No. S-226670
Vancouver Registry

IN THE SUPREME COURT OF BRITISH COLUMBIA

IN THE MATTER OF THE *COMPANIES' CREDITORS ARRANGEMENT ACT,* R.S.C. 1985, c. C-36, AS AMENDED

AND

IN THE MATTER OF THE *BUSINESS CORPORATIONS ACT,* S.B.C. 2002, c. 57, AS AMENDED AND THE *BUSINESS CORPORATIONS ACT,* S.N.B. 1981, c. B-9.1, AS AMENDED

AND

IN THE MATTER OF A PLAN OF COMPROMISE AND ARRANGEMENT OF TREVALI MINING CORPORATION AND TREVALI MINING (NEW BRUNSWICK) LTD.

PETITIONERS

AFFIDAVIT

I, Cory Neumann, of the City of Fredericton in the Province of New Brunswick, AFFIRM THAT:

1. I am a Geological Engineer within the Department of Natural Resources and Energy Development ("**DNRED**") within the Province of New Brunswick ("**PNB**"). As such, I have personal knowledge of the matters within in this affidavit except where the matters within this affidavit are based on information from a person I identify, which case I believe that both the information from the person and the resulting statement are true.

2. I make this affidavit in support of PNB's application for a two-week extension of the CCAA stay to facilitate an orderly handover of care and maintenance responsibilities.

3. Trevali Mining (New Brunswick) ("**Trevali NB**") holds mining leases with the DNRED in regard to the Caribou mine near Bathurst, New Brunswick, which is located in the northeastern part of New Brunswick.

4. Trevali NB also holds the lease for the Restigouche mine (located near Caribou). Also applicable is the formerly operating Halfmile mine near Miramichi, New Brunswick. Collectively, I will refer to them below as the "Mines."

5. In regard to Caribou, PNB is the owner of two pieces of land currently leased to Trevali NB, specifically land identified by PID 50237924 and PID 50252766.

6. Trevali NB owns the land identified as PID 50072032.

7. Upon the land owned by Trevali NB and identified as PID 50072032, there is a mill related to the Caribou mine.

8. Upon the land owned by PNB, but currently leased by Trevali NB, there is equipment currently owned by Trevali NB along with other structures.

Environmental Obligations

9. Section 88 of the ***Mining Act***, S.N.B. 1985, c. M-14.1 (the "***Mining Act***"), states a company shall continue to owe any obligations for which they are liable under the ***Mining Act*** prior to the surrender of the mining lease, which would include environmental obligations.

10. These environmental obligations are outlined in the Approval to Operate applicable to Caribou mine, #I-11611, that was issued by the Department of Environment and Local Government ("**ELG**") pursuant to s. 8(1) of N.B. Reg. 82-126 under the ***Clean Environment Act***, R.S.N.B. 1973, c. C-6 (***"CEA"***). Now shown to me and attached as Exhibit "A" is the Approval to Operate #I-11611 for the period of February 25, 2022, to May 13, 2026.

11. During the CCAA proceedings of Trevali NB, PNB has understood that these environmental obligations were being fulfilled, as a result, PNB has not entered onto the mine sites, or taken other enforcement steps to review and assess the status of the sites, the equipment, or other environmental conditions, and has relied on reports of Trevali NB and the Monitor in respect of the state of the Mines.

12. If a bankruptcy is initiated, it is my understanding that Trevali NB would cease to fulfil these environmental obligations.

13. As per the Approval to Operate, such environmental obligations include, among other things, weekly dam inspections (s. 22(a)), the responsibility of keeping records of hazardous waste, inspection of a "G" pond at least once per week (s. 27(c)), and to conduct weekly surface water monitoring (s. 35).

14. Other environmental obligations at Caribou include:

    a. monitoring the tailings impoundment (which is almost full);

b. controlling acid drainage and treating it daily as long as water is being pumped from the underground mine and discharged from the tailings facility; and
c. maintaining ongoing water treatment.

15. The major issue at Caribou is the obligation in regard to water treatment and the treating and pumping of water out of the mine, which is currently being done.

16. Without same, the mine will flood. While it may take time for mine-impacted water to overflow, such flooding still creates a risk that was not there before.

17. If the company ceases to fulfill these environmental obligations, PNB has the statutory authority under the ***CEA*** to ensure that the environment is protected.

18. Since the Monitor reported to PNB regarding the outcome of the sales process in these CCAA proceedings, PNB and the Monitor have been in discussions regarding options to facilitate an orderly transition of care and maintenance activities to PNB, the result of which is discussed later in this affidavit.

19. The environmental obligations related to the Mines include ongoing activities at both Restigouche mine and Halfmile. Both mines also have been issued Approvals to Operate by ELG.

20. Now attached and shown to me as Exhibit "B" is the Approval to Operate, #I-11912, for Restigouche Mine, from December 1, 2022, to May 31, 2023.

21. Now attached and shown to me as Exhibit "C" is the Approval to Operate, #I-9983, for Halfmile Mine, from January 15, 2018, to January 14, 2023.

22. Specifically, Trevali NB has an obligation to de-water the Restigouche mine pursuant to the Approval to Operate and its applicable sections, like s. 23.

23. Restigouche was operated as an open pit, and this open pit fills with water that is acidic (due to acid-generating waste rock). The pit has to be treated and emptied before mine-impacted water spills out over the pit into the surrounding area, contaminating the surrounding lands and water systems.

24. The level in the Restigouche open pit also has to be recorded once per day, as per s. 26 of the Approval to Operate.

25. Treating and de-watering the Restigouche mine was part of the cash flow of Trevali NB within CCAA and, to the best of my knowledge, these obligations have been performed since filing.

26. With a sudden receivership or bankruptcy, PNB would not be in a position to automatically take over the environmental obligations at Restigouche, Halfmile and Caribou and there would be a delay or a gap in upkeeping environmental obligations that are required daily and/or weekly at all sites.

27. Overall, it is my belief there is a risk that there would be a gap in performing the environmental obligations required and this increases the chance of environmental damage if a receivership or bankruptcy were to occur on January 10, 2022.

28. Beyond environmental obligations, there is equipment on the mine sites.

29. If the receiver's personnel are not in place as of the time of any receivership or bankruptcy order, there is nothing to stop anyone from damaging or taking the equipment on site.

30. If anyone damages or takes components of the electrical system at Caribou, this could affect the functioning of the water treatment plant at Caribou, leading to risk of environmental damage.

31. A sudden bankruptcy or receivership on January 10, would leave PNB scrambling to arrange security and care and maintenance contractors in line with provincial law.

32. To comply with provincial law, including any environmental obligations under the Approval to Operate, PNB would require a qualified project manager to manage operations after bankruptcy with PNB overseeing same.

33. A sudden bankruptcy or receivership puts a steady and planned transition at risk and could result in periods where there is *no one* overseeing the Mines in regard to both security and environment.

34. It is my belief that a sudden bankruptcy or receivership would lead to a chaotic transition.

35. Without a planned overlap between PNB's contractors and Trevali NB employees on site, PNB and its own contractors would attempt to understand the work underway at each site and the safest way to continue essential operations.

36. I have worked for DNRED for 24 years and have personally visited the Mines many times. I am familiar with the layout, evolution, development, improvements and environmental issues of the Mines.

37. The key immediate issue is protection of the electrical grid at the Mines, which would be at risk in a chaotic transition.

38. The electrical grid would be at risk either being vandalized with parts stolen from same without security, or if the parts are sold off/liquidated without proper notice. This would affect any infrastructure necessary for environmental monitoring and/or protection, including water treatment and the liming station in the tailings pond.

39. It is my belief that a chaotic transition would bring a probable disruption to the electrical grid and increase the risk that a requirement under the Approval to Operate could be missed.

40. It is my belief that any equipment on site, including the water treatment plant, would face challenges in being liquidated and/or sold in a short amount of time based on the various conditions, including:

a. delays due to ongoing Environmental Impact Assessment ("**EIA**") obligations in regard to the Mines;
b. winter weather conditions in northern New Brunswick that create difficulty in accessing and viewing equipment; and
c. restrictions on road access that can start in February and can end as far as May.

41. Specifically, I have been informed by Crystale Harty, Director of EIA Branch, and verily believe, that any activities related to decommissioning and abandonment at the Caribou site, including removing the water treatment plant, requires the party seeking to remove such equipment to seek approval from ELG and would likely require a further EIA.

42. I have also been informed by Crystale Harty, and verily believe, that an EIA can take from four (4) months at its simplest to multiple years, depending on the information given to ELG by the party seeking to remove the equipment.

The Stay Extension

43. On or about December 21, 2022, I reached out to a contractor DNRED has engaged on other projects in the past (the "**Contractor**") regarding a proposal to take over care and maintenance at the Mines, to assess the equipment at the mine sites (the "**Equipment**"), and to assist in developing care and maintenance and remediation plans for the Mines.

44. On or about December 23, 2022, I had a call with representatives of the Contractor regarding same.

45. On or about December 23, 2022, I received an email from the Contractor advising that, due to internal approvals required, it would not be able to submit a proposal until January 6, 2023.

46. As a result of this timing, I am not certain when the Contractor could be at the Mines, but it certainly will not be before a proposal is submitted and accepted by DNRED.

47. I have been told by Jennifer Welles, the Acting Assistant Deputy Minister of the Mineral Resources Division of DNRED, that PNB is prepared to provide the equivalent of USD$198,000, in either Canadian or US dollars, to Trevali NB to rent the equipment currently owned or leased by Trevali NB (the "**Equipment**") on the following terms:
    a. An order being made by the CCAA court extending the stay of proceedings in respect of Trevali NB to January 24, 2023; and
    b. An order being made by the CCAA court that:
        i. PNB and its contractors may use the Equipment for the purposes of water treatment and remediation until March 31, 2023;
        ii. such permission to use the Equipment survives any future bankruptcy in respect of Trevali NB or receivership in respect of Trevali NB or its property, and is enforceable as against any trustee in bankruptcy or receiver; and
        iii. the payment by PNB in relation to the Equipment is without prejudice to any rights PNB may have to act in its regulatory capacities in respect of the mines or the Equipment.

48. Further, Ms. Welles has informed me that, subject to cooperation from Trevali NB or the Monitor in entering payment details into the Service New Brunswick system, PNB would provide such funding within approximately five (5) business days of the CCAA court making an order as described above.

49. I have been informed by Ms. Welles that the purpose for the period of time requested for use of the Equipment is so that PNB has sufficient time to inspect all equipment on site, formulate an initial plan for reclamation, and allow PNB time to negotiate the purchase of any Equipment that would be useful for reclamation of the Mines, given the potential need for time to seek internal approvals for funding such a purchase.

