



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.:	20181016-SRLSM
Fee:	Small (C2) -US\$175 per year
Fees Paid	US\$875: Five (5) years (February, 2024–January, 2029)

Addressee(s): Mr. Ramdat Sankar
Proprietor
Endeavour Inc.
24, Vergenoogen
East Bank Essequibo.

Activity: Operation of a Sand and Loam Mine

Mr. Ramdat Sankar, hereinafter referred to as the “Permit Holder”, is hereby authorised in accordance with the Environmental Protection Act, Cap. 20:05, Laws of Guyana, the Environmental Protection (Amendment) Act, 2005, and the Environmental Protection (Authorisations) Regulations, 2000, to operate a Sand and Loam Mine located at Manaka, Left Bank Essequibo River, within Block: R-70/MP/000, hereinafter referred to as the “Project”, in the manner indicated in the Application for Renewal of Environmental Authorisation submitted on May 04, 2023, subject to the terms and conditions set forth herein under the Environmental Protection Act, Cap. 20:05, existing and/or forthcoming regulations made under the said Act, and/or applicable laws, best practices, guidelines and standards relevant to this project.

This is a Renewal of the Environmental Permit (Transferred), Reference #: 20181016-SRLSM, issued on March 09, 2021 and expired on January 31, 2024. This Environmental Permit (Renewed) is issued pursuant to the Environmental Protection (Authorisations) Regulations, 2000.

The Permit Holder, His Servants, Agents and/or Sub-Contractors shall comply with the following Terms and Conditions for Operation:

1.0 OPERATION

- 1.1 Make an application to the Agency to vary this Environmental Permit (Renewed) in instances where it becomes necessary to:
 - i. Change the construction, operation, structure, or layout of the facility and all associated buildings;
 - ii. Change equipment, machine, apparatus, mechanism, system or technology serving the facility;
 - iii. Change the position and design of any outlet at the point or points of discharge of effluents; or
 - iv. Affect any other change outlined in 20(3) of the Environmental Protection (Authorisations) Regulations.
- 1.2 Maintain all demarcated boundary limits for the site claim and the periphery of the concession as prescribed by the Guyana Geology and Mines Commission (GGMC), using signage, fences or other means.
- 1.3 Maintain good housekeeping, sanitary and hygienic practices, and the aesthetic quality of your surroundings at all times.
- 1.4 Adhere to the stipulations within the **Mining Act, No. 20 of 1989, the Mining Regulations including the Mining (Amendment) Regulations, 2005, and Regulations of the Maritime Administration Department of the Ministry of Public Infrastructure.**

2.0 EMPLOYEES, OCCUPATIONAL HEALTH AND SAFETY

- 2.1 Adhere to the requirements of **the Occupational Safety and Health Act, Cap. 99:01, Laws of Guyana.**
- 2.2 Employees shall at all times be well protected and equipped with Personal Protective Equipment relevant to the occupational tasks during operation. These Personal Protective Equipment (PPE) must include but not be limited to:
 - i. Safety helmets;
 - ii. Protective respiratory devices

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- iii. Safety boots with ankle support;
 - iv. Gloves with reinforced palms and fingers; and
 - v. Tightly fitted safety goggles.
- 2.3 Prepare and maintain an employee log of distribution of Personal Protective Equipment.
- 2.4 Prepare and maintain a training file of all employees/Contractors of training completed. This list should be available upon Officers request during Compliance Inspection of the Sand, and Loam Mining operation.
- 2.5 Provide and maintain adequate fire protection measures, in accordance with guidelines established by the **Guyana Fire Service**.
- 2.6 Provide well-equipped first aid and snake bite kits at the work site.
- 2.7 Ensure that communication and transportation systems are in place to respond to emergencies.
- 2.8 Ensure all employees/third party contractors are aware of the Conditions of this **Environmental Permit (Renewed) 20181016-SRLSM** and provide training on the requirements of the Permit and good environmental management practices.
- 3.0 WATER QUALITY MANAGEMENT**
- 3.1 Comply with the provisions of the **Environmental Protection (Water Quality) Regulations, 2000**.
- 3.2 Implement practical measures where applicable to prevent pollution of the Essequibo River and or any other streams and natural water ways that may be found within or adjacent to your mining concession. This should include the establishment of siltation fences, sedimentation berms or other sediment control structures in erosion prone areas.
- 3.3 At all times, avoid water contamination from fuel, grease and waste oils.
- 3.4 No sand, and loam mining pit shall be operated within **two hundred (200) meters** of any surface water body e.g., river, spring, creeks etc., located within or around the allocated Mining Block without first obtaining approval from the

EPA and the implementation of adequate mitigation measures to reduce/eliminate any adverse Environmental impacts.

