



**Environmental
Protection
Agency**

Ganges Street, Sophia,
Georgetown, GUYANA
Tel.: (592)-225-2062 / 1218 / 0506 / 6917
Fax: (592) 225-5481
Email: epa@epaguyana.org

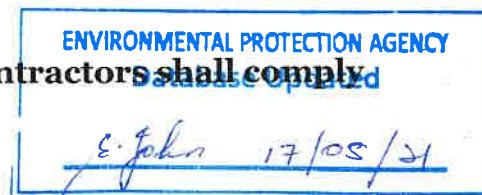
Operation Permit

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.:	20201002- FSMPW
Fee:	Medium (C1) US\$500 per year
Fee Paid:	US\$2,292 for Four (4) Years and Seven (7) Months (February 2021- August 2025)
Addressee:	Baker Hughes Guyana Company Inc. 51 Eccles Industrial Estate East Bank Demerara.
Activity:	Operation of a Fuel Storage Facility to support the Oil Field Drilling and Completions Liquid Mud Plant

Baker Hughes Guyana Company Inc., hereinafter referred to as the "Permit Holder", is hereby authorised in accordance with the Environmental Protection Act, Cap. 20:05, the Environmental Protection (Amendment) Act, 2005, and the Environmental Protection (Authorisations) Regulations, 2000, to Operate a Fuel Storage Facility which supports the Oil Field Drilling and Completions Liquid Mud Plant at GPORT Shorebase, 10-13 Water Street, Kingston, Georgetown, hereinafter referred to as the "Project", in a manner indicated in the Application for Environmental Authorisation submitted on October 02, 2020, and subject to the terms and conditions set forth herein under the Environmental Protection Act, Cap. 20:05, Laws of Guyana, and in any existing or forthcoming Regulations made under the said Act, and/or any applicable laws, guidelines, best practices and standards relevant to this project.

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 Notify the Agency in writing and obtain its approval for **ANY** proposed changes in the Fuel Storage operation **at least fourteen (14) days before making the change**. The notification shall contain a **description of the proposed change in operation**. It is not necessary to make such a notification if an **Application to vary** this permit has been made and the Application contains a description of the proposed change. In this condition '**change in operation**' means a change in the nature or functioning, or an extension, of the installation, which may have consequences for the environment including but not limited to the following:

N.A.
[Signature]

Operation Permit (Renewed) Ref. No. 20201002- FSMPW

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

- i. Changes in construction, structure, or layout of the facility and all associated buildings.
 - ii. Installation of new and/or changes to equipment, machine, apparatus, mechanism, system or technology serving the facility.
 - iii. Any technology used or installed at the facility from which effluent may be discharged.
 - iv. Any other circumstance or condition prescribed by Regulation 20(3) of the Environmental Protection (Authorisations) Regulations.
- 1.2 Adopt and comply with the National Standard "Guidance for the Design, Construction, Modification, and Maintenance of Petrol Filling Stations" and any forthcoming code of practice/guidelines pertaining to the operation of fuel storage.
 - 1.3 An Operation and Maintenance Manual shall be developed and maintained for the Fuel Storage Facility. The Manual shall address all aspects of the on-going operation, including the required maintenance and inspection schedule, loss monitoring/ investigation procedures, emergency response and requirements for review of the Manual.
 - 1.4 The Operation and Maintenance Manual shall be submitted to the EPA for review and approval **by April 30, 2021.**
 - 1.5 A register of the quantities of fuel and associated hazardous materials stored onsite shall be established and maintained. A summary of the registered information shall be submitted to the Agency as a component of the **Annual Report at condition 7.6.**
 - 1.6 Fuel shall at all times be stored above-ground, in a cool, dry place and away from ignition sources. **'No Smoking'** signs shall be posted where fuel is handled or stored.
 - 1.7 Employees shall be equipped with Personal Protective Equipment relevant to the occupational tasks during operation. These Personal Protective Equipment may include but not limited to:
 1. Safety helmets;
 2. Protective respiratory devices
 3. Safety boots with ankle support;
 4. Gloves with reinforced palms and fingers;
 5. Eye protections such as tightly fitted safety goggles.**(Employees should at all times be well protected)**
 - 1.8 Guyana Fire Service Approval shall be maintained annually and shall be submitted as a component of the **Annual Report at condition 7.6.**
 - 1.9 The Fuel Storage Facility shall maintain fire prevention and control equipment in accordance with the Guyana Fire Service Approval. This may include a smoke detection

Operation Permit (Renewed) Ref. No. 20201002- FSMPW

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and alarm system, fire extinguishers, fire hydrants or sprinkler systems as appropriate.

