AMENDED ENVIRONMENTAL COMPLIANCE APPROVAL

NUMBER 0341-CZQM4U
Issue Date: January 31, 2024

Lake Shore Gold Corp.
8215 Highway 101 West
Stn Main, P.O. Box 1067
Timmins, Ontario
P4N 7W7

Site Location: Timmins West Mine
8215 Highway 101 West
Bristol Township
City of Timmins, District of Cochrane
P4N 7W7

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

the existing and new Works for the collection and temporary storage of domestic sewage, the existing stormwater management, containment facility including a physical-chemical effluent treatment system with Rated Capacity of 5,500 m^3/day to collect, store process materials and impacted process water for reuse at the Timmins West Mine site prior to discharging to the Tatachikapika River and the existing Works for the treatment of sanitary sewage and subsurface disposal of treated effluent from the Timmins West Mine site, rated at a total Maximum Daily Flow of 62.58 m^3/day, consisting of the following:

PROPOSED WORKS

DOMESTIC SANITARY SEWAGE WORKS

the establishment of Works for the collection and temporary storage of domestic sewage to service the security gatehouse trailer, consisting of the following:

- one (1) one-compartment above ground holding tank, located on the east side of the security gatehouse trailer, receiving raw sewage from the security gatehouse trailer, having a minimum working capacity of approximately 3,785 L and equipped with two (2) access openings and a high liquid level float system connected to an audible and visual warning alarm, the holding tank pumped out and hauled off site on an as required basis by a licensed hauler to a licensed facility as appropriate for waste type;

- all other controls, electrical equipment, instrumentation, piping, pumps, valves and appurtenances essential for the proper operation of the aforementioned Works;

EXISTING WORKS

EFFLUENT TREATMENT FACILITY/STORMWATER MANAGEMENT SYSTEM

The Effluent Treatment Facility and Stormwater Management System include the following components:

- ENPAR Technologies AmmEL-LC system for reducing mine water ammonia concentration; consists of the use of an Ion Exchange medium (i.e. zeolite); regeneration of said medium using 3-5% Sodium Chloride; electrochemical oxidation of ammonium to nitrogen gas; pH adjustment station using sulfuric acid (H_2SO_4) and sodium hydroxide;

- six (6) gravity flow tanks for reducing mine water ammonia concentration; consists of the use of an Ion Exchange medium (i.e. zeolite); regeneration of said medium using 3-5% Potassium Sulfate;

- AmmeEL-LC and gravity flow tank systems are operated simultaneously, both discharging into the same holding tank;

- one (1) Post Treatment and pH Adjustment Tank complete with a mixer, CO_2 or /and Acid addition system, pH meter, level controller and all associated piping and ancillaries;

- one (1) pneumatically operated Sludge Transfer Pump system complete with two (2) positive displacement sludge pumps and two (2) forcemains to sludge holding tank and containment facility respectively;

- one (1) Effluent Discharge Pump System rated not to exceed 5,500 m^3/day complete with three (3) in-line pumps to an engineered discharge channel approximately 115 m away from the Tatachikapika River (discharge to Environment via an energy dissipation pad, located at NAD 83 N53566312 E 460516);

- one (1) buried 4 inch pipeline and one (1) buried 10 inch pipeline to convey treated effluent from the Effluent Treatment Facility to the regulated discharge point located at NAD 83 N53566312 E460516;

- one (1) 90 m x 60 m water management pond ("Pond A") designed to receive industrial process water including mine dewatering and site run-off from containment facilities; emergency spillway to Thunder Creek at elevation 312.0 m; 0.5 m freeboard requirement; seepage collection system for the mine and stormwater containment pond that includes a perforated pipe to intercept seepage, pump chamber, submersible effluent pump, and forcemain to discharge collected seepage back to Pond A;

- one (1) 150 m x 90 m water management pond ("Pond B") designed to receive industrial process water including mine dewatering and site run-off from the containment facilities; emergency spillway to Thunder Creek at elevation 313.25 m; 0.3 m freeboard requirement;

- one (1) water management pond ("Pond C") designed to receive industrial process water including mine

dewatering and site run-off from the containment facilities; emergency spillway to Thunder Creek Tributary at elevation 324.5 m;

- three (3) surface run-off infiltration basins (SW1, SW2, SW4) designed to collect run-off from the mine site and direct to the water management ponds (Pond A, Pond B and Pond C) through a pumping and piping system;

- increase the rated capacity of the facility to discharge a maximum of 5,500 m^3/day to the regulated discharge location near the Tatachikapika River;

- use of mine effluent in the site's Paste Backfill Plant;

- use of treated mine effluent as dust suppressant for the mine site; and

- all other controls, electrical equipment, instrumentation, piping, pumps, valves and appurtenances essential for the proper operation of the aforementioned Works;

DOMESTIC SANITARY SEWAGE WORKS

HOLDING TANK

- one (1) one-compartment underground holding tank, located on the west side of the main building, receiving raw sewage from the Paste Backfill Plant, having a minimum working capacity of approximately 6,570 L and equipped with a high liquid level alarm system connected to an audible and visual warning alarm, the holding tank pumped out and hauled off site on an as required basis by a licensed hauler to a licensed facility as appropriate for waste type;

- all other controls, electrical equipment, instrumentation, piping, pumps, valves and appurtenances essential for the proper operation of the aforementioned Works;

ON-SITE SEWAGE DISPOSAL SYSTEM

- one (1) on-site sewage disposal system rated at a Maximum Daily Flow of 10,950 L/day, consisting of either one or a series of septic tanks with a minimum total capacity of 18,184 L, a minimum 12,000 L pump chamber controlled by a 24 hour timed dosing unit with a duplex pump system;

- two (2) raised leaching beds. One consisting of three (3) Ecoflo Biofilters (Ecoflo ST-650) and a 100 m^2 stone layer and 288 m^2 sand filter layer. The second bed consisting of two (2) Ecoflo Biofilters (Ecoflo ST-650) and a 168 m^2 stone layer and 570 m^2 sand filter layer. This as detailed in Drawings 09-194-01 and 09-194-02, dated Nov 19, 2009, and prepared by Calder Engineering Ltd.;

- for Phase 1, one (1) Class 4 sewage system rated at a total Maximum Daily Flow of 10.95 m^3/day, to service the Timmins Mine consisting of a series of septic tanks with a minimum total volumetric working capacity of 64.08 m^3, a minimum 27.0 m^3 balancing tank/pump chamber controlled by a 24 hour timed dosing pump system, one (1) Waterloo Biofilter treatment unit with 14.6 m^3 of foam medium and one (1) leaching bed,

which comprises a 240.7 m² stone layer, 290 m² sand layer, and 231 m of distributing pipe;

- for Phase 2, expansion of the Phase 1 Class 4 sewage system from a total Maximum Daily Flow of 10.95 m³/day to 21.83 m³/day, addition of one (1) Waterloo Biofilter treatment unit with 14.6 m³ of foam medium and expansion of the leaching bed with an additional 240.7 m² stone layer, 296 m² sand layer, and 231 m of distributing pipe;

- for Phase 3, expansion of the Phase 2 Class 4 sewage system from a total Maximum Daily Flow of 21.83 m³/day to 29.45 m³/day, addition of one (1) Waterloo Biofilter treatment unit with 14.6 m³ of foam medium and one (1) leaching bed, which comprises a 240.7 m² stone layer, 272 m² sand layer, and 231 m of distributing pipe;

- for Phase 4, expansion of the Phase 3 Class 4 sewage system from a total Maximum Daily Flow of 29.45 m^3 /day to 62.58 m^3/day, A raw sewage lift station of 23,000 L capacity, equipped with two (2) sewage pumps to dose 29,450 L of sewage to the existing sewage on-system, and 33,125 L to the expanded disposal system; A 45,700 L septic tank equipped with an effluent filter; A 27,300 L balancing tank equipped with two (2) effluent pumps, to direct flow to the Waterloo Biofilter treatment system; A 13,000 L dosing tank equipped with two (2) effluent pumps to direct flow to the disposal system; Two (2) cells of 9 lengths of 25 m each of shallow buried trenches for a total disposal field of 18 trenches or 450 m; and

- all other controls, electrical equipment, instrumentation, piping, pumps, valves and appurtenances essential for the proper operation of the aforementioned Works;

all in accordance with the supporting documents listed in Schedule 'A'.

