



Environmental Protection Agency

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Environmental Permit (Renewed)

Issued under the Environmental Protection Act, Cap. 20:05, Laws of Guyana, the Environmental Protection (Amendment) Act, 2005, and the Environmental Protection (Authorisations) Regulations, 2000.

Reference No.:	20101013-GIMMP
Fee:	Large (C1) US\$3100 per year
Fee Paid:	US\$15500- (5 years: October, 2022 to September, 2027)
Address:	Mr. Elliot Lincoln Director and President, Guyana Industrial Minerals Inc. 222 Area J, Cedar Court, Lamaha Gardens, Georgetown.
Activity:	Bauxite Mining and Beneficiation

Guyana Industrial Minerals Inc., hereinafter referred to as the "Permit Holder", is hereby authorised in accordance with the Environmental Protection Act, No. Cap. 20:05, Laws of Guyana, the Environmental Protection (Amendment) Act, 2005, and the Environmental Protection Regulations, 2000, to undertake Bauxite Mining and Beneficiation of the Bonasika, One, Two, Five, Six and Seven Deposits, located between the Right Bank Essequibo River and the Left Bank of the Demerara River, hereinafter referred to as the "Project", in a manner indicated in the Renewal Application submitted on September 16, 2021, subject to the terms and conditions set forth herein under the Environmental Protection Act, existing and forthcoming regulations made under the said Environmental Protection Act and/or any other applicable laws, best practices, guidelines and standards relevant to this project.

This is a Renewal of the Environmental Permit, Reference #20101013-GIMMP, issued in March, 2017, and expired on February, 2022, in accordance with the Environmental Protection (Authorisations) Regulations, 2000.

Terms and Conditions for the Operation to be adhered to by the Permit Holder, His Servants, Agents and/or Sub-Contractor(s):

1.0 OPERATION

- 1.1. Comply with the approved Environment Impact Assessment dated May, 2001, the Environmental Impact Assessment Addendum dated May, 2010, the revised Environmental Management Plan, dated February 26, 2020, and EMP addendum dated June, 2020, for the Project.
- 1.2. Undertake mining and beneficiation of bauxite only at the Permitted site. **Sand mining and logging for commercial purposes is strictly prohibited at all times.**
- 1.3. Notify the Agency in writing and obtain its approval for **ANY** proposed changes in operation of Bauxite mining at least **fourteen (14) days** before making the change. The notification shall contain a **description of the proposed change in operation**. It is not necessary to make such a notification if an **Application to vary** this Permit has been made and the Application contains a description of the proposed change. In this condition '**change in operation**' means a change in the nature or functioning, or an extension, of the installation, which may have consequences for the environment, including but not limited to the following:
 - i) Changes in construction, structure, layout of the facility;
 - ii) Installation of new and/or changes to equipment, machine, apparatus, mechanism, system or technology serving the facility or operation; and
 - iii) Any technology installed at the facility from which effluent may be discharged.
- 1.4. Adhere to the stipulations within the **Mining Act, No. 20 of 1989**, and the **Mining Regulations including the Mining (Amendment) Regulations, 2005**.
- 1.5. Continue to maintain all demarcated boundary limits of the Mining Licence (ML) for Bonasika one, two, five, six and seven as prescribed by the Guyana Geology and Mines Commission (GGMC).
- 1.6 Within the legal powers of the Company, ensure proper signage and security measures are in place to discourage the influx of people and keep unauthorized persons from accessing restricted and high-risk areas that are under operation by Guyana Industrial Minerals Inc.
- 1.7 Ensure that records of all maintenance activities of equipment are maintained and placed at visible locations.
- 1.8 As far as possible, maintain the following non- extractable, vegetated buffer zone at least 20 m wide as follows:

- Between your mining blocks and other different contiguous land-use activities.
Around the mine site.
- Around the property boundary.
- Around any water source/spring located on the property.

In instances where 20m vegetative buffer zones cannot be maintained and operations have the potential to impact other contiguous activities, then adequate mitigation measures need to be implemented.

2.0 EMPLOYEES AND EMERGENCY MANAGEMENT

- 2.1 Ensure that adequate fire protection such as fire extinguishers, sand buckets, fire pumps are provided and placed at visible locations on site, in accordance with guidelines established by the Guyana Fire Service.
- 2.2 Ensure all firefighting equipment are maintained and serviced in accordance with guidelines established by the Guyana Fire Service.
- 2.3 Establish and regularly update the Company's evacuation plan which must be posted in conspicuous location (s).
- 2.4 Install an alarm system and ensure that all employees are trained and aware of the emergency response protocol and their duties and responsibilities according to the evacuation plan.
- 2.5 Employees must, at all times, be equipped with the necessary protective equipment to their job specification such as; hi-visibility vests, hard hats, gloves, dust mask and appropriate footwear and ensure appropriate utilization of these gears.
- 2.6 Prepare and maintain an employee log of distribution of Personal Protective Equipment.
- 2.7 Provide well-equipped first aid and snake bite kits at all work sites.
- 2.8 Ensure that communication and transportation systems are in place to respond to emergencies.
- 2.9 Ensure that proper prophylactic or other acceptable measures are implemented to protect workers and other persons from malaria and other harmful diseases at the project site.
- 2.10 Within the legal powers of the Company, discourage the influx of people into the Mining Concession and do not allow outsiders to settle on its periphery.
- 2.11 Provide employees and third-party contractors with training on good environmental management practices, occupational health and safety and of their obligations under this Permit on a regular basis.
- 2.12 Prepare and maintain a training file for all employees and third-party contractors,