- 1.10 Emergency spill cleanup kits shall be maintained by the facility. Kits should contain absorbent materials, drain seals and other appropriate tools for clean-up of potential spills. Kits must be readily available and easily accessible.

2.0 FUEL HANDLING AND STORAGE

Secondary Containment

- 2.1 Existing secondary containment around the fuel tanks shall be inspected monthly for cracks and breakage to ensure they are liquid tight to withstand hydrostatic pressure of any contained liquid when full. A summarised inspection report shall be submitted to the Agency as a component of the **Annual Report** required at **condition 7.6**.
- 2.2 All secondary containment shall remain sealed and all piping must enter or exit the containment over the wall. Secondary containment shall provide total containment, and no part of the tank infrastructure (e.g. dispenser, filling hoses and valves) shall protrude outside the containment.

Fuel and Pipeline Tank Maintenance

- 2.3 All fuel storage tanks shall be tested by competent persons to verify their integrity once every five years. All tests should be documented including a clear indication of the scope, type and results of the tests. The test methods and results shall be submitted to the Agency as a component of the **Annual Report** required at **condition 7.6**.
- 2.4 Visual inspections of fuel tanks shall be conducted in accordance with the specifications outlined below. These results shall be submitted to the Agency as a component of the **Annual Report** required in **condition 7.6**.
1. Quarterly inspections internally by Baker Hughes Guyana Company Inc.
 2. Formal External Inspection by a certified inspector bi- annually
- 2.5 Protection measures for fuel storage tanks such as painting and coating shall be maintained to minimise corrosion of fuel tanks.
- 2.6 Maintenance and/ or repair of fittings, pipes and hoses shall be conducted monthly and in accordance to manufacturer's specifications. A summarised inspection report shall be compiled and submitted to the Agency as part of the **Annual Report** required at **condition 7.6**.

Overfill Protection & Leak Detection

- 2.7 Overfill protection shall be installed and maintained on all fuel tanks. This may include an automatic shut off device or an audible or visible overfill alarm.
- 2.8 The safe fill level shall be clearly identified on the gauge and set at 90% to prevent overfilling. In the event of overfilling, all discharges shall be released into the containment

Operation Permit (Renewed) Ref. No. 20201002- FSMPW

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2.9 Leak detection systems shall be installed on all fuel tanks. At least two (2) of the following measures should be implemented:

1. Overflow alarms on tanks;
2. Gauging system;
3. Dipstick measurements;
4. Sensors on walls of tanks or;
5. Electric shut down buttons.

Fuel Transfer

- 2.10 The Best Available Technology/ Technique (BAT) shall be employed to capture fuel lost during the unloading of fuel to storage tanks and refuelling of equipment.
- 2.11 Secondary containment, drip trays or other overflow and drip containment measures shall be installed and maintained at connection points or other possible overflow points.
- 2.12 A Standard Operating Procedure (SOP) for fuel transfer operations including a checklist of measures to follow during filling operations shall be established and maintained. A copy of this SOP shall be submitted to the EPA as a component of the **Annual Report** required at **condition 7.6**.
- 2.13 All employees shall be trained on the SOP outlined in **condition 2.12**. An Annual training schedule shall be submitted to the EPA as a component of the **Annual Report** required in **condition 7.6**.

3.0 WATER QUALITY

Adhere to the provisions of the **Environmental Protection (Water Quality) Regulation, 2000**.

- 3.1 All equipment refuelling shall be conducted on an impervious surface.
- 3.2 The oil- water separator shall be maintained at the point of final discharge from the secondary containment for the fuel storage facility.
- 3.3 Effluent from the secondary containment for the fuel storage facility shall flow through the oil- water separator(s) and should be in accordance with the Guyana National Bureau of Standards (GNBS) *Interim Guidelines for Industrial Effluent Discharge into the Environment*. The following allowable limits should not be exceeded:

Operation Permit (Renewed) Ref. No. 20201002- FSMPW

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Parameter	Daily Maximum Concentration	Units	Sample type	Frequency of Analysis
pH	(pH 5.0-9.0)		Grab	Annually
Temperature	<40	°C	Grab	
Total Suspended Solids (TSS)	< 100	mg/L	Grab	
Oil and Grease	< 10	mg/L	Grab	
Total Petroleum Hydrocarbon (TPH)	< 40	mg/L	Grab	
Diesel Range Organics	<100	mg/L	Grab	