50. It is my belief that the stay extension and permission to use the Equipment is the best way for PNB to maintain all its security and environmental obligations on all sites, while minimizing prejudice to any other parties.

AFFIRMED BEFORE ME at the City of Fredericton, in the County of York and Province of New Brunswick, January 3, 2023.

Christopher Whibbs
A Commissioner of Oaths
Being a Solicitor

CORY NEUMANN

This is Exhibit "A" to the Affidavit #1 of Cory Neumann affirmed January 3, 2023, at the City of Fredericton in the County of York and Province of New Brunswick.

A Commissioner of Oaths being a Solicitor

CHRISTOPHER WHIBBS

APPROVAL TO OPERATE

I-11611

Pursuant to paragraph 8(1) of the *Water Quality Regulation - Clean Environment Act*, this Approval to Operate is hereby issued to:

Trevali Mining (New Brunswick) Ltd.
for the operation of the
Caribou Mine

Description of Source:	**Caribou Mine**
Source Classification:	**Fees for Industrial Approvals Regulation - Clean Water Act** **Class 1A**
Parcel Identifier:	**50072032, 50237924**
Mailing Address:	**P.O. Box 790 Station Main Bathurst, NB E2A 4A5**
Conditions of Approval:	**See attached Schedule "A" of this Approval**
Supersedes Approval:	**I-11464**
Valid From:	**February 25, 2022**
Valid To:	**May 13, 2026**

Recommended by: _____

Issued by: _____
for the Minister of Environment and Climate Change

February 28, 2022
Date

SCHEDULE "A"

A. DESCRIPTION AND LOCATION OF SOURCE

The Trevali Mining (New Brunswick) Ltd. Caribou Mine, located in Restigouche County, NB, on the properties identified by the Parcel Identifier Numbers 50072032 and 50237924, is hereby approved to operate, subject to the following:

B. DEFINITIONS

1. **"Approval Holder"** means Trevali Mining (New Brunswick) Ltd.

2. **"Department"** means the New Brunswick Department of Environment and Local Government.

3. **"Facility"** means the Caribou Mine which consists of an underground mine, surface ore storage and crushing facility, a concentrator plant, a minewater treatment plant and tailings impoundment located on properties 50072032 and 50237924, and without limiting the generality of the term, includes all land, buildings, processes and activities associated with the operation of the Caribou Mine.

4. **"Parameter List A"** means pH, total suspended solids (TSS), copper, lead and zinc. **"Parameter List B"** means pH, TSS, conductivity, hardness, total acidity, sulfate, aluminum, arsenic, cadmium, calcium, copper, cyanide, iron, lead, magnesium, manganese, mercury, nickel, selenium, thallium, total ammonia (as nitrogen) and zinc.

5. **"Environmental Emergency"** means a situation where there has been or will be a release, discharge, or deposit of a contaminant or contaminants to the atmosphere, soil, surface water, and/or groundwater environments of such a magnitude or duration that it could cause significant harm to the environment or put the health of the public at risk.

6. **"MDMER"** means the *Metal and Diamond Mining Effluent Regulations* and includes any subsequent revisions or amendments made to the MDMER.

7. **"Accredited"** means accreditation to ISO/IEC 17025 by Standards Council of Canada (SCC), the Canadian Association for Laboratory Accreditation Inc. (CALA), or accreditation to ISO/IEC 17025 from another body that is recognized to grant such accreditation per ISO/IEC 17011 criteria.

8. **"Hazardous Waste"** means any waste material intended for disposal or recycling, that is identified as a hazardous waste by the federal *Cross-border Movement of Hazardous Waste and Hazardous Recyclable Material Regulation*, and/or is included in Class 1 and/or Class 7 of the federal *Transportation of Dangerous Goods Regulations*. This definition excludes any waste(s) for which the Department has issued a written exemption.

9. **"statutory holiday"** means New Year's Day, Family Day, Good Friday, Easter Monday, the day fixed by proclamation of the Governor-in-council for the celebration of the birthday of the Sovereign (Victoria Day), Canada Day, New Brunswick Day, Labour Day, the day fixed by proclamation of the Governor-in-council as a general day of Thanksgiving, Remembrance Day, Christmas Day and Boxing Day. If the Statutory Holiday falls on a Sunday, the following day shall be considered as the Statutory Holiday.

10. **"normal business hours"** means the hours when the Department's offices are open. These include the period between 8:15 a.m. and 4:30 p.m. from Monday to Friday excluding statutory holidays.

11. **"after hours"** means the hours when the Department's offices are closed. These include statutory holidays, weekends, and the hours before 8:15 a.m. and after 4:30 p.m. from Monday to Friday.

C. TERMS AND CONDITIONS

12. Immediately following the discovery of an environmental emergency, a designate representing the Approval Holder shall notify the Department in the following manner:

During normal business hours, telephone the Department's applicable Regional Office **until personal contact is made** (i.e. no voice mail messages will be accepted) and provide all information known about the environmental emergency. The telephone numbers for the Regional Offices are provided below:

Bathurst Regional Office (506) 547-2092

After hours, telephone the National Environmental Emergency Center (NEEC) **until personal contact is made** and provide all information known about the environmental emergency. The telephone number for the **Canadian Coast Guard is 1-800-565-1633.**

If available at the time of reporting, this initial verbal Emergency Report shall include:

(a) a description of the source, including the name of the person responsible for the source;
(b) the nature, extent, duration and environmental impact of the environmental emergency;
(c) the cause or suspected cause of the environmental emergency;
(d) any remedial action taken, or to be taken, to minimize the impact of the environmental emergency; and,
(e) any remedial action taken, or to be taken, to prevent a recurrence of the environmental emergency.

13. Within 24-hours of the time of initial notification, a copy of a **Preliminary Emergency Report** be filed via email by a designate representing the Approval Holder to the Department's Bathurst Regional Office as well as to the Approval Engineer responsible for this Approval. The Preliminary Emergency Report shall clearly communicate all information available at the time about the environmental emergency.

Within five (5) days of the time of initial notification, a copy of a **Detailed Emergency Report** shall be filed via email by a designate representing the Approval Holder to the Department's Bathurst Regional Office *as well as* to the Approval Engineer responsible for this Approval. The Detailed Emergency Report shall include, as a minimum, the following: i) a description of the problem that occurred; ii) a description of the impact that occurred; iii) a description of what was done to minimize the impact; and iv) a description of what was done to prevent recurrence of the problem.

14. **Polishing Pond Exceedance Response:**
Notwithstanding any other actions taken pursuant to Conditions 12 and 13, if the Polishing Pond Discharge structure (PPD) limits of Condition 32(b) are exceeded or if the bioassay test from Condition 34(h) indicates acute lethality at the PPD, the Approval Holder shall immediately:

(a) if there is retention volume available in the South Tributary Tailings Pond (STTP), stop discharging effluent from the STTP to the Polishing Pond and from the PPD to the South Branch of 40 Mile Brook;
(b) notify the Department pursuant to Conditions 12 and 13;
(c) re-sample and re-test the PPD for trout and daphnia toxicity and for Parameter List "A";
(d) begin an investigation to determine the cause of the discharge limit exceedance or acute lethality;
(e) provide to the Department, for review and approval, the proposed actions felt necessary to eliminate the discharge limit exceedance or acute lethality;
(f) if the discharge from the STTP to the Polishing Pond and from the Polishing Pond to the South Branch of 40 Mile Brook was stopped, implement the approved actions from (e) before resuming the discharge;
(g) if the PPD Exceedance Response was initiated following a bioassay test indicating acute lethality or if the effluent was determined to be acutely lethal following the sample required under 14(c), re-sample and re-test the PPD for trout and daphnia toxicity every two weeks until the effluent at the PPD is determined not to be acutely lethal in three consecutive tests; and
(h) if the PPD Exceedance Response was initiated because of a discharge limit exceedance and the effluent was determined not to be acutely lethal following the sample required under 14(c), re-sample and re-test the PPD for trout and daphnia toxicity every two weeks until there is no exceedance at the PPD for two consecutive weeks.

15. **MDMER Correspondence:**
The Approval Holder shall submit to the Department copies of all correspondences and reports that are required to be submitted pursuant to the MDMER.

16. **Approval Classification:**
The Facility is hereby classified as a Class 1A source pursuant to Section 5(1) of the *Fees for Industrial Approvals Regulation 93-201* under the *Clean Water Act.*

17. **Method of Sampling and Testing:**
The Approval Holder shall ensure that:

(a) all sampling and testing required by this Approval is done following the procedures set out in the latest edition of the *Standard Methods for the Examination of Water and Wastewater* or other method deemed acceptable by the Department;

(b) all parameters that are required to be analyzed under conditions 34(h) and 36 and all acute lethality testing are analyzed by *Accredited* laboratories whose accreditation includes the analytical method used to make the determination;

(c) a Proficiency Testing Program offered by the Canadian Association for Laboratory Accreditation Inc., that consists of four samples per study and two studies per year, is performed at the Approval Holder's laboratory located at the facility and the results of the evaluation submitted to the Department as the results become available;

(d) metal parameters are analyzed for "total metals" and reported in mg/l or µg/ℓ as appropriate and shall include a calculation of daily metal loadings in kg/day where flow data is available. Test method detection levels shall be sufficiently low such that meaningful interpretation of the monitoring data can be made; and

(e) toxicity testing follows the procedures described in EPS/1/RM/13 and EPS/1/RM/14.

18. **Siltation Control and Watercourse Alteration:**
The Approval Holder shall:

(a) follow the latest Sedimentation Management Plan to control and mitigate erosion and sedimentation during all activities permitted under this Approval, and in particular, during the construction of new structures;

(b) not conduct any construction work or remove any material within thirty meters of any watercourse, without first applying for, and receiving, a Watercourse and Wetland Alteration Permit or other authorization pursuant to Section 3(3)(b.3) of the *Watercourse and Wetland Alteration Regulation - Clean Water Act.*

19. **Rehabilitation Bond:**
Pursuant to the EIA Determination dated February 20, 1996, the Approval Holder shall establish and keep in force, a rehabilitation bond as described below:

(a) the rehabilitation bond shall be for the purpose of providing all aspects of environmental protection at the Facility, or any area affected thereby, and the Approval Holder shall place no other restrictions on the access, redemption or use of the rehabilitation bond;

(b) the rehabilitation bond shall be for a minimum amount of $1,500,000;

(c) the rehabilitation bond shall be provided in a form which is acceptable to the Department. A rehabilitation bond in the form of cash, or a Letter of Credit with terms that are acceptable to the Department, is an acceptable form.

20. **Ore Storage:**
The Approval Holder shall:

(a) store ore from any source and potentially acid generating waste rock fill from the Restigouche mine on the Crusher Ore Pad or the Restigouche Raise Ore Pad; and

(b) ensure that all runoff from the Crusher Ore Pad and the Restigouche Raise Ore Pad is collected and transferred underground or directly to the minewater treatment plant for treatment.

