comprised of 5 sampling locations (each of 5 samples to be comprised of 3 sub-samples), for both Lake Timiskaming and Slate Creek;
 - c. monitoring of sediment quality in Lake Timiskaming and Slate Creek;
 - d. biological triggers that if exceeded will require an investigation of cause; and
 - e. mitigation measures, established in consultation with the Ministry's Northern Region Office and District Manager, that will be implemented if the Plant is found to be the cause of the trigger exceedance in the subsection 12.d above.
- 13. Within six (6) months of issuance of the Approval, or prior to the operation of the TSF, the Owner shall install a deeper bedrock monitoring well (MW10D) at the location of "MW10" as shown on Figure 6.3.1- Groundwater Monitoring Well Locations dated 12-Jan-2022.
- 14. The Owner shall monitor and record, in cubic metres a **daily volume of plant effluent** from the CCR Discharge Tank for each day on which a sample is collected under this Approval for the Final Process Effluent, using **continuous flow measuring devices** and instrumentations/pumping rates calibrated to an accuracy within plus or minus fifteen per cent (+/- 15%)
- 15. The Owner shall use a flow measure method to an accuracy of plus or minus twenty per cent (+/- 20%) to determine in cubic metres a **volume of effluent** for each Overflow Effluent Monitoring Stream for each Eight(8)-hour Period for which a sample is collected under this Approval from the stream. A **volume of effluent** for an Overflow Monitoring Stream is the volume that flows past the Overflow

Effluent Sampling Point on the stream during the Eight(8)-hour Period.

- 16. The Owner shall determine by calibration or confirm by means of a certified report of a Licensed Engineering Practitioner that each flow measurement method used under subsections 14 and 15 meets the accuracy requirements for each effluent stream.
- 17. 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 Licensed Engineering Practitioner that each new or altered flow measurement method meets the accuracy requirements of subsections 14 and 15 of this section, as the case may be, within two weeks after the day on which the new or altered method or system is used.
- 18. The Owner shall develop and implement a maintenance schedule and a calibration schedule for each flow measurement system installed at the Plant and shall maintain each flow measurement system according to good operating practices.
- 19. The Owner shall use reasonable efforts to set up each flow measurement system used for the purposes of this section in a way that permits inspection by a provincial officer.
- 20. The Owner shall retain for a minimum of five (5) years from the date of their creation, all records and information related to or resulting from the monitoring activities required by this Approval.

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 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 <u>not</u> 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 for approval to the local fire services authority prior to implementing Limited Operational Flexibility.
- 7. For greater certainty, any modification made under the Limited Operational Flexibility may only be carried out after other legal obligations have been complied with, including those arising from the *Environmental Protection Act, Lakes and Rivers Improvements Act* and the *Mining 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.

12. REPORTING

- 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. In addition to the obligations under Part X of the EPA and O. Reg. 675/98 (Classification and Exemption of Spills and Reporting of Discharges), the Owner shall, within fifteen (15) days of the occurrence of any reportable spill as provided in Part X of the EPA and Ontario Regulation 675/98, submit a full written report of the occurrence to the District Manager describing the cause and discovery of the spill, clean-up and recovery measures taken, preventative measures to be taken and a schedule of implementation.
- 3. The Owner shall, upon request, make all manuals, plans, records, data, procedures and supporting documentation available to Ministry staff.
- 4. On or before June 1 in each year, the Owner shall prepare a report Reports Available to the Public, submit to the District Manager upon request, and ensure this report is available to any person at the Plant on request during the Plant's normal office hours, in an electronic format related to the previous calendar year and including the following:

- a. a summary of plant loadings calculated under sections 2 and 3 of Schedule F;
- b. a summary of concentrations determined under sections 4 and 5 of **Schedule F**;
- c. a summary of the results of monitoring performed under Condition 10 regarding monitoring and reporting;
- d. a summary of **daily process plant volume** and calculations performed for Overflow Effluents;
- e. a summary of the concentrations or other results that exceeded an objective/limit prescribed in **Schedule B** or **Schedule C**; and
- f. a summary of the Overflow Effluent incidents in which Process Effluent was discharged from the Plant without flowing past a sampling point maintained on a process effluent stream in accordance with this Approval before being discharged.
- 5. 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. The reports shall contain, but shall not be limited to, the following information pertaining to the reporting period (throughout the Quarter):
 - a. all information relating to reporting requirements of the Approval for Bypass, Overflow, and non-compliance during the Quarter.
 - b. for each month in the Quarter, the **monthly average plant loadings** and the highest and lowest daily plant loadings calculated under **Schedule F** for each Limited Parameter in **Schedule C**, as appropriate.
 - c. for each day in the Quarter, each daily overflow effluent stream loading calculated under **Schedule F** for each Limited Parameter in **Schedule C** in this Approval.
 - d. for each month in the Quarter, the monthly average concentrations and the highest and lowest analytical results for each Limited Parameter in the Final Process Effluent Monitoring Stream with Thrice Weekly or Weekly monitoring frequency.
 - e. for each day in the Quarter, the daily concentrations calculated and the highest and lowest analytical results for each Limited Parameter in **Schedule C** in this Approval in each Overflow Effluent Monitoring Stream at Plant.
 - f. for each month in the Quarter, the monthly average process effluent plant volume and the highest and lowest daily process effluent plant volumes for the Final Process Effluent.
 - g. The Owner shall report, for each day in the Quarter, the daily overflow effluent stream volumes calculated.
 - h. The Owner shall report the number of days in each month in the Quarter on which Process Effluent

- or Overflow Effluent was discharged from the Plant.
- i. The Owner shall report, for each month in the Quarter, the highest and lowest pH results obtained for the Final Process Effluent Monitoring Stream at the Plant.
- 6. The Owner shall prepare performance reports on a calendar year basis and submit to the District Manager in an electronic format 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 Final Effluent monitoring data, including concentration/result, **volume of effluent**, Monthly Average Daily Volume of Effluent, and a comparison to the objectives and compliance limits in this Approval, including an overview of the success and adequacy of the Works;
 - b. a summary and interpretation of surface water monitoring data, including depth profile data and plots for temperature, conductivity and dissolved oxygen;
 - c. a summary and interpretation of Acute Toxicity to Rainbow Trout and Daphnia magna test results;
 - d. a summary and interpretation of chronic toxicity test, including a plot of percentage reduction in growth or reproduction against the logarithm of test concentration. Plume delineation data and the chronic toxicity tests results shall be used to comment on the potential for chronic toxicity within the effluent plume;
 - e. a summary of Quarterly water level data downloaded from the Water Survey of Canada Station Lake Temiskaming at Haileybury ID# 02JE011;
 - f. a summary and interpretation of any biological monitoring completed;
 - g. a summary of all operating issues encountered and corrective actions taken;
 - h. 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;
 - i. a summary of any effluent quality assurance or control measures undertaken;
 - j. a summary of the calibration and maintenance carried out on all Process Effluent and Overflow Effluent monitoring equipment to ensure that the accuracy is within the tolerance of that equipment as required in this Approval or recommended by the manufacturer;
 - k. a tabulation of the volume of sludge generated, an outline of anticipated volumes to be generated in the next reporting period and a summary of the locations to where the sludge was disposed;