- 3.4 Grab samples of effluent shall be collected annually at the final discharge point from the oil-water separator. GPS Coordinates for this final discharge point shall be submitted to the EPA by **March 31, 2021**.
- 3.5 Grab samples shall be collected and processed by a certified laboratory. Result/Analysis shall be submitted to the EPA as a component of the **Annual Report** required in **condition 7.6**.
- 3.6 Fuel/lubricants including waste oils shall not be drained from equipment onto the ground or into waterways.
- 3.7 Interceptor drains shall be maintained on site. These must be adequately sloped to collect storm flow.

4.0 AIR QUALITY AND NOISE MANAGEMENT

Adhere to the provisions of the **Environmental Protection (Air Quality) Regulations, 2000** and the **Environmental Protection (Noise Management) Regulations, 2000**.

- 4.1 Servicing and maintenance of generators, compressors and other equipment shall be conducted on impervious surfaces and in accordance to manufacturer's specifications.
- 4.2 All significant noise-producing equipment, such as generators, shall be equipped with silencers or mufflers and/or be enclosed in suitable acoustic enclosures where necessary, to reduce noise levels impacting the surrounding environment to achieve compliance with Guyana National Bureau of Standards (GNBS) requirement.

Operation Permit (Renewed) Ref. No. 20201002- FSMPW

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

- 4.3 All generators and machines/equipment shall be serviced in accordance to manufacturer's specification to ensure efficiency and reduce the level of noise produced. A summarised maintenance report shall be submitted as a component of the **Annual Report** required in **condition 7.6**.
- 4.4 Comply with the Guyana National Bureau of Standards (GNBS) Guidelines for Noise Emission into the Environment at a distance of 15 m (50 ft) from the source or at the property boundary, whichever is closer.

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

5.0 WASTE MANAGEMENT

- 5.1 In accordance with the **Environmental Protection (Litter Enforcement) Regulation, 2013**, promote good sanitation and solid waste disposal practices on site; covered garbage receptacles must be placed at strategic locations at the facility.
- 5.2 Waste materials shall not be burnt on site. All solid waste shall be disposed at an approved Solid Waste Disposal Site, by an EPA Authorised Waste Disposal Company.
- 5.3 Good house-keeping, sanitary, and hygienic practices shall be maintained at all times. The facility surroundings shall be kept free of vegetation and litter.
- 5.4 Solid waste receptacles shall be secured when not in use.

6.0 HAZARDOUS WASTE MANAGEMENT

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

- 6.1 All hazardous waste shall be stored in containers appropriate for the waste stream. That is:
- a) **Plastic Containers**
 - i. Water- based wastes
 - ii. Fountain Solutions, Pre- Press
 - b) **Metal Containers**
 - i. Solvents and Petroleum- based products
 - ii. Waste ink, Press-wash, Oil and Oily Absorbents
- 6.2 All hazardous waste containers shall be labelled with the following:
- i. The words "**Hazardous Waste**"
 - ii. The type of waste
 - iii. Beginning accumulation date-



Operation Permit (Renewed) Ref. No. 20201002- FSMPW

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6.3 All waste oil containers shall be labelled with the following:

- i. The words **“Waste Oil or “Used oil”**
- ii. Beginning accumulation date

6.4 All 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
- iv. Bunded area shall provide 110% containment of the largest volume stored therein.

6.5 All hazardous waste shall be disposed and or treated by an EPA authorised Hazardous Waste Disposal Facility. All hazardous waste treatment and disposal shall be documented on a Waste Manifest Form which must be submitted to the EPA as a component of the **Annual Report** required in **condition 7.6**.

7.0 COMPLIANCE MONITORING AND REPORTING

7.1 Notify the Environmental Protection Agency **within one (1) hour** of the occurrence of any environmental emergencies (e.g. oil spills, hazardous materials/wastes 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).

7.2 Make all employees, and third parties under your direction, aware of the conditions of the Environmental Authorisation and provide training on good environmental practices. Annual training schedule shall be submitted in the **Annual Report** required in **condition 7.6**.

7.3 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.

7.4 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.

