



**Environmental  
Protection  
Agency**

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## **Operation 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.**

<b>Reference No.:</b>	<b>20130207-LNSMO</b>
<b>Fee:</b>	<b>Small (C1) – US\$100 per year</b>
<b>Fee Paid:</b>	<b>US \$ 500 -Five (5) years (July, 2022 to June, 2027)</b>
<b>Addressee:</b>	<b>Mr. Leon De Nobrega, Proprietor 20, Winkle Road New Amsterdam Berbice.</b>
<b>Activity:</b>	<b>Operation of a Sand Mine</b>

**Mr. Leon De Nobrega, 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 Mine located at Block D-56/MP/000, Sand Hills, Berbice River, hereinafter referred to as the “Project”, in the manner indicated in the Application for Environmental Authorisation submitted on July 21, 2020, and 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 any other applicable laws, best practices, guidelines and standards relevant to this project.**

**This is a Renewal of the Operation Permit, Reference No. 20130207-LNSMO issued on March 30, 2015 which expired on March 31, 2020.**

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

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## **1.0 GENERAL**

- 1.1 Make an application to the Agency to vary this Permit 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. effect any other change outlined in Regulation 20(3) of the Environmental Protection (Authorisations) Regulations.
- 1.2 Operate **only** within the area enclosing approximately 44 acres, granted by the Guyana Geology and Mines Commission (GGMC), as is described herein: **Point A**, located at geographical coordinates of longitude **57°44'59"W** and latitude **5°48'43"N**, thence at true bearing of **151°**, for a distance of approximately **816** yards, to **Point B**, located at geographical coordinates of longitude **57°44'47"W** and latitude **5°48'22"N**, thence at a true bearing of **229°**, for a distance of approximately **263** yards, to **Point C**, located at geographical coordinates of longitude **57°44'53"W** and latitude **5°48'17"N**, thence at true bearing of **330°**, for a distance of approximately **799** yards, to **Point D**, located at geographical coordinates of longitude **57°45'5"W** and latitude **5°48'37"N**, thence at a true bearing of **46°**, for a distance of approximately **272** yards, to the point of commencement at **Point A**.
- 1.3 Maintain demarcated property boundary limits as provided in condition 1.2 for the site claim, using signage, fences or other appropriate means.
- 1.4 Maintain at all times, proper signage and security measures to keep unauthorized persons from accessing restricted and high-risk areas.
- 1.5 Not undertake any developmental activity which may significantly affect the environment other than those activities covered by this Permit without prior approval from the EPA.
- 1.6 Adhere to the Guyana Geology and Mines Commission's (GGMC) **Code of Practice for Sand and Loam Mining**.
- 1.7 Ensure that transportation of sand materials to and from the project site does not encumber road traffic.

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- 3.4 Determine and demarcate the 'high' water table depth. Excavation shall remain to a depth that leaves at least two (2) meters above the water table. No mining is allowed at or below the water table.

#### **4.0 VEGETATION CLEARING, TOP SOIL STRIPPING AND RECLAMATION**

- 4.1 Maintain natural vegetative cover as far as practical, especially in the vicinity of steep slopes occurring at project site and re-vegetate areas from which vegetation were removed.
- 4.2 Ensure that topsoil cleared from working areas is stripped carefully and reused immediately for rehabilitation of worked areas.
- (a) Where possible, topsoil shall be placed directly onto an area being rehabilitated to reduce double handling of soil.
- (b) Where reuse cannot be accomplished immediately, the topsoil shall be stockpiled in a suitable storage site until such time for reuse.
- 4.3 Avoid storing topsoil (overburden) within three metres (3m) of natural vegetation or the mine face.
- 4.4 Ensure that all topsoil is kept separate from all overburden and gravel for use as backfill during progressive reclamation. Topsoil shall be replaced in its natural sequence during reclamation activities.
- 4.5 Ensure vegetative debris is incorporated and stored with top soil to keep it active for reuse in site reclamation. In addition, practical measures, such as growing of vegetation such as shrubs and grasses on stockpiles of topsoil shall be employed to reduce erosion, and dust nuisance to surrounding ecosystems.
- 4.6 Store overburden stockpiles at least **two hundred (200) meters** away from any waterway, creek or drainage system.
- 4.7 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.