- 3.5 Store overburden stockpiles away from drainage systems and beyond **200 meters** of away from any waterway, creek or drainage system.
- 3.6 Consider the weather pattern before initiating major earthworks e.g., road maintenance, topsoil excavation. Monitor areas of exposed soil during periods of heavy rainfall.
- 3.7 Conduct site clearing of any mine expansion panels in a gradual and phased manner to minimise sediment discharge.
- 3.8 Use benchmarks to determine depth achieved during mining operations.
- 3.9 Determine and demarcate the 'high' ground water depth. Conduct excavation to a depth that leaves five (5) meters above the water table. No mining is allowed at or below the water table.
- 3.10 Ensure that all reasonable and practical measures are taken to safeguard any water source/ spring intended for use by the Residents/ Farmers/Developer residing in or utilising the Area. The pollution of a potable water source is strictly prohibited.
- 3.11 Design and maintain a well-established drainage network to limit surface run off into these sensitive water bodies.

4.0 BIODIVERSITY PROTECTION

- 4.1 Report any occurrences of illegal wildlife trapping and trading in the project area to the EPA and Guyana Wildlife Conservation and Management Commission.
- 4.2 Prohibit the hunting, trapping, trading and removal of wildlife that is found within the Mining Site by employees.
- 4.3 As practical as possible, avoid or minimise the creation of barriers that would impede the movement of wildlife or cause a threat to their migration.
- 4.4 Ensure that no mining activities are carried-out in areas that are sensitive to Mining such Wetlands, Swamps, Protected species Habitat, etc.

- 4.5 Site access routes and facilities in locations that avoid impacts to critical terrestrial habitats, and plan construction activities to avoid sensitive times of the year.
- 4.6 Communicate to employees through trainings, signage and other practicable means, that the capture, trading and/or removal of endangered and vulnerable wildlife from the project area and surrounding areas is forbidden, in accordance with the **Wildlife Conservation and Management Act, 2016**, and any of its applicable forthcoming Regulations.

5.0 BUFFER ZONES MANAGEMENT

- 5.1 Maintain demarcated boundary limits for the site claim. Ensure proper signage and security measures are utilised throughout the mining concession to keep unauthorised persons from accessing restricted and high-risk areas.
- 5.2 Establish and maintain a non-extractable, vegetative buffer zone of at least **one hundred and fifty (150) meters wide** between Sand, and Loam Mining pit and adjoining areas with different land to buffer noise and fugitive dust emissions.
- 5.3 Ensure to re-contour mined-out areas within your concession to address the effects such as erosion, wildlife movement, landslide and Occupational Health and Safety hazards.

6.0 VEGETATION CLEARING, TOP SOIL STRIPPING AND RECLAMATION

- 6.1 Where possible, place topsoil directly onto an area being rehabilitated to reduce double handling of soil.
- 6.2 Conduct reclamation activities at mined-out sites/pits, in accordance with the stipulations of the Guyana Geology and Mines Commission Environmental Codes of Practice for Sand, Loam and Laterite Mining.
 - 6.2.1 Progressively rehabilitate the site allocating at least one metre (1 m) of the topsoil (including all vegetation cleared from the site) to be used as backfill material. Rehabilitation must include reduction of slopes to prevent landslides and/or erosion, and re-vegetation.



- 6.3 Not store topsoil (overburden) within **three (3) metres** of natural vegetation or mine's 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.
- 6.4 Keep top soil alive by covering and allowing vegetative growth.
- 6.5 Erect silt fences or other sediment control devices in drainage lines/around the mine in erosion prone areas.
- 6.6 Limit as far as possible the disturbance of natural vegetation to areas that would allow for the safe exploitation of Sand, Loam and Laterite Resource.