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

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

"Bi-Monthly" means once every two months, with a minimum of two weeks apart between sampling events;

"$CBOD_5$" means five day carbonaceous (nitrification inhibited) biochemical oxygen demand measured in an unfiltered sample;

"Director" means a person appointed by the Minister pursuant to section 5 of the EPA for the purposes of Part II.1 of the EPA;

"District Manager" means the District Manager for the Timmins District Office of the Ministry;

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

"Equivalent Equipment" means a substituted equipment or like-for-like equipment that meets the required quality and performance standards of a named equipment;

"Existing Works" means those portions of the Works included in the Approval that have been constructed

previously;

"Grab Sample" means an individual sample of at least 1000 millilitres collected in an appropriate container at a randomly selected time over a period of time not exceeding 15 minutes;

"Limited Operational Flexibility" (LOF) means any modifications that the Owner is permitted to make to the Works under this Approval;

"Maximum Daily Flow" means the largest volume of flow to be received during a one-day period for which the Works is designed to handle;

"Ministry" means the ministry of the government of Ontario responsible for the EPA and OWRA and includes all officials, employees or other persons acting on its behalf;

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

"Owner" means Lake Shore Gold Corp. and its successors and assignees;

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

"Proposed Works" means the sewage works described in the Owner's application, this Approval and in the supporting documentation referred to herein, to the extend approved by this Approval;

"Rated Capacity" means design daily flow for which the Works are approved to handle;

"Semi-annually" means once every six months;

"Weekly" means once a week;

"Works" means the sewage works described in the Owner's application, this Approval, 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

PART I – GENERAL

1. GENERAL CONDITION

(1) The Owner shall ensure that any person authorized to carry out work on or operate any aspect of the Works is notified of this Approval and the conditions herein and shall take all reasonable measures to ensure any such person complies with the same.

(2) Except as otherwise provided by these conditions, the Owner shall design, build, install, operate and maintain the Works in accordance with the description given in this Approval, and the application for approval of the Works.

(3) Where there is a conflict between a provision of any document in the schedule referred to in this Approval and the conditions of this Approval, the conditions in this Approval shall take precedence, and where there is a conflict between the documents in the schedule, the document bearing the most recent date shall prevail.

(4) Where there is a conflict between the documents listed in the Schedule submitted documents, and the application, the application shall take precedence unless it is clear that the purpose of the document was to amend the application.

(5) The conditions of this Approval are severable. If any condition of this Approval, or the application of any requirement of this Approval to any circumstance, is held invalid or unenforceable, the application of such condition to other circumstances and the remainder of this Approval shall not be affected thereby.

2. CHANGE OF OWNER

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

(a) change of Owner or operating authority, or both;

(b) change of address of Owner or operating authority or address of new owner or operating authority;

(c) change of partners where the Owner or operating authority is or at any time becomes a partnership, and a copy of the most recent declaration filed under the Partnerships Registration Act;

(d) change of name of the corporation where the Owner or operator is or at any time becomes a corporation, and a copy of the most current "Initial Notice or Notice of Change" (Form 1, 2 or 3 of O. Reg. 189, R.R.O. 1980, as amended from time to time), filed under the Corporations Information Act shall be included in the notification to the District Manager.

(2) In the event of any change in ownership of the Works, the Owner shall notify in writing the succeeding owner of the existence of this Approval, and a copy of such notice shall be forwarded to the District Manager.

(3) The Owner shall ensure that all communications made pursuant to this condition will refer to this Approval's number.

3. OPERATIONS MANUAL

(1) Within three (3) months of the issuance date of this Approval, the Owner shall update an operations manual, that includes, but not necessarily limited to, the following information:

(a) operating procedures for routine operation of all the Works;

(b) inspection programs, including frequency of inspections, for all the Works and the methods or tests employed to detect when maintenance is necessary;

(c) repair and maintenance programs, including the frequency of repair and maintenance for all the Works, copies of maintenance contracts for any routine inspections and pump-outs should be included for all the tanks and treatment units;

(d) contingency plans and procedures for dealing with potential spill, bypasses and any other abnormal situations and for notifying the District Manager; and

(e) complaint procedures for receiving and responding to public complaints.

(2) The Owner shall maintain the operations manual up to date through revisions undertaken from time to time and retain a copy at the location of the Works. Upon request, the Owner shall make the manual available for inspection and copying by Ministry personnel.

PART II - EFFLUENT TREATMENT FACILITY/STORMWATER MANAGEMENT SYSTEM

4. 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 C** of this Approval, as amended.

(2) Sewage Works proposed under Limited Operational Flexibility shall adhere to the design guidelines contained within the Ministry’s publication "Design Guidelines for Sewage Works 2008", as amended.

(3) The Owner shall ensure at all times, that the Works, related equipment and appurtenances which are installed or used to achieve compliance are operated in accordance with all Terms and Conditions of this Approval.

(4) For greater certainty, the following are not permitted as part of Limited Operational Flexibility:

(a) Modifications to the Works that result in an increase of the Rated Capacity of the Works;

(b) Modifications to the Works that may adversely affect the approved effluent quality criteria or the location of the discharge/outfall;

(c) Modifications to the treatment process technology of the Works, or modifications that involve construction of new reactors (tanks) or alter the treatment train process design;

(d) Modifications to the Works approved under s.9 of the EPA, and

(e) Modifications to the Works pursuant to an order issued by the Ministry.

(5) Implementation of Limited Operational Flexibility is not intended to be used for piecemeal measures that result in major alterations or expansions.

(6) If the implementation of Limited Operational Flexibility requires changes to be made to the Emergency Response, Spill Reporting and Contingency Plan, the Owner shall, provide a revised copy of this plan for approval to the local fire services authority prior to implementing Limited Operational Flexibility.

(7) For greater certainty, any modification made under the Limited Operational Flexibility may only be carried out after other legal obligations have been complied with, including those arising from the Environmental Protection Act, 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.

5. EFFLUENT OBJECTIVES

(1) The Owner shall use best efforts to design, construct and operate the Works with the objective that the concentrations of the materials named below as effluent parameters are not exceeded in the effluent from the Works at location TR-1:

Table 1 - Effluent Objectives	
Effluent Parameter	**Concentration Objective** (milligrams per litre unless otherwise indicated)
Chemical Oxygen Demand	10.0
Aluminium	0.350
Vanadium	0.045
Cobalt	0.007
Total Phosphorus	0.145
Sulphate	1,725.0
Chloride	1,100.0

6. EFFLUENT LIMITS

(1) The Owner shall design, construct, operate and maintain the Works such that the concentrations of the materials named below as effluent parameters are not exceeded in the effluent from the Works at location TR-1:

Table 2 - Effluent Limits		
Effluent Parameter	**Maximum Daily Concentration** (milligrams per litre)	**Monthly Average Concentration** (milligrams per litre)
Column 1	Column 2	Column 3
Total Suspended Solids	30	15
Total Ammonia Nitrogen (Ammonia + Ammonium)	20*	10*
Arsenic	0.10	0.05
Copper	0.10	0.05
Nickel	0.45	0.225
Lead	0.04	0.02
Zinc	0.30	0.15
Acute lethality to Rainbow Trout < or = 50% mortality in 100% effluent		
Acute lethality to Daphnia magna < or = 50% mortality in 100% effluent		
pH of the effluent maintained between 6.0 to 9.5, inclusive, at all times		

* The Owner shall monitor end-of-pipe total ammonia concentrations weekly as defined in s. 22 of O. Reg. 560/94. If the concentration exceeds 10 mg/L for two (2) consecutive samples, the Owner shall conduct weekly acute toxicity tests with Rainbow Trout and Daphnia Magna until the concentration of total ammonia is below 10 mg/L for two (2) consecutive samples and at that time the frequency of toxicity testing will return to its regular schedule as specified in Table 4. If two consecutive toxicity tests failure (mortality >50%) occur, the Owner shall stop discharging to the environment. Discharge will resume when two successive toxicity tests are passed, and at that time the frequency of toxicity testing will return to its regular schedule as specified in Table 4

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

(a) Non-compliance with respect to a Maximum Daily Concentration limit is deemed to have occurred when any single grab sample analyzed for a parameter named in Column 1 of subsection (1) is greater than the corresponding Maximum Daily Concentration limit set out in subsection (1); and the sample represents a day when discharge of effluent from TR-1 occurred.

(b) Non-compliance with respect to a Monthly Average Concentration limit is deemed to have occurred when the arithmetic mean concentration of all samples taken in a month analyzed for a parameter named in Column 1 of subsection (1) is greater than the corresponding Monthly Average Concentration limit set out in subsection (1); and the sample represents a day when discharge of effluent from TR-1 occurred.

(c) Non-compliance with respect to pH is deemed to have occurred when any single measurement is

outside of the indicated range; and the sample represents a day when discharge of effluent from TR-1 occurred.

(3) The Owner shall control the quality of the effluent from TR-1 to ensure that each rainbow trout acute lethality test and each daphnia magna acute lethality test performed on any grab sample of effluent results in mortality for no more than 50 per cent of the test organisms in 100 per cent effluent.

(4) The Owner shall include in all routine reports submitted in accordance with Condition 9, a summary of the efforts made and results achieved under subsection (1).

7. EFFLUENT - VISUAL OBSERVATIONS

Notwithstanding any other condition in this Approval, the Owner shall ensure that the effluent from the Works 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, sheen or foam on the receiving waters.

8. MONITORING AND RECORDING

The Owner shall carry out and maintain the following monitoring program:

(1) Any of the sampling and flow monitoring locations as set out in subsection (2) may be changed or abandoned and new locations may be added following commencement of monitoring if, in the opinion of the District Manager, it is necessary to do so to ensure that representative samples are being collected.