21. **Toxicity Action Plan:**
The Approval Holder shall ensure to follow the most recent approved Toxicity Action Plan. In the situation of a new toxicity event, or if requested by the Department, the Approval Holder shall review the Toxicity Action Plan and resubmit to the Department for review and approval.

22. **Dam Safety:**
The Approval Holder shall:

(a) ensure that weekly dam inspections are conducted by, and a summary report containing the results be prepared and approved by an engineer who is a member of the Association of Professional Engineers and Geoscientists of New Brunswick or who is licensed to practice engineering under the Engineering and Geoscience Professions Act., and the report shall be submitted to the Department on a quarterly basis and included with the Quarterly Environment Report;

(b) ensure that Dam Safety Inspections are conducted on a schedule and in a manner that follows the 2013 Canadian Dam Association - Dam Safety Guidelines. The Dam Safety Inspection shall be performed and a summary report containing the results of the inspection be prepared and approved by an engineer who is a member of the Association of Professional Engineers and Geoscientists of New Brunswick or who is licensed to practice engineering under the Engineering and Geoscience Professions Act. The report shall be submitted within 3 months of the completion of the inspection.

(c) within one year of the completion of the STTP dam raise, submit to the Department a Dam Safety Review Report prepared and approved by an engineer who is a member of the Association of Professional Engineers and Geoscientists of New Brunswick or who is licensed to practice engineering under the Engineering and Geoscience Professions Act. The Dam Safety Review shall be conducted following the 2013 Canadian Dam Association - Dam Safety Guidelines and the report shall include a proposal, including a timeline, for review and approval by the Department, for addressing any action items that are identified during the Dam Safety Review.

23. **Operation of Fire Pond:**
The Approval Holder may withdraw a maximum of approximately 2000 m3/day and an average of approximately 1750 m3/day of water from the Fire Pond providing that:

(a) the intake pipe(s) for the Fire Pond pumping station are equipped with a screen as described in *Freshwater Intake End-of-Pipe Fish Screen Guideline - March 1995*;

(b) the flow at the Fire Pond outlet structure is determined and recorded at the beginning of the work day;

(c) for the months of June, November and December, if the flow reading at the Fire Pond outlet structure is less than 110 lps, then the flow shall be increased to obtain a minimum flow of at least 110 lps for the following 24 hour period; and

(d) for all other months, if the flow reading is less than 30 lps at the Fire Pond outlet structure, then the flow shall be increased to obtain a minimum flow of at least 30 lps for the following 24 hour period.

24. **STTP Liming Station:**
The Approval Holder shall:

(a) ensure that the STTP liming station is capable of discharging lime to the STTP within 2 weeks of having been requested to do so by the Department;

(b) ensure that the STTP liming station is capable of maintaining the pH at the STTP spillway at a minimum of 6.5 pursuant to Condition 30(b).

25. **Solid Waste Management:**
The Approval Holder shall ensure:

(a) that non-hazardous, non-recyclable solid waste including any domestic solid waste generated at the Facility is transported to an approved landfill;

(b) that no solid waste shall be disposed of onsite without the approval of the Department;

(c) that hazardous waste, is managed as follows:

(1) The Approval Holder shall ensure that all hazardous waste at the Facility is stored:

i. in a dedicated hazardous waste storage area, secured in sealed and chemically resistant containers, away from high traffic areas, protected from vehicle impacts, away from electrical panels and in a containment area that is designed to prevent contact between incompatible materials;

ii. in a containment area that has secondary containment adequate to contain 110% of the nominal volume of the largest container in the containment area;

iii. in a containment area designed to prevent the release or discharge of hazardous waste to the environment as a result of a spill;

(2) The Approval Holder shall keep a record of all hazardous waste put into the hazardous waste storage area, including the date the waste was put into storage, a description of each hazardous waste put into storage and the amount of each hazardous waste put into storage;

(3) The Approval Holder shall ensure that all hazardous waste generated at the Facility is collected and transported offsite by a Hazardous Waste Collection and Transportation provider that is approved by the Department; and

(4) The Approval Holder shall ensure that a record of all hazardous waste that is transported offsite is kept including, as a minimum, the name and identifying number of the generator, a description of each hazardous waste transported, the amount of each hazardous waste transported, the name and identifying number of the Hazardous Waste Collection and Transportation provider, the date of the collection, the class of each hazardous waste collected (under the federal Transportation of Dangerous Goods Act), and the name, location, and identifying number of the intended Receiver of each hazardous waste.

26. **Operation of Collection Ditch and Pipeline Systems:**
The Approval Holder shall submit the latest approved Operations, Maintenance and Surveillance Protocol for the Collection Ditches and Pipelines at the Facility to ensure there is no release of untreated minewater to the receiving environment. The Protocol shall include, but not limited to, frequencies and procedures for surveillance and monitoring of these infrastructures, routine maintenance and employee training. The Protocol shall be revised upon written request from the Department.

27. **"G" Pond Operation & Sampling:**
The Approval Holder shall:

(a) operate the "G" Pond in a manner that ensures that there is no *direct* discharge from "G" Pond to the North Branch of the 40 Mile Brook;

(b) maintain the "G" Pond at the lowest practical level and the runoff collected in the "G" Pond shall be pumped to the underground mine or directly to the minewater treatment plant for treatment;

(c) inspect the "G" Pond at least once per week and a statement regarding the operation of "G" Pond provided in the Quarterly Environment Report; and

(d) sample the North Branch of the 40 Mile Brook, approximately 50 meters upstream and 50 meters downstream of "G" Pond, once per month (unless conditions make sampling unsafe) and the samples shall be analyzed for Parameter List A.

28. **Operation of Minewater Treatment Plant:**
The Approval Holder shall:

(a) control and record the level of minewater within the underground mine such that the minewater level does not exceed elevation 2410m;

(b) collect mine water and any contaminated surface runoff from the facility that does not comply with the Polishing Pond Effluent Discharge Limits shown in Condition 32(b) and shall process this water in the minewater treatment plant before discharging the treated water to the Active Sludge Cell that discharges to the STTP, such that there is no direct discharge to the environment other than from the Polishing Pond; and

(c) control the pH at the inlet of the hydroxide pond or STTP sludge cell to a minimum of 8.5.

29. **Hydroxide Sludge Disposal:**
The Approval Holder shall dispose of minewater treatment plant hydroxide sludge in a manner acceptable to the Department. The current practice of disposing of the sludge in the sludge cell at the west end of the STTP is acceptable.

30. **Operation of STTP:**
The Approval Holder:

(a) shall ensure that all tailings are covered by a minimum of one meter of water cover at all times except during the preparation and construction of the STTP dam crest raise project when the water cover over the tailings will be reduce to less than one meter until the completion of the work;

(b) may discharge effluent from the STTP to the Polishing Pond providing that the effluent from the STTP meets the effluent discharge limits shown below:

Parameter	Limit
pH	6.5 (minimum instantaneous reading)
Copper	0.3 mg/l (max monthly average), 0.6 (max in a grab sample)
Lead	0.2 mg/l (max monthly average), 0.4(max in a grab sample)
Zinc	0.5 mg/l (max monthly average), 1.0 (max in a grab sample)
TSS	15.0 mg/l (max monthly average), 30.0 (max in a grab sample)

(c) shall not dispose of waste other than tailings, treated mine water and supernatant from the STTP sludge cell in the STTP, unless approved by the Department; and

(d) shall collect for treatment any seepage from the STTP that is not collected by the Polishing Pond and which does not meet the STTP discharge limits specified above.

31. **Thiosalt Management:**
The Approval Holder shall operate the Facility such that the pH at Station B (South Branch downstream of Diversion Channel), Station H (40 Mile at Crown Reserve Road) and Station E (Mouth) are, at all times when discharging from the STTP to the Polishing Pond, ≥ 6.0. Should thiosalt concentration at the discharge of PPDraise above 400 mg/L, the Approval Holder shall implement the Thiosalt Management Framework included in the December 2018 Klohn Crippen Berger report titled ***"Potential for the Development of Thiosalts in the STTP".***

32. **Operation of Polishing Pond:**
The Approval Holder:

(a) shall discharge the final effluent from the Facility to the receiving environment only from the Polishing Pond;

(b) may discharge effluent from the Polishing Pond to the South Branch of the 40 Mile Brook providing that the effluent from the Polishing Pond meets the effluent discharge limits shown below:

Parameter	Limit
pH	6.0 to 9.5 at all times
Copper	0.3 mg/l (Maximum monthly average), 0.6 (maximum in a grab sample)
Lead	0.2 mg/l (Maximum monthly average), 0.4 (maximum in a grab sample)
Zinc	0.5 mg/l (Maximum monthly average), 1.0 (maximum in a grab sample)
TSS	15.0 mg/l (Maximum monthly average), 30.0 (maximum in a grab sample)
Toxicity	Non-acutely lethal at all times, where "acutely lethal" means that the effluent, at 100% concentration, kills more than 50% of the rainbow trout over a 96 hour period when tested using the method of *EPS 1/RM/13*.

(c) shall implement corrective action to restore the discharge at the outlet of the Polishing Pond to a non-acutely lethal condition as described in Condition 14 if acute lethality is detected at the outlet of the Polishing Pond.

33. **Caribou Lake:**

The Approval Holder may withdraw water from the Caribou Lake subject to the following:

(a) For process water usage, water can be pumped up to a maximum average of 650 m3/day, calculated on a monthly basis, to a total maximum volume of 1,000 m3/day;

(b) During Spring freshet, when the water level in the Caribou Lake exceeds the Caribou Lake Spillway invert elevation of 463.85 meters (geodetic), excess water can be pumped to the diversion channel provided that the pumping will cease when water level returns back to the invert elevation, that the pump is sized to meet the 1:10 precipitation return period, that additional flow in the diversion channel is monitored such that cumulative flow remains below the 1:10 precipitation return period rate of 2.44 m^3/s and that fish passage and habitat enhancement features in the Diversion Channel is not impacted by the added flow in the channel;

(c) a maintenance flow that is acceptable to the Department is maintained in the Diversion Channel;

(d) the Caribou Lake diversion channel is inspected once per week for blockage, or more frequently if blockages are regularly observed, and shall remove the blockage and restore normal flow in the channel immediately after discovering the blockage;

(e) measure flow and grab sample the water discharged from Caribou Lake to the diversion channel once per week for Parameter List A; and

(f) inspect the emergency invert over-flow structure from Caribou Lake to the STTP for over-flow daily during the over-flow season, and shall document in the Quarterly Environment Report instances when over-flow has taken place or provide a statement that no overflow took place.