which should be available upon Officers' request during Compliance Inspections and at any other time.

- 2.13 Maintain employment of an Environmental Officer or an Environmental Unit that would be responsible for coordinating Environmental Management, implementing the conditions of this Permit, ensuring employees are trained in environmental management and Emergency Response Procedures and capable of monitoring for compliance with this Permit.
- 2.14 Institute a transparent and accessible grievance mechanism for employees to relate and address any environmental and work-related concerns or problems which may arise and affect the well-being or performance of the workers. Employees must be notified of the agreed mechanism during recruitment.

3.0 VEGETATION CLEARING, TOPSOIL STRIPPING

- 3.1 Take necessary precautions to avoid soil compaction, erosion, rutting, siltation and sedimentation during operation by limiting the size of the disturbed area, slope length and gradient, and the duration of soil exposure.
- 3.2 Consider the weather pattern before initiating major earthworks. Monitor areas of exposed soil during periods of heavy rainfall.
- 3.3 Maintain natural vegetative cover as far as practical, especially in the vicinity of steep slopes occurring at project site.
- 3.4 Limit cleared areas to those identified within the mine plan for ore recovery, infrastructure, waste and stockpiles areas, etc. In instances where proposed areas have previously been cleared, a record of clearance should be maintained prior to commencing additional clearance activities.
- 3.5 Maintain the integrity of areas where riparian vegetation is located in proximity to major earthworks to aid in mitigating erosion/sedimentation impacts at the site.
- 3.6 Top soil and vegetation should be carefully stripped and stockpiled in an allocated area marked by a sign and bermed to mitigate the free movement of sediments, so that it can be used for reclamation and re-vegetation as mining progresses.
- 3.7 Where practical, locate stockpiles in areas of low permeability. Stockpiles should be graded in such a manner to promote runoff.
- 3.8 Store overburden stockpiles away from the drainage system at least **two hundred (200) meters** away from any water courses. Runoff from this overburden must be directed to the settling pond for treatment before discharge.
- 3.9 Not store topsoil (overburden) within three meters (3m) of natural vegetation or mine face.

- 3.10 Where possible, topsoil should be placed directly onto an area being rehabilitated to reduce double handling of soil.
- 3.11 Employ practical measures such as growing of vegetation e.g. shrubs and grasses on stockpiles of topsoil, to reduce erosion and dust disturbances to surrounding ecosystems.
- 3.12 Implement measures to ensure stockpiled materials are not contaminated during mine operations.

4.0 WATER QUALITY AND DRAINAGE MANAGEMENT

- 4.1 Adhere to the provisions of the **Environmental Protection (Water Quality) Regulations, 2000.**
- 4.2 Adhere to the Water Quality Monitoring plan in the revised Environmental Management Plan dated February 26, 2020, and addendum dated June, 2020 and any subsequent approved revisions/amendments of the afore-mentioned documents, for the Project.
- 4.3 Provide within **three (3) months** of issuance of the Permit definite plans for installation/restoration of new groundwater monitoring wells, stating proposed locations, justification of site selection, timelines and methods that will be employed to prevent loss of the new wells. The plan should also include methods of drilling and borehole construction.
- 4.4 No direct discharge of stormwater to any water-bodies is allowed. Direct all runoff from the overburden stockpile, ore stockpile areas and water accumulated in pit sumps into a settling pond that is retained and is intercepted by a natural (rock berm) or artificial sedimentation fence so as to restrict the free flow of sediments into nearby creeks (Sassaparo) or nearby waterways.
- 4.5 Engineer and maintain surface drainage systems to minimise disturbances to natural drainage patterns.
- 4.6 Drainage systems should be capable of handling the probable maximum precipitation within the mines and ancillary facilities. Discharge should be directed into a settling pond before releasing into the environment.
- 4.7 As far as possible, divert surface water runoff from higher mine benches to prevent it from reaching lower workings. Where possible, strategically place low permeability materials to restrict water flow into mining areas.
- 4.8 Identify lignite overburden waste zones (potential acid generating materials) and encapsulate within other overburden waste types to minimise the potential for acid generation.
- 4.9 Install silt traps where necessary to avoid siltation and sedimentation of waterways during operation and maintenance.
- 4.10 Clean drains and sediment traps as necessary.