- 1. a summary of any complaints received and any steps taken to address the complaints;
- m. a summary of all Overflows and Bypass, other situations outside normal operating conditions and spills within the meaning of Part X of EPA and abnormal discharge events;
- n. a summary of all Notice of Modifications to Sewage Works completed under subsection 8 of Condition 11, including a report on status of implementation of all modification; and
- o. any other information the District Manager requires from time to time.
- 7. The Owner shall submit an annual groundwater monitoring report prepared by a licensed independent Professional Geoscientist or Licensed Engineering Practitioner qualified in the field of hydrogeology, in digital format, to the District Manager on March 31st of each calendar year. This report can be merged with the annual report required pursuant to subsection (6) at the discretion of the District Manager. The annual groundwater monitoring report shall include the following minimum information:
 - a. a site plan or plans of the entire site illustrating significant site features such as lakes, rivers, seeps, ponds, ditches, collection and treatment facilities, and roadways, as well as all of the sampling locations;
 - b. a cross section of the subsurface soils, stratigraphy, displaying the groundwater elevations;
 - c. a groundwater contour map showing the groundwater elevations for each well, water table contours or potentiometric surface and the inferred groundwater flow directions;
 - d. tables summarizing all historical and current water level data and analytical results for all parameters for each groundwater monitoring well with comparison to MECP Guideline B-7 Guidelines, Provincial Water Quality Objectives (PWQO) or Aquatic Aquatic Protection Values (APV) where applicable;
 - e. graphs illustrating current and historical trends with time of key groundwater quality parameters;
 - f. a copy of the borehole logs for all groundwater monitoring wells (may be provided electronically);
 - g. a copy of the original laboratory analytical results (may be provided electronically on CD); and
 - h. conclusions and recommendations for future monitoring and/or contingency measures.

13. APPROVAL SUBJECT TO FINAL DRAWINGS

1. The Owner shall not construct any portion of the **Stage 2 or Stage 3** of Tailing Area or allow its commencement, until detailed design drawings, specifications and an engineer's report containing detailed design calculations for this portion of Works have been submitted to and approved by the Director.

Schedule A

1.	Application for Environmental Compliance Approval dated June 28, 2021 and received on July 2, 2021,
	submitted by Cobalt Camp Refinery Ltd., for expansion of sewage Works to serve a refinery plant with a
	maximum production capacity of 25,000 tonnes per year of cobalt sulphate, including design reports,
	engineering drawings and specifications.

Schedule B (upon commencement of operation of the Proposed Works)

Table B-1 Final Process Effluent ObjectivesFinal Process Effluent from the Wastewater Treatment Facilities

Parameter	Averaging Calculator	Final Effluent Objectives (maximum unless otherwise indicated)
Column 1	Column 2	Column 3
Sodium	Monthly Average Effluent Concentration	2000 mg/L* ¹
Sulphate	Monthly Average Effluent Concentration	4200 mg/L

Note*1: mg/L means milligrams per litre

Schedule C (upon commencement of operation of the Proposed Works)

Table C-1 Final Process Effluent Compliance Limits - for Mutanda Feedstock

Final Process Effluent from the Wastewater Treatment Facilities

Single Sample Result Monthly Average Effluent		
Parameter	(maximum unless otherwise	
1 m uniceer	indicated)	(maximum unless otherwise indicated)
Column 1	Column 2	Column 3
Arsenic - Total	0.15 mg/L	$0.1~{ m mg/L*}^1$
Boron - Total	20 mg/L	$10~\mathrm{mg/L}$
Cadmium - Total	0.01 mg/L	0.005 mg/L
Chromium - Total	0.2 mg/L	0.1 mg/L
Cobalt - Total	0.1 mg/L	0.05 mg/L
Copper - Total	0.1 mg/L	0.05 mg/L
Lead - Total	0.1 mg/L	$0.05~\mathrm{mg/L}$
Manganese - Total	20 mg/L	10 mg/L
Nickel - Total	0.38 mg/L	0.25 mg/L
Strontium - Total	20 mg/L	10 mg/L
Thallium - Total	0.1 mg/L	$0.05~\mathrm{mg/L}$
Total Zinc - Total	0.6 mg/L	0.3 mg/L
Total Suspended Solid (TSS)	22.5 mg/L	15 mg/L
рН	between 6.0 - 9.5 inclusive (Single Sample Result)	
Toxicity to Rainbow Trout and	Non-acutely lethal (no more than 50% mortality)	
Daphnia magna	(Single Sample Result)	
Temperature	Maximum differential of +20°C, compared to lake water	