(2) The effluent shall be sampled at the sampling point(s) named below, in accordance with the measurement frequency and sample type specified for each parameter named below:

Table 3 - Influent Monitoring
(Samples to be collected at the influent of wastewater pumping station or at the inlet of the Containment Pond)

Parameters	Sample Type	Minimum Frequency
Temperature	Grab/Probe	Bi-Monthly
pH	Grab/Probe	Bi-Monthly
Chloride	Grab	Bi-Monthly
Sulphate	Grab	Bi-Monthly
Ammonia, Total (Ammonia+Ammonium)	Grab	Bi-Monthly
Arsenic	Grab	Bi-Monthly
Copper	Grab	Bi-Monthly
Iron	Grab	Bi-Monthly
Lead	Grab	Bi-Monthly
Nickel	Grab	Bi-Monthly
Vanadium	Grab	Bi-Monthly
Zinc	Grab	Bi-Monthly

Table 4 - Effluent Monitoring (Samples of the effluent discharge to be collected at the sampling location TR-1)		
Parameters	**Sample Type**	**Minimum Frequency**
Temperature	Grab/Probe	Weekly
pH	Grab/Probe	Weekly
Alkalinity (total as $CaCO_3$)	Grab	Weekly
Chemical Oxygen Demand	Grab	Weekly
Conductance (µS/cm)	Grab	Weekly
Hardness, total	Grab	Weekly
Oil and Grease	Grab	Monthly
Total Dissolved Solids	Grab	Weekly
Total Suspended Solids	Grab	Thrice Weekly
Chloride	Grab	Weekly
Sulphate	Grab	Weekly
Ammonia, Total (Ammonia+Ammonium)	Grab	Weekly
Ammonia, Un-Ionized (calculated)	Grab	Weekly
Organic Carbon, Dissolved	Grab	Weekly
Phosphorus, Total	Grab	Weekly
Acute lethality to Rainbow Trout	Grab	Monthly
Acute lethality to Daphnia magna	Grab	Monthly
Inductively Coupled Plasma (ICP) metal scan*	Grab	Weekly

* ICP metal scan to include Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Mercury, Molybdenum, Potassium, Nickel, Selenium, Silver, Sodium, Strontium, Tin, Thallium, Titanium, Tungsten, Uranium, Vanadium, Yttrium, Zinc.

(3) The receiving water shall be sampled at the sampling points as outlined in Table 5a below, in accordance with the measurement frequency and sample type specified for each parameter as outlined in Table 5b below:

Table 5a (Locations of Sampling Sites)

Sampling Site	Site Description	UTM Co-ordinates, Zone 17
TAT-1	Tatachikapika River, upstream of the effluent discharge location (reference)	5353069 N 457006 E
TAT-2	Tatachikapika River, immediately downstream of the effluent discharge location (near field exposure)	5357550N 461193E
TAT-3	Tatachikapika River, below the confluence of the Tatachikapika River and Thunder Creek	5358505N 462259 E
TC-1	Thunder Creek, upstream of mine site (reference)	5359366N, 457999E
TC-2	Thunder Creek, immediately downstream of mine site (near field exposure)	5359191N 459234E
TC-3	Thunder Creek, downstream of mine site (far field exposure)	5358619N 461181E
WTC-1	West Thunder Creek Tributary, upstream of mine site (reference)	5358710N 458756E
WTC-2	West Thunder Creek Tributary, downstream of mine site	5359084 N 458713 E

Table 5b - Receiver Monitoring (Samples of the receiving water to be collected at sampling locations outlined in Table 5a above)			
Parameters	**Sample Type**	**Min. Frequency (TAT-1 and TAT2)**	**Min. Frequency (TAT-3, TC-1, TC-2, TC-3, WTC-1 and WTC-2)**
Temperature	Grab/Probe	Monthly	May, July & October
pH	Grab/Probe	Monthly	May, July & October
Acidity	Grab	Monthly	May, July & October
Alkalinity (total as $CaCO_3$)	Grab	Monthly	May, July & October
Chemical Oxygen Demand	Grab	Monthly	May, July & October
Conductance (µS/cm)	Grab/Probe	Monthly	May, July & October
Dissolved Oxygen	Grab/Probe	Monthly	May, July & October
Hardness, total	Grab	Monthly	May, July & October
Oil and Grease	Grab	Monthly	May, July & October
Total Dissolved Solids	Grab	Monthly	May, July & October
Total Suspended Solids	Grab	Monthly	May, July & October
Chloride	Grab	Monthly	May, July & October
Sulphate	Grab	Monthly	May, July & October
Ammonia, Total (Ammonia+Ammonium)	Grab	Monthly	May, July & October
Ammonia, Un-Ionized (calculated)	Grab	Monthly	May, July & October
Organic Carbon, Dissolved	Grab	Monthly	May, July & October
Phosphorus, Total	Grab	Monthly	May, July & October
ICP metal scan*	Grab	Monthly	May, July & October

* Inductively Coupled Plasma (ICP) metal scan to include Aluminum, Antimony, Arsenic, Barium, Beryllium, Bismuth, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Lithium, Magnesium, Manganese, Mercury, Molybdenum, Potassium, Nickel, Selenium, Silver, Sodium, Strontium, Tin, Thallium, Titanium, Tungsten, Uranium, Vanadium, Yttrium, Zinc.

(4) The methods and protocols for sampling, analysis, toxicity testing, and recording shall conform, in order or precedence, to the methods and protocols specified in the following:

(a) the Ministry's publication "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater (January 1999)", as amended from time to time by more recently published editions;

(b) the publication "Standard Methods for the Examination of Water and Wastewater" (21st edition) as amended from time to time by more recently published editions;

(c) the Environment Canada publications "Reference Method for Determining Acute Lethality of Effluents to Rainbow Trout" (July 1990) and "Reference Method for Determining Acute Lethality of Effluents to Daphnia magna" (July 1990);

(d) in respect of any parameters not mentioned in documents (a) to (c) above, the written approval of the District Manager shall be obtained prior to sampling.

(5) The Owner shall install, maintain and operate (a) flow measuring device(s) so as to measure effluent flow rate at the sampling location TR-1 with an accuracy to within plus or minus 15 percent of the actual flow rate for the entire design range of the flow measuring device, which must be operable under winter conditions.

(6) After **twenty four (24) months** of effluent monitoring under Subsection (2), the effluent objectives, limits and monitoring frequency specified in Conditions 5, 6, 7 and 8 may be changed to such frequency as the District Manager may specify in writing from time to time, provided that the new specified frequency is never less than annual.

(7) After **twenty four (24) months** of influent monitoring under Subsection (2), the influent monitoring frequency specified in Condition 8 may be changed to such frequency as the District Manager may specify in writing from time to time, provided that the new specified frequency is never less than annual.

(8) The following information shall be retained by the Owner for a period of at least **three (3) years** from the date of preparation:

(a) Laboratory analytical results of the samples taken pursuant to the sampling program set out in this Condition; and

(b) Sewage Works operation, performance and maintenance results, including logbooks associated with the operation, performance and maintenance of the sewage Works.

(9) The Owner shall take all reasonable steps to minimize any adverse impact to surface or ground waters resulting from non-compliance with the effluent requirements specified in this Approval including, but not limited to, such accelerated or additional monitoring as necessary to determine the nature and impact of the discharge in respect of which there is non-compliance.

(10) The Owner shall notify the District Manager in writing when sampling is determined to be not possible due to health and safety procedures as described in the Operation Manual.

9. REPORTING

(1) The Owner shall prepare and submit to the District Manager an activity report each Quarter by the last day of the month following the quarter being reported upon. The activity report shall contain the following in a format that is acceptable to the District Manager:

(a) estimate of total effluent discharged from the sewage Works during the reporting period;

(b) a status of storage capacity occupied and remaining in sewage Works system;

(c) a summary and interpretation of all monitoring data collected relative to the sewage works facility during the period being reported upon, including statistical evaluation (minimum, maximum, average), evaluation of compliance with this Approval and Ministry guidelines;

(d) a description of any operating problems and the corrective action taken during the reporting period,
including anomalies in data due to changes in, or upsets of the sewage Works;

(e) a summary of all information generated under the requirements of Condition 8; and

(f) comments on the ability to meet effluent objectives.

(2) The Owner shall report to the District Manager or designate, any exceedence of effluent limits for any parameter specified in Condition 6 verbally, as soon as reasonably possible, and in writing within seven (7) days of the knowledge of the exceedence.

(3) In addition to the obligations under Part X of the EPA and O. Reg. 675/98 (Classification and Exemption of Spills and Reporting of Discharges), 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.

(4) The Owner shall prepare and submit a performance report to the District Manager on an annual basis by **June 30th** following the end of the period being reported upon. The report shall cover the period of operations from January 1 to December 31, and subsequent reports shall be submitted to cover successive annual periods following thereafter. The reports shall contain the following information:

(a) a comprehensive listing, statistical summary and interpretation of all monitoring data taken pursuant to this Approval (including flow monitoring) and a comparison to the effluent limits outlined in Condition 6, including an overview of the success and adequacy of the sewage works;

(b) a description of any operating problems encountered and corrective actions taken;

(c) a summary of all maintenance carried out on any major structure, equipment, apparatus, mechanism or thing forming part of the sewage works and the ability of the structures to perform their intended functions for the upcoming calendar year;

(d) a summary of any effluent quality assurance or control measures undertaken in the reporting period;

(e) a summary of the calibration and maintenance carried out on all effluent monitoring equipment;

(f) a list summarizing any implementation programs affiliated with the approved sewage works that are planned, being implemented and completed, as well as the completion or scheduled completion

date of each program. This includes any activity contained in the Limited Operational Flexibility;

(g) all flow data and metal (arsenic, copper, lead, nickel and zinc) loading calculations;

(h) a copy of all Notice of Modifications submitted to the District Manager as a result of Schedule B, Section 1, with a status report on the implementation of each modification;

(i) a report summarizing all modifications completed as a result of Schedule B, Section 3; and

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

(5) The Owner shall furnish to the District Manager any information which the District Manager may request concerning compliance with this Approval, pursuant to Section 31 of the Ontario Water Resources Act and copies of any records required to be kept by this Approval.