#### **5.0 BIODIVERSITY PROTECTION**

- 5.1 Prohibit the hunting, trapping, trading and removal of wildlife that is found within the Mining Site and contiguous areas by employees.

## **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 Provide Employees with training on good environmental management practices, occupational health and safety and of their obligations under this Permit on a regular basis.
- 2.3 Prepare and maintain a training file for all employees and third-party contractors, which should be available upon Officers' request.
- 2.4 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
  - III. Safety boots with ankle support;
  - IV. Gloves with reinforced palms and fingers; and
  - V. Tightly fitted safety goggles.
- 2.5 Prepare and maintain an employee log of distribution of Personal Protective Equipment (PPE).
- 2.6 Provide well-equipped first aid and snake bite kits at the work site.
- 2.7 Provide and maintain adequate fire protection measures, in accordance with guidelines established by the Guyana Fire Service.

## **3.0 ACCESS AND BUFFER ZONE MANAGEMENT**

- 3.1 Utilise only the Berbice River to transport Sand from the Mine; seek permission from the Agency to construct any access road from the Sand Mine to the Tacama major Road or elsewhere.
- 3.2 Maintain a non-extractable, vegetated buffer zone at least 150 m wide from adjoining areas with different land uses unless otherwise approved by the EPA.
- 3.3 Maintain a non-extractable buffer of 100 meters wide along the side of the mine/pit parallel to any main public or private road and power lines.

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- 5.2 Undertake clearing of vegetation at a pace slow enough to ensure that terrestrial animals and aquatic life can move to other locations.
- 5.3 Establish vegetation around production facilities and along access roads to mitigate the impact on terrestrial resources.
- 5.4 Conduct and record visual observances of aquatic and terrestrial biodiversity on a daily basis submit reports as a component of the Environmental Annual Report required in **Condition 11.2**.
- 5.5 Report all occurrences of illegal wildlife trapping and trading to the EPA and Wildlife Management Authority.
- 5.6 Communicate to employees 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.

## **6.0 WATER QUALITY**

- 6.1 Comply with the provisions of the **Environmental Protection (Water Quality) Regulations, 2000**.
- 6.2 Implement practical measures where applicable to prevent pollution of the Berbice River 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.
- 6.3 Ensure that the Berbice River specifically in the vicinity of the Project Site is kept free of solid wastes such as food boxes, plastic bottles, etc.
- 6.4 Adequately store and protect overburden and waste especially in rainy conditions to avoid runoff into the Berbice River.
- 6.5 Not store topsoil (overburden) within 20 m of any creek and spring located within your property.
- 6.6 Consider the weather pattern before initiating major earthworks e.g., road maintenance, topsoil excavation. Monitor areas of exposed soil during periods of heavy rainfall.
- 6.7 Maintain the integrity of areas where riparian vegetation is located to aid in mitigating erosion/sedimentation impacts at the site.

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**7.0 AIR QUALITY MANAGEMENT**

- 7.1 Comply with the applicable provisions of the **Environmental Protection (Air Quality) Regulations, 2000.**
- 7.2 Operate all mechanical equipment in accordance with manufacturer's specifications. All mechanical equipment and vehicles should be regularly maintained and operated at their optimal levels to minimise atmospheric emissions.
- 7.3 Employ dust suppression methods such as water soaking to control dust emissions from material stockpiles, roads and other components that would generate dust as necessary especially during dry seasons.
- 7.4 Cover sand during transport from mine to reduce emission of fugitive dust into the surrounding environment.

**8.0 NOISE MANAGEMENT**

- 8.1 Comply with the applicable provisions of the **Environmental Protection (Noise Management) Regulations, 2000.**
- 8.2 Comply with Guyana National Bureau of Standards (GNBS) *Guidelines for Noise Emissions into the Environment* at a distance of 15 metres (50 feet) from the source or property boundary, whichever is closer, not exceeding the following limits:

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

- 8.3 Ensure all significant noise-producing equipment e.g., front-end loaders, are equipped with appropriate silencers and mufflers where necessary, to reduce noise levels impacting the surrounding environment, to achieve compliance with the *National Bureau of Standards* GNBS requirements.

**9.0 FUEL, AND HAZARDOUS WASTE MANAGEMENT**

- 9.1 Adhere to the provisions of the **Environmental Protection (Hazardous Waste Management) Regulations, 2000.**
- 9.2 Not service or refuel vehicles in mining pits except in instances of emergencies.