7.0 ROADS

- 7.1 Design and construct mine access road(s) to limit erosion. The running surface of the road should be crowned with a compacted layer and should have sufficient diversion drains and culverts to direct storm water away from surface water bodies.
- 7.2 After construction, continue to maintain the mine access road leading to the mine Site. In the event that ruts/holes are developed, as a result to usage of the road to the mine, fill with suitable material (such as compacted fill), as much possible to reduce the potential for erosion.
- 7.3 Establish and maintain a non-extractable vegetative buffer zone of **One hundred (100) meters** between the mine/pit parallel and all major public/private roadways and power lines.
- 7.4 Ensure roads are sloped and constructed to minimise the likelihood of soil erosion. In addition, roads should be **bermed** with compacted material on both sides to prevent erosion of road and impede the flow of runoff into surface water bodies.
- 7.5 Ensure that all trucks transporting materials to the river front does not exceed the established speed limit of the roads so as to minimise dust generation on the road.

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- 7.6 Road should be soaked as needed in areas close to farms, settlements to not exceed ambient dust levels and become a nuisance to residents.
- 7.7 Ensure that all measures such as grading, compacting, and wetting of the specified section of the access road are carried out as is necessary to maintain the road.
- 7.8 Ensure that trucks are equipped with the necessary reflecting signage to warn the public of impending danger of parked/moving trucks on the public thoroughfare.
- 7.9 Install adequate safety signs along roads informing users of dangerous bends, crossing of haul trucks, speed limits, etc.
- 7.10 Ensure that activities of the operation do not impede road traffic.

8.0 NOISE QUALITY MANAGEMENT

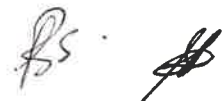
- 8.1 Comply with the **Environmental Protection (Noise Management) Regulation, 2000.**
- 8.2 Comply with *Guyana National Bureau of Standards (GNBS) Guidelines Noise Emissions into the Environment*, not exceeding the limits below at a distance of 15 meters (50 feet) from the source or property boundary, whichever is closer.
 - Industrial Limits: **100 dB** [Daytime Limits (06:00 h-18:00 h)]
80 dB [Night-time Limits (18:00 h – 06:00h)]
- 8.3 Ensure all significant noise-producing equipment, e.g., generators etc. are equipped with appropriate silencers or mufflers and/or are enclosed in suitable acoustic enclosures where necessary to reduce noise levels impacting the surrounding environment to achieve compliance with GNBS requirement.
- 8.4 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.

9.0 AIR QUALITY MANAGEMENT

- 9.1 Comply with the provisions of the **Environmental Protection (Air Quality) Regulations, 2000.**
- 9.2 Operate and service all mechanical equipment in accordance with manufacturer's specifications at all times. Additionally, ensure that mechanical equipment and vehicles are regularly maintained and work at their optimal levels to minimise atmospheric emissions.
- 9.3 Employ dust suppression methods such as watering, erecting dust screens/fences to control dust emissions from material stockpiles and other components that would generate dust.
- 9.4 Maintain an inventory of all sources of air contaminants. For example, generators, heavy duty equipment, trucks etc. on site. The inventory should be submitted as a component of the Project's Environmental Annual Report.

10.0 WASTE MANAGEMENT


- 10.1 Adhere to the provisions of the **Environmental Protection (Litter Enforcement) Regulations, 2013.**
- 10.2 Maintain good sanitary and hygienic practices and the aesthetic quality of your surroundings at all times.
- 10.3 Dispose solid waste in a manner approved by the EPA and away from all mineral reserves allocated for mining and dwellings, or remove from site to an approved landfill.
- 10.4 Do **not** dispose waste in or near the waterways (Essequibo River, etc.).
- 10.5 Provide covered garbage receptacles at strategic locations, at the project site, which should be emptied, cleaned and maintained.
- 10.6 As far as possible, reduce, reuse, recycling and/or compost waste materials.
- 10.7 Dispose all solid waste in a solid waste pit.