34. **Mine Water Monitoring Program:**
The Approval Holder shall:

(a) measure the level of minewater in the underground mine once per week, or provide a statement that the mine has been dewatered;

(b) continuously measure flow of untreated minewater released to the minewater treatment plant in m3/sec;

(c) measure pH at the inlet of the active sludge cell continuously;

(d) sample and analyze for five days per week for temperature, and Parameter list A at the reclaim pumphouse during the ice free season and once per week when access is limited due to ice;

(e) take a grab sample from the discharge of the STTP to the Polishing Pond, five days per week and analyze for temperature and Parameter List A when discharging;

(f) measure the maximum and minimum level in the STTP during the month;

(g) conduct a visual inspection of the quantity and quality of the STTP dam seepage once per month, noting in particular any change in flow or turbidity of the discharge from the previous month;

(h) measure flow and take a grab sample from the outlet from the Polishing Pond three days per week, every Monday, Wednesday and Friday, and analyze for temperature, thiosalts and Parameter List A, take a grab sample from the outlet from the Polishing Pond once per quarter for Parameter List B and monthly for acute lethality.

35. **Surface Water Monitoring Program:**
The Approval Holder shall collect by grab sample and have the sample tested for Parameter list A at the following locations and frequencies:

Station	Location	Frequency
J	In the north branch of the Forty Mile Brook adjacent to the Anaconda tailings ponds and approximately 350 meters upstream of the confluence of the south and north branches of the Forty Mile Brook	weekly*
B	In the South Branch of the Forty Mile Brook upstream of the confluence of the south and north branches of the Forty Mile Brook	weekly*
H	In the Forty-Mile Brook upstream of the bridge on the Crown Reserve Road approximately 900 meters downstream of the confluence of the north and south branches of the Forty Mile Brook	weekly*
E	at the mouth of Forty-Mile Brook approximately 50 meters upstream of the confluence of the Forty Mile Brook and the Nepisiguit River	monthly
F	in the Nepisiguit River approximately 3.5 kilometers upstream of the confluence of the Forty Mile Brook and the Nepisiguit River	monthly
G	in the Nepisiguit River approximately 1 kilometer downstream of the confluence of the Forty Mile Brook and the Nepisiguit River	monthly
K	in the Nepisiguit River approximately 5 kilometers downstream of the confluence of the Forty Mile Brook and the Nepisiguit River	monthly

*unless conditions make sampling unsafe

36. **Well Monitoring Program:**
The Approval Holder shall:

(a) sample monitoring wells CMW-1, CMW-2, CMW-3, CMW-4, CMW-5 and CMW6A twice per calendar year and shall analyze these samples for the substances in Parameter List B;

(b) attempt to schedule the sampling from (a) to coincide with maximum groundwater levels in the spring that being approximately mid to late May and minimum groundwater levels in the fall that being early to mid September.

37. **Quarterly Environment Report:**
The Approval Holder shall submit to the Department and to the Bathurst Regional Office, a Quarterly Environment Report not later than 45 days after the end of the quarter, which may be submitted by email, including:

(a) a cover letter signed by a Company official stating that the Quarterly Environment Report has been reviewed and is felt to be an accurate reporting of the activities at the Facility during the reporting period;

(b) a brief summary of any Emergency Reports submitted pursuant to Conditions 12 and 13 during the reporting period;

(c) a brief statement regarding:

- the management of hazardous waste from Condition 25(c);
- the "G" Pond inspection from Condition 27(c),
- a summary of the results of the Diversion Channel inspections from Condition 33(d),
- on the Caribou Lake overflow from Condition 33(f),
- a brief, general statement on the operation of the Minewater Treatment Plant from Condition 28 including the level of minewater in the underground mine;
- and of any other significant environmental activities that took place at the Facility during the reporting period;

(d) the results of all sampling and testing conducted during the previous Quarter in accordance with Conditions:

Conditions 14(c), 14(g) and 14(h) - PPD Exceedance Response;
Condition 27(d) - G Pond;
Condition 33(e) - Caribou Lake Discharge;
Condition 34 - Minewater Monitoring;
Condition 35 - Surface Water Monitoring; and,
Condition 36 - Monitoring Wells.

(e) the summary report of the weekly dam inspections from Condition 22(b).

Prepared by: Gaetan Landry

Gaetan Landry, P.Eng.
Authorizations Branch

This is Exhibit "B" to the Affidavit #1 of Cory Neumann affirmed January 3, 2023, at the City of Fredericton in the County of York and Province of New Brunswick.

A Commissioner of Oaths being a Solicitor

CHRISTOPHER WHIBBS

New Nouveau Brunswick

APPROVAL TO CONSTRUCT AND OPERATE

I-11912

Pursuant to paragraph 8(1) of the *Water Quality Regulation - Clean Environment Act*, this Approval to Construct and Operate is hereby issued to:

Trevali Mining (New Brunswick) Ltd.

for the construction and operation of the

Restigouche Mine

Description of Source:	**Restigouche Mine**	
Source Classification:	**Fees for Industrial Approvals Regulation - Clean Water Act**	**Class 1A**
Parcel Identifier:	**50252766**	
Mailing Address:	**P.O. Box 790 Station Main Bathurst, NB E2A 4A5**	
Conditions of Approval:	**See attached Schedule "A" of this Approval**	
Supersedes Approval:	**I-11818**	
Valid From:	**December 01, 2022**	
Valid To:	**May 31, 2023**	

Recommended by: _____

Issued by: _____
for the Minister of Environment and Climate Change

November 29, 2022
Date

SCHEDULE "A"

A. DESCRIPTION AND LOCATION OF SOURCE

This is an approval for the operation of the Restigouche Mine and the construction of additional infrastructure to re-open the mine and proceed with underground mining. The Restigouche Mine, owned and operated by Trevali Mining (New Brunswick) Ltd., located in Restigouche County, NB, on the property identified by the Parcel Identifier Number 50252766, is hereby approved to operate subject to the following Terms & Conditions:

B. DEFINITIONS

1. **"Approval Holder"** means Trevali Mining (New Brunswick) Ltd.

2. **"Department"** means the New Brunswick Department of Environment and Local Government.

3. **"Facility"** means the Restigouche Mine which consists of the underground mine, the waste rock storage piles, the open pit, the minewater treatment system and surface infrastructures located on property 50252766, and without limiting the generality of the term, includes all land, buildings, processes and activities associated with the operation of the Restigouche Mine.

4. **"Parameter List A"** means pH, Total Suspended Solids, Hardness (as CaCO3), Dissolved Organic Carbon, Copper, Lead and Zinc. **"Parameter List B"** means pH, TSS, hardness (as CaCO3), Dissolved Organic Carbon, aluminum, arsenic, barium, beryllium, bismuth, boron, cadmium, calcium, chromium, cobalt, copper, iron, lead, lithium, magnesium, manganese, molybdenum, nickel, potassium, rubidium, selenium, silver, sodium, strontium, tellurium, thallium, tin, uranium, vanadium and zinc. **"Parameter List C"** means pH, hardness and acidity (as CaCO3), sulfate, aluminum, arsenic, calcium, copper, iron, lead, magnesium, manganese, nickel and zinc.

5. **"after hours"** means the hours when the Department's offices are closed. These include statutory holidays, weekends, and the hours before 8:15 a.m. and after 4:30 p.m. from Monday to Friday.

6. **"statutory holiday"** means New Years Day, Family Day, Good Friday, Easter Monday, the day fixed by proclamation of the Governor-in-council for the celebration of the birthday of the Sovereign (Victoria Day), Canada Day, New Brunswick Day, Labour Day, the day fixed by proclamation of the Governor-in-council as a general day of Thanksgiving, Remembrance Day, Christmas Day and Boxing Day. If the Statutory Holiday falls on a Sunday, the following day shall be considered as the Statutory Holiday.

7. **"normal business hours"** means the hours when the Department's offices are open. These include the period between 8:15 a.m. and 4:30 p.m. from Monday to Friday excluding statutory holidays.

8. **"Environmental Emergency"** means a situation where there has been or will be a release, discharge, or deposit of a contaminant or contaminants to the atmosphere, soil, surface water, and/or groundwater environments of such a magnitude or duration that it could cause significant harm to the environment or put the health of the public at risk.

9. **"MDMER"** means the *Metal and Diamond Mining Effluent Regulations* and includes any subsequent revisions or amendments made to the MDMER.

10. **"Accredited"** means accreditation to ISO/IEC 17025 by Standards Council of Canada (SCC), the Canadian Association for Laboratory Accreditation Inc. (CALA), or accreditation to ISO/IEC 17025 from another body that is recognized to grant such accreditation per ISO/IEC 17011 criteria.

11. The following surface water sampling locations are hereby defined:

    (a) "Station K" means in the North Branch of Charlotte Brook, in the stream diversion channel, directly south of the open pit and approximately 360 meters upstream of station control and serving as a background reference;
    (b) "Station Control" means in Charlotte Brook, downstream of the open pit, but approximately 80 meters upstream of the MSD and including a concrete Parshall flume;
    (c) "Station D" means in Charlotte Brook approximately 30 meters downstream from the confluence of the treated effluent outfall from the MSD;
    (d) "Station M" means in Charlotte Brook approximately 80 meters downstream of the confluence of the treated effluent outfall from the MSD;
    (e) "Station O" means in Charlotte Brook immediately upstream of the Upsalquitch Road bridge and approximately 500 meters upstream of Upsalquitch Lake;
    (f) "BE001" means in Upsalquitch Lake at the north end approximately 100 meters from the east shore;
    (g) "BE002" means in Upsalquitch Lake at the south end approximately 150 meters from the west shore;
    (h) "UR-5" means in the Southeast Upsalquitch River approximately 600 meters downstream of Upsalquitch Lake;
    (i) "UR-6" means in the Southeast Upsalquitch River directly upstream of Route 180.

C. TERMS AND CONDITIONS

12. **Emergency Reporting - Initial Notification:**
Immediately following the discovery of an environmental emergency, a designate representing the Approval Holder shall notify the Department in the following manner:

During normal business hours, telephone the Department's Bathurst Regional Office **until personal contact is made** (i.e. no voice mail messages will be accepted) and provide all information known about the environmental emergency. The telephone numbers for the Regional Offices are provided below:

Bathurst Regional Office (506) 547-2092

After hours, telephone the Canadian Coast Guard **until personal contact is made** and provide all information known about the environmental emergency. The telephone number for the **Canadian Coast Guard is 1-800-565-1633**.

13. **Emergency Reporting - Follow-up:**
Within 24-hours of the time of initial notification, a copy of a **Preliminary Emergency Report** shall be filed via email by a designate representing the Approval Holder to the Department's Bathurst Regional Office as well as to the Department's Central Office. The Preliminary Emergency Report shall clearly communicate all information available at the time about the environmental emergency.

