



**Environmental
Protection
Agency**

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Environmental Permit (Renewed)

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

Reference No.:	20100114 – JPHIO
Fees:	Medium (C1) i.e., US\$ 500 per year
Fees Paid	US\$ 2500 for Five (5) years (October 2024–September 2029)
Addressee (s):	Mr. Yodhia Persaud Executive Chairman GUYGAS INC. Area P&X Land of Canaan East Bank Demerara
Activity:	Operation of a Liquefied Petroleum Gas, Oxygen, Nitrogen, Carbon Dioxide and Acetylene Gases Production, Storage and Bottling Facility.

GUYGAS INC., hereinafter referred to as the “Permit Holder,” is hereby authorized 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 Liquefied Petroleum Gas, Oxygen, Nitrogen, Carbon Dioxide, and Acetylene Gases Production, Storage, and Bottling Facility located at Area P&X, Land of Canaan, East Bank Demerara, hereinafter referred to as the “Project,” in a manner indicated in the applications for Renewal of Environmental Authorisation submitted on March 4, 2024, and subject to the terms and conditions set forth herein and in any existing or forthcoming regulations, made under the said Environmental Protection Act and/or any other applicable laws, best practices, guidelines and standards relevant to this project.

This is a Renewal of the Operation Permit (Varied); Reference No. 20100114-JPHIO, issued on August 2019, which expired on July 31, 2024.

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

1.0 OPERATIONS

- 1.1 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 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 All employees and third parties under the Project's direction shall be made aware of the conditions of the Environmental Authorisation.
- 1.3 The Permit Holder shall provide training on good environmental practices.
- 1.4 An Operational and Maintenance Manual shall be established and maintained. The Manual shall address all aspects of ongoing operations, including the required maintenance and inspection schedule, loss monitoring/investigation procedures, emergency response, and requirements for review of the Manual.
- 1.5 The acetylene plant shall be equipped with an emergency shutdown system to stop all electrical machinery in an emergency.
- 1.6 Emergency spill clean-up kits shall be maintained at the Project for response to spills. Kits shall contain absorbent materials, drain seals, and other appropriate tools for clean-up and be readily available and clearly identifiable at the Project.
- 1.7 Corrosion control measures shall be implemented to prevent the corrosion of filling pipe work.
- 1.8 Vehicles shall be equipped with a first aid kit, spill control equipment, and a fire extinguisher.
- 1.9 Servicing and maintenance of vehicles shall be conducted on an impervious base to prevent fuel spills/leaks. Oil spills should be cleaned-up by the best practicable means to prevent runoff into the waterways.
- 1.10 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.

- 1.11 All firefighting equipment shall be maintained and serviced according to the Guyana Fire Service requirements.
- 1.12 Adhere to the requirements of the **Occupational Safety and Health Act, Cap. 99:01, Laws of Guyana.**

2.0 HAZARD MATERIALS MANAGEMENT

- 2.1 Adhere to the **Pesticides and Toxic Chemicals Control Act 2000.**
- 2.2 A register of the quantities of Chemicals stored at the Project shall be established and maintained. Registered information shall be maintained on-site and made available for inspection by the EPA upon request.
- 2.3 The Chemical Storage Area shall be clearly labeled with “***Danger, Hazardous Storage Area- Authorized Personnel Only***” where applicable as a spill control measure.
- 2.4 Flammable materials shall be stored away from ignition sources. ‘**No Smoking**’ signs shall be posted where these materials are handled and stored.
- 2.5 Chemicals shall be stored in accordance with the manufacturer's directions or Safety Data Sheet instructions.
- 2.6 Acetone DMF (Dimethylformamide) shall be stored in above-ground or underground storage tanks that are regularly inspected and maintained by qualified personnel.
- 2.7 Hydrated Lime storage and loading areas shall be waterproof to avoid soil and groundwater contamination.
- 2.8 Safety Data Sheets for all Chemicals shall be readily available and easily accessible at all times in Chemical Storage Areas.
- 2.9 Chemicals shall be segregated as indicated below to reduce the risk of mixed spillage and fire:
 - i. Acids separate from Bases;
 - ii. Acids separate from Flammables;
 - iii. Bases separate from Flammables;
 - iv. Oxidizers separate from Compressed Flammable Gases; and
 - v. Oxides separate from all other chemicals.
- 2.10 Chemical containers shall be clearly labelled 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; and
- vi. Product Name or Identifiers

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

2.12 Chemicals **shall not** be stored on damaged or inadequately secured racking or on damaged pallets to minimize the risk of spills.

2.13 Chemicals stored in drums and totes shall:

- a) Be protected from UV rays;
- b) Be covered to prevent exposure to dirt, dust, and moisture; and
- c) Do