- 4.11 Collect mine influenced water (e.g., groundwater seepage into mine workings, process plant water, surface runoff within mine area) in sumps, drains and direct into a system of settling ponds to reduce suspended solids levels, as necessary, before re-use in the mine site process plant or release into the receiving environment after final settling.
- 4.12 Consider the weather pattern before initiating major earthworks e.g. road maintenance, topsoil excavation. Monitor areas of exposed soil during periods of heavy rainfall.
- 4.13 Store overburden stockpiles away from drainage systems and beyond 100 meters of any water course.
- 4.14 Conduct site clearing of any mine expansion panels in a gradual and phased manner to minimise sediment discharge.
- 4.15 Conduct Quarterly monitoring of the following parameters in accordance with the approved Environmental management Plan dated February 26, 2020. Submit reports to the Agency on a quarterly basis. These reports shall be submitted to the EPA no later than one (1) month after the reporting quarter.
 - pH (5.0-9.0);
 - Turbidity (<30 NTU);
 - Conductivity (> 400 μ S/cm);
 - Total Dissolved Solids (<200 mg/L);
 - Temperature (<40C);
 - Cadmium (<0.05 mg/L)
 - Lead (<0.2 mg/L)
 - Iron (<2.0mg/L);
 - Zinc (<0.5mg/L);
 - Aluminium (<0.2mg/L);
 - Oil and Grease (<10mg/L);
 - Total Suspended Solids (<50mg/L);
 - Chromium (VI) (0.1 mg/L);
 - Manganese;
 - Sulphates; and

- Copper (<0.3mg/L).

4.16 Conduct monthly monitoring of the following parameters in accordance with the approved Environmental Management Plan dated February 26, 2020. Submit reports to the Agency on a quarterly basis. These reports shall be submitted to the EPA no later than one (1) month after the reporting quarter.

- pH (5.0-9.0);
- Turbidity (<30 NTU);
- Conductivity (> 400 μ S/cm);
- Total Dissolved Solids (<200 mg/L); and
- Temperature (<40C)

5.0 MINING OPERATION

- 5.1 Adhere to the stipulations within the Mining Act, No. 20 of 1989, the Mining Regulations including the Mining (Amendment) Regulations, 2005.
- 5.2 Operate the major processing component of the mining operation in accordance with the Amended EMP February, 2020; this includes Primary and Secondary crushing, Washing, Screening, and the use of a series of Settling Ponds.
- 5.3 Ensure that the transport of mined material (ore, overburden, etc.) from the mines to the processing/ waste material dump is done in a manner that prevents adverse impacts to the environment and public safety.
- 5.4 Ensure water accumulated in mine pits, including groundwater and precipitation flow/storm water, are collected and contained within in-pit sumps and directed into sediment ponds prior to being discharged into any waterway.
- 5.5 Conduct continuous geo-chemical characterization of Ore and Gangue material within mines to develop a trace metals characterization profile. pH levels should at all times be maintained to near neutral levels while undertaking all necessary work to control and manage acid mine drainage from the mining and tailing areas.

6.0 TAILINGS POND MANAGEMENT

- 6.1 Maintain the Design of the tailing Pond in such a manner that there is control of the flow through velocity (flow rate) within the system to improve embankment stability

and settlement rates.

- 6.2 Maintain the tailings pond embankment using well compacted competent soils free of organic matter.
- 6.3 Ensure that the design capacity of the tailings pond can contain all of the sediment-laden process water, as well as seepage, surface runoff and precipitation from the design storm event with a minimum freeboard of 0.60 m (2 feet).
- 6.5 Install and maintain decant pipes/systems so that sediment-free water can be discharged (as necessary).
- 6.6 Install emergency spillways to prevent overtopping. Spillways must be riprapped with coarse material to prevent erosion.
- 6.7 Maintain sufficient storage or spillway capacity to accommodate seasonal rainfall as well as extreme storms.
- 6.8 Ensure that the relevant personnel have an understanding of the tailings management plan, along with their respective roles and responsibilities, particularly in the role of visual indications of storage performance.
- 6.9 Conduct continuous monitoring and water height observations which will investigate the hydrogeological conditions and storage capacity of the settling ponds and analyse its susceptibility to failure. The records/reports should be submitted as part of the Environmental Annual Report required in condition

Reports must include but not be limited to the following:

- i. Issues in Foundation and stability conditions observed examples: undercutting of embankments, seepage/piping and Erosion;
 - ii. Availability and suitability of borrow materials;
 - iii. Flood assessment of the site;
 - iv. Height of water in tailing Pond and weather conditions and
 - v. Details on any maintenance carried out and, noting any significant issues identified during the monitoring exercise.
- 6.10 Establish and maintain set maximum retention time for waste water in the tailings pond and sediment ponds, to allow for settling of suspended solids and natural degradation of possible contaminants.
- 6.12 Tailings pond monitoring reports should be prepared annually and submitted as part of the Annual Environmental Report. The report should consider the following, but not limited to:
 - i. Design against performance-tailings volume occupied;
 - ii. Insitu tailings parameters (density, strength and permeability);
 - iii. Position of the phreatic surface; and

- iv. Status and condition of the current monitoring system.