10. AS-CONSTRUCTED DRAWINGS

(1) The Owner shall prepare within 6 months of substantial completion of any new works a complete set of drawings showing the works as-constructed and shall, within a reasonable period of time after any changes to the works, amend the drawings to reflect said changes. A copy of the said drawings and amendments thereto shall be submitted to the District Manager (for his records only), as they become available.

(2) The Owner shall maintain the as-constructed drawings, as amended, at the location of the works for so long as it is in operation, and shall make them available for inspection and copying by a provincial officer upon request.

11. RECEIVER BIOLOGICAL MONITORING

(1) Receiving environment monitoring will be conducted in a manner that is consistent with but not necessarily limited to, the Environmental Effects Monitoring (EEM) requirements of the Metal Mining Effluent Regulations (MMER) under the Fisheries Act. This includes the provisions regarding the iterative schedule of studies and required components of each study. The studies will follow the technical guidance presented in the Metal Mining Guidance Document for Aquatic Environmental Effects Monitoring (Environment Canada 2002 and subsequent amendments) respecting the sampling, laboratory analyses and data interpretation of water sediment, benthic invertebrate and fish samples.

(2) The Ministry of Environment will be provided with copies of the proposed study design in advance of each study and copies of the final interpretive report following each study. This will provide the Ministry of Environment with the opportunity to provide technical input throughout the EEM process. The input and requirements by the Ministry will not necessarily be confined by requirements of the federal EEM program.

12. ADDITIONAL REQUIREMENTS

(1) In addition to the requirements outlined in the above conditions, the Owner shall also comply with requirements listed in **Schedule D.**

PART III – DOMESTIC SANITARY SEWAGE WORKS

13. MONITORING AND RECORDING

The Owner shall carry out the following monitoring program:

(1) All samples and measurements taken for the purpose of this Approval are to be taken at a time and in a location characteristic of the quality and quantity of the effluent stream over the time period being monitored.

(2) Samples shall be collected at the sampling points, at the sampling frequency and using the sample type specified for each parameter listed in the Influent Monitoring Table included in **Schedule B**.

(3) Samples shall be collected at the sampling points, at the sampling frequency and using the sample type specified for each parameter listed in the Effluent Monitoring Table included in **Schedule B**.

(4) The Owner shall employ measurement devices to accurately measure quantity of effluent being discharged to each individual subsurface disposal bed, including but not limited to water/wastewater flow meters, event counters, running time clocks, or electronically controlled dosing, and shall record the daily volume of effluent being discharged to each subsurface disposal bed.

(5) The Owner shall ensure that the flow of treated effluent discharged into each subsurface disposal bed does not exceed the Maximum Daily Flow for which the subsurface disposal bed is designed to handle.

(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 Procedure F-10-1, “Procedures for Sampling and Analysis Requirements for Municipal and Private Sewage Treatment Works (Liquid Waste Streams Only), as amended from time to time by more recently published editions;

(b) the Ministry's publication "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater Version 2.0" (January 2016), PIBS 2724e02, as amended; and

(c) the publication "Standard Methods for the Examination of Water and Wastewater" (21st edition), as amended from time to time by more recently published editions.

(7) 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.

14. EFFLUENT OBJECTIVES

(1) The Owner shall design and undertake everything practicable to operate the Works in accordance with the Final Effluent parameters design objectives listed in the table included in **Schedule B**.

(2) For the purposes of subsection 1:

(a) The concentrations of $CBOD_5$ and TSS named in Column 1 of Effluent Objectives Table listed in **Schedule B**, as measured at each monitoring event, should be compared to the corresponding concentration set out in Column 3 of Effluent Objectives Table listed in **Schedule B**.

15. OPERATIONS AND MAINTENANCE

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

(2) The Owner shall prepare and make available for inspection by Ministry staff, a maintenance agreement with the manufacturer for the treatment process/technology or its authorized agent. The maintenance agreement must be retained at the site and kept current for the operational life of the Works.

(3) The Owner shall ensure that all septic tanks are pumped out every 3-5 years or when the tank is 1/3 full of solids and the effluent filters are cleaned out at minimum once a year or more often if required.

(4) The Owner shall ensure that grass-cutting is maintained regularly over the subsurface disposal beds, and that adequate steps are taken to ensure that the area of the underground Works is protected from vehicle traffic.

(5) The Owner shall maintain and service the Works in such a manner that leaks and spills are prevented.

(6) The Owner shall use best efforts to immediately identify and clean up all spills.

(7) The Owner shall enter into a written Agreement with a licensed hauled sewage system operator for the disposal of sanitary sewage from the holding tanks, on an as required basis, and shall keep a copy of the valid Agreement at all times during the operation of the Works.

(8) The Owner shall maintain a logbook to record the clean outs of the holding tanks, and shall keep the

logbook at the site and make it available for inspection by the Ministry staff. The logbook shall include the following:

(a) the name and signature of the person(s) that conducted the clean out;

(b) the date and time of the clean out;

(c) an estimate of the quantity of materials that are removed from each holding tank; and

(d) observances (including location) of any leaks and/or spills at or around any component of the Works, including recommendations for remedial action and the actions taken to mitigate the situation.

(9) The Owner shall visually inspect the general area where Works are located for break-out or any leaks and/or spills once every month.

(10) In the event a break-out is observed from a subsurface disposal bed or any leaks and/or spills are observed at or around any component of the Works, the Owner shall do the following:

(a) sewage discharge to that subsurface disposal system or that holding tank shall be discontinued;

(b) the incident shall be **immediately** reported verbally to the Spills Action Centre (SAC) at (416) 325-3000 or 1-800-268-6060;

(c) submit a written report to the District Manager within **one (1) week** of the break-out or leak and/or spill;

(d) access to the break-out or leak/spill area shall be restricted until remedial actions are complete;

(e) during the time remedial actions are taking place the sewage generated at the site shall not be allowed to discharge to the environment; and

(f) sewage generated at the site shall be safely collected and disposed of through a licensed waste hauler to an approved sewage disposal site.

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

(12) The Owner shall maintain a logbook to record the results of Operation and Maintenance activities specified in the above sub-clauses, and shall keep the logbook at the site and make it available for inspection by the Ministry staff.

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

Approval.

16. REPORTING

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

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

(3) The Owner shall prepare and submit a Domestic Sanitary Sewage Works performance report to the District Manager on an annual basis by **June 30th** following the end of the period being reported upon. The first such report shall cover the first annual period following the commencement of operation of the Works and subsequent reports shall cover successive annual periods following thereafter. The reports shall contain, but shall not be limited to, the following information:

(a) a summary and interpretation of all monitoring data and a comparison to the Effluent Objectives of Condition 14 including an overview of the success and adequacy of the Works, and a contingency plan in the event of not meeting the Effluent Objectives;

(b) a review and assessment of the performance of the Works, including all treatment units and subsurface disposal beds;

(c) a description of any operating problems encountered and corrective actions taken at all Works located at the property;

(d) a record of all maintenance carried out on any major structure, equipment, apparatus, mechanism or thing forming part of all Works located at the property including but not limited to: records of maintenance inspections for the treatment system, records of septic tank effluent filters cleaning, records of septic tank pump-outs, records of sludge pump-outs accumulated from the treatment system, records of visual inspections of all subsurface disposal systems;

(e) a summary of any effluent quality assurance or control measures undertaken in the reporting period;

(f) a summary and interpretation of all daily flow data and results achieved in not exceeding the Maximum Daily Flow discharged into each one of the subsurface disposal system;

(g) a summary of any complaints received during the reporting period and any steps taken to address the complaints;

(h) a summary of all spill or abnormal discharge events;

(i) any other information the District Manager requires from time to time.

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

1. Condition 1 is imposed to ensure that the Works are built and operated in the manner in which they were described for review and upon which Approval was granted. This condition is also included to emphasize the precedence of conditions in the Approval and the practice that the Approval is based on the most current document, if several conflicting documents are submitted for review.

2. Condition 2 is included to ensure that the Ministry records are kept accurate and current with respect to approved Works and to ensure that subsequent owners of the Works are made aware of the Approval and continue to operate the Works in compliance with it.

3. Condition 3 is included to ensure that a comprehensive operations manual governing all significant areas of operation, maintenance and repair is prepared, implemented and kept up-to-date by the Owner and made available to the Ministry. Such a manual is an integral part of the operation of the Works. Its compilation and use should assist the Owner in staff training, in proper operations and in identifying and planning for contingencies during possible abnormal conditions. The manual will also act as a benchmark for Ministry staff when reviewing the Owner's operation of the Work.

