



**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.:	20180709- HSMPE1
Fee:	Large (C1) i.e., US \$1500 per year
Fee Paid:	US\$ 7,500 for Five (5) years (November 2023-October 2028)
Addressee:	Mr. Vahman Jurai, Director-Guyana, 1216-1218, Block I, Zone, Eccles, East Bank Demerara.
Activity:	Support of Offshore Drilling Operations “Cement /Baroid Lab, Drilling equipment maintenance workshop, Transportation and storage of lithium batteries.”
Varied Activity	Expansion of the Drilling Equipment Maintenance Workshop, Installation of a Lift System, and the relocation of the Security Hut

Halliburton Guyana Inc., hereinafter referred to as the “Permit Holder,” is hereby authorized by the Environmental Protection Act, Cap. 20:05, the Environmental Protection (Amendment) Act, 2005, and the Environmental Protection (Authorisations) Regulations, 2000, to operate a “cement laboratory, drilling equipment workshop and transportation and storage of lithium batteries” at 1216 -1218 Block I, Zone, Eccles, East Bank Demerara, hereinafter referred to as the “Project,” in a manner indicated in the Application for Variance of Environmental Authorisation submitted on March 20, 2024, and subject to the terms and conditions set forth herein under the Environmental Protection Act, Cap. 20:05, Laws of Guyana, existing and/or forthcoming Regulations made under the said Act, and/or any applicable laws, guidelines, best practices, and standards relevant to this project.

This is a Variance of Environmental Permit (Renewed and Varied), Reference Number 20180709-HSMPE1, issued on December 15, 2023, and expiring on October 31, 2028.

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

1.0 CONSTRUCTION

- 1.1 Land clearing and disturbance shall be limited to areas where immediate work is taking place.
- 1.2 Construction works shall **not be executed between 18:00 hrs. to 06:00 hrs.**, on any day, close to communal areas unless, approval is sought from the EPA. This requirement does not apply for large concrete pours or asphalt laying and earth removal where work in the early morning and late evening is required.
- 1.3 Areas for construction material stockpiles and equipment shall be identified.
- 1.4 Stockpile areas shall be downwind to avoid materials being dispersed by wind to sensitive areas. Loading and offloading activities shall, as far as possible, also be confined to this location.
- 1.5 Temporary stockpiles shall not exceed **twenty-four (24) hours** before being removed or transferred to the designated stockpiling areas established by Condition 1.3.
- 1.6 Temporary stockpiles of construction materials, including excavated waste, shall be stored in a secured, designated area and protected from wind and water erosion.
- 1.7 Stockpiles shall not exceed the height of the parameter fence.
- 1.8 Stockpiles, including dusty materials transported to, from, and within the site, shall be enclosed or covered to reduce airborne emissions. Where this is not practical owing to frequent usage, employ wet suppression methods such as watering or erecting dust screens/fences to control emissions.
- 1.9 Install a silt fence **at least 3 meters** from the boundary of any canal, drain, or river to prevent any possible contamination from construction material. The height of the silt fence shall be **no less than 3 meters**; the distance between fence posts shall **not exceed 1.2 meters (4 ft.)**, and fence posts shall be installed at a depth of **at least 0.6 meters (24 inches)**.
- 1.10 Where feasible, pre-mixed, 'ready-mixed' concrete shall be used to reduce dust emissions caused by on-site preparation.
- 1.11 Measures shall be implemented for the removal of any contamination and or siltation of drains during construction.
- 1.12 All construction equipment and machinery shall be maintained in accordance with the manufacturer's specifications to avoid mechanical failures and abnormal noise pollution. Logs and records signed by the appropriate inspecting personnel shall be maintained and made available for inspection by the EPA upon request.
- 1.13 All cutting of wood and mixing of cement shall be done at least 15m from the perimeter drains to minimize pollution.



discharge, or spill, of contaminant fluids, oil or lubricants.

- 11.8 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 Section 26 of the Environmental Protection Act, Cap. 20:05, Laws of Guyana.
- 11.9 Where it appears to the Agency that the Permit Holder is engaged in any activity that may pose a serious threat to natural resources or the environment, or a risk of serious pollution of the environment or any damage to public health, the EPA may issue to the Permit Holder a Prohibition Notice, which may order him to immediately cease the offending activity, in accordance with Section 27 of the Environmental Protection Act, Cap. 20:05, Laws of Guyana.
- 11.10 The EPA reserves the right to conduct regular inspections of the Permit Holder's construction 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.
- 11.11 The Permit Holder, His Servants, and/or Agents 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 upon request. Pursuant to Section 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.
- 11.12 The EPA has the right to modify, cancel or suspend this Permit for breach of any of the terms and conditions contained herein.
- 11.13 **This Environmental Permit (Varied) is not the final consent; all relevant Permissions shall be obtained from other regulatory bodies for continued operation.**
- 11.14 This Environmental Permit (Varied) is valid for the period stipulated herein **November 2023 to October 2028.**
- 11.15 This Environmental Permit (Varied) shall remain valid until **October 31, 2028**, 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.
- 11.16 This Permit must be renewed by submitting a completed Application Form for Renewal of Environmental Authorisation to the Agency at least six months before



III. 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.

10.11 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.