7.0 HAUL ROADS

- 7.1 Ensure that roads are constructed at a minimum distance of 200 meters away from residences, in accordance with the approved EIA Addendum, EMP dated February 26, 2020 and EMP addendum dated June, 2020.
- 7.2 Designate routes for heavy equipment traffic will be utilised to reduce the area potentially impacted by compaction of soils. If ponding is observed due to compaction and poses a risk (e.g. inadequate drainage, erosion potential), it may be necessary to scarify the compacted surface to increase infiltration.
- 7.3 Maintain a 15 m wide vegetative buffer between the mines, roads and residences.
- 7.4 Ensure the 21 km road between the Bonasika mine leading to Sand Hills is constantly maintained and constructed of laterite or other suitable road construction material to accommodate the heavy duty machinery and is used in a manner to minimise dust nuisance to the environment.
- 7.5 Ensure the running surface of the haul road is crowned with a compacted layer and equipped with good drainage on both sides of the road shoulder to catch and direct stormwater to the local drainage system and to prevent erosion of roads.
- 7.6 Minimise the clearing of vegetation during road construction by restricting the width of road corridors as much as possible.
- 7.7 Ensure that culverts are installed at points of low elevation along new roadways to maintain local drainage patterns and sized to handle wet season flood flows.
- 7.8 Ensure all reasonable and practical measures such as the provision of turnout drains at regular intervals are implemented to prevent erosion of roads.
- 7.9 Ensure adequate safety signs are erected along all roads informing users of dangerous bends, crossing of haul trucks, speed limits, etc.

7.0 WASTE MANAGEMENT

- 7.1 Adhere to the provisions of the **Environmental Protection (Litter Enforcement) Regulations, 2013.**
- 7.2 Construct the waste disposal sites at least 100 meters away from watercourses, residences or farmland and above the highest ground water table level of the area.
- 7.3 Divert storm water from the waste pit.
- 7.4 Solid waste pit should be maintained and covered on a regular basis to avoid fly and rodent infestations as well as mal-odour from leachate.

- 7.5 When the maximum capacity is reached, the solid waste pit should be covered with at least 0.3 metres of soil and a suitable site determined for another.
- 7.6 Waste shall not be disposed of in or near waterways.
- 7.7 **Burning of waste is strictly prohibited** unless otherwise pre – approved by the EPA.
- 7.8 Promote the reduction and reuse of waste generated from your facility.
- 7.9 Where possible and practical, compost organic matter and reuse organic materials as fertilizer for re-vegetation of reclaimed areas.
- 7.10 Maintain a septic system on site at all times. The septic tank should not be located within 1.5 m of a building or property boundary and should be accessible for cleaning and desludging. Any modification to the Septic tanks must be in accordance with the Guyana National Bureau of Standards (GNBS) ***Code of Practice for the Design and Construction of Septic Tanks and Associated Secondary Treatment and Disposal Systems.***

8.0 AIR QUALITY MANAGEMENT

- 8.1 Adhere to the provisions of the **Environmental Protection (Air Quality) Regulations, 2000.**
- 8.2 Comply with Air Quality Management Procedures as outlined in approved EMP dated February 26, 2020.
- 8.3 Develop and maintain an inventory of all emission sources onsite.
- 8.4 Conduct fence line monitoring to determine compliance with the Maximum Permissible Levels identified in the Table below:

Air Pollutant	Averaging Time	Maximum Permissible Level	Type of Monitoring	Frequency of Monitoring
PM _{2.5}	24 h	25 µg/m ³	Ambient	Quarterly
Carbon Monoxide	1 h	35ppm	Ambient	Annual
Nitrogen Dioxide	1 h	200µg/m ³	Ambient	Annual
Sulphur Dioxide	24 h	20 µg/m ³	Ambient	Annual

- 8.5 Ensure employees responsible for visual monitoring are aware of mitigation measures to be implemented if the threshold for such monitoring is surpassed.
- 8.6 Take all necessary precautions to reduce any instances of particulates released into the environment from the Operation.
- 8.7 Employ all practical measures along roads, at material stockpiles, and other sensitive areas to control and prevent fugitive dust impacts during the operation phases. Utilise dust suppression methods such as watering on a regular basis throughout the facility within and around the Mine Site, and the haul road from Bonasika to Sand Hills.
- 8.8 Operate all mechanical equipment in accordance with the manufacturer's specifications. Additionally, ensure that all mechanical equipment and vehicles are regularly maintained and operated at their optimal levels to minimize **atmospheric emissions**.