7.5 Maintain and submit to the Agency records of the type, composition and quantity of contaminant released (i.e. any solid, liquid, gas, odor, sound, vibration, radiation, heat or combination of any of them).

7.6 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.

7.7 Report to the Agency any non-compliance(s) with the Operation Permit (Renewed):

Operation Permit (Renewed) Ref. No. 20201002- FSMPW

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

- I. Within **twenty-four (24) hours** of the time the Holder of the Environmental Authorisation for Operation becomes aware of the non-compliance(s), 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(s), its cause and the period of non-compliance including exact dates and time.
- 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.

7.8 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.

7.9 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.

8.0 INSTITUTIONAL AUTHORITY/ LIABILITIES

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

8.2 The EPA reserves the right to review/amend the conditions attached to this Permit which also includes the review and/or amendment of permit fees in consideration of any changes in fee schedule as determined by the Agency for projects of this nature.

8.3 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 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.

8.4 The EPA shall have the right to cancel or suspend this Permit for breach of any of the terms and conditions contained herein.

8.5 The Permit Holder, his Servants, Agents and/or Sub-Contractors shall be strictly jointly and severally liable as follows:

- a. For any activity that causes, or is likely to cause pollution of the environment, unless the person takes all reasonable and practicable measures to prevent or minimise any

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resulting adverse effect, in accordance with Section 19(1)(a) of the Environmental Protection Act, Cap. 20:05, Laws of Guyana.

- b. For any activity which results in the discharge, release or entry into the environment of any contaminant in any amount, concentration or level in excess of that prescribed by the regulations or stipulated by this Permit, in accordance with Section 19(1)(b) of the Environmental Protection Act, Cap. 20:05 Laws of Guyana.
 - c. The discharge or release of contaminants, such as hydraulic fluids, lubricants, fuel, or other industrial fluids relative to the Project, which are not stipulated herein, or by Regulations under the Environmental Protection Act, are strictly prohibited. Any such discharge or release shall be a violation of Section 19(1)(b) of the Environmental Protection Act.
 - d. For the compensation of any Party who suffers any loss or damage as a result of the project. (s.19(3)(e)) Environmental Protection Act, Cap. 20:05, Laws of Guyana.
 - e. For any material or serious environmental harm caused by pollution of the environment, whether intentionally or recklessly, in accordance with section 39 (1), (2), (3) and (4) of the Environmental Protection Act, 20:05, Laws of Guyana.
 - f. Any gross negligence or wilful misconduct resulting in serious risk, or adverse effects to the marine environment, biodiversity, protected species and natural habitat with respect to any release or discharge, spill, contaminant fluids, oil, or lubricants from any facilities permitted under this project.
 - g. For the payment of all costs and expenses related to the assessment of damage and investigations required, as result of any pollution incidents attributable to the activity for which this Permit has been issued.
- 8.6 The Agency (EPA) shall notify the Permit Holder immediately of any written claim or notice sent by any Complainant seeking loss or damage for negligence as a result of the Permit Holder's lack of due care and diligence.
- 8.7 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 s. 26 of the Environmental Protection Act, Cap. 20:05, Laws of Guyana.
- 8.8 Where it appears to the Agency that the Permit Holder is engaged in any activity that may pose serious threat to natural resources or serious pollution of the Environment or any damage to public health, issue to the Permit Holder a Prohibition Notice, which may include an order to immediately cease the offending activity. See: s. 27 of the Environmental Protection Act, Cap. 20:05, Laws of Guyana.

Operation Permit (Renewed) Ref. No. 20201002- FSMPW

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

- 8.9 This Operation Permit shall remain valid until **August 31, 2025**, 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.
- 8.10 This Permit must be renewed by submitting a completed Renewed Application Form for Environmental Authorisation to the Agency at least six months before this Permit expires, that is, no later than **March 31, 2025**.
- 8.11 Any late submission of renewal application (s) after the specified date as stated above, shall require the Permit Holder to pay, in addition to 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\$2000.00) 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.
- 8.12 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.

Signed by  on behalf of the Environmental Protection Agency.

Ms. Sharifah Razack
Executive Director (Ag.)

Date 2021 . 02 . 12

Operation Permit (Renewed) Ref. No. 20201002- FSMPW

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I hereby accept the above terms and conditions upon which this Operation Permit 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:	NARVAN SINGH
SIGNATURE:	Narvan Singh for Darryl Eiser
DESIGNATION:	Business Development Manager
DATE:	9. March 2021