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All fueling must be done outside of pit on an impervious surface. Adequate equipment such as hand pumps and drip pans should be provided and used.

- 9.3 Construct and maintain adequate containment with an impervious surface for the storage and handling of all hazardous materials, oils, lubricants and fuels. Containment shall be constructed to store 110% of the total volume of the largest tank.
- 9.4 Ensure that all fuel or hazardous materials and waste are stored away from ignition sources and have **"No Smoking"** signs posted where fuel is handled or stored.
- 9.5 Maintain emergency spill cleanup kits and equipment on site for response to potential spills.
- 9.6 Refrain from draining fuel/lubricants including used/waste oils of any quantity from equipment onto the ground or into waterways.
- 9.7 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.
- 9.8 Ensure that drip trays are use under equipment being subjected to maintenance procedures.

#### **10.0 WASTE MANAGEMENT**

- 10.1 Adhere to the provisions of the **Environmental Protection (Litter Enforcement) Regulations, 2013.**
- 10.2 Promote proper solid waste management and disposal practices at your facility at all times. Waste shall not be disposed of in or near or in any waterways or the Berbice River.
- 10.3 Ensure that solid waste pits are located at least one hundred (100) meters away from any watercourses, or habitation. The waste sites shall 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.
- 10.4 Maintain good house-keeping, sanitary and hygienic practices and the aesthetic quality of the surroundings at all times.
- 10.5 Ensure that garbage receptacles are placed in strategic locations within the Mine site. Have separate bins to facilitate the collection and sorting of waste according to liquid and solids; organic and inorganic; degradable and non-degradable.

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Used tyres and batteries shall be re-used or disposed of in a manner approved by the EPA.

10.6 Construct and maintain a **new or existing** Ventilated Improved Pit (VIP) latrine in accordance with the following requirements:

- 10.6.1 The environs of the latrine/latrines shall be kept clean in a hygienic manner and maintained both internally and externally.
- 10.6.2 Built with suitable materials such as hardwood or concrete materials;
- 10.6.3 Maintained on a clay mound to prevent surface water from entering;
- 10.6.4 Properly vented with a tall ventilation pipe located on the windward side;
- 10.6.5 Fitted with a fly screen on the top of the vent to prevent the passage of flies and mosquitoes. The meshed apertures (holes) of the fly screen must not exceed 1.5 millimeters, made with corrosion resistant material to withstand intense rainfall, high temperature and strong sunlight;
- 10.6.6 Positioned at least fifty (50) meters away from surface and ground water sources, creeks well or springs;
- 10.6.7 Dug at least 0.6 meters above the average water table and at least four (4) meters away from any dwelling (such as camps, residential areas and any sleeping and living quarters, etc.);
- 10.6.8 Easily reach during bad weather and will not cause odour;
- 10.6.9 When the maximum capacity is reached latrine(s) should be covered with at least 0.3 meters of soil and a suitable determined for another.

10.7 Submit to the Agency, a copy of a renewed Mining License issued by the Guyana Geology and Mines Commission **within one (1) month** of issuance.

**11.0 COMPLIANCE MONITORING AND REPORTING**

11.1 Monitor the implementation of the conditions of this **Operation Permit (Renewed)**, insofar as they involve adherence by employees and all third parties under your direction.

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- 11.2 Submit **Environmental Annual Reports** to the EPA on or before **March 31** every year on your compliance with this Permit. **Please note that it is an offence to fail to submit Annual Reports and the Permit Holder shall be liable to pay fines for such an omission**, in accordance with Regulation 7(3) of the Environmental Protection (Authorisations) Regulations.
- 11.3 Comply with any lawful directions given by the EPA from time-to-time in furtherance of the implementation of any international or other obligation for the environmental protection of Guyana.
- 11.4 Implement relevant measures/agreements to avoid conflicts with other land users/communities. Conflicts should be reported to the relevant authorities if they occur.
- 11.5 Inform the **National Trust and Walter Roth Museum** if any artefacts of archaeological and anthropological significance are unearthed during operations.
- 11.6 Submit to the EPA the results of all periodic audits conducted by the GGMC.
- 11.7 Notify the EPA within **one (1) hour** of any accidental release of contaminants or incidence of pollution into the environment. The Permit Holder shall provide the financial, equipment and technical capacity to adequately respond to any emergency that may occur on site and emergency response shall be immediate.
- 11.8 Inform the Agency prior to or within **thirty (30) days** of any change of name or ownership of the operation.
- 11.9 Notify the EPA within **twenty-four (24) hours** of the occurrence of any environmental emergencies (e.g., oil spills, sudden onset disaster, natural, technological or human induced factors that cause or threaten to cause severe environmental damage as well as harm to human health or livelihood).
- 11.10 Inform the Agency prior to or within **thirty (30) days** of any change of name or ownership of the operation.
- 11.11 Submit to the Agency a detailed **Project Closure Plan** for approval **two (2) years** prior to closure. Thereafter, the closure plan will be updated and reviewed at a frequency agreed to with the Agency, as needed.
- 11.12 The Permit Holder shall provide the financial, equipment and technical capacity to adequately respond to any emergency that may occur on site and emergency response shall be immediate.