9.0 NOISE MANAGEMENT

- 9.1 Adhere to the **Environmental Protection (Noise Management) Regulations, 2000** and the Noise Management measures outlined in the revised Environmental Management Plan (pending approval).
- 9.2 Implement all possible measures to mitigate adverse noise impacts from heavy machinery and generators on the environment. Ensure all significant noise producing equipment, e.g. generators etc. are equipped with appropriate silencers or mufflers or are enclosed in suitable acoustic enclosures where necessary to reduce noise levels to achieve compliance with the GNBS requirements.
- 9.3 Comply with the Guyana National Bureau of Standards (GNBS) **Guidelines for Noise Emission into the Environment** at a distance of 15 m (50 ft) from the source or at the property boundary, whichever is closer.

- Industrial Limits: **100 dB** (Day-time (06:00 h -18:00 h))
80 dB (Night-time (18:00 h - 06:00 h))

- 9.4 Operate all mechanical equipment in accordance with manufacturer's specifications. All mechanical equipment, vehicles, should be regularly maintained and operated at their optimal levels to ensure efficiency and reduce the noise levels produced.

Develop and maintain an inventory of noise producing equipment on site.

10.0 FUEL HANDLING AND STORAGE

- 10.1 Fuel shall at all times be stored above-ground, in a cool, dry place and away from ignition sources. 'No Smoking' signs shall be posted where fuel is handled or stored.

- 10.2 Construct and maintain an impervious secondary containment wall around fuel storage tanks, creating a temporary holding area in the event of accidental spillage. The containment wall for areas with multiple tanks must have the capacity to provide at least 110% containment of the largest tank. The containment wall for areas with solitary tanks must have the capacity to provide 110% containment of each fuel tank. The containment wall **MUST** be fully sealed to prevent spillage into the receiving drainage system.
- 10.3 Secondary containment, drip trays or other overflow and drip containment measures shall be installed and maintained at connection points or other possible overflow points.
- 10.4 Existing secondary containment around the fuel tanks shall be inspected monthly for cracks and breakage to ensure they are liquid tight to withstand hydrostatic pressure.
- 10.5 All piping must enter or exit the containment over the wall and no part of the tank infrastructure (e.g. dispenser, filling hoses and valves) shall protrude outside the containment.
- 10.6 Ensure that adequate signage is installed in fuel storage areas, such as No Smoking, Flammable Materials, etc.
- 10.7 Protection measures for fuel storage tanks such as painting and coating shall be maintained to minimize corrosion of fuel tanks.
- 10.8 Maintenance and/ or repair of fittings, pipes and hoses shall be conducted monthly and in accordance to manufacturer's specifications. A summarized inspection report shall be compiled and submitted to the Agency as part of the Annual Report required in condition 16.2.
- 10.9 Secondary containment, drip trays or other overflow and drip containment measures shall be installed and maintained at connection points or other possible overflow points.
- 10.10 Leak detection systems shall be installed on all fuel tanks. At least two (2) of the following measures should be implemented:
- (a) Overflow alarms on tanks;
 - (b) Gauging system;
 - (c) Dipstick measurements;
 - (d) Sensors on walls of tanks; or
 - (e) Electric shut down buttons

11.0 HAZARDOUS MATERIALS/WASTE MANAGEMENT

- 11.1 Adhere to the provisions of the **Environmental Protection (Hazardous Waste Management) Regulations, 2000**, and the stipulations within the

Pesticides and Toxic Chemicals **Act, No. 13 of 2000**, the Pesticides and Toxic Chemicals Regulations, No. 8 of 2004, the Pesticides and Toxic Chemicals (Amendment) Regulations, No. 8 of 2007.

11.2 The Hazardous Material Storage areas shall be clearly labelled, secured and well illuminated when not in use. The following warning signs shall be clearly posted:

- (a) Danger- Chemical Storage Area "Authorized Personnel Only"
- (b) Read and Follow all label directions
- (c) No Smoking
- (d) No Eating or Drinking

11.3 Establish and maintain a register of hazardous materials or chemicals used or generated by the operation. Submit to the Agency, twice yearly (June and December), a report on hazardous waste generation and management for the previous six months including (please see attached form):

- The name, location and type of facility.
- Types and quantities (in metric units) of hazardous waste generated.
- Manner of storage, use, any applied treatment standards/methods and disposal of these substances.
- Data concerning off-site shipments of waste, i.e. local disposal facility utilized, country to which hazardous waste is shipped, purpose of shipment and amount of waste shipped.
- A summary of any accidents that may have occurred and any action taken.
- Any waste minimization efforts undertaken by your facility for hazardous material/waste.
- Any other matter the Agency may require.