Within five (5) days of the time of initial notification, a copy of a **Detailed Emergency Report** shall be filed via email by a designate representing the Approval Holder to the Department's Bathurst Regional Office *as well as* to the Department's Central Office. The Detailed Emergency Report shall include, as a minimum, the following: i) a description of the problem that occurred; ii) a description of the impact that occurred; iii) a description of what was done to minimize the impact; and iv) a description of what was done to prevent recurrence of the problem.

14. **Emergency Response:**
Notwithstanding any other actions taken pursuant to Conditions 12 or/and 13, if the limits of Condition 29, 30 and/or 31 are exceeded, or if the acute lethality testing done pursuant to Condition 33(e) indicates acute lethality at the MSD, the Approval Holder shall immediately:

(a) stop discharging effluent from the Open Pit to the MSD;
(b) notify the Department pursuant to the Emergency Reporting conditions as appropriate;
(c) sample and test the MSD and Station D for acute lethality testing with rainbow trout and Daphnia magna and for Parameter List "A";
(d) begin an investigation to determine the cause of the discharge limit exceedance or acute lethality and implement the actions necessary to eliminate the discharge limit exceedance or acute lethality.

15. **Rehabilitation Bond:**

Pursuant to the EIA Approval Letter dated July 20, 2018, the Approval Holder shall establish and keep in force, a rehabilitation bond as described below:

(a) the rehabilitation bond shall be for the purpose of providing all aspects of environmental protection at the Facility, or any area affected thereby, and the Approval Holder shall place no other restrictions on the access, redemption or use of the rehabilitation bond;
(b) the rehabilitation bond shall be for a minimum amount of $289,500.00;
(c) the rehabilitation bond shall be provided in the form of cash, a Letter of Credit with terms that are acceptable to the Department, or another form which is acceptable to the Department.

16. **MDMER Correspondence:**

The Approval Holder shall submit to the Department copies of all correspondences and reports that are required to be submitted pursuant to the MDMER.

17. **Approval Classification:**

Restigouche Mine is hereby classified as a Class 1A source pursuant to the *Fees for Industrial Approvals Regulation 93-201* under the *Clean Water Act.*

18. **Method of Sampling and Testing:**

The Approval Holder shall ensure that

(a) all sampling and testing required by this Approval is done following the procedures set out in the latest edition of the *Standard Methods for the Examination of Water and Wastewater* or other method deemed acceptable by the Department;
(b) all parameters that are required to be analyzed under conditions 33(e), 34 and 35 and all acute lethality testing are analyzed by *Accredited* laboratories whose accreditation includes the analytical method used to make the determination;
(c) a Proficiency Testing Program offered by the Canadian Association for Laboratory Accreditation Inc., that consists of four samples per study and two studies per year, is performed at the Approval Holder's laboratory located at the facility and the results of the evaluation submitted to the Department as the results become available;
(d) metal parameters are analyzed for "total metals" and reported in mg/l or µg/ℓ as appropriate and shall include a calculation of daily metal loadings in kg/day where flow data is available. Test method detection levels shall be sufficiently low such that meaningful interpretation of the monitoring data can be made; and
(e) acute lethality testing follows the procedures described in EPS/1/RM/13 and EPS/1/RM/14.

19. **General Site Operations:**
The Approval Holder:

(a) shall separate topsoil and grubbings generated during site stripping and store these materials in a separate storage area for use during reclamation;
(b) shall collect contaminated site runoff for treatment;
(c) may direct uncontaminated runoff offsite;
(d) may use treated minewater for use on the haul roads for dust control;
(e) shall ensure that water that is collected in the west perimeter ditch is directed to the open pit; and
(f) may discharge water collected by the east perimeter ditch to the MSD providing the combined discharge meets the limits of Condition 29.

20. **Siltation Control and Watercourse Alteration:**
The Approval Holder shall:

(a) have a Sedimentation Management Plan to control and mitigate erosion and sedimentation during all activities permitted under this Approval, and in particular, during the construction of new structures and shall follow this plan at all times;
(b) not conduct any construction work or remove any material within thirty metres of any watercourse, without first applying for, and receiving, a Watercourse and Wetland Alteration Permit or other authorization pursuant to Section 3(3)(b.3) of the *Watercourse and Wetland Alteration Regulation - Clean Water Act.*

21. **Operation of Collection Ditch and Pipeline Systems:**
The Approval Holder shall have an Operations, Maintenance and Surveillance Protocol for the Collection Ditches and Pipelines at the Facility to ensure there is no release of untreated minewater to the receiving environment. This shall include, but not limited to, frequencies and procedures for surveillance and monitoring of these infrastructures, routine maintenance and employee training.

22. **Drilling & Blasting Operations:**
The Approval Holder shall:

(a) before blasting at the facility, submit to the Department a Drilling and Blasting Plan, for review and approval, that would include, to a minimum:
    i. details on how drill dust will be controlled while being able to sample the drill cuttings for testing pursuant to Condition 23;
    ii. mitigation measures to ensure that flyrock will be controlled during the initial surface blasting for the development of the portal; and
    iii. a blast monitoring program including, but not necessarily limited to, monitoring of vibrations and air blast designed to demonstrate compliance with the "Guidelines for the Use of Explosives In or Near Canadian Fisheries Waters - DFO 1998" and shall include a description of when the blast monitoring program would no longer be required and a rationale to support it;

(b) not drill or blast at the facility until the Drilling and Blasting Plan submitted pursuant to condition 22(a) is approved by the Department;
(c) follow the approved Drilling and Blasting Plan submitted pursuant to condition 22(a) at all times; and
(d) maintain records of the blast design for all blasts at the facility and blast monitoring results for blasts made during the period that the blast monitoring program is required in the approved Drilling and Blasting Plan. These records shall be kept for a period of not less than two (2) years and made available to the Department on request.

23. **Waste Rock Management Program:**
The Approval Holder shall treat all the waste rock produced as being potential acid generating (PAG) materials and use the waste rock as backfill underground at the Facility and/or trucked to the Caribou Mine to be used as underground backfill. In the event that waste rock segregation is required, the Approval Holder shall:

(a) follow the "Acid Rock Drainage Monitoring and Management Program - Revision 3, February 2007";
(b) place PAG material on the existing PAG pile area but keep it in an area that is separate and distinct from the existing piles;
(c) place non-acid generating (NAG) material in the existing NAG storage area and keep it separate and distinct from the existing piles; and
(d) submit, in the Quarterly Environmental Report, any test results done to determine if waste rock is PAG and records of where the waste rock has been placed.

24. **Ore Storage:**
The Approval Holder shall:

(a) before beginning the construction of the Transition Pad, submit to the Department, for review and approval, engineering plans showing the construction details and a description of the construction methods to be used;
(b) store ore from the Facility on the approved Transition Pad; and
ensure that all runoff from the Transition Pad is collected and transferred to the open pit.

25. **Crushing Operations:**
Unless a written approval is given by the Department, the Approval Holder shall not operate crushing equipment at the Restigouche Mine.

26. **Operation of Minewater Treatment Facility:**
The Approval Holder shall operate the minewater treatment facility as follows:

(a) The Approval Holder shall not allow the water level in the open pit to exceed 409 meters where "meters" in reference to elevations in this Approval means meters above mean sea level;
(b) the level in the open pit shall be recorded once per day;
(c) runoff collected on the PAG pile area shall be directed to the Sedimentation Pond;
(d) the level in the Sedimentation Pond shall be recorded once per day;
(e) the dates and times when the discharge from the open pit is directed to the MSD and when there is no discharge, shall be recorded.

27. **Disposal of Hydroxide Sludge:**
The Approval Holder shall ensure that Hydroxide Sludge from the in-pit treatment of minewater is collected at the bottom of the open pit. Any other method of disposal of hydroxide sludge from the minewater treatment facility shall be approved by the Department.

28. **Approved Discharge Location:**
The Approval Holder shall ensure that no contaminants be *directly* released to the environment except through the MSD providing that the discharge limits of Condition 29 are met.

29. **Discharge Limits at Mixing Structure:**
The Approval Holder shall operate the Restigouche Mine so as to produce a final effluent at the MSD that meets the following discharge limits:

(a) The Approval Holder may discharge up to 126 liters per second of treated minewater through the MSD, providing that the combined flow in Charlotte Brook at Station D, calculated as the sum of the flow at Station Control plus the flow at the MSD does not exceed 850 liters per second;
(b) the pH shall, at all times, be between 6.0 and 9.5;
(c) the total suspended solids shall be $\leq$ 25 mg/ℓ in a grab sample and shall be $\leq$ 12 mg/ℓ for the month average;
(d) the copper concentration shall be $\leq$ 0.03 mg/ℓ in a grab sample and $\leq$ 0.02 mg/ℓ for the month average;
(e) the lead concentration shall be $\leq$ 0.06 mg/ℓ in a grab sample and $\leq$ 0.03 mg/ℓ for the month average;
(f) the zinc concentration shall be $\leq$ 0.25 mg/ℓ in a grab sample;
(g) the discharge at the MSD shall, at all times, be non-acutely lethal, where "acutely lethal" means that the effluent, at 100% concentration, kills more than 50% of the rainbow trout over a 96 hour period when tested using the method of *EPS 1/RM/13*.

30. **Instream Water Quality - Normal Flow:**
During normal flow in Charlotte Brook, where "normal flow" means that the flow in Charlotte Brook measured at Station Control is ≥ 15 liters per second, the Approval Holder shall operate the Restigouche Mine such that the following instream water quality is met:

(a) the instream copper, lead and zinc concentrations at Station O, shall meet the *Canadian Water Quality Guidelines for the Protection of Aquatic Life* published by the Canadian Council of Ministers of the Environment;
(b) the instream hardness as CaCO3 at Station O shall not exceed 150 mg/ℓ in a grab sample or 100 mg/ℓ for the quarterly average.

31. **Instream Water Quality - Low Flow:**
During low flow, where "low flow" means the flow in Charlotte Brook measured at Station Control is < 15 liters per second, the Approval Holder shall operate the Restigouche Mine such that the following instream water quality is met:

(a) if the hardness at Station D is ≤ 150 mg/ℓ, copper shall be ≤ 0.002 mg/ℓ, lead shall be ≤ 0.004 mg/ℓ and zinc shall be ≤ 0.030 mg/ℓ in a grab sample at Station D;
(b) if the hardness at Station D is > 150 mg/ℓ, copper shall be ≤ 0.006 mg/ℓ, lead shall be ≤ 0.0085 mg/ℓ and zinc shall be ≤ 0.030 mg/ℓ in a grab sample at Station D;
(c) the instream copper, lead and zinc concentrations at Station O, shall meet the *Canadian Water Quality Guidelines for the Protection of Aquatic Life* published by the Canadian Council of Ministers of the Environment;
(d) the instream hardness as CaCO3 at Station O shall not exceed 150 mg/ℓ in a grab sample or 100 mg/ℓ for the quarterly average.