4. Condition 4 is included to ensure that the Works are operated in accordance with the application and supporting documentation submitted by the Owner, and not in a manner which the Director has not been asked to consider. These Conditions are also included to ensure that a Professional Engineer has reviewed the proposed modifications and attests that the modifications are in line with that of Limited Operational Flexibility, and provide assurance that the proposed modifications comply with the Ministry's requirements stipulated in the Terms and Conditions of this Approval, MOE policies, guidelines, industry engineering standards and best management practices.

5. Conditions 5 and 14 are imposed to establish non-enforceable effluent quality objectives which the Owner is obligated to use best efforts to strive towards on an ongoing basis. These objectives are to be used as a mechanism to trigger corrective action proactively and voluntarily before environmental impairment occurs and before the compliance limits of Condition 6 are exceeded.

6. Conditions 6 and 7 are imposed to ensure that the effluent discharged from the Works to Tatachikapika River meets the Ministry's effluent quality requirements as specified on a continual basis thus minimizing environmental impact on the receiver.

7. Conditions 8 and 13 are included to require the Owner to demonstrate on a continual basis that the quality and quantity of the effluent from the approved Works is consistent with the design objectives and effluent limits specified in the Approval and that the approved Works does not cause any impairment to the receiving groundwater and watercourse.

8. Conditions 9 and 16 are included to provide a performance record for future references and to ensure that

the Ministry is made aware of problems as they arise, so that the Ministry can work with the Owner in resolving the problems in a timely manner.

9. Condition 10 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.

10. Condition 11 is included to ensure to ensure the ongoing long-term protection of the environment.

11. Condition 12 is imposed (with Schedule D) to provide for the substantially equivalent requirements that were set out in Ontario Regulation 560/94 as it read prior to its revocation on July 1, 2021 such that there is a continued protection of the environment.

12. Condition 15 is included to require that the Works be properly operated, maintained, and equipped such that the environment is protected.

Schedule 'A' forms part of this Approval and contains a list of supporting documentation / information received, reviewed and relied upon in the issuance of this Approval.

SCHEDULE 'A'

All in accordance with the following submitted supporting documents:

1. Environmental Compliance Approval Application submitted by Jennifer Warden, Environmental Coordinator – Timmins West Mine, Lake Shore Gold Corp. – A Subsidiary of Pan American Silver, dated August 15, 2023 and received on September 7, 2023, including all supporting information.

2. All other information and documentation provided by Lake Shore Gold Corp. – A Subsidiary of Pan American Silver.

3. Application for Approval of Industrial Sewage Works submitted by Harri Ollila of Lake Shore Gold Corp. Timmins West Project, dated August 20, 2007;

4. Project description, drawings and addendum documents, and revisions dated December 3, 2007, prepared and submitted by Harri Ollila and Darryl Boyd in association with Golder Associates Ltd. and B.H.Martin Consultants Ltd., Consulting Engineer;

5. Application for Approval of Industrial Sewage Works submitted by Harri Ollila of Lake Shore Gold Corp., dated November 3, 2009, including supporting documents;

6. Engineer's Report, Comprehensive Approval of Approval for Industrial Sewage Works - Timmins Mine Lake Shore Gold Corp., prepared by Calder Engineering Ltd., dated February 22, 2010.

7. Email dated April 30, 2010, from Genevieve Sulatycky, Acting Environmental Coordinator, Lake Shore Gold Corp., in agreement with the DRAFT CCA.

8. Notice of Planned Modification to the Sewage Works #1, submitted by Lake Shore Gold Corp., dated July 27, 2010, for a Pilot project - Geotube dewatering technology, and approved by the MOE on August 16, 2010, including supporting documentation;

9. Notice of Planned Modification to the Sewage Works #2, submitted by Lake Shore Gold Corp., dated July 27, 2010, for a New Mine Water Pond for additional storage capacity, and approved by the MOE on August 16, 2010, including supporting documentation;

10. Application for Approval of Industrial Sewage Works submitted by Bryan Neeley of Lake Shore Gold Corp., dated July 15, 2010, including supporting documents;

11. Technical Memo - Design and Operations Report - Proposed On-Site Class 4 Sewage Disposal System Upgrade - Timmins Mine Lake Shore Gold Corp., prepared by Calder Engineering Ltd., dated July 14, 2010.

12. Environmental Compliance Approval Application dated November 15, 2012 signed by Dan Gagnon, VP Timmins Operations & General Manager, Lake Shore Gold Corp. together with submission made by Marcel Cardinal, Manager of Environmental Affairs, Lake Shore Gold Corp.

SCHEDULE 'B'

Influent Monitoring Table

Sampling Location	Upstream from each Waterloo Biofilter treatment system
Frequency	Semi-annually (once every six months)
Sample Type	Grab
Parameters	BOD_5, Total Suspended Solids (TSS),

Effluent Monitoring Table

Sampling Location	Effluent discharged from each Waterloo Biofilter treatment system upstream from each leaching bed
Frequency	Semi-annually (once every six months)
Sample Type	Grab
Parameters	$CBOD_5$, Total Suspended Solids (TSS)

Effluent Objectives Table

Effluent discharged from each Waterloo Biofilter treatment system upstream from each leaching bed

Final Effluent Parameter	**Averaging Calculator**	**Effluent Concentration Objective** (maximum unless otherwise indicated)
Column 1	*Column 2*	*Column 3*
$CBOD_5$	Single Sample Result	10 mg/L
Total Suspended Solids	Single Sample Result	10 mg/L

SCHEDULE 'C'

Limited Operational Flexibility Criteria for Modifications to Industrial Sewage Works

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

   1.1 Sewage Pumping Stations

   a. Alter pumping capacity by adding or replacing equipment where new equipment is located within an existing sewage treatment plant site or an existing sewage pumping station site, provided that the modifications do not result in an increase of the sewage treatment plant Rated Capacity and the existing flow process and/or treatment train are maintained, as applicable.

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

   1.2 Sewage Treatment Process

   a. Installing additional chemical dosage equipment including replacing with alternative chemicals for pH adjustment or coagulants (non-toxic polymers) provided that there are no modifications of treatment processes or other modifications that may alter the intent of operations and may have negative impacts on the effluent quantity and quality.

   b. Expanding the buffer zone between a sanitary sewage lagoon facility or land treatment area and adjacent uses provided that the buffer zone is entirely on the proponent’s land.

   c. Optimizing existing sanitary sewage lagoons with the purpose to increase efficiency of treatment operations provided that existing sewage treatment plant rated capacity is not exceeded and where no land acquisition is required.

   d. Optimizing existing sewage treatment plant equipment with the purpose to increase the efficiency of the existing treatment operations, provided that there are no modifications to the works that result in an increase of the approved rated capacity, and may have adverse effects to the effluent quality or location of the discharge.

   e. Replacement, refurbishment of previously approved equipment in whole or in part with Equivalent Equipment, like-for-like of different make and model, provided that the firm

capacity, reliability, performance standard, level of quality and redundancy of the group of equipment is kept the same or exceeded. For clarity purposes, the following equipment can be considered under this provision: pumps, screens, grit separators, blowers, aeration equipment, sludge thickeners, dewatering equipment, UV systems, chlorine contact equipment, bio-disks, and sludge digester systems.

1.3 Sewage Treatment Plant Outfall

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

1.4 Sanitary Sewers

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

1.5 Pilot Systems

a. Installation of pilot systems for new or existing technologies provided that:

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

1.6 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 to an approved tailings management plan.
   ii Routine dam raises and extensions are signed and stamped 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.
   iv Routine dam raises and extensions are designed in compliance with the Lakes and Rivers Improvement Act (LRIA) and as required the LRIA Permit is in place.

b. New dams are not eligible under LOF, unless pre-approved under the tailings management

plan.

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.

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.

Ontario
Ministry of
the Environment

Notice of Modification to Sewage Works

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

Part 1 – Environmental Compliance Approval (ECA) with Limited Operational Flexibility

(Insert the ECA's owner, number and issuance date and notice number, which should start with "01" and consecutive numbers thereafter)

ECA Number	Issuance Date (mm/dd/yy)	Notice number (if applicable)

ECA Owner	Municipality

Part 2: Description of the modifications as part of the Limited Operational Flexibility

(Attach a detailed description of the sewage works)

Description shall include:

1. A detail description of the modifications and/or operations to the sewage works (e.g. sewage work component, location, size, equipment type/model, material, process name, etc.)
2. Confirmation that the anticipated environmental effects are negligible.
3. List of updated versions of, or amendments to, all relevant technical documents that are affected by the modifications as applicable, i.e. submission of documentation is not required, but the listing of updated documents is (design brief, drawings, emergency plan, etc.)

Part 3 – Declaration by Professional Engineer

I hereby declare that I have verified the scope and technical aspects of this modification and confirm that the design:

1. Has been prepared or reviewed by a Professional Engineer who is licensed to practice in the Province of Ontario;
2. Has been designed in accordance with the Limited Operational Flexibility as described in the ECA;
3. Has been designed consistent with Ministry's Design Guidelines, adhering to engineering standards, industry's best management practices, and demonstrating ongoing compliance with s.53 of the Ontario Water Resources Act; and other appropriate regulations.