The Agency considers all materials listed in Schedule I and II of the Environmental Protection (Hazardous Wastes Management) Regulations, 2000, to be hazardous. (Please see attached list.)

11.4 (a) Collect and store waste oils, used batteries, and any other hazardous waste on site until ready for disposal in a manner approved by the EPA.

(b) Refrain from draining fuel/ lubricants, including waste oils of any quantity from equipment on to the ground and waterways.

11.5 Contain all chemicals securely and conform to the safety conditions as outlined in the Material Safety Data Sheet for each chemical. Keep all chemicals in well-sealed and individually labeled containers and properly store in an impervious and well-ventilated room/bond.

11.6 Safety Data Sheets for all hazardous materials shall be readily available and easily

accessible at all times at the Facility.

- 11.7 Take the necessary precautionary measures during the transport, transfer, use and handling of all hazardous material.
- 11.8 Implement a programme to ensure regular and preventative maintenance of machinery and equipment to prevent leaks and minimize air emissions and hydrocarbon releases.
- 11.9 All hazardous waste shall be stored in a covered, bunded area. This area shall include the following:
 - (a) Signage- "Hazardous Waste Storage Area";
 - (b) Low traffic;
 - (c) No floor drains; and
 - (d) Secondary containment capable of containing 110% of the largest volume therein.
- 11.10 Do not service vehicles in mining pits except in instances of emergency repairs.
- 11.11 Maintain emergency spill cleanup kits on site for response to spills.
- 11.12 A fully stocked first- aid kit shall be readily available at the hazardous storage Facility.
- 11.13 Material storage containers shall be inspected weekly for signs of leakage or corrosion and damaged containers must be replaced immediately. Inspection Reports must be maintained and signed by the appropriately qualified inspecting officer and his/her supervisor.
- 11.14 Elevate all waste oil/ chemical tanks and containers so that leaks are easily identifiable.
- 11.15 Collect and store waste oils on site, until ready for disposal or reuse. It is an offence to drain fuel/lubricants including waste oils of any quantity from equipment onto the ground or water way.

12.0 PROGRESSIVE RECLAMATION AND CLOSURE

- 12.1 Adhere to the Conceptual Closure Plan as outlined in the revised EMP dated February, 2020 and addendum dated June, 2020.
- 12.2 Ensure progressive reclamation occurs as mining progresses.
- 12.3 Re-contour borrow pits from which materials are sourced for the construction of roads and for other infrastructure works to conform to the natural topography of the area.
- 12.4 Replace topsoil removed from these areas after excavation to facilitate re-vegetation.

- 12.5 Restore all waterways temporarily diverted during mining operations to their original channels, if possible.
- 12.6 In the mined-out areas, level and grade steep slopes, install drainage, backfill depressions and prepare ground in a manner that results in a stable state that blends in with the surrounding area and allows for progressive reclamation.
- 12.7 Do not store topsoil (overburden) within three metres (3m) of natural vegetation or mine face. Top soil and vegetation should be carefully stripped and stockpiled in an allocated area marked by a sign, so that it can be used for reclamation and re-vegetation as mining finishes.
- 12.8 Segregate topsoil of reasonable quantity and overburden separately at a location prepared for this purpose for re-use during progressive reclamation.
- 12.9 Employ practical measures, such as growing of vegetation (shrubs and grasses) on stockpiles of topsoil to reduce erosion and to prevent landslides.
- 12.10 Backfill the mine pits and slopes with waste materials such as rock wastes from upper levels can be dumped or backfilled to the lower mined slope voids.
- 12.11 As far as possible, employ in-pit overburden dumping to minimize the footprint of overburden dumps and assist with reclamation.

13.0 BIODIVERSITY PROTECTION

- 13.1 Maintain vegetation around production facilities and along access and haul roads to mitigate the impact on terrestrial resources.
- 13.2 Prohibit employees from the capturing, killing and trading of all Wildlife from the project area in accordance with the Wildlife Conservation and Management Act, 2016.
- 13.3 Conduct aquatic and terrestrial surveys at least once every two years to assess any change in species type and abundance and present the result of those surveys to the Agency.
- 13.4 Record observances of aquatic and terrestrial biodiversity and submit quarterly reports to the EPA.
- 13.5 Prohibit the capture, trade and removal of wildlife from the mining area by employees.
- 13.6 Report any occurrences of illegal wildlife trapping and trading in the project area to the EPA and Wildlife Conservation and Management Commission.