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11.13 Report to the Agency any non-compliances with the Environmental Permit (Renewed):

10.9.1 Within **twenty-four (24) hours** of the time the Holder of the Operation Permit (Renewed) becomes aware of the non-compliance, the anticipated manner in which it may endanger human health or the environment.

10.9.2 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.

10.9.3 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.

**12.0 INSTITUTIONAL AUTHORITY/LIABILITIES**

12.1 The Permit Holder 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 or 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 any Project (and more specifically petroleum activities). S. 19(1) EP Act, Cap. 20:05, Laws of Guyana.

12.2 The Permit Holder, His Servants, Agents and/or Sub-Contractor 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, 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.

12.3 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)) EP Act Cap. 20:05, Laws of Guyana.

12.4 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, Laws of Guyana, the Environmental Protection (Amendment) Act, 2005, and the Environmental Protection (Authorisations) Regulations, 2000.

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- 12.13 The Permit Holder, his Servants and/or Agents shall be liable of any gross negligence or willful misconduct caused by the Permit Holder, his Servants and/or Agents, to the marine environment, biodiversity, protected species and natural habitat with respect to any release or discharge, spill, contaminant fluids, oil or lubricants from the fuel storage at any facilities permitted under this project.
- 12.14 This Operation Permit (Renewed) is effective for the period stipulated herein **July, 2022 to June, 2027**.
- 12.15 This Operation Permit shall remain valid until **June 30, 2027 unless** otherwise cancelled, suspended, modified or varied 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 (Authorisation) Regulations, 2000.
- 12.16 This Operation Permit (Renewed) must be renewed by submitting a completed *Application Form for Renewal of Environmental Authorization* to the Agency at least six months before this Permit expires, that is, no later than **December 31, 2026**.
- 12.17 Any late submission of renewal application(s) after the specified date as stated above, 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 (\$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.
- 12.18 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.


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- 12.5 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.
- 12.6 The EPA shall have the right to cancel or suspend this Permit for breach of any of the terms and conditions contained herein.
- 12.7 **This Operation Permit (Renewed) is not the final consent; all relevant permission shall be obtained from other regulatory bodies for continued operation.**
- 12.8 The Permit Holder shall compensate any Party who suffers any loss of damage as a result of the attributed project. (Part V, s.19 (3) (e) Environmental Protection Act, Cap. 20:05, Laws of Guyana.
- 12.9 The Permit Holder shall be responsible for the payment of all cost related to the assessment of damage and costs for the independent assessor(s).
- 12.10 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.
- 12.11 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 Permit Holder shall be issued with a Prohibition Notice Order to immediately cease the offending activity in accordance with s. 27 Environmental Protection Act, Cap. 20:05, Laws of Guyana.
- 12.12 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, the Permit Holder shall:
- Immediately notify the Agency of the discharge;
  - Concentration and amount of contaminant;
  - Circumstances of the discharge; and
  - What action he/she has taken or intends to take to restore the natural environment; and
  - Be liable to pay for the cost of an independent investigation into the discharge.

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Signed by  on behalf of the Environmental Protection Agency  
**Mr. Kemrai Parsram**  
Executive Director

Date: 2022-07-07

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 forthcoming regulations, best practices, codes of practices guidelines, standards or other regulatory instruments relevant to this project.

NAME:	Leon De Nobrega
SIGNATURE:	Leon De Nobrega
DESIGNATION:	Sand pit owner / operator
DATE:	22 Jan 2024