Note*1: mg/L means milligrams per litre

Table C-2 Final Process Effluent Compliance Limits (for any feedstocks other than Mutanda Feedstock and/or combinations of feedstocks)

Final Process Effluent from the Wastewater Treatment Facilities

	Single Sample Result	Monthly Average Effluent	
Parameter	(maximum unless otherwise	Concentration	
	indicated)	(maximum unless otherwise indicated)	
Column 1	Column 2	Column 3	
Arsenic - Total	0.15 mg/L	0.1 mg/L	
Boron - Total	20 mg/L	10 mg/L	
Cadmium - Total	0.01 mg/L	0.005 mg/L	
Chromium - Total	0.2 mg/L	0.1 mg/L	
Cobalt - Total	0.1 mg/L	$0.05~\mathrm{mg/L}$	
Copper - Total	0.1 mg/L	$0.05~\mathrm{mg/L}$	
Lead - Total	0.1 mg/L	$0.05~\mathrm{mg/L}$	
Manganese - Total	20 mg/L	10 mg/L	
Nickel - Total	0.38 mg/L	0.25 mg/L	
Strontium - Total	20 mg/L	10 mg/L	
Thallium - Total	0.1 mg/L	0.05 mg/L	
Zinc - Total	0.6 mg/L	0.3 mg/L	
Total Suspended Solid (TSS)	22.5 mg/L	15 mg/L	
Aluminium (Al) - Dissolved (0.2μ)	5.0 mg/L	2.5 mg/L	
Ammonia (Unionized)	0.7 mg/L	0.35 mg/L	
Antimony (Sb) - Total	1.0 mg/L	0.5 mg/L	
Barium (Ba) - Total	10.0 mg/L	5.0 mg/L	
Beryllium (Be) - Total	2.0 mg/L	1.0 mg/L	
Cyanide (CN) - Free	0.70 mg/L	0.35 mg/L	
Iron (Fe) - Total	4.0 mg/L	2.0 mg/L	
Mercury (Hg) - Total	0.004 mg/L	0.002 mg/L	
Molybdenum (Mo) - Total	4.0 mg/L	2.0 mg/L	
Phosphorus (P) - Total	0.4 mg/L	0.2 mg/L	
Selenium (Se) - Total	0.2 mg/L	0.1 mg/L	
Silver (Ag) - Total	0.02 mg/L	0.01 mg/L	
Tungsten (W) - Total	4.0 mg/L	2.0 mg/L	
Uranium (U) - Total	1.0 mg/L	0.5 mg/L	
Vanadium (V) - Total	1.0 mg/L	0.5 mg/L	
Zirconium (Zr) - Total	0.8 mg/L	0.4 mg/L	
Radium - 226	0.74 Becquerels/L	0.37 Becquerels/L	
рН	between 6.0 - 9.5 inclusive (Single Sample Result)		
Toxicity to Rainbow Trout and	Non-acutely lethal (no more than 50% mortality)		
Daphnia magna	(Single Sample Result)		
Temperature	Maximum differential of +	20°C, compared to lake water	

Schedule D - Monitoring Program

(upon commencement of operation of the Proposed Works)

Table D-1 Final Process Effluent Monitoring

Effluent from the Wastewater Treatment Facilities at the Final Process Effluent Sampling Point