14.0 COMPLIANCE MONITORING AND REPORTING

- 14.1 Maintain records of significant environmental matters, including monitoring data, accidents and occupational illnesses, and spills, fires and other emergencies. It requires that this information be reviewed and evaluated to improve the effectiveness of the environmental, health and safety program, with an annual summary of the above information. Record keeping shall be in compliance with the requirements of the EPA Act and local regulations and submit all information annually to the Agency for review and consideration.
- 14.2 Submit Annual Environmental Reports to the EPA on or before March 31 every year of environmental management activities; status of the project, progress of the implementation of the EMP, monitoring activities, as well as compliance with the conditions of this Permit. (Please see attached the reporting format for the preparation of Environmental Annual Reports.)
- 14.3 Ensure the reports and records of monitoring include the following:
- The names of the individuals and designations, who conducted sampling, prepared and compiled the reports;
 - The date, place/location, time, weather conditions, techniques and methods used in sampling;
 - The date the measurements were compiled or analysed and the names of the individuals who compiled the information;
 - Observations, readings, calculations, benchmarks, bench data, the results of analyses;
 - Limitations of the sampling process and all other occurrence at the time of study, which may affect the results;
 - Possible sources of error during monitoring activities;
 - Photographs and drawings of all relevant aspects of the operation; and
 - The state of operation of facilities at the time of measurement, including planned and unplanned shutdowns, production levels and achievement of design capacity, identification of release point, source of release and substances being released.
- 14.4 Submit to the EPA, a detailed **Project Closure/Reclamation Plan** for approval one year prior to plan closure.
- 14.5 Notify the EPA of any accidental release of contaminants or incidence of pollution into the environment within **one (1) hour**.
- 14.6 Comply with any lawful directions given by the EPA from time-to-time in furtherance of the implementation of any international or other obligations for the environmental protection.
- 14.7 Report to the Agency of non-compliance with the **Environmental Permit (Modified)**:

- Within **twenty-four (24) hours** of the time the Holder of the Environmental Permit (Modified) becomes aware of the non-compliance, the anticipated manner in which it may endanger human health or the environment.
 - Within **seventy-two (72) hours**, submit to the Agency a written report containing a description of the non-compliance, its cause and the period of non-compliance including exact dates and time.
 - Submit a report to the Agency indicating the reasons and the anticipated time it is expected to continue if the non-compliance has not been corrected.
- 14.8 Inform the National Trust and Walter Roth Museum if any artifacts of archaeological and anthropological significance are unearthed during operations.
- 14.9 Be responsible for payment for all environmental audits and compliance monitoring associated with this Permit.
- 14.10 Foster good corporate relations involving the residents in and around Sand Hills, Vreed-en-rust communities and other stakeholders, where general information can be shared and major concerns or complaints resolved. Adhere to the Memorandum of Understanding (MoU) agreement signed between the Guyana Industrial Mineral Inc. (GINMIN) and the Community.
- 14.11 Institute a transparent and accessible grievance mechanism for surrounding communities and other land-use owners related to any environmental concerns or problems which may arise and affect their well-being as a result of the Company's operation.
- 14.12 Inform the Agency prior to or within **thirty (30) days** of any change of name or ownership of the operation.
- 14.13 Notify the Agency within **twenty-one (21) days** in event of death, bankruptcy, liquidation or receivership of the Permit Holder or if the Company becomes a party to an amalgamation.
- 14.14 Inform the Guyana Forestry Commission (GFC) and forest concession holders of the proposed planned period for removal of vegetation to facilitate the removal of any merchantable timber.

15.0 LIABILITY AND INDEMNIFICATION FOR POLLUTION DAMAGE

- 15.1 The Permit Holder, his Servants, Agents and/or Sub-Contractor(s) shall be strictly liable for any loss and / or damage to the environment through any act caused intentionally or recklessly, through the adverse effect of any discharge or release, or cause or permit the entry of pollution, contaminant in any amount, concentration or level in excess of those prescribed by the regulations or stipulated by any environmental authorisation, which are attributed to the Project. (s.19 (1) EP Act).

15.2 Where the Permit Holder in accordance with s. 19(3) is found liable for the contaminant or for the process involving the contaminant or who causes or permits a discharge as aforementioned in relation to above, shall:

(a) immediately notify the Agency of –

(i) the discharge;

(ii) the concentration and amount contaminant

(iii) the circumstances of the discharge;

(iv) what action the person has taken or intends to take to restore the natural environment;

(b) be liable to pay for the cost of an independent investigation into the discharge.

15.3 The Permit Holder, His Servants, Agents and/or Sub-Contractor(s) shall be guilty of any offence in accordance with s. 39 (1), (2), (3), (4) of the EP Act, Laws of Guyana, which states every person who causes material or serious environmental harm by polluting the environment intentionally or recklessly and with the knowledge that material and or / serious environmental harm will or might result is guilty of an offence and shall be liable to the penalties prescribed under the said Act.

15.4 The Permit Holder shall compensate any party who suffers any loss or damage as a result of the attributed project. (PART V s. 19 (3) (e)).

