



**Environmental
Protection
Agency**

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Environmental Permit (Varied)

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.:	20210325-NRGHI
Fee:	<u>Land Reclamation - US\$ 9,300 (3 years)</u> (Extra Large (C2) – US\$ 3,100 per year) <u>Dredging - US\$ 9,300 (3 years)</u> (Extra Large (C2) – US\$ 3,100 per year) <u>Wharf - US\$ 9,300 (3 years)</u> (Extra Large (C2) - US\$3,100 per year) <u>Shore Base- US\$ 9,300 (3 years)</u> (Extra Large (C2) – US\$3,100 per year)
Fees Paid:	US\$37,200 three (3) years – September 2021 to August 2024

Addressee(s): Mr Andron Alphonso
Secretary
NRG Holdings Inc.
Lot 16 A, Mudlot Kingston,
Georgetown, Guyana.



Activity: Construction and Operation of a Shore Base and Wharf

NRG Holding Inc., 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, for the construction and operation of a Shore Base and Wharf, located at Foreshore Plantation Best, West Bank of Demerara, hereinafter referred to as the “Project”, in a manner indicated in the Application dated March 25, 2021, subject to the terms and conditions set forth herein and any existing or forthcoming regulations made under the said Environmental Protection Act and/or any applicable laws, best practices, guidelines and standards relevant to this project.

Handwritten signature and initials.

Terms and Conditions to be adhered to by the Permit Holder, his Servants, Agents and Sub-Contractors:

1.0 CONSTRUCTION AND OPERATION

- 1.1 Notify the Agency in writing of any proposed changes in construction and operation of the Shore Base and Wharf or dredging plan at least **fourteen (14) days before** making the change. The notification shall contain a **description of the proposed change in construction**. 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 construction or operation'** includes but is not limited to, any change in the nature or functioning, or an extension, of the installation, which may have consequences for the environment.

Note: For more details on the application for variance of an environmental authorisation, please see **Regulation 20** of the **Environmental Protection (Authorisations) Regulations 2000**.

- 1.2 Submit to the EPA an **Environmental and Social Management Plan (ESMP) within the first four (4) months of the date that this Permit is issued**, unless otherwise stated by the EPA. The ESMP must address but not be limited to the following:

- 1.2.1 Management of the reclaimed land and its possible impacts on the mainland (Vreed-en-Hoop coast) and aquatic environment.
- 1.2.2 Assess fully the potential impacts to shoreline and inland vegetation (especially, mangroves), fisheries, birdlife and other sensitive aquatic and near-shore habitats during shore base and wharf construction and operation as well as the areas for dredging activities.
- 1.2.3 Method of dredging activities, depth/bathymetry, timing, disposal of spoils etc. Consideration must be given to seasonal factors such as migration periods (e.g. of marine mammals, fish, birds); breeding and growing seasons; timing of feeding and periods of reduced ecosystem resilience.
- 1.2.4 A comprehensive mitigation and monitoring plan should be developed to address and continuously assess the impacts of the project during its life cycle.
- 1.2.5 Any other consideration as required by the Agency.

The ESMP required under subsection 1.2 will inform the revision and updating of applicable conditions as set forth below and inclusion of any other conditions as the Agency sees fit to ensure protection of the environment and prevention or mitigation of pollution/contamination.

- 1.3 Take all appropriate and necessary precautions to ensure, avoid and/or mitigate

erosion, siltation and sedimentation of the Demerara River in the vicinity of the project site during the construction and operation of the project.

- 1.4 Removal of Mangroves is strictly prohibited without prior approval from the Agency and other regulatory bodies. If there is need to remove any Mangroves, permission must be sought prior to commencing any removal.
- 1.5 Avoid construction works between 23:00 hrs and 06:00 hrs on any day. However, for continuous concrete pour, prior approval must be sought from the EPA.
- 1.6 Ensure that employees are at all times, equipped with appropriate protective gear during construction and operation such as protective headgear, respirators, safety vests, construction boots, etc.
- 1.7 Utilise the land in accordance with the plan submitted to the Agency. All specifications of location, pathways, reserve and boundary lines must be adhered to, unless otherwise authorised; evidence of which must be provided to the Agency.
- 1.8 Ensure that all construction and operation activities at the project site are conducted in accordance with the Maritime; Sea and River Defence and Drainage & Irrigation Laws of Guyana.
- 1.9 In the event that materials have to be transported to the construction site, ensure that all trucks/barges used to transport construction materials to the site are covered.
- 1.10 Identify suitable areas for material stockpile and equipment during construction and operation.
- 1.11 Avoid any road traffic hazards or unnecessary inconveniences to the general public through appropriate planning and management of the construction site.

2.0 DREDGING MANAGEMENT

- 2.1 Dredging management as set out below will be further informed by the ESMP required under subsection 1.2.
- 2.2 Dredging must only be conducted for this shore base infrastructure for land reclamation, to create or maintain safe navigation access, channels, turning basins and berth/docks. Approval must be sought from the EPA for dredging for other reasons.
- 2.3 Ensure that dredged material disposal as well as the conduct of all land reclamation dredging, construction dredging and maintenance dredging are handled in such a way to prevent negative impacts on habitats or pose a significant hazard to human

health and the environment.

- 2.4 Methods for excavation and dredging must be selected to minimise the suspension of sediments and/or destruction of benthic habitat.
- 2.5 Implement all necessary measures to reduce turbidity and the release of contaminants from re-suspension of sediments in the water column and from exposure of sediments to higher oxygen levels.
- 2.6 Monitor siltation within a 500 meters radius both upstream and downstream of the banks of the Demerara River. Qualitative and Quantitative data should be recorded and stored.

3.0 OFFSHORE SAND BURROWING

- 3.1 Seek all relevant regulatory approvals from other applicable regulatory authorities e.g. Guyana Geology and Mines Commission (GGMC).
- 3.2 Environmental management of this activity must be addressed in the ESMP required under condition 1.2, including appropriate measure to prevent, avoid, and/or mitigate any associated environmental impacts, including but not limited to marine, flora and fauna.
- 3.3 In conducting this activity, ensure adherence to all applicable regulations, and guidelines, provided under Maritime Administration Department (MARAD) and GGMC, and any applicable and appropriate international best practices.
- 3.4 Burrowed material is only to be used for land reclamation of the project site.
- 3.5 Do not conduct this activity in areas where offshore cables, and other infrastructures are located.

4.0 WATER AND SOIL QUALITY MANAGEMENT

- 4.1 Water and soil quality management will be further informed by the ESMP required under subsection 1.2.
- 4.2 Protect susceptible sloped surfaces with suitable revetment and appropriate cover to ensure stability of slopes and avoid erosion.
- 4.3 Ensure that the riverbank is cleared of debris on a regular basis to promote free flow of water.



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4.4 Maintain the integrity of the existing waterways at all times. Discharges into the environment must be in accordance with the Guyana National Bureau of Standards (GNBS) *Interim Guidelines for Industrial Effluent Discharge into the Environment*. The following are the allowable limits for this type of project and should not be exceeded:

- pH 5.0-9.0;
- Temperature < 40 °C;
- Biological Oxygen Demand (BOD) < 50 mg/L;
- Chemical Oxygen Demand (COD) < 250 mg/L;
- Total Suspended Solid (TSS) < 100 mg/L;
- Oil and Grease < 20 mg/L; and
- Total Dissolved Solid (TDS) < 40 mg/L.

The **ESMP** required under subsection 1.2 must include a water quality monitoring plan during construction and operation, including identification of locations for sampling, frequency of sampling, method of analysis etc., and include appropriate justification. The Agency also reserves the right to request independent analysis from a certified laboratory approved by the EPA.

- 4.5 Avoid soil and water contamination from fuel, grease, waste oils and other petroleum products that might be used at the construction site. Ensure to store all oils, fuel, paints and chemicals in a designated area at least 100 meters away from the Demerara River or other water bodies.
- 4.6 As far as practicable, conduct refueling, oil changes and maintenance of vehicles, machinery and other equipment on an impervious base. Spills should be cleaned-up by the best practicable means.
- 4.7 Adequately store and or cover temporary stockpiles of construction materials, excavated waste and fuel in a secured designated area to prevent accidental release into the Demerara River/Atlantic Ocean, especially in rainy conditions. The designated area should not be placed within 10 m of the Demerara River or other water bodies.
- 4.8 Ensure construction and dredging is done to coincide with low flow periods of the Demerara River.
- 4.9 Construct a septic tank system on site or in proximity of the site. The septic tank should not be located within 1.5 m of a building or property boundary and should be accessible for cleaning and de-sludging. 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*.
- 4.10 In the construction stage of the project, ensure that portable toilets are provided where necessary for employees of the project.

5.0 NOISE ABATEMENT AND AIR QUALITY MANAGEMENT

5.1 Noise management and air quality conditions for construction and operation phases will be further informed by the ESMP required under subsection 1.2.

5.2 Comply with the Environmental Protection (Air Quality) Regulations, 2000 and the Environmental Protection (Noise Management) Regulations 2000.

5.3 Comply with the Guyana National Bureau of Standards (GNBS) *Guidelines for Noise Emissions into the Environment*. Sound levels from noise-making devices should not exceed the limits below, at a distance of 15 metres (50 ft) from the source or property boundary, whichever is closer.

- **Construction Limits:** **90 dB** during the daytime (06:00 h - 18:00 h)
75 dB during the night-time (18:00 h - 06:00 h)

5.4 Ensure that all activities during construction and operation activities are done in such a manner so as to prevent, minimise, control and or avoid adverse noise nuisance to the surrounding environment.

5.5 Implement appropriate and practical measures or best practices for management of noise from all sound-making devices, such as generators, machinery.

5.6 Employ dust suppression methods such as watering, erecting dust screens/fences, to control dust emissions from material stockpiles and other components of the development that would generate dust.

5.7 Ensure that appropriate measures are in place to minimise the impacts of air borne emissions from vehicles offloading and or loading construction materials.

5.8 Comply with the *World Health Organisation (WHO) Air Quality Guidelines for Particulate Matter in the Environment*, not exceeding the limits below:

PM_{2.5}: 10 µg/m³ annual mean
25 µg/m³ 24-hour mean

PM₁₀: 20 µg/m³ annual mean
50 µg/m³ 24-hour mean

5.9 Comply with the *World Health Organisation (WHO) Air Quality Guidelines for Air pollutants in the Environment*. The following parameters shall not exceed limits as indicated below:

- CO – 9 ppm (8h)

- NO₂ - 0.1 ppm
- VOC - 100 ppm

6.0 HAZARDOUS WASTE MATERIAL / WASTE MANAGEMENT

- 6.1 Comply with the Environmental Protection (Litter Enforcement) Regulations, 2013 and the Environmental Protection (Hazardous Waste Management) Regulations, 2000.
- 6.2 At all times utilise the best practicable means of handling, storing and disposing of all waste materials.
- 6.3 Promote proper solid waste management and disposal practices at the project site. In particular, dispose of waste at the nearest designated waste management facility or contract a Disposal Service that services the area to dispose of waste at a legal designated site. Place covered garbage receptacles at strategic locations around the construction site.
- 6.4 Domestic waste should be placed in covered receptacles and disposed by a competent disposal company.
- 6.5 Reuse waste material where practical as land-filling material or reclamation material for the site. However, this must be done in an aesthetic and controlled manner. The Demerara River and or bank should not be littered with any form of wood, concrete, plastic, glass and metallic waste or any form of waste that will affect humans, flora and fauna and related biodiversity.
- 6.6 Dumping of waste (Domestic and Construction) into the Demerara River/Atlantic Ocean is strictly **prohibited**. Waste, inclusive of waste oil and/or fuel, should not be stored within 100 meters of the river.
- 6.7 Ensure that there is provision of adequate means of receiving and managing effluents and wastes to meet the needs of the project.
- 6.8 Prepare and submit within the ESMP (required under condition 1.2) a spill prevention, control and countermeasure plan that is adequate for the highest volume of hazardous waste and other waste that may be stored by the facility.
- 6.9 Ensure regular training is scheduled on simulated spill incident and response exercises for response personnel; spill alert and reporting procedures; deployment of spill control equipment, and the emergency care/treatment of people and animals impacted by the spill.

7.0 EMERGENCY MANAGEMENT

- 7.1 Obtain approval from the Guyana Fire Service and provide fire protection measures such as fire extinguishers and sand buckets in accordance with this approval.
- 7.2 Ensure the Fire Safety Certificate is renewed annually and all firefighting equipment are maintained and serviced regularly. Fire Safety Certificate should be submitted in the Annual Report and presented to officers upon request during compliance inspection.
- 7.3 Ensure all employees are trained in the use of firefighting equipment, such as, fire extinguishers and understand the firefighting protocol.
- 7.4 Ensure all employees are aware of the Emergency Response Plan and Environmental and Social Management Plan (ESMP) when it is prepared and submitted to the Agency and their duties and responsibilities according to these plans.
- 7.5 Ensure at all times the working environment is monitored for occupational hazards relevant to the specific construction and operational activities of the project.

8.0 COMPLIANCE MONITORING AND REPORTING


- 8.1 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.
- 8.2 Monitor the implementation of the conditions of this Environmental Permit (Varied), insofar as they involve adherence by employees and all third parties under your direction.
- 8.3 Report to the Agency of non-compliance(s) with this **Environmental Permit (Varied)**:
 - 8.3.1 Within **twenty-four (24) hours** of the time the Holder of the Environmental Permit (Varied) becomes aware of the non-compliance, the anticipated manner in which it may endanger human health or the environment.
 - 8.3.2 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.

- 8.3.3 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.
- 8.4 Submit **Environmental Annual Reports** to the EPA on or before **March 31** every year on your compliance with this Permit.
- 8.5 Submit to the EPA no-objections from both the Sea Defence Board and Maritime Administration Department.
- 8.6 Notify the EPA within **twenty-four (24) hours** of the occurrence of any environmental emergencies such as a sudden onset of 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.
- 8.7 Inform the Agency prior to or within **thirty (30) days** of any change of name or ownership of the operation.
- 8.8 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.
- 9.0 INSTITUTIONAL AUTHORITY/LIABILITIES**
- 9.1 The EPA reserves the right to conduct regular inspections of the Permit Holder's construction and operational activities as part of its monitoring and enforcement requirements under the Environmental Protection Act, Cap 20:05, and the Environmental Protection (Amendment) Act, 2005, and Environmental Protection (Authorisations) Regulations, 2000.
- 9.2 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 the 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.
- 9.3 The EPA reserves the right to review/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.
- 9.4 The EPA shall have the right to cancel or suspend this Permit for breach of any of the

terms and conditions contained herein.

- 9.5 The Permit Holder is obligated to ensure that the construction and operation of the project is permitted by other relevant authorities.
- 9.6 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 this Environmental Permit (Varied), which are attributed to the Project, pursuant to s. 39 and s. 19 (1) and (2) of the Environmental Protection Act, Cap. 20:05, Laws of Guyana.
- 9.7 The Permit Holder shall compensate any Party who suffers any loss or damage as a result of the attributed Project (See: s. 19 (3)(e) of the Environmental Protection Act, Cap. 20:05, Laws of Guyana.)
- 9.8 The Permit holder shall be guilty of an offence in accordance with s. 39 (1), (2), (3) and (4) of the Environmental Protection Act, Cap. 20:05, Laws of Guyana, which attribute liability for causing 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. If found guilty of an offence the Permit Holder shall be liable to the penalties prescribed under the said Act.
- 9.9 Should the Permit Holder contravene or be 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.
- 9.10 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, the Agency may issue to the Permit Holder a Prohibition Notice, which may order him to immediately cease the offending activity, in accordance with s. 27 of the Environmental Protection Act, Cap. 20:05, Laws of Guyana.
- 9.11 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.
- 9.12 The Permit Holder shall be liable of any gross negligence or willful misconduct caused by the Permit Holder, his Servants and/or Agents, to the environment, biodiversity, protected species and natural habitat with respect to any release, discharge, or spill, of contaminant fluids, oil or lubricants.

- 9.13 The 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.
- 9.14 This Environmental Permit (Varied) is effective for the period stipulated herein, **September, 2021 to August, 2024.**
- 9.15 This **Environmental Permit (Varied)** shall remain valid until **August 31, 2024**, unless otherwise suspended, cancelled, modified or varied, in accordance with the provisions of this Permit or the Environmental Protection Act, Cap. 20:05, Laws of Guyana, Environmental Protection (Amendment) Act, 2005, and the Environmental Protection (Authorisations) Regulations, 2000.
- 9.16 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 **February 29, 2024.**
- 9.17 Any late submission of renewal application(s) after the specified date as stated above, may require the Permit Holder to pay, in addition to renewal fees, a late penalty fee (accruing at the time such obligation was first owed for renewal) at a rate of **two thousand dollars (GY\$2000.00) 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.
- 9.18 Failure to comply with the requirements of this Permit shall render the Permit Holder liable to prosecution and to civil penalties and/or injunctive relief prescribed under the Environmental Protection Act, Cap. 20:05, Laws of Guyana and its Regulations, including 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

Executive Director

Date 10.12.2021

I hereby accept the above Terms and Conditions upon which this Environmental Permit (Varied) 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 or forthcoming regulations made under the said Environmental Protection Act and/or any applicable laws, best practices, guidelines and standards relevant to this project.

NAME:	ANDRON ALPHONSO
SIGNATURE:	
DESIGNATION:	DIRECTOR
DATE:	13 th December, 2021