32. **Groundwater Quality:**
The Approval Holder shall ensure that if there is a surface discharge of ground water, that this discharge is sampled and analysed on a monthly basis for Parameter List "A"; and that the groundwater is captured and returned to the sedimentation pond, unless the groundwater meets the discharge limits of Condition 29.

33. **Minewater Monitoring Program:**
The Approval Holder shall take a grab sample and analyze minewater from the following locations for the parameters and frequency as follows:

(a) the West Perimeter Ditch at the sump and the East Perimeter Ditch at its discharge point once per week for Parameter List "A". If there is no flow in the ditch during the reporting period, this shall be reported;
(b) the West Sulfide Pad discharge, the East Sulfide Pad discharge, the minewater pumped from the open pit to the sedimentation pond, and the sedimentation pond discharge point once per week for Parameter List "A";
(c) the final treated minewater being discharged to the valley above the MSD once per week for Parameter List "A";

(d) the discharge from the inert rock pad once per week for Parameter List "A". If there is no flow from the pad during reporting period, this shall be reported;

(e) the discharge from the MSD:

i. daily when discharging and weekly at all other times for Parameter List "A" and flow. The flow reading shall be taken, if possible, at the beginning of the work day and used to determine the operating flow status for the following 24 hour period pursuant to Condition 29(a). The daily "hardness loading" shall be calculated;

ii. monthly for acute lethality testing with rainbow trout and Daphnia magna;

iii. quarterly for total phosphorous, total ammonia, TKN, nitrate/nitrite, and Parameter List "B" taken, if possible, to coincide with Condition 34(f).

34. **Surface Water Monitoring Program:**

The Approval Holder shall take a grab sample and analyse water or sediment taken from the following locations for the parameters and at the frequency as follows:

(a) Station K, twice per month for Parameter List "A";

(b) Station Control:

i. daily for flow with the flow reading taken, if possible, at the beginning of the work day and to be used to determine the operating flow status for the following 24 hour period pursuant to Conditions 30 and 31,

ii. twice per month for Parameter List "A";

(c) Station D, daily when discharging at the MSD during low flow conditions in the Charlotte Brook and twice per month at all other times for Parameter List "A";

(d) Station M, twice per month for Parameter List "A";

(e) Station O:

i. weekly when discharging at the MSD and twice per month at all other times for Parameter List "A";

ii. once per month on a mutually agreed day, that day currently being the second Monday of the month, for Parameter List "B";

(f) Stations BE001 and BE002 once per quarter, for Parameter List "A", secchi depth, chlorophyll a and phosphorus and a calculation of the Carlson Trophic State Index;

(g) Stations UR-5 and UR-6, once per quarter, for Parameter List "A".

35. **Groundwater Monitoring Program:**
The Approval Holder shall take a grab sample and analyze for the substances in Parameter List "C" once per calendar quarter, water from monitoring wells:

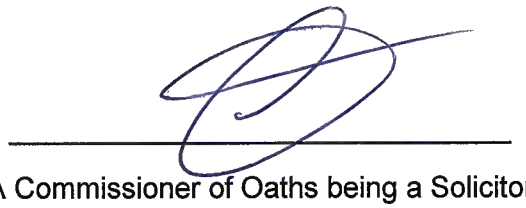
RMW-1,
RMW-2 & RMW-2A,
RMW-3B & RMW-3C,
RMW-4 & RMW-4A,
RMW-5A,
RMW-6A, and,
RMW-14B.

36. **Quarterly Environmental Report:**
The Approval Holder shall submit to the Department a Quarterly Environmental Report not later than 45 days after the end of the quarter, which may be provided by email, including:

(a) a cover letter signed by a Company official stating that the Quarterly Environment Report has been reviewed and is felt to be an accurate reporting of the activities at the Facility during the reporting period;
(b) a brief summary of any Emergency Reports submitted pursuant to Conditions 12 and 13, a brief discussion of any difficulties in meeting the conditions of this Approval or of non-compliance with the conditions of the Approval, and a brief discussion of any other significant environmental activities that took place at the Restigouche Mine during the reporting period;
(c) the test results of the analysis required pursuant to Conditions 32, 33, 34 and 35 including a brief discussion of any anomalous test results;
(d) a table showing the level in meters in the open pit, the sedimentation pond, the MSD and Charlotte Brook at Station Control pursuant to Condition 26(b) and (d), 33(e) and 34(b);
(e) the dates and times when the treated minewater flow was directed to the MSD or the open pit, and the days on which there was no flow from the minewater treatment plant;
(f) in the last Quarterly Environment Report of each year, the annual average of the monitoring well results from Condition 35.

Prepared by: Gaetan Landry
Gaétan Landry, P.Eng.
Authorizations Branch

This is Exhibit "C" to the Affidavit #1 of Cory Neumann affirmed January 3, 2023, at the City of Fredericton in the County of York and Province of New Brunswick.



A Commissioner of Oaths being a Solicitor

CHRISTOPHER WHIBBS

New Nouveau Brunswick

APPROVAL TO OPERATE

I-9983

Pursuant to paragraph 8(1) of the *Water Quality Regulation - Clean Environment Act*, this Approval to Operate is hereby issued to:

TREVALI MINING (MARITIMES) LTD.

for the operation of the

Halfmile Mine

Description of Source:	**The Halfmile Mine**
Source Classification:	**Fees for Industrial Approvals Regulation - Clean Water Act** **Class 1A**
Parcel Identifier:	**40217218**
Mailing Address:	**P.O. Box 790 Station Main Bathurst, NB E2A 4A5**
Conditions of Approval:	**See attached Schedule "A" of this Approval**
Supersedes Approval:	**I-8692**
Valid From:	**January 15, 2018**
Valid To:	**January 14, 2023**

Recommended by: _____

Issued by: _____
for the Minister of Environment and Local Government

January 12, 2018
Date

SCHEDULE "A"

A. DESCRIPTION AND LOCATION OF SOURCE

The TREVALI MINING (MARITIMES) LTD. Halfmile Mine, located in Northumberland County, NB, approximately 20 kilometers west of the former Heath Steele Mine, and approximately 2.5 kilometers south of the Chief's Plateau Road on the property identified by the Parcel Identifier Number 40217218, and also referred to as Mining Lease No. 261, is hereby approved to operate, subject to the following:

B. DEFINITIONS

1. **"Approval Holder"** means TREVALI MINING (MARITIMES) LTD.

2. **"Department"** means the New Brunswick Department of Environment and Local Government.

3. **"Director"** means the Director of the Authorizations Branch of the Department of Environment and Local Government and includes any person designated to act on the Director's behalf.

4. **"Inspector"** means an Inspector designated under the *Clean Air Act*, the *Clean Environment Act*, or the *Clean Water Act*.

5. **"environmental emergency"** means a situation where there has been or will be a release, discharge, or deposit of a contaminant or contaminants to the atmosphere, soil, surface water, and/or groundwater environments of such a magnitude or duration that it could cause significant harm to the environment or put the health of the public at risk.

6. **"facility"** means the "Halfmile Mine" which consists of an underground mine and surface infrastructure, located on property 40217218 and without limiting the generality of the term, includes all land and works that have been or may be impacted by exploration activities, by the construction and operation of the Halfmile Mine, by minewater treatment and discharge, and/or by reclamation activities at the Halfmile Mine. Trevali's Halfmile Mine is hereby identified as a "source" pursuant to Section 2(1) of the *Water Quality Regulation* and specifically includes:

   (a) a 3 kilometer long mine access road;
   (b) an underground mine with a maximum production rate of approximately 2,000 tonnes per day of ore;
   (c) a fresh air raise and a return air raise;
   (d) the portal waste rock and ore handling pad with runoff from the pad reporting to the underground mine pumping station;
   (e) a non-acid generating waste rock storage pad;

(f) office buildings and shops with a septic system;
(g) an electrical substation (pad-mounted transformers) and a core storage area;
(h) a minewater pipeline from the underground mine pumping station to untreated minewater pond BA1;
(i) untreated minewater pond BA1 with a volume at the design water level of 520.5 metres above sea level (masl) of approximately 12,182 m^3 and pumping back to the underground mine or to the minewater treatment plant (MWTP);
(j) a 1,000 m^3/day Veolia Water Actiflo package MWTP discharging treated effluent to treated minewater pond BA2 or to the outfall structure and the treatment plant sludge to sludge pond BA3;
(k) treatment plant sludge pond BA3 with a volume at the design water level of 531.3 masl of approximately 929 m^3;
(l) minewater pond BA2 with a volume at the design water level of 520.5 masl of approximately 22,310 m^3 and containing treated or untreated minewater;
(m) treated and untreated pipelines and pumping stations capable of pumping treated and untreated minewater to various locations including back to the minewater treatment plant for further treatment, to the underground mine or to the treated effluent outfall structure; and
(n) a treated effluent outfall structure discharging the final treated effluent from pond BA2 or the MWTP through an infiltration diffuser outfall directly or indirectly into the watershed of Moody Brook;

and with all of the above items located as *generally* shown in the drawing entitled "Kria Resources - Halfmile Mine, Site Infrastructure (WTP EMP), Figure 1" and dated 2012/05/04.

7. In this Approval to Operate:

(a) "Parameter List A" means pH, Total Suspended Solids, Hardness (as $CaCO_3$), Copper, Lead and Zinc;

(b) "Parameter List B" means pH, TSS, hardness (as $CaCO_3$), acidity (as $CaCO_3$), ammonia, aluminum, arsenic, barium, beryllium, bismuth, boron, cadmium, calcium, chromium, cobalt, copper, iron, lead, lithium, magnesium, manganese, molybdenum, mercury, nickel, potassium, rubidium, selenium, silver, sodium, strontium, sulfate, tellurium, thallium, tin, uranium, vanadium and zinc.

8. The "Point of Compliance" means MH2, that being the manhole on the pipeline from the MWTP or BA2 to the infiltration diffuser outfall and located as shown in the drawing entitled "Kria Resources - Halfmile Mine, Site Infrastructure (WTP EMP), Figure 1" and dated 2012/05/04.