15.5 To the extent permitted by Law, the Permit Holder shall indemnify, defend and hold harmless the Agency (EPA) from liability including all claims and losses, and all related costs, and expenses (including reasonable attorney's fees and costs of investigation, litigation, settlement, judgments, interest and penalties) resulting to any person, firm or corporation that may be injured or damaged as a result of the Permit Holder in the performance of the said project, that are attributed to the negligence or tortious acts of the Permit Holder or any of its sub – contractors and / or by anyone else for whose acts any of them may be liable.

15.6 The Permit Holder shall not be indemnified by the Agency for any activity that causes or is likely to cause pollution to the environment, resulting from adverse effects through the discharge, any contaminant in any amount, concentration, ultra-hazardous substances, chemicals or otherwise, and shall be rendered liable to prosecution and to penalties prescribed under the Environmental Protection Act and Regulations.

16.0 INSTITUTIONAL AUTHORITY

16.1 The EPA reserves the right to conduct regular inspections of the Permit Holder's operation as part of its monitoring and enforcement requirements under the Environmental Protection Act, Cap. 20:05, the Environmental Protection (Amendment) Act, 2005, and the Environmental Protection Regulations, 2000.

- 16.2 The EPA reserves the right to review / amend the conditions attached to this Permit, which also includes the review and/or amendment of Permit Fees in consideration of any changes in fee structure as determined by the Agency for projects of this nature. The Permit Holder shall at all times allow entry to the permitted facility to any Officer designated by the EPA for the purposes of conducting inspections or any other legitimate business of the Agency. Pursuant to s. 38 of Environmental Protection Act, Cap. 20:05, Laws of Guyana, it is an offence to **assault, obstruct or hinder** an authorised person in the execution of his/her duty under the said Act or its Regulations and the Permit Holder be liable to penalties prescribed under paragraph (c) of the Fifth Schedule for doing so.
- 16.3 The EPA shall have the right to cancel or suspend this Permit for breach of any of the terms and conditions contained herein.
- 16.4 This **Environmental Permit (Renewed)** is not the final consent; all relevant permissions should be obtained from other regulatory bodies for continued operation.
- 16.5 Should the Permit Holder contravene or is likely to contravene any condition of this Permit, the Agency (EPA) may serve on him an enforcement notice in accordance with s. 26 of the Environmental Protection Act Cap. 20:05, Laws of Guyana.
- 16.6 Where it appears to the Agency that the Permit Holder is engaged in any activity that may pose serious threat to natural resources or serious pollution of the Environment or any damage to public health, issue to the Permit Holder a Prohibition Notice Order to immediately cease the offending activity. S. 27 EP Act, Cap. 20:05, Laws of Guyana.
- 16.7 The Agency (EPA) shall notify the Permit Holder immediately of any written claim or notice sent by any Complainant seeking loss or damage for negligence as a result of the Permit Holder lack of due care and diligence.
- 16.8 **This Environmental Permit (Renewed)** is effective for the period stipulated herein (**October, 2022 to September, 2027**).
- 16.9 **This Environmental Permit (Renewed)** shall remain valid until **September 30, 2027**, unless otherwise suspended, cancelled, modified or varied, in accordance with the provisions of this Permit or the Environmental Protection Act, Cap. 20:05, the Environmental Protection (Amendment) Act, 2005, and the Environmental Protection (Authorisations) Regulations, 2000.
- 16.10 This **Environmental Permit (Renewed)** must be renewed by submitting a completed Application Form for Renewal of Environmental Authorisation to the Agency **at least six (6) months** before this Permit expires, that is, no later than **March 31, 2027**.
- 16.11 Any late submission of renewal application(s) after the specified date as stated above, shall require the Permit Holder to pay, in addition to the renewal fee, a late penalty fee (accruing at the time such obligation was first owed for renewal) at a rate of **two thousand dollars (GY\$2,000.00) per day** for every day late, until such renewal application is submitted to the Agency, without prejudice to any other rights of the Permit Holder in connection therewith.

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16.12 Failure to comply with the requirements of this Permit shall render the Permit Holder liable to prosecution and to civil penalties and/or injunctive reliefs prescribed under the Environmental Protection Act, Cap. 20:05, Laws of Guyana, the Environmental Protection (Amendment) Act 2005, and the Environmental Protection (Authorisations) Regulations 2000, including under any existing and forthcoming regulations made under the said Act or any other applicable Laws of Guyana.


Signed by  on behalf of the Environmental Protection Agency.

Kemraj Parsaram
Executive Director

Date

2022.10.19

I hereby accept the above terms and conditions upon which this Environmental Permit (Renewed) is granted and agree to abide by the Environmental Protection Act, Cap. 20:05, Laws of Guyana, the Environmental Protection (Amendment) Act, 2005, and the Environmental Protection Regulations, 2000, and any forthcoming regulations, best practices, guidelines and standards made under this Act.

NAME	ELLIOTT LINCOLN
DESIGNATION	CEO
SIGNATURE	
DATE	26/10/22