Parameter	Sample Frequency	Sample Type
pH (Field)* ¹	Thrice Weekly	Grab
Total Suspended Solids (TSS) - low level	Thrice Weekly	Grab
Temperature (Continuous Monitoring in Facility and Grab during sample)*	Thrice Weekly	Continuous & Grab
Conductivity (Continuous Monitoring in Facility and Grab during sample collection)	Thrice Weekly	Continuous & Grab
Total Ammonia Nitrogen and Un-ionized Ammonia* ¹	Weekly	Grab
Nitrate	Weekly	Grab
Cyanide (total, free, WAD)	Weekly	Grab
ICP Metals Scan* ² (dissolved and total)	Weekly	Grab
Hardness	Weekly	Grab
Sulphate	Weekly	Grab
Chloride	Weekly	Grab
Alkalinity	Weekly	Grab
Total Dissolved Solids (TDS)	Weekly	Grab
Radium 226	Weekly	Grab
Acute Toxicity to Rainbow Trout	Monthly/Quarterly*3	Grab
Acute Toxicity to Daphnia Magna	Monthly/Quarterly*3	Grab
Chronic Toxicity (seven-day Fathead Minnows growth inhibition test and seven-day <i>Ceriodaphnia dubia</i> inhibition and survivability test)	Semi-annually	Grab

Note*1: The temperature and pH of the Final Effluent shall be determined in the field at the time of sampling for Total Ammonia Nitrogen. The concentration of Un-ionized Ammonia shall be calculated using the total ammonia concentrations, pH and temperature using the methodology stipulated in "Ontario's Provincial Water Quality Objectives (PWQO)" dated July 1994, as amended, for Ammonia (unionized).

Note*²: Analysis shall be for both total and dissolved (field filtered) metals. ICP Metal Scan includes: Aluminium, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Tungsten, Uranium, Vanadium, Zinc, and Zirconium.

Note*3: Details see Conditions 10.7 and 10.8

Table D-2 Quality Control - Final Process Effluent Monitoring

Effluent from the Wastewater Treatment Facilities at the Final Process Effluent Sampling Point

- 1. On one day in each year, on a day on which samples are picked up as in above Table D-1, the Owner shall collect and pick up a duplicate sample for each sample picked up on that day and shall analyze each duplicate sample for the parameters for which the frequency of monitoring, is "Thrice Weekly", or "Weekly".
- 2. The same Final Process Effluent Sampling Point shall be used for the purposes of sampling under subsection 1 of this Table in a year.
- 3. The Owner shall prepare a travelling blank and travelling spiked blank sample for each sample for which a duplicated sample is picked up at the Plant under subsection 1 of this Table and shall analyzed 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 Version 2.0" (January 2016), PIBS 2724e02, as amended.
- 4. There shall be an interval of at least six (6) months between successive Pick-Up days at the Plant under subsection 1 of this Table.

Table D-3 Surface Water Monitoring

Sample Stations	as listed in Table D-4	
Sample Frequency	as listed iii Table D-4	
Sample Type	Grab	
Sample Parameters	pH (field), Temperature (field), Conductivity (field), Total and Unionized	
	Ammonia, Nitrate, Cyanide (total, free, WAD), Dissolved Oxygen,	
	Radium-226, Dissolved Organic Carbon, ICP Metals Scan (dissolved and	
	total)* ¹ , Hardness, Sulphate, Chloride, Alkalinity, Total Suspended Solids,	
	Phosphorus (low level)	

Note*1: Analysis shall be for both total and dissolved (field filtered) metals. ICP Metal Scan includes: Aluminium, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Tungsten, Uranium, Vanadium, Zinc, and Zirconium.

Table D-4 Surface Water Monitoring Farr Creek, Slate Creek and Lake Timiskaming

as shown on Figure 6.2.1 - Water Quality Sampling Locations dated March 22, 2021, and as updated following concurrence from the District Manager

Site ID	Sample Depth (m)	Sample Location	Sample Frequency
FC1	0	Farr Creek, approximately 1500 m north of the TSF Pond	Quarterly* ²
SC0	0	Slate Creek, approximately 300 m up-stream of the Plant and also up-stream of the small tributary flowing from the northwest	Monthly* ²
SC1	0	Slate Creek, approximately 200 m up-stream of the Plant	Monthly* ²
SC2B	0	Slate Creek, approximately 100 m down-stream of the Plant	Monthly* ²
LT2	0, 7	Lake Timiskaming, Approximately 400 m north of the Final Effluent Outfall	Monthly* ²
LT3	0, 6, 40	Lake Timiskaming, Approximately 1700 m north-east of the Outfall	Monthly* ²
LT4	0, 6, 12	Lake Timiskaming, Approximately 125 m south of the Outfall	Monthly* ²
LT5	0, 6, 40 + vertical profiles of field chemistry	Lake Timiskaming, Approximately 150 m south of the Outfall and 500 m off-shore deep water	Monthly* ²
LT6	0, 6, 12	Lake Timiskaming, Approximately 500 m south-east of the Outfall	Monthly* ²
LT7	0, 6, 40 + vertical profiles of field chemistry	Lake Timiskaming, Approximately 4.9 km south-east of the Outfall	Quarterly* ²
Water Intake	approximately 6 to 7	Freshwater intake from Lake Timiskaming - to be sampled at Plant	Monthly* ²

Note*¹: The chemistry readings are to be recorded at minimum depth intervals of every 2 meter from $0 \sim 20$ meters, then at intervals of 5 meters from 25- 70 meters and every 2 meters from 70-80 meters.

Note*²: Samples shall be collected during open water months. During ice-covered and partly ice-covered periods, sampling shall continue on a monthly basis when conditions allow it to be carried out safely.

Table D-5 Groundwater Monitoring

Sample Stations	twenty-one (21) monitoring wells, as listed in Table D-6	
Sample Frequency	four (4) time per year (Spring, Summer, Fall and Winter)	
Sample Type	Grab	
Sample Parameters	pH (field), Temperature (field), Conductivity (field), Total Ammonia	
	Nitrogen, Nitrate Nitrogen, Nitrite Nitrogen, Dissolved Organic Carbon,	
	Cyanide (free), Cyanide (total), Fluoride, ICP Metals Scan (dissolved and	
	total)* ¹ , Dissolved Mercury, Hardness, Sulphate, Chloride, Alkalinity, TSS	
	(low level), Total Dissolved Solids; and groundwater level and elevation.	

Note*1: Analysis shall be for both total and dissolved (field filtered) metals. ICP Metal Scan includes: Aluminium, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Phosphorus, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Tungsten, Uranium, Vanadium, Zinc, and Zirconium.

Table D-6 Groundwater Monitoring

as shown on Figure 6.3.1- Groundwater Monitoring Well Locations dated 12-Jan-2022, and as updated following concurrence from the District Manager

Well ID	Location
MW1A	Located east of the Upper and Lower Pond, screened in varved clay
MW2	Located south-east of the Lower Pond, screened in silty clay
MW3A	Located south of the Lower Pond,
MW4A	Located south-west of the Lower Pond, screened in varved clay
MW5	Located south of the Autoclave Pond, screened in varved clay
MW6	Located south of the Autoclave Pond, screened in varved clay
MW7	Located up-gradient of the TSF and Autoclave Pond, screened in varved clay
MW7D	Located up-gradient of the TSF and Autoclave Pond, screened in bedrock
MW8	Located east of the TSF, screened in varved clay
MW8D	Located east of the TSF, screened in bedrock
MW9	Located north of the TSF and west of the TSF Water Pond, screened in clay
MW10	Located north of the TSF and west of the TSF Water Pond, screened in clay
MW10D	Located north of the TSF and west of the TSF Water Pond, screened in bedrock
MW11	Located west of the TSF, screened in varved clay
MW12	Located north of the TSF and west of the TSF Water Pond, screened in varved clay
MW12D	Located north of the TSF and west of the TSF Water Pond, screened in bedrock
MW13	Located south of the Autoclave Pond, screened in the deeper overburden
MW14	Located southeast of the Autoclave Pond, screened in shallow overburden
MW15	Located west of the Autoclave Pond, screened in shallow overburden
MW16S	Located north-east of the TSF, screened in shallow overburden
MW16D	Located north-east of the TSF, screened in bedrock

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

- i. 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.
- ii. Forcemain relining and replacement with similar pipe size where the nominal diameter is not greater than 1,200 mm.