9. The surface water sampling stations referenced in Condition 29 are described and located approximately as follows:

(a) HB1 in Halfmile Brook 200m upstream of its confluence with Moody Brook at N47°-19'-59.8" x W066° -17'- 01.3";

(b) MB1 in Moody Brook 750m downstream of the diffuser outfall structure at N47°-19'-50.7 x W066°-18'- 45.6";

(c) MB2 in Moody Brook 400m downstream of the mouth of Halfmile Brook at N47°-20'-12.1 x W066° -16'- 52.4";

(d) MB3 in Moody Brook 10m upstream of its confluence with the Nepisiguit River at N47°-21'-43.9 x W066° -15'- 26.5";

(e) NR1 in the Nepisiguit River 5.6 kms upstream of its confluence with Moody Brook at N47°-22'-48.0 x W066° -19- 29.0";

(f) NR2 in the Nepisiguit River 1200 m downstream of its confluence with Moody Brook at N47°-22'-02.0 x W066° -14- 27.0";

(g) WUT1 in the West Unnamed Tributary 350m upstream of its confluence with the Northwest Miramichi River at N47°-18'-24.5 x W066° -20'- 53.0";

(h) EUT1 in the East Unnamed Tributary 4.0 kms upstream of its confluence with the Northwest Miramichi River at N47°-18'-37.2 x W066° -18'- 47.8";

(i) EUT2 in the East Unnamed Tributary 50m upstream of its confluence with the Northwest Miramichi River at N47°-16'-56.1 x W066° -19'- 38.4";

(j) NMR1 in the Northwest Miramichi River 200m upstream of its confluence with the West Unnamed Tributary at N47°-18'-35.6" x W066° -21'- 10.4";

(k) NMR2 in the Northwest Miramichi River 50m downstream of its confluence with the East Unnamed Tributary at N47°-16'-42.0" x W066° -19'- 39.8".

10. The groundwater monitoring wells referred to in Condition 30 are those shown on the drawing entitled: "Trevali Mining Corp - Halfmile Project Groundwater Monitoring Well (MW) and Surface Water (SW) Sample Locations" dated 2012/01/11 and located approximately as follows:

MW1 at: 47° 18' 14.406" N 66° 19' 18.904" W
MW2 at: 47° 18' 11.833" N 66° 19' 30.751" W
MW3 at: 47° 18' 13.417" N 66° 19' 38.910" W
MW4 at: 47° 18' 18.356" N 66° 19' 31.231" W
MW6 at: 47° 19' 03.514" N 66° 19' 28.331" W
MW7 at: 47° 19' 07.377" N 66° 19' 18.989" W
MW8 at: 47° 19' 17.553" N 66° 18' 55.701" W
MW9 at: 47° 19' 19.451" N 66° 18' 59.273" W

MWU at: 47° 19' 25.20" N 66° 19' 06.90" W

11. In this Approval to Operate:

(a) "Inert Rock" or "Construction Grade Rock" means waste rock with a $\%S_{total}$ less than 0.1% and an NP/AP greater than 3.0;

(b) "NAG" or "Non-acid generating waste rock" means waste rock with a $\%S_{total}$ equal to or greater than 0.1% but less than 0.3%, and an NP/AP greater than 3.0;

(c) "PAG" or "Potentially acid generating waste rock" means waste rock with a $\%S_{total}$ equal to or greater than 0.3% and/or an NP/AP less than 3.0.

12. The "MMER" means the *Metal Mining Effluent Regulations* and includes any subsequent revisions or amendments made to the MMER.

C. EMERGENCY REPORTING

13. Immediately following the discovery of an environmental emergency, a designate representing the Approval Holder shall notify the Department in the following manner:

During normal business hours, telephone the Department's applicable Regional Office **until personal contact is made** (i.e. no voice mail messages will be accepted) and provide all information known about the environmental emergency. The telephone number for the Regional Office is provided below:

Miramichi Regional Office (by telephone) at (506) 778-6032

After hours, telephone the Canadian Coast Guard **until personal contact is made** and provide all information known about the environmental emergency. The telephone number for the **Canadian Coast Guard is 1-800-565-1633**.

14. Within 24-hours of the time of initial notification, an electronic email copy of a **Preliminary Emergency Report** shall be filed by a designate representing the Approval Holder to the Department's applicable Regional Office *as well as* the Department's Central Office using the information provided below. The Preliminary Emergency Report shall clearly communicate all information available at the time about the environmental emergency.

Within five (5) days of the time of initial notification, an electronic mail copy of a **Detailed Emergency Report** shall be filed by a designate representing the Approval Holder to the Department's applicable Regional Office *as well as* the Department's Central Office using the information provided below. The Detailed Emergency Report shall include, as a minimum, the following: i) a description of the problem that occurred; ii) a description of the impact that occurred; iii) a description of what was done to minimize the impact; and iv) a description of what was done to prevent recurrence of the problem.

Miramichi Regional Office at elg.egl-region2@gnb.ca
Central Office in Fredericton to the assigned approvals engineer

D. TERMS AND CONDITIONS

15. **Emergency Response:**
Notwithstanding any other actions taken pursuant to Condition 13 if the limits of Condition 27(e) are exceeded or if the bioassay test from Condition 28(c)(ii) or 28(c)(iii) indicates acute lethality at the Point of Compliance, the Approval Holder shall immediately:

(a) stop discharging effluent into the watershed of Moody Brook;
(b) notify the Department pursuant to Condition 13 as appropriate;
(c) begin an investigation to determine the cause of the discharge limit exceedence or acute lethality;
(d) provide to the Authorizations Branch, for review and approval, the proposed actions felt necessary to eliminate the discharge limit exceedence or acute lethality;
(e) implement the approved actions from (d) before resuming discharge into the watershed of Moody Brook.

16. **Emergency Response Plan:**
At such time that the Emergency Response Plan is revised or updated, the Approval Holder shall provide to the Authorizations Branch and to the Miramichi Regional Office a copy of the most recent version of the Emergency Response Plan described in Section 30 of the MMER by the date required in the MMER.

17. **MMER:**
The Approval Holder shall submit to the Authorizations Branch copies of all correspondence and reports that are required to be submitted pursuant to the MMER.

18. **Compliance with Other Legislation:**
The issuance of this Approval does not relieve the Approval Holder from compliance with any other applicable local bylaws, federal or provincial Acts and/or Regulations, including, but not limited to, the *Mining Act* and its Regulations.

19. **Rehabilitation Bond:**
The Approval Holder shall establish, and keep in force, a rehabilitation bond as follows:

(a) the rehabilitation bond shall be for the purpose of providing all aspects of environmental protection at the Halfmile Mine, or any area affected thereby, and the Approval Holder shall place no other restrictions on the access, redemption or use of the rehabilitation bond;

(b) The Approval Holder shall provide a rehabilitation bond of a minimum of $325,160 for, among other things, the activities described in the Reclamation Plan dated October 6, 2010. This bond may be provided to the Minister of Energy and Mines;

(c) with respect to ore and waste rock placed on the portal waste rock handling pad at the Halfmile Mine, a second rehabilitation bond of a minimum of $50,000 shall be provided. This bond may be provided to the Minister of Energy and Mines;

(d) with respect to waste rock temporarily stored on the Halfmile Mine NAG waste rock pad pursuant to Condition 25(e), until all of the waste rock has been returned underground as backfill, the Approval Holder shall provide a third rehabilitation bond of $250,000 to the Minister. The rehabilitation bond shall be in the form of a cash deposit or an irrevocable Letter of Credit with Conditions that are acceptable to the Minister;

(e) if permission is subsequently given by the Minister to store PAG waste rock on the Halfmile site in addition to the PAG waste rock stored on the portal pad pursuant to 25(b), the Approval Holder shall provide to the Minister additional security subject to any further Terms & Conditions deemed necessary by the Authorizations Branch, before any additional PAG waste rock is stored at the Halfmile site.

20. **Approval Classification:**
The facility is hereby classified as a Class 1A source pursuant to Section 5(1) of the *Fees for Industrial Approvals Regulation 93-201* under the *Clean Water Act.*

21. **Test Methods:**
The Approval Holder shall follow the test procedures outlined in Standard Methods, where "Standard Methods" means *Standard Methods for the Examination of Water and Wastewater*, 19th or later Edition, or other method deemed acceptable by the Industrial Processes Section for the analysis of the parameters listed in Parameter Lists A and B. Metals shall be tested for "total metals". Toxicity testing shall follow the procedures described in EPS/1/RM/13 and EPS/1/RM/14 and shall be done at a laboratory which is accredited by the Standards Council of Canada or equivalent agency. Test method detection levels shall be sufficiently low such that meaningful interpretation of the monitoring data can be made.

22. **Groundwater Withdrawal:**
The Approval Holder shall:

(i) may withdraw up to a combined total maximum of 50 m^3/day of groundwater from all groundwater sources on the mine property;
(ii) shall monitor, or provide flow restriction devices, on any groundwater withdrawal to demonstrate compliance with (i); and
(iii) shall not withdraw surface water from any surface watercourse.

23. **General Site Operations:**
The Approval Holder shall:

(a) shall employ generally accepted Best Management Practices to control and mitigate erosion and sedimentation during all activities permitted under this Approval as described in the approved Environmental Protection Plan referenced in Condition 24 of EIA Determination 4561-3-1253;
(b) shall collect all contaminated and potentially contaminated site runoff in the minewater collection system for re-use or treatment and discharge;
(c) may direct uncontaminated runoff offsite;
(d) may use treated minewater which meets the limits of Condition 27(e) on the site roads for dust control;
(e) shall ensure that a program of inspections, maintenance and/or alarming capability is in place on pipeline and pumping systems, the MWTP and on the minewater holding ponds such that there is no release of untreated minewater to the receiving environment from any pipeline, plant or pond;
(f) shall ensure that an adequate level of maintenance, staffing and employee training is provided in order to prevent the discharge of untreated minewater or contaminated runoff due to lack of provision of these resources;
(g) shall ensure that adequate spare equipment and/or redundant systems are installed or available, in order to prevent the discharge of untreated minewater or contaminated runoff.

24. **Solid Waste Management:**
Solid waste shall be managed as follows:

(a) The Approval Holder shall manage non-hazardous, non-recyclable solid waste generated at the mine by transporting this material to an approved landfill;
(b) Approval Holder shall ensure that recyclable materials are recycled to the greatest practical extent;
(c) Approval Holder shall manage hazardous waste, where "hazardous waste" means any waste material intended for disposal or recycling, that is identified as a hazardous waste by the federal *Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations,* and/or is included in Class 1 and/or Class 7 of the federal *Transportation of Dangerous Goods Regulations,* as follows:

(1) Approval Holder shall ensure that all hazardous waste at the Halfmile Mine is stored as follows:
   i. all hazardous waste shall be stored in a dedicated hazardous waste storage area, secured in sealed and chemically resistant containers, away from high traffic areas, protected from vehicle impacts, away from electrical panels and in a containment area that is designed to prevent contact between incompatible materials;
   ii. all hazardous waste shall be stored in a containment area that has secondary containment adequate to contain 110% of the nominal volume of the largest container in the containment area;
   iii. all hazardous waste shall be stored in a containment area designed to prevent the release or discharge of hazardous waste to the environment as a result of a spill;

(2) Approval Holder shall keep a record of all hazardous waste put into the hazardous waste storage area, including as a minimum, the date the waste was put into storage, a description of each hazardous waste put into storage and the amount of each hazardous waste put into storage;

(3) Approval Holder shall ensure that all hazardous waste generated at the Halfmile Mine is collected and transported offsite by a Hazardous Waste Collection and Transportation provider that is approved by the Department;

(4) Approval Holder shall keep a record of all hazardous waste that is transported offsite including as a minimum, the name and identifying number of the generator, a description of each hazardous waste transported, the amount of each hazardous waste transported, the name and identifying number of the Hazardous Waste Collection and Transportation provider, the date of the collection, the class of each hazardous waste collected (under the federal Transportation of Dangerous Goods Act), and the name, location, and identifying number of the intended Receiver of each hazardous waste.