I hereby declare that to the best of my knowledge, information and belief the information contained in this form is complete and accurate

Name (Print)	PEO License Number

Signature	Date (mm/dd/yy)

Name of Employer

Part 4 – Declaration by Owner

I hereby declare that:

1. I am authorized by the Owner to complete this Declaration;
2. The Owner consents to the modification; and
3. This modifications to the sewage works are proposed in accordance with the Limited Operational Flexibility as described in the ECA.
4. The Owner has fulfilled all applicable requirements of the *Environmental Assessment Act*.

I hereby declare that to the best of my knowledge, information and belief the information contained in this form is complete and accurate

Name of Owner Representative (Print)	Owner representative's title (Print)

Owner Representative's Signature	Date (mm/dd/yy)

SCHEDULE 'D'

Notice due to MISA Revocation

This Schedule is to provide for the substantially equivalent requirements that were set out in Ontario Regulation 560/94 as it read prior to its revocation on July 1, 2021 such that there is a continued protection of the environment.

This Schedule applies both to effluent streams that discharge continuously and to effluent streams that discharge intermittently.

This Schedule shall come into force on the day it is issued.

For the purpose of this Approval, the following definitions apply:

1. "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;

2. "Discharger" means **Lake Shore Gold Corp.** or person in occupation or having the charge, management or control of ***LAKE SHORE GOLD - TIMMINS MINE*** the plant to which this Approval applies;

3. "District Manager" means the District Manager of the appropriate local district office of the Ministry where the Plant is geographically located;

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

5. "Limited Parameter" means a parameter for which a limit is specified in Column 3 or 4 of **Schedule A** in this Approval;

6. "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;

7. "Metal Mining Plant" means any opening or excavation in, or working of, the ground for the purpose of winning any Metal, Metal concentrate or Metal-bearing substance and includes all associated,

    a. ways, works, machinery, buildings or premises below or above the ground,

    b. waste disposal sites, wastewater treatment facilities, and

    c. roasting or smelting furnaces, refineries, concentrators or mills, wherever located, that are used in connection with washing, crushing, grinding, sifting, reducing,

leaching, roasting, smelting, refining or treating of any Metal, Metal concentrate or Metal-bearing substance;

8. "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;

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

10. "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;

11. "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 associated with it;

12. "Process Change" means a change in equipment, production processes, Process Materials or treatment processes;

13. "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;

14. "Process Effluent Monitoring Stream" means a process effluent stream on which a sampling point is maintained under Condition 3;

15. "Process Effluent Sampling Point" means a sampling point maintained on a process effluent stream under Condition 3;

16. "Process Materials", in relation to the Discharger'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;

17. "Quarter" means a period of three (3) consecutive months beginning on the first day of January, April,

July or October;

18. "Semi-annual Period" means a period of six (6) months beginning on the first day of January or July;

19. "Storm Water Effluent" means run-off from a storm event or thaw that is not used in any industrial process.

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

TERMS AND CONDITIONS

1. BYPASSES

1. The Discharger shall not permit effluent that would ordinarily flow past a sampling point maintained under this Approval to be discharged from the Discharger's plant without flowing past that sampling point, regardless of whether it would be convenient to do so because of a maintenance operation, a breakdown in equipment or any scheduled or unscheduled event.

2. SAMPLING AND ANALYTICAL PROCEDURES

1. Subject to Condition 17, the Discharger shall carry out the maintenance of sampling point obligations of this Approval and the sampling and analysis obligations of this Approval, including quality control sampling and analysis obligations, in accordance with the procedures described in the Ministry publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater", as amended from time to time.

2. The Discharger shall maintain the sampling equipment used at the Discharger's plant for sampling required by this Approval in a way that ensures that the samples collected at the plant under this Approval accurately reflect the level of discharge of each Limited Parameter from the plant.

3. SAMPLING POINTS

1. The Discharger shall maintain, a sampling point on each Process Effluent stream at the Discharger's plant, as necessary so that the plant loadings calculated under Condition 7 for each Limited Parameter and the concentrations determined under Condition 8 for each Limited Parameter accurately reflect the level of discharge of each such parameter from the plant.

2. Despite subsection (1) of this condition, the Discharger need not maintain a sampling point on a by-pass.

3. If circumstances change so that a new sampling point is necessary at the Discharger's plant in order to permit the calculation of plant loadings under Condition 7 for each Limited Parameter and the determination of concentrations under Condition 8 for each Limited Parameter that accurately reflect the level of discharge of each such parameter from the plant, the Discharger

shall, within thirty (30) days of the change, establish the new sampling point and notify the District Manager in writing.

4. The Discharger may, after notifying the District Manager in writing, eliminate a sampling point maintained under subsection (1) or established under subsection (3) of the this condition if the sampling point is no longer necessary to permit the calculation of plant loadings under Condition 7 for each Limited Parameter and the determination of concentrations under Condition 8 for each Limited Parameter that accurately reflect the level of discharge of each such parameter from the Plant.

5. The plant loading for a parameter or the concentration for a parameter 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 the parameter from the plant.

4. REPORTS ON SAMPLING POINTS

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

5. USE OF SAMPLING POINTS

1. Subject to Condition 16, the Discharger shall use the sampling points maintained under this Approval for all sampling required by this Approval.

6. CALCULATION OF LOADINGS — GENERAL

1. For the purposes of performing a calculation under Conditions 7 and 8, the Discharger shall use the actual analytical result obtained by the laboratory.

2. Despite subsection (1) of this condition, where the actual analytical result is less than one-tenth of the analytical method detection limit set out in the Ministry publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater", as amended from time to time, the Discharger shall use the value zero for the purpose of performing a calculation under Conditions 7 and 8.

3. The Discharger shall ensure that each calculation of a process effluent loading required by Condition 7 and each calculation of a process effluent concentration required by Condition 8 is performed as soon as reasonably possible after the analytical results on which the calculation is based become available to the Discharger.

7. CALCULATION OF LOADINGS — PROCESS EFFLUENT

1. The Discharger shall calculate, in kilograms, a daily process effluent stream loading for each Limited Parameter in each Process Effluent Monitoring Stream of the Discharger for each day

on which a sample is collected under this Approval from the stream for analysis for the parameter.

2. When calculating a daily stream loading under subsection (1) of this condition, the Discharger 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 20, for the stream for the day.

3. The Discharger shall calculate, in kilograms, a daily process effluent plant loading for each Limited Parameter for each day for which the Discharger is required to calculate a daily process effluent stream loading for the parameter under subsection (1) of this condition.

4. For the purposes of subsection (3) of this condition, a daily process effluent plant loading for a parameter for a day is the sum, in kilograms, of the daily process effluent stream loadings for the parameter calculated under subsection (1) of this condition for the day.

5. Where the Discharger calculates only one daily process effluent stream loading for a parameter for a day under subsection (1) of this condition, the daily process effluent plant loading for the parameter for the day for the purposes of subsection (3) of this condition is the single daily process effluent stream loading for the parameter for the day.

6. The Discharger 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 Discharger's plant for analysis for the parameter.

7. For the purposes of subsection (6) of this condition, a monthly average process effluent plant loading for a parameter for a month is the arithmetic mean of the daily process effluent plant loadings for the parameter calculated under subsection (3) of this condition for the month.

8. CALCULATION OF CONCENTRATIONS — PROCESS EFFLUENT

1. The Discharger shall calculate, in milligrams per litre, a monthly average concentration for each Limited Parameter in each Process Effluent Monitoring Stream of the Discharger for each month.

2. For the purposes of subsection (1) of this condition, a monthly average concentration for a parameter for a month is the arithmetic mean of the analytical results obtained for the parameter from the samples collected under Condition 13 or 14, as the case may be, from the stream for the month.

9. PARAMETER LIMITS

1. The Discharger shall ensure that each analytical result obtained for each Limited Parameter from each sample collected from a Process Effluent Monitoring Stream at the Discharger's

plant does not exceed the daily concentration limit specified for the parameter in Column 3 of **Schedule A** in this Approval.

2. The Discharger shall ensure that each monthly average concentration calculated for a Limited Parameter under Condition 8 in connection with the Discharger's plant does not exceed the monthly average concentration limit specified for the parameter in Column 4 of **Schedule A** in this Approval.

3. Subject to subsection (4) of this condition, the Discharger shall control the quality of each Process Effluent Monitoring Stream at the Discharger'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.

4. Throughout any day on which the Discharger has used an alternate sampling point on a Process Effluent Monitoring Stream for sampling, as permitted by Conditions 16(7) and (8), the Discharger,

    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 (3) of this condition with respect to the stream.

10. LETHALITY LIMITS

1. The Discharger shall control the quality of each Process Effluent Monitoring Stream at the Discharger'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 at the plant results in mortality for no more than fifty (50) per cent of the test organisms in hundred (100) per cent effluent.

11. MONITORING - GENERAL

1. Despite Conditions 13 to 19, the Discharger need not collect samples from any stream at the Discharger's plant on a day on which Process Effluent is not being discharged from the plant.

2. Despite Conditions 13 and 15, the Discharger need not collect or analyze samples for total cyanide if cyanide is not used at the Discharger's plant.

3. Where the Discharger is required by this Approval to pick up a set of samples and analyze it for certain parameters, the Discharger shall pick up a set of samples sufficient to allow all the analyses to be performed.