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 or exceeded. For clarity purposes, the following equipment can be considered under this provision:

pumps, screens, grit separators, blowers, aeration equipment, sludge thickeners, de-watering equipment, UV systems, chlorine contact equipment, bio-disks, and sludge digester systems.

3. Final Effluent Disposal Facility

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

4. Sewers

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

5. Pilot Systems

- a. Installation of pilot systems for new or existing technologies provided that:
 - i. any effluent from the pilot system is discharged to the inlet of the sewage treatment plant or hauled off-site for proper disposal,
 - ii. any effluent from the pilot system discharged to the inlet of the sewage treatment plant or sewage conveyance system does not significantly alter the composition/concentration of the influent sewage to be treated in the downstream process; and that it does not add any inhibiting substances to the downstream process, and
 - iii. the pilot system's duration does not exceed a maximum of two years; and a report with results is submitted to the Director and District Manager three months after completion of the pilot project.

6. Tailings Management Facilities

- a. Routine dam raises and dam extensions to allow continued management of tailings and storage of mineral materials and sewage, provided that:
 - i. Routine dam raises and extensions are in adherence with a tailings management plan prepared by a Professional Engineer licensed under the *Professional Engineers Act* in Ontario.
 - ii. Routine dam raises and extensions are sealed by a Professional Engineer licensed under the *Professional Engineers Act* in Ontario.
 - iii. Routine dam raises and extensions have an associated Erosion and Sediment Control Plan applying best management practices that is to be implemented during construction.
- b. New dams are not eligible under LOF, unless already included as part of the Works for which an Environmental Compliance Approval or an amended Environmental Compliance Approval has already been issued describing how new Works would affect the management of tailings and water at

the site.

- c. c. Pipe replacement or extension with similar pipe size within the Tailings Management area, where the nominal diameter is not greater than 1,200 mm.
- d. Clause 1.6 does not relieve the Owner 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 necessary approval from Ministry of Natural Resources and Forestry (MNRF) and Ministry of Energy, Northern Development and Mines (ENDM) to proceed with the undertaking.
- 1. 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.
- 2. 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.
- 3. The modifications noted in section (3) above are <u>not</u> 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.

Schedule F

1. CALCULATION OF LOADINGS — GENERAL

- 1. For the purposes of performing a calculation under sections 2 to 5 of this Schedule, the Owner shall use the actual analytical result obtained by the laboratory.
- 2. Despite subsection 1 of this section, where the actual analytical result is less than one-tenth of the analytical method detection limit set out in the Ministry's publication "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 sections 2 to 5 of this Schedule.
- 3. The Owner shall ensure that each calculation of a process effluent loading required by section 2 and each calculation of a process effluent concentration required by section 4 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 an overflow effluent loading required by section 3 is performed in time and each calculation of an overflow effluent concentration required by section 5 is performed in time to comply with Quarterly Reports to the District Manger requirements.

2. CALCULATION OF LOADINGS — PROCESS EFFLUENT

- 1. The Owner shall calculate, in kilograms, a **daily process effluent stream loading** for each Limited Parameter, in **Schedule** C in this Approval, in each Process Effluent Monitoring Stream of the Plant 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, 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 10 regarding monitoring and reporting, for the stream for the day.
- 3. The Owner shall calculate, in kilograms, a **daily process effluent plant loading** for each Limited 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 section.
- 4. For the purposes of subsection 3 of this section, 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 section 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 section, the daily process effluent plant loading for the parameter for

- the day for the purposes of subsection 3 of this section 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 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 Plant for analysis for the parameter.
- 7. For the purposes of subsection 6 of this section, 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 section for the month.