- 10.8 Ensure that solid waste pits are located at least **two hundred (200) meters** away from any watercourses, or sensitive habitation that may be found within the Mining Concession. The waste sites should be constructed above the ground water table and lined to the floor with an impervious, earthen or other material to prevent leaching to ground water.
- 10.9 Burning is prohibited at all time unless otherwise approved by the Environmental Protection Agency.
- 10.10 Implement waste control measures to minimise odour and loss of visual aesthetics around the solid waste pit.
- 10.11 Construct and maintain ***new or existing*** pit latrine(s) in accordance with the *Guyana Bureau of Standard (GNBS) Code of Practice for the Design and Construction of Ventilated Improved Pit Latrines*.
- 10.12 Maintain a septic tank system at all times which shall be accessible for cleaning and de-sludging. Any modification to the Septic Tank (s) 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***.

11.0 FUEL, WASTE OIL AND HAZARDOUS MATERIALS MANAGEMENT

- 11.1 Adhere to the provisions of the **Environmental Protection (Hazardous Waste Management) Regulations, 2000**.
- 11.2 There shall be no release of any pollutants (i.e., fuel, waste oil, etc) to ground water or soil from permitted installation. Accidental release of pollutants to soil and ground water should be recorded and be reported within twenty-four (24) hours to the Agency for further investigation.
- 11.3 In the event that fuel is stored onsite, ensure that the fuel containment bund has a 110 % percent containment capacity of the largest storage tank/container, which must have an impervious surface for the handling of all oils, lubricants and fuels.



- 11.4 Take the necessary precautionary measures such as the use of leak - proof and tightly closed lid containers during the transport of fuel from the site. Appropriate measures should also be taken and during the handling and use of all Hazardous Waste on site.
- 11.5 Label and store in a containment bund which must have an impervious surface all waste oil, used batteries, oily rags, filters and oil containers before being reused or sold to an authorised dealer.
- 11.6 Waste oils should be stored on-site until it is ready for reuse. Disposal of waste oils shall be done in a manner approved by the EPA.
- 11.7 Not undertake any fueling activity inside of the pit. All fueling must be done away from mining pit and on a concrete/ impervious surface.
- 11.8 Maintain emergency spill cleanup kits on site for response to spills.

12.0 COMPLIANCE MONITORING AND REPORTING

- 12.1 Comply with any directions given by the EPA from time-to-time in furtherance of the implementation of any international or other obligations for the environmental protection of Guyana.
- 12.2 Monitor the implementation of the Conditions of this Operation Permit (Renewed), insofar as they involve adherence by your employees and all third parties under your direction.
- 12.3 Submit to the EPA, the **Environmental Annual Reports** on the status of the project, progress of the implementation of the monitoring activities and compliance with the conditions contained herein by **March 31** each year
- 12.4 Conform to all terms and conditions under which this Environmental Permit (Renewed) is granted and the Permit Holder shall be liable for any loss or damage which arises from the project as a result of the Permit Holder's activities or breach of any term or condition of this Permit.
- 12.5 Inform the Agency prior to or within **thirty (30) days** of any change of name or ownership of the operation.

- 12.6 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.
- 12.7 Notify the EPA **within one (1) hour** of the occurrence of any environmental emergencies such as a sudden onset disaster, accident, natural, technological or human induced factors that cause or threaten to cause severe environmental damage as well as harm to human health or livelihood.
- 12.8 Report to the Agency any non-compliances with the Environmental Permit (Renewed):
- 12.8.1 Within **twenty-four (24) hours** of the time the Holder of the Environmental Permit becomes aware of the non-compliance, the anticipated manner in which it may endanger human health or the environment.
 - 12.8.2 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.
 - 12.8.3 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.
- 12.9 Prepare and submit a detailed Reclamation Plan for approval six (6) months before the actual reclamation process commences.
- 12.10 Submit to the Agency a detailed Project Closure Plan for review and approval two (2) years prior to closure. Thereafter, the closure plan will be updated and reviewed at a frequency agreed to with the Agency.
- 12.11 Notify the EPA once the roads are constructed in order for an assessment to be conducted before the expiration of the Permit.