4. The Discharger 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 Discharger as soon as reasonably possible.

5. Subject to subsection (6) of this condition, the Discharger shall pick up all samples required to be picked up at the Discharger's plant under Conditions 13 and 14 between the hours of 7 a.m. and 10 a.m.

6. If the District Manager is satisfied, on the basis of written submissions from the Discharger, that the circumstances at the Discharger's Plant are such that it would be impractical to pick up a set of samples from each sampling point maintained at the Plant under this Approval within the time period specified in subsection (5), the District Manager may give the Discharger a written notice in respect of the Plant, varying the time period specified in subsection (5).

7. Subject to subsection (8) of this condition, where the Discharger is required by Condition 13 or 14 to pick up samples, the Discharger shall pick up samples collected over the twenty four (24)-hour period immediately preceding the Pick-Up.

8. The twenty four (24)-hour period referred to in subsection (7) of this condition may be shortened or enlarged by up to three (3) hours to permit the Discharger to take advantage of the three(3)-hour range specified in subsection (5) of this condition or of a different three (3)-hour period.

12. MONITORING – ALTERNATE SAMPLING PROCEDURES

1. Where the Discharger is, in accordance with Condition 2(1), required by the Ministry publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater", as amended from time to time, to collect a composite sample for any sample required to be picked up at a stream at the Discharger's plant under this Approval, the Discharger may collect the composite sample by collecting three (3) equal volume grab samples from the stream at intervals of at least two (2) hours and combining them.

2. 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.

3. For the purposes of subsection (2) 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 ninety (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.

4. For the purposes of subsection (2) of this condition, the average daily flow of the Process Effluent Monitoring Stream is the arithmetic mean of the thirty (30) highest daily volumes calculated under Condition 20 in relation to the stream within the ninety (90)-day period preceding the date of the calculation of the retention time.

5. A retention time calculated under this condition expires 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.

13. MONITORING – PROCESS EFFLUENT – THRICE WEEKLY

1. The Discharger shall, on three (3) days in each week, pick up a set of samples collected at each Process Effluent Sampling Point at the Discharger's plant and shall analyze each set of samples for the parameters for which the frequency of monitoring, as set out in Column 2 of **Schedule A** in this Approval, is thrice weekly.

2. There shall be an interval of at least twenty (24) hours between successive Pick-Up days at the plant under subsection (1) of this condition.

3. All samples picked up under subsection (1) of this condition in a week shall be picked up on the same three (3) days in the week.

14. MONITORING – PROCESS EFFLUENT – WEEKLY

1. The Discharger shall, on one day in each week, pick up a set of samples collected at each Process Effluent Sampling Point at the Discharger's plant and shall analyze each set of samples for the parameters for which the frequency of monitoring, as set out in Column 2 of **Schedule A** in this Approval, is weekly.

2. There shall be an interval of at least four days between successive Pick-Up days at the plant under subsection (1) of this condition.

3. All samples picked up under subsection (1) of this condition in a week shall be picked up on the same day in the week.

15. MONITORING – PROCESS EFFLUENT – QUALITY CONTROL

1. On one day in each year, on a day on which samples are picked up at the plant under Condition 13(1), the Discharger shall collect and pick up a duplicate sample for each sample picked up on that day under Condition 13(1) at one Process Effluent Sampling Point at the Discharger's plant and shall analyze each duplicate sample for the parameters for which the frequency of monitoring, as set out in Column 2 of **Schedule A**, is thrice weekly.

2. On one day in each year, on a day on which samples are picked up at the plant under Condition 14(1), the Discharger shall collect and pick up a duplicate sample for each sample picked up on that day under Condition 14(1) at one Process Effluent Sampling Point at the Discharger's plant and shall analyze each duplicate sample for the parameters for which the frequency of monitoring, as set out in Column 2 of **Schedule A**, is weekly.

3. The Discharger shall ensure that the same Process Effluent Sampling Point is used at the Discharger's plant for the purposes of sampling under subsections (1) and (2) of this condition in a year.

4. The Discharger shall prepare a travelling blank and travelling spiked blank sample for each sample for which a duplicate sample is picked up at the plant under subsection (1) or (2) of this condition and shall analyze the travelling blank and travelling spiked blank samples in accordance with the directions set out in the Ministry publication entitled "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater", as amended from time to time.

5. There shall be an interval of at least six (6) months between successive Pick-Up days at the plant under subsections (1) and (2) of this condition.

16. MONITORING – PROCESS EFFLUENT – pH MEASUREMENT

1. The Discharger shall, on three (3) days in each week, during the time period applicable to the plant under Condition 11(6) or (7), collect a grab sample from each Process Effluent Monitoring Stream at the Discharger's plant and shall analyze each sample for the parameter pH.

2. There shall be an interval of at least twenty four (24) hours between each of the three (3) collections at a stream under subsection (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 13.

4. Each grab sample collected under subsection (1) of this condition shall be picked up within four (4) hours of when it was collected.

5. All samples picked up under subsection (1) of this condition in a week shall be picked up on the same three (3) days in the week.

6. The Discharger shall ensure that each grab sample picked up under subsection (1) of this condition is analyzed within four (4) hours of when it is picked up.

7. Instead of collecting a grab sample under subsection (1) of this condition from a stream, the Discharger 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 on each of three (3) days in each week during the time period applicable to the plant under Condition 11(6) or (7).

8. For the purposes of this condition, the Discharger shall use either the sampling point maintained under Condition 3 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.

9. Before using an alternate sampling point under subsection (8) of this condition, the Discharger shall give the District Manager a written notice describing the location of the alternate sampling point, together with a revised version of the list and plot plan referenced under Condition 4 showing the alternate sampling point.

17. MONITORING – ACUTE LETHALITY TESTING – RAINBOW TROUT

1. Where the Discharger is required by this condition to perform a rainbow trout acute lethality test, the Discharger shall perform the test according to the procedures described in the Environment and Climate 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 14(1), the Discharger shall collect and immediately pick up a grab sample at each Process Effluent Sampling Point at the Discharger'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 (3) of this condition.

5. All samples picked up under subsection (3) of this condition in a month shall be picked up on the same day in the month.

6. Where the Discharger has performed tests under subsection (3) of this condition for twelve (12) consecutive months, in accordance with MISA Regulation 560/94 before this amendment notice is issued, 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 Discharger is relieved of the obligations under subsection (3) of this condition relating to the sampling point and shall instead collect and immediately pick up a grab sample at the sampling point on one day in each Quarter and perform a rainbow trout acute lethality test on each sample.

7. Samples picked up at the plant under subsection (6) of this condition shall be picked up on a day on which samples are picked up at the plant under subsection (3) of this condition.

8. If no samples are being picked up at the plant under subsection (3) of this condition during a Quarter, samples picked up at the plant during the Quarter under subsection (6) of this condition

shall be picked up on a day on which samples are picked up at the plant under Condition 14(1).

9. There shall be an interval of at least forty five (45) days between successive Pick-Up days at the plant under subsection (6) of this condition.

10. All samples picked up under subsection (6) of this condition in a Quarter shall be picked up on the same day in the Quarter.

11. If a rainbow trout acute lethality test performed under subsection (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 (6) to (10) of this condition cease to apply in respect to samples from that sampling point, and the Discharger shall instead comply with the requirements of subsection (3) of this condition relating to the sampling point, until the tests performed under subsection (3) of this condition on all samples collected from the sampling point for a further twelve (12) consecutive months result in mortality for no more than fifty (50) per cent of the rainbow trout for each test.

12. The Discharger shall notify the Director in writing of any change in the frequency of acute lethality testing under this Approval at the Discharger's plant, within thirty (30) days after the day on which the change begins.

18. MONITORING – ACUTE LETHALITY TESTING – *DAPHNIA MAGNA*

1. Where the Discharger is required by this section to perform a *Daphnia magna* acute lethality test, the Discharger shall perform the test according to the procedures described the Environment and Climate Change Canada publication entitled "Biological Test Method: Reference Method for Determining Acute Lethality of Effluents to *Daphnia magna* ", as amended from time to time.

2. Conditions 18(2) to (12) 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 Discharger shall pick up each set of samples required to be collected from a sampling point at the Discharger's plant under this condition on a day on which the Discharger collects a sample from the sampling point under Condition 17, to the extent possible having regard to the frequency of monitoring required at the sampling point under this condition and Condition 17.

19. MONITORING – CHRONIC TOXICITY TESTING – FATHEAD MINNOW AND *CERIODAPHNIA DUBIA*

1. Where the Discharger is required to perform a seven-day fathead minnow growth inhibition test, the Discharger shall perform the test according to the procedure described in the Environment and Climate Change Canada publication entitled "Biological Test Method: Test of Larval

Growth and Survival Using Fathead Minnows", as amended from time to time.

2. Where the Discharger is required to perform a seven-day *Ceriodaphnia dubia* reproduction inhibition and survivability test, the Discharger 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 14(1), the Discharger shall collect and immediately pick up a grab sample from each Process Effluent Sampling Point at the Discharger'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 (3) of this condition.

5. All samples picked up under subsection (3) of this condition in a Semi-annual Period shall be picked up on the same day in the Semi-annual Period.