10.12 It is the responsibility of the Permit Holder to ensure the permitted activity and premises are secured and that all practicable steps necessary to prevent fires, explosions, leaks, or suspected leaks and spills at the permitted premises are taken.

11.0 INSTITUTIONAL AUTHORITY/ LIABILITIES

11.1 The Permit Holder shall be liable for any material environmental harm caused by polluting the environment, pursuant to s. 39 of the Environmental Protection Act, Cap. 20:05, Laws of Guyana.

11.2 The Permit Holder shall be liable for any serious environmental harm caused by polluting the environment, pursuant to s. 39 of the Environmental Protection Act, Cap. 20:05, Laws of Guyana.

11.3 The Permit Holder shall be liable for any activity that causes or is likely to cause pollution of the environment unless all reasonable and practicable measures are taken to prevent or minimize any resulting adverse effect, pursuant to s. 19 of the Environmental Protection Act, Cap. 20:05, Laws of Guyana.

11.4 The Permit Holder shall be liable for discharging, causing, or permitting the entry into the environment of any contaminant in any amount, concentration, or level excess of that prescribed by the regulations or stipulated by this Environmental Permit, pursuant to s. 19 of the Environmental Protection Act, Cap. 20:05, Laws of Guyana.

11.5 The Permit Holder shall be liable to compensate any person who suffers any loss or damage as a result of contravening conditions 11.3 and 11.4 of this Environmental Permit, pursuant to s. 19 of the Environmental Protection Act, Cap. 20:05, Laws of Guyana.

11.6 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 of 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.

11.7 The Permit Holder shall be liable for 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,

10.0 COMPLIANCE MONITORING AND REPORTING

- 10.1 Notify the Environmental Protection Agency **within one (1) hour** of the occurrence of any environmental emergencies (e.g., oil spills, hazardous materials/wastes, chemicals 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).
- 10.2 An incident spill report shall be done for **EVERY** occurrence of spills during the collection and/or transportation of hazardous waste. Records of spill reports shall be maintained and submitted to the Agency upon request.
- 10.3 Spill Reports shall be submitted to the Agency **within twenty-four (24) hours of the incident.**
- 10.4 The Clean-up Plan shall be available on site and shall include, but not be limited to, the location of all materials stored and operations/actions in the event of a spill.
- 10.5 Annual Training schedules and reports shall be submitted to the Agency as a component of the required **Annual Report** referred to as Monitoring and Compliance. Training shall include but not be limited to Employees working in confined spaces and prolonged noisy areas.
- 10.6 Monitor the implementation of the conditions of this Permit, insofar as they involve adherence by your employees.
- 10.7 Notify the Agency in writing of any change of name or ownership of the Permit Holder's facility within **thirty (30) days** after the change occurs.
- 10.8 Notify the Agency **within twenty-one (21) days** in the event of death, bankruptcy, liquidation, or receivership of the Permit Holder or if the Company becomes a party to an amalgamation.
- 10.9 Submit **Annual Reports** to the EPA on the progress of the operation and compliance with the conditions under which this Permit was granted on or before **March 31** each year.
- 10.10 Report to the Agency any non-compliance(s) with the Operation Permit:
 - I. Within **twenty-four (24) hours** of the time, the Holder of the Environmental Authorisation for Operation becomes aware of the non-compliance, and the anticipated manner in which it may endanger human health or the environment.
 - II. 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.



8.2 The oil-water separator at the Project shall be maintained.

8.3 The project shall maintain the integrity of the existing waterways at all times. All effluent from secondary containments shall flow through the oil-water separator and shall be in accordance with the Guyana National Bureau of Standards (GNBS) *Interim Guidelines for Industrial Effluent Discharge into the Environment*. The following allowable limits shall not be exceeded:

Parameter	Maximum Concentration	Units	Type
Oil and Grease	Total Petroleum Hydrocarbon (TPH) < 40	mg/L	Grab
Thermal effluent	<40	°C	In-situ

Water Quality Monitoring shall be conducted **annually** at the discharge points, in accordance with the parameters listed above, by trained personnel utilizing calibrated equipment. Records shall be maintained and submitted to the EPA as a component of the **Annual Report**.

8.4 Interceptor drains shall be maintained on-site and must be adequately sloped and capable of handling the maximum precipitation during a storm event.