3. CALCULATION OF LOADINGS — OVERFLOW EFFLUENT

- 1. The Owner shall calculate, in kilograms, an overflow effluent stream loading for each Limited Parameter, in Table C-1 or C-2, as appropriate of **Schedule C** in this Approval, in each Overflow Effluent Monitoring Stream of the Plant for each Eight (8)-hour Period during which a sample is collected under this Approval from the stream for analysis for the parameter.
- 2. When calculating a stream loading under subsection 1 of this section, 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 volume of effluent, as determined under Condition 10 regarding monitoring and reporting, for the stream for the Eight (8)-hour Period.
- 3. The Owner shall calculate, in kilograms, a daily overflow effluent stream loading for each Limited Parameter, in Table C-1 or C-2, as appropriate of **Schedule** C in this Approval, in each Overflow Effluent Monitoring Stream of the Plant for each day for which the Owner is required to calculate an overflow effluent stream loading for the parameter under subsection 1 of this section.
- 4. For the purposes of subsection 3 of this section, a daily overflow effluent stream loading for a parameter for a day is the sum, in kilograms, of all the Eight (8)-hour period overflow effluent stream loadings for the parameter calculated under subsection 1 of this section for the day.
- 5. Where the Owner calculates only one overflow effluent stream loading for a parameter under subsection 1 of this section for a stream for a day, the daily overflow effluent stream loading for the parameter for the day for the purposes of subsection 3 of this section is the single overflow effluent stream loading calculated for the parameter under subsection 1 of this section.

4. CALCULATION OF CONCENTRATIONS — PROCESS EFFLUENT

1. The Owner shall calculate, in milligrams per litre, a Monthly Average Effluent Concentration for each Limited Parameter in the Final Process Effluent Monitoring Stream for each month.

5. CALCULATION OF CONCENTRATIONS — OVERFLOW EFFLUENT

1. The Owner shall calculate, in milligrams per litre, a daily concentration for each Limited

Parameter, in Table C-1 or C-2, as appropriate of **Schedule C** in this Approval, in each Overflow 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. For the purposes of subsection (1) of this condition, a **daily concentration** for a parameter for a stream for a day is the arithmetic mean of the analytical results obtained for the parameter from the samples collected under Condition 6 regarding overflows from the stream for the day.
- 3. Where there is only one analytical result obtained for a parameter from the stream for a day, the **daily concentration** for the parameter for the stream for the day for the purposes of subsection (1) of this condition is the single analytical result obtained for the parameter.

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 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.
- 3. Condition 3 regarding construction of Works/record drawings is included to ensure that the Works are constructed in a timely manner so that standards applicable at the time of Approval of the Works are still applicable at the time of construction to ensure the ongoing protection of the environment, and that prior to the commencement of construction of the portion of the Works that are approved in principle only, the Director will have the opportunity to review detailed design drawings, specifications and an engineer's report containing detailed design calculations for that portion of the Works, to determine capability to comply with the Ministry's requirements stipulated in the terms and conditions of the Approval, and also ensure that the Works are constructed in accordance with the Approval and that record drawings of the Works "as constructed" are updated and 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 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.
- 7. Condition 7 regarding design objectives is imposed to establish non-enforceable design objectives to be used as a mechanism to trigger corrective action proactively and voluntarily before environmental impairment occurs.
- 8. Condition 8 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.

- 9. Condition 9 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.
- 10. Condition 10 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 design objectives and compliance limits.
- 11. Condition 11 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.
- 12. Condition 12 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.
- 13. Condition 13 regarding approval subject to final drawings is included due to the provisional nature of the supporting documentation submitted by the Owner with the application for approval. The Director has only approved the Works in principle for the **Stage 2 and Stage 3** of Tailing Area, and this condition will ensure that, prior to the commencement of construction of these portions of the Works, the Director will have the opportunity to review detailed design drawings, specifications and an engineer's report containing detailed design calculations for that portion of the Works, in order to determine the Proposed Works' capability to comply with the Ministry's requirements stipulated in the terms and conditions of the Approval.

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.

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.

and

This Notice must be served upon:

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

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

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 4th day of February, 2022



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

NH/

c: Area Manager, MECP North Bay Area Office

c: District Manager, MECP Sudbury District Office Maria Story, Story Environmental Inc.