25. **Waste Rock Management:**

The Approval Holder shall manage waste rock at the Halfmile Mine site as follows:

(a) waste rock may be stored underground or on the portal waste rock pad;

(b) the maximum amount of waste rock stored on the portal waste rock pad shall not exceed 10,000 tonnes;

(c) runoff from the portal waste rock pad shall be directed to the underground pumping station;

(d) if it is subsequently approved by the Department to haul waste rock from another location to Halfmile for purposes other than as backfill, then this shall be done subject to any additional Terms & Conditions deemed necessary by the Authorizations Branch;

(e) in addition to the 10,000 tonnes of waste rock permitted to be stored on the Halfmile Mine portal waste rock pad, the Approval Holder may store additional waste rock onsite on the Halfmile NAG waste rock pad until needed as backfill subject to:

(i) before waste rock is moved from the portal waste rock pad to the NAG waste rock pad, a representative sample of each blast or 1000 t, whichever is lower, is sampled for %Stotal and NP/AP ratio;
(ii) waste rock meeting the definition of Inert Rock in Condition 11(a) may be stored on the NAG waste rock pad;
(iii) waste rock meeting the definition of NAG in Condition 11(b) may be stored on the NAG waste rock pad;
(iv) the NAG waste rock pad shall be graded such that any surface runoff that is generated reports to the mine access road ditch;
(v) if surface runoff is generated from the NAG waste rock pad, the runoff shall be sampled at the mine access road ditch once per week for Parameter List A and the results reported in the Monthly Report;
(vi) the amount of waste rock stored on the NAG waste rock pad and records of where the waste rock has been placed on the pad shall be filed onsite and submitted with the Monthly Environmental Report.

(f) waste rock may be used for construction purposes on the Halfmile Mine site subject to:

(i) only waste rock meeting the definition of Inert Rock in Condition 11(a) shall be eligible for construction purposes on the Halfmile Mine site;
(ii) the use of waste rock for construction purposes on the site must be approved, on a case by case basis, by the Authorizations Branch;

(g) if it is subsequently approved by the Department to store PAG waste rock at the Halfmile mine site in addition to PAG stored on the portal waste rock pad, then this may be stored at the site subject to any further Terms & Conditions deemed necessary by the Authorizations Branch.

26. **Ore Management:**
The Approval Holder shall manage ore as follows:

(a) ore may be stored underground or on the portal ore pad;

(b) the maximum amount of ore stored on the portal ore pad shall not exceed 10,000 tonnes;

(c) runoff from the portal ore pad shall be directed to the underground pumping station;

(d) ore shall not be crushed at the Halfmile Mine. If ore crushing is subsequently approved by the Department, then ore crushing shall be done subject to any further Terms & Conditions deemed necessary by the Authorizations Branch; and

(e) the transportation of ore to other locations for processing shall be approved on a case by case basis and may be subject to further Terms & Conditions deemed necessary by the Authorization Branch.

27. **Operation of Minewater Treatment Plant:**
The Approval Holder may discharge contaminants into the watershed of Moody Brook subject to the following:

(a) The Approval Holder shall not discharge contaminants into the environment at any location other than into the watershed of Moody Brook via the infiltration diffuser outfall;

(b) The Approval Holder shall operate the Halfmile Mine such that there is no direct discharge of contaminants into the Northwest Miramichi River watershed;

(c) The Approval Holder shall control the levels in minewater ponds BA1 and BA2 such that there is, at all times, a minimum of 1 meter of freeboard, and shall record the level in BA1 and BA2 once per day during operation, monthly otherwise;

(d) The Approval Holder shall record the dates and times when discharge is directed to the watershed of Moody Brook via the infiltration diffuser outfall;

(e) The Approval Holder shall operate the Halfmile Mine and the MWTP so as to produce a final treated effluent at the Point of Compliance that, at all times, meets the following discharge limits:

(i) the flowrate shall not exceed 1000 m3/day or 42 m3/hour;
(ii) the pH shall be between 6.5 and 9.0;
(iii) the aluminum concentration shall be less than 0.100 mg/l;
(iv) the cadmium concentration shall be less than 0.0006 mg/l;
(v) the copper concentration shall be less than 0.004 mg/l;
(vi) the iron concentration shall be less than 0.30 mg/l;
(vii) the manganese concentration shall be less than 0.02 mg/l;
(viii) the lead concentration shall be less than 0.016 mg/l;
(ix) the zinc concentration shall be less than 0.03 mg/l;

(x) the maximum allowable ammonia concentration may be set by the Industrial Processes Section at a later date;

(xi) the total suspended solids shall be ≤ 25 mg/ℓ in a grab sample and shall be ≤ 12 mg/ℓ for the month average;

(xii) the discharge at the Point of Compliance shall be non-acutely lethal, where "acutely lethal" means that the effluent, at 100% concentration, kills more than 50% of the rainbow trout over a 96 hour period when tested using the method of EPS 1/RM/13;

(f) if it is subsequently concluded by the Authorizations Branch that naturally occurring background contaminant levels in Moody Brook are higher than the levels in (e), then the Approval Holder shall not discharge treated effluent with contaminant levels higher than the background values;

(g) the Point of Compliance shall be equipped with a flow monitoring device that is acceptable to the Authorizations Branch;

(h) The Approval Holder shall dispose of the sludge generated at the MWTP in a manner approved by the Authorizations Branch. If MWTP concentrate is disposed of underground, within 60 days of having done so, the Approval Holder shall provide to the Authorizations Branch an analysis of the MWTP concentrate and a report describing the longterm chemical stability of the concentrate in the underground mine.

28. **Minewater Monitoring Program:**

The Approval Holder shall sample and analyze minewater from the following locations for the parameters and frequency as follows:

(a) from BA1 once per month on a mutually agreeable day, that day currently being the last Wednesday of each month (± 2 days) for Parameter List "A" and ammonia;

(b) from BA2 once per week when operating the MWTP, otherwise monthly on a mutually agreeable day, that day currently being each Wednesday, for Parameter List "A" and ammonia;

(c) at the Point of Compliance when discharging:

i. daily grab sample for pH, conductivity, Parameter List "A" and ammonia and total daily flow for any day that discharge takes place;
ii. monthly grab sample for trout toxicity for any month during which discharge takes place (although the frequency of testing can be increased to twice per month if the effluent is determined to be acutely lethal);
iii. monthly grab sample for daphnia toxicity for any month during which discharge takes place (although the frequency of testing can be increased to twice per month if the effluent is determined to be acutely lethal);

iv. quarterly grab sample for total phosphorous, total ammonia, TKN, nitrate/nitrite, and Parameter List "B" for any quarter during which discharge takes place and taken, if possible, to coincide with (ii) and (iii);

(d) once per year, the infiltration diffuser outfall shall be inspected for erosion, blockage and any other issue that could affect its operation and a brief report included in the following Monthly Report. The inspection shall be made in the spring prior to discharge;

(e) the minewater sampling program from above may be modified by the Authorizations Branch when sufficient data has been collected to justify this change.

29. **Surface Water Monitoring Program:**
The Approval Holder shall grab sample and analyze samples taken from the following locations for the parameters and at the frequency as follows:

(a) at Station MB1, once per week on a mutually agreeable day, that day currently being each Wednesday, for Parameter List "A" when discharging and once per month on a mutually agreeable day, that day currently being being the last Wednesday of each month (± 2 days), for Parameter List "A" when not discharging;

(b) at Station MB1, Station HB1, Station MB3, Station MB2, once per quarter for Parameter List "B" on a mutually agreeable day that day currently being being the last Wednesday of the quarter (± 2 days);

(c) at Station NR2, Station WUT1, Station NMR1, Station NMR2 and Station EUT1 two times per year for Parameter List "B" on a mutually agreeable day, that day currently being the last Wednesday of the half year (± 2 days);

(d) the surface water sampling program from above may be modified by the Authorizations Branch when sufficient data has been collected to justify this change.

30. **Groundwater Monitoring Program:**
The Approval Holder shall sample MW1, MW2, MW3, MW4, MW6, MW7, MW8, MW9, and MWU for Parameter List B and groundwater elevation once per quarter. The results shall be submitted in the Monthly Environment Report following the month of sampling. The results shall be in tabular and graphical format acceptable to the Authorizations Branch. The groundwater sampling program may be modified by the Authorizations Branch when sufficient data has been collected to justify this change.

31. **Monthly Environmental Report:**
By the end of the following month, the Approval Holder shall submit to the Authorizations Branch and to the Miramichi Regional Office a monthly Environment Report for the previous month for the Halfmile Mine, which may be provided in electronic format, including:

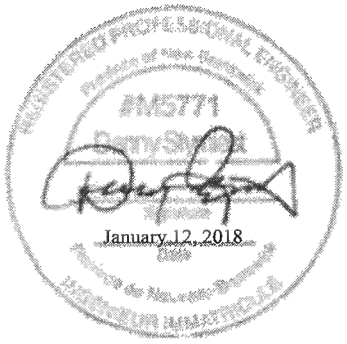
(a) a cover letter signed by a Company official stating that the Monthly Report has been reviewed and is felt to be an accurate reporting of the activities at the Halfmile Mine for that month;

(b) a brief summary of any Emergency Reports submitted pursuant to Condition 13, a brief discussion of any difficulties in meeting the conditions of this Approval or of non-compliance with the conditions of the Approval, and a brief discussion of any other significant environmental activities that took place at the Halfmile Mine during the month;

(c) the information and test results required pursuant to:

Condition 22 - a statement concerning groundwater withdrawal;
Condition 24 - information on the management of solid waste;
Condition 25 - information on the management of waste rock;
Condition 27 - information on the operation of the MWTP;
Condition 28 - test results from minewater monitoring;
Condition 29 - test results from surface water monitoring;
Condition 30 - test results of groundwater well monitoring;

(d) the amount of waste rock stored on the portal waste rock storage pad at the end of the month;



Prepared by: _____
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