9.0 WASTE MANAGEMENT

9.1 Adhere to the provisions of the **Environmental Protection (Litter Enforcement) Regulations, 2013**, promote good sanitation and solid waste disposal practices on site. Covered garbage receptacles shall be placed upon impervious bases at strategic locations at the project facility.

9.2 Burning of waste materials on site is **strictly prohibited**. All solid waste shall be disposed of, at an approved solid waste disposal site, by an EPA authorised waste disposal company.

9.3 Good housekeeping, sanitary, and hygienic practices shall be maintained at all times. The facility's drains and surroundings shall be kept free of vegetation and litter.

9.4 Septic Tank(s) shall be constructed and maintained by the Guyana National Bureau of Standards Code of Practice for the Design and Construction of Septic Tanks and Associated Secondary Treatment and Disposal Systems.

9.5 Septic Tank(s) shall at all times be accessible for cleaning and de-sludging by an EPA-authorized waste disposal company.

9.6 Any modification to the Septic Tank(s) must be by 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.

- iv. Secondary containment capable of containing 110% of the largest volume therein.
- 6.5 Each transport of hazardous waste shall generate a manifest. The manifest shall contain the following:
 - i. The name and address of the waste generator;
 - ii. The name and description of the waste and hazardous class;
 - iii. The number and type of containers;
 - iv. The quantity of waste being transported; and
 - v. The name and address of the facility designated to receive the waste
- 6.6 Copies of signed manifests shall be maintained by the Project for not less than three years and made available for inspection by the EPA upon request.

7.0 NOISE MANAGEMENT

- 7.1 Adhere to the provisions of the **Environmental Protection (Noise Management) Regulations, 2000.**
- 7.2 All significant noise-producing equipment, such as generators, shall be enclosed in structures constructed with materials of good insulation properties (e.g., hollow concrete blocks, insulation boards, solid clay bricks, etc.), equipped with silencers/mufflers to reduce the noise level and place on properly designed foundations to ensure effective damping of vibrations.
- 7.3 The generator shall be serviced in accordance with the manufacturer's specifications to ensure efficiency and reduce the level of noise produced. A summarised maintenance report shall be maintained and made available for inspection by the EPA upon request.
- 7.4 Noise emissions shall be monitored at the Project's boundary **biannually** to determine compliance with Guyana National Bureau of Standards (GNBS) *Guidelines for Noise Emissions into the Environment*, not exceeding the commercial limits listed below:

Commercial Limits: 80 dB (Day-time (06:00 h -18:00 h))
65 dB (Night- time (18:00 h - 06:00 h))

Monitoring shall be conducted by trained personnel using calibrated Type 2 Sound Level Meters. Records of all monitoring exercises shall be maintained and submitted as part of the **Annual Report**.

8.0 WATER QUALITY MANAGEMENT

- 8.1 Adhere to the provisions of the **Environmental Protection (Water Quality) Regulations, 2000.**



4.5 Damaged lithium batteries shall be properly packaged according to the guidelines outlined in the End of Life (EOL) for Lithium Metal Battery Packaging submitted to the EPA.

4.6 A lithium spill kit shall be maintained at the worksite.

4.7 Lithium batteries shall be transported in accordance with the **International Maritime Dangerous Goods (IMDG) Code and the Lithium battery guide for shippers.**

5.0 WORKSHOP OPERATIONS

5.1 Workshop activities shall, at all times, be conducted within the confines of the workshop.

5.2 Operation and maintenance of machines, equipment, and tools used at the workshop shall be conducted in accordance with the manufacturer's specifications. Summarised maintenance records shall be maintained and submitted to the EPA upon request.

5.3 Engine oil, grease, and other chemicals used at the workshop shall be stored within secondary containment (bunded area) to minimize the spread/ release of spillage from the storage area.

5.4 All chemicals used at the workshop shall be stored in accordance with the Safety Data Sheets (SDS). SDS shall be readily available and easily accessible.

5.5 Flammable materials shall be stored away from ignition sources. **'No Smoking'** signs shall be posted where such materials are handled and stored.

6.0 HAZARDOUS WASTE (WASTE OIL) MANAGEMENT

6.1 Adhere to the provisions of the **Environmental Protection (Hazardous Waste Management) Regulations 2000.**

6.2 Hazardous waste shall be stored in sealed metal containers appropriate for the waste stream.

6.3 Hazardous waste containers shall be labelled with the following:

- i. The words **"Waste Oil or "Used oil" and "Sludge"**
- ii. Beginning accumulation date

6.4 Hazardous waste shall be stored in a covered, bunded area. This area shall include the following:

- i. Signage- **"Hazardous Waste Storage Area"**
- ii. Low traffic
- iii. No floor drains



inspection by the EPA upon request.

- 3.2 Standard Operating Procedures (SOPs) for laboratory operations shall be established and maintained for the following but not limited to;
- i. Slurry preparation
 - ii. Thickening or pumping time
 - iii. Compressive strength testing for oil well cement
 - iv. Rheology testing for oil well cement
 - v. Free fluid test
 - vi. Fluid loss testing for oil well cement
 - vii. Gas migration/flow apparatus
 - viii. Static gel strength

Procedures shall be made available for inspection by the EPA upon request

- 3.3 Chemicals shall be handled and stored in accordance with the Manufacturer's specifications and SDS.
- 3.4 Chemical containers shall be clearly labeled in accordance with the Globally Harmonized System of Classification and Labelling. The following must be evident:
- i. Signal Word
 - ii. GHS Symbols - (Hazard Pictograms)
 - iii. Manufacturer Information
 - iv. Precautionary Statements/First Aid
 - v. Hazard Statements
 - vi. Product Name or Identifiers

- 3.5 Chemical storage containers shall be inspected for signs of leakage or corrosion, and damaged containers **must be replaced immediately**. Inspection reports shall be maintained and made available for inspection by the EPA upon request.

4.0 TRANSPORTATION AND STORAGE OF LITHIUM BATTERY

- 4.1 Adhere to the requirements outlined in the Global HSE Standards and Performance for Primary Lithium Metal Battery Handling, Storage, and Termination.
- 4.2 Lithium batteries and cells shall only be handled by trained personnel wearing proper personal protective equipment.
- 4.3 Lithium batteries and cells shall be stored in a well-ventilated area, away from water, humid air, acids, and oxidizing materials.
- 4.4 Lithium battery storage area shall have immediate access to both a class D and an ABC fire extinguisher.



2.0 OPERATIONS

- 2.1 An application shall be made to the Agency to vary this Permit in instances where it becomes necessary to:
- i. Change the construction, operation, structure, or layout of the Project and all associated buildings;
 - ii. change equipment, machine, apparatus, mechanism, system, or technology serving the Project;
 - 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
- 2.2 All employees and third parties under the Project's direction shall be made aware of the conditions of the Environmental Authorisation.
- 2.3 Employees shall be equipped with Personal Protective Equipment relevant to the occupational tasks during operation.
- 2.4 Equipment, parts, and tools stored at the Warehouse in support of the Oil and Gas Industry shall be new, uncontaminated, and free of radiation sources.
- 2.5 Heavy machinery, such as cranes, forklifts, etc., shall be parked on impervious surfaces to prevent fuel spills and leaks from entering the soil.
- 2.6 The Guyana Fire Service approval shall be maintained and fire protection measures such as fire extinguishers and sand buckets shall be provided in accordance with this approval.
- 2.7 All firefighting equipment shall be maintained and serviced according to the Guyana Fire Service requirements.
- 2.8 Scheduled training shall be maintained for employees involved in the Project. Training reports shall be made available for inspection by the EPA upon request.
- 2.9 All equipment and machinery shall be maintained in accordance with the manufacturer's specifications to avoid mechanical failures and abnormal noise pollution. Logs and records signed by the appropriate inspecting personnel shall be maintained and made available for inspection by the EPA upon request.
- 2.10 Adhere to the requirements of the **Occupational Safety and Health Act, Cap. 99:06, Laws of Guyana.**


3.0 CEMENT/ BAROID LAB


- 3.1 A register of all chemicals and Safety Data Sheets (SDS) utilized by the Project shall be established and maintained. Registered information shall be made available for



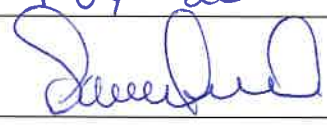
this Permit expires, that is, no later than **April 30, 2028**.

- 11.17 Any submission of the application required by Condition 12.16 beyond the date specified therein, the agency may require the Permit Holder to pay, in addition to the application 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 application is submitted to the Agency, without prejudice to any other rights of the Permit Holder in connection therewith.
- 11.18 Failure to comply with the requirements of this Permit or with applicable laws and regulations, whether existing or forthcoming, shall render the Permit Holder liable to prosecution and to penalties, inclusive of civil penalties, injunctive relief and imprisonment, as prescribed under the Environmental Protection Act, Cap. 20:05, Laws of Guyana, the Environmental Protection Regulations and other applicable laws of Guyana.

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

Date 22/4 

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, the Environmental Protection (Amendment) Act, 2005, and the Environmental Protection (Authorisations) Regulations, 2000, and any existing or forthcoming regulations, guidelines, best practices, and standards made under this Act.

NAME	Sandy Amundareef	
DATE	13 - Nov - 2024	
SIGNATURE		
DESIGNATION	HSE Coord.	