13.0 INSTITUTIONAL AUTHORITY/ LIABILITIES

- 13.1 The EPA reserves the right to review and/or amend the conditions and fees 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.

- 13.2 The EPA shall have the right to cancel or suspend this Permit for breach of any of the terms and conditions contained herein.
- 13.3 The Permit Holder, His Servants, Agents and/or Sub-Contractors 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 shall be liable to penalties prescribed under paragraph (c) of the Fifth Schedule for doing so.
- 13.4 This Environmental Permit (Renewed) is not the final consent; all relevant permission should be obtained from other regulatory bodies for continued operation.
- 13.5 The Permit Holder, his Servants and/or Agents shall be strictly liable for any loss or damage to the environment through any act caused intentionally or recklessly, through the adverse effect of any discharge or release, or cause to permit the entry of pollution, contaminant in any amount, concentration or level in excess of that prescribed by the regulations or stipulated by any environmental authorisation which are attributed to the Project. Section 19(1) and (2) of the Environmental Protection Act, Cap. 20:05, Laws of Guyana.
- 13.6 The Permit Holder, his Servants and/or Agents shall be guilty of any offence in accordance with Section 39(1), (2), (3), (4) of the Environmental Protection Act, Cap. 20:05, which states respectively that 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 Act.
- 13.7 The Permit Holder shall be liable to any gross negligence or wilful misconduct caused by the Permit Holder, his Servants and/ or Agents, to the marine environment, biodiversity, protected species and natural habitat.
- 13.8 The Permit Holder shall compensate any Party who suffers any loss or

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damage as a result of the attributed project. (Section 19(3)(e)) of the Environmental Protection Act Cap. 20:05, Laws of Guyana.

- 13.9 The Permit Holder shall be liable to compensate any person who suffers any loss or damage as a result of contravening conditions 7.1 and 7.2 of this Environmental Permit (Transferred), pursuant to s. 19 of the Environmental Protection Act, Cap. 20:05, Laws of Guyana.
- 13.10 Should the Permit Holder contravene or is likely to contravene any condition of this Permit, the Agency (EPA) may serve him an enforcement notice in accordance with Section 26 of the Environmental Protection Act Cap. 20:05, Laws of Guyana.
- 13.11 Where it appears to the Agency (EPA) 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, the Agency may issue to the Permit Holder a Prohibition Notice, which may include an order to immediately cease the offending activity (See: Section 27 of the Environmental Protection Act, Cap. 20:05, Laws of Guyana).
- 13.12 This Environmental Permit (Renewed) is valid for the period stipulated herein **February, 2024 to January, 2029**.
- 13.13 This Environmental Permit (Renewed) shall remain valid until **January 31, 2029**, unless otherwise suspended or revoked in accordance with the provisions of this Permit or the Environmental Protection Act, Cap. 20:05, Laws of Guyana, the Environmental Protection (Amendment) Act, 2005, and the Environmental Protection (Authorisations) Regulations, 2000.
- 13.14 This Permit must be renewed by submitting a completed Application Form for Renewal of Environmental Authorisation to the Agency at least six months before this Permit expires, that is, no later than **July 31, 2028**.
- 13.15 Any late submission of renewal application(s) after the specified date as stated above, the agency may 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 business day late, until such renewal application is submitted to the Agency, without prejudice to any other rights of the Permit Holder in connection therewith.

Environmental Permit (Renewed) - Ref. No. 20181016-SRLSM

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.

13.16 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 and its Regulations, including under any forthcoming regulations made under the said Act or any other applicable Laws of Guyana.

Signed by  on behalf of the Environmental Protection Agency.
Kemraj Parsram
Executive Director

Date: 2024. 01. 25

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, the Environmental Protection (Authorisations) Regulations, 2000, and any existing and forthcoming regulations, best practices, guidelines and standards made under this Act.

NAME:	<i>Ramdat Santer</i>
DESIGNATION:	<i>Proprietor</i>
SIGNATURE:	<i>Ramdat Santer</i>
DATE:	<i>25. 01. 2024</i>