6. The Discharger need not collect a sample from a sampling point in accordance with subsection (3) of the 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 Discharger's plant result in mortality for no more than fifty (50) per cent of the test organisms in hundred (100) per cent effluent.

20. EFFLUENT FLOW MEASUREMENT

1. For the purposes of this condition, a volume of effluent for a stream for a day is the volume that flowed past the sampling point maintained 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 Discharger shall determine in cubic metres a daily volume of effluent for each process effluent stream at the Discharger's plant for each day on which a sample is collected under this Approval from the stream.

3. The Discharger 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 Discharger 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 (2) of this condition meets the accuracy requirements of subsection (3) of this condition.

5. Where the Discharger uses a new flow measurement method or alters an existing flow measurement method, the Discharger 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 (3) of this condition, as the case may be, within two weeks after the day on which the new or altered method or system is used.

6. The Discharger shall develop and implement a maintenance schedule and a calibration schedule for each flow measurement system installed at the Discharger's plant and shall maintain each flow measurement system according to good operating practices.

7. The Discharger 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.

21. CALCULATION OF PLANT VOLUMES

1. The Discharger shall calculate, in cubic metres, a daily process effluent plant volume for each day.

2. For the purposes of subsection (1) of this condition, a process effluent plant volume for a day is the sum of the daily process effluent volumes determined under Condition 20 for the day.

3. The Discharger shall calculate, in cubic metres, a monthly average process effluent plant volume for each month, by taking the arithmetic mean of the daily process effluent plant volumes calculated under subsection (1) of this condition for the month.

22. STORM WATER CONTROL STUDY

1. The Discharger shall complete a storm water control study in respect of the Discharger's plant, in accordance with the requirements of the Ministry publication entitled "Protocol for Conducting a Storm Water Control Study", dated August, 1994 as amended from time to time.

2. The Discharger need not comply with subsection (1) of this condition in respect of the Discharger's plant if,

    a. the plant meets the exemption criteria set out in the Ministry publication entitled "Protocol for Conducting a Storm Water Control Study", dated August, 1994 as amended from time to time; and

    b. the Discharger had notified the Director in writing, before 1997, that the plant meets the exemption criteria referred to in paragraph (a).

3. The Discharger shall ensure that a copy of each study completed under this condition is available to Ministry staff at the Discharger's plant, on request, during the plant's normal office

hours.

23. RECORD KEEPING

1. The Discharger shall keep records of all analytical results obtained under Conditions 13, 14 and 16, all calculations performed under Conditions 7 and 8 and all determinations and calculations made or performed under Conditions 20 and 21.

2. The Discharger shall keep records of all sampling and analytical procedures used in meeting the requirements of Condition 2, including, for each sample, the date, the time of Pick-Up, the sampling procedures used, and any incidents likely to affect the analytical results.

3. The Discharger shall keep records of all retention times calculated under Condition 12.

4. The Discharger shall keep records of the results of all monitoring performed under Conditions 15 and 17 to 19.

5. The Discharger shall keep records of all maintenance and calibration procedures performed under Condition 20.

6. The Discharger 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.

7. The Discharger shall keep records of any incident in which Process Effluent is discharged from the Discharger's plant without flowing past a sampling point maintained on a process effluent stream in accordance with this Approval before being discharged, stating the date, duration, cause and nature of each incident.

8. Discharger shall keep records of all Process Changes and redirections of or changes in the character of effluent streams that affect the quality of effluent at any sampling point maintained under this Approval at the Discharger's plant.

9. The Discharger shall keep records of the location of each sampling point maintained at the Discharger's plant under this Approval.

10. The Discharger shall make each record required by this condition as soon as reasonably possible and shall keep each such record for a period of three (3) years.

11. The Discharger shall ensure that all records kept under this condition are available to Ministry staff at the Discharger's plant, on request, during the plant's normal office hours.

24. REPORTS AVAILABLE TO THE PUBLIC

1. On or before June 1 in each year, the Discharger shall prepare a report relating to the previous calendar year and including,

    a. a summary of plant loadings calculated under Condition 7;

    b. a summary of concentrations determined under Condition 8;

    c. a summary of retention times calculated under Condition 12;

    d. a summary of the results of monitoring performed under Conditions 13, 14 and 16 to 19;

    e. a summary of calculations performed under Condition 21(1);

    f. a summary of the concentrations or other results that exceeded a limit prescribed by Condition 9 or 10;

    g. a summary of the incidents in which Process Effluent was discharged from the Discharger's plant without flowing past a sampling point maintained on a process effluent stream in accordance with this Approval before being discharged.

2. The Discharger shall ensure that each report prepared under subsection (1) of this condition is available to any person at the Discharger's plant, on request during the plant's normal office hours.

3. The Discharger shall provide the Director, upon request, with a copy of any report that the Discharger has prepared under subsection (1) of this condition.

25. REPORTS TO THE DISTRICT MANAGER – GENERAL

1. The Discharger shall notify the District Manager and the Director in writing of any change of name or ownership of the Discharger's plant, within thirty (30) days after the end of the month in which the change occurs.

2. The Discharger shall notify the District Manager in writing of any Process Change or redirection of or change in the character of an effluent stream that affects the quality of effluent at any sampling point maintained under this Approval at the Discharger's plant, within thirty (30) days of the change or redirection.

3. The Discharger need not comply with subsection (2) of this condition where the effect of the change or redirection on effluent quality is of less than one week's duration.

26. REPORTS TO THE DISTRICT MANAGER

1. The Discharger shall report any incident in which Process Effluent is discharged from the Discharger's plant without flowing past a sampling point maintained on a process effluent stream in accordance with this Approval before being discharged.

2. The Discharger shall report any concentration or other result that exceeds a limit prescribed by Condition 9 or 10.

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.

27. QUARTERLY REPORTS TO THE DISTRICT MANAGER

1. No later than forty five (45) days after the end of each Quarter, the Discharger shall submit a report to the District Manager containing information relating to the Discharger's plant throughout the Quarter as required by subsections (3) to (8) 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 26 during the Quarter.

4. The Discharger shall report, for each month in the Quarter, the monthly average plant loadings and the highest and lowest daily plant loadings calculated under Condition 7 for each Limited Parameter in this Approval.

5. The Discharger shall report, for each month in the Quarter, the monthly average concentrations calculated under Condition 8 and the highest and lowest analytical results obtained under Condition 13 and 14 for each Limited Parameter in each Process Effluent Monitoring Stream at the Discharger's plant.

6. The Discharger 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 21.

7. The Discharger shall report the number of days in each month in the Quarter on which Process Effluent was discharged from the Discharger's plant.

8. The Discharger shall report, for each month in the Quarter, the highest and lowest pH results obtained under Condition 16 for each Process Effluent Monitoring Stream at the Discharger's plant.

28. REPORTS TO THE DISTRICT MANAGER – CHRONIC TOXICITY TESTING

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

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

29. CONFLICT BETWEEN APPROVALS

1. Where there is a conflict between a limit in this Schedule and a limit in the ECA for this Plant for a given parameter, the most stringent of the two limits shall apply.

The reasons for this amendment to the Approval are as follows:

1. Conditions 1 to 28 are imposed to provide for substantially equivalent requirements as is currently provided in Ontario Regulation 560/94 (*Effluent Monitoring and Effluent Limits – Metal Mining Sector*) such that there is a continued protection of the environment in the event that Ontario Regulation 560/94 is revoked:

    a. Effluent limits are imposed to ensure that the effluent discharged from the Discharger's Plant to the receiver meets the Ministry's effluent quality requirements thus minimizing environmental impact on the receiver.

    b. Monitoring and recording requirements are included to require the Discharger to demonstrate on a continual basis that the quality and quantity of the effluent from the Discharger's Plant is consistent with the effluent limits specified in this Approval and that the effluent does not cause any impairment to the receiving watercourse.

    c. Reporting requirements are included to provide a performance record for future references and to ensure that the Ministry is made aware of problems as they arise, so that the Ministry can work with the Discharger in resolving the problems in a timely manner.

2. Condition 29 is included to emphasize the precedence of the most stringent limit, if there are conflicting limits between this amendment notice and the ECA for the Plant.

SCHEDULE A
PROCESS EFFLUENT LIMITS AND MONITORING FREQUENCY

TABLE:

Item	Column 0.1 Analytical test group	Column 1 Parameter	Column 2 Monitoring frequency	Column 3 Daily concentration limit (mg/L)	Column 4 Monthly average concentration limit
1.	2	Total Cyanide	Thrice weekly	2	1
2.	8	Total Suspended Solids (TSS)	Thrice weekly	30	15
3.	9	Copper	Weekly	0.6	0.3
4.	9	Lead	Weekly	0.4	0.2
5.	9	Nickel	Weekly	1	0.5
6.	9	Zinc	Weekly	1	0.5
7.	10	Arsenic	Weekly	1	0.5

Upon issuance of the environmental compliance approval, I hereby revoke Approval No(s). 6086-992J6B issued on January 16, 2015.

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 January, 2024

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

KC/

c: District Manager, MECP Timmins District Office
Jennifer Warden, Environmental Coordinator – Timmins West Mine, Lake Shore Gold Corp. – A Subsidiary of Pan American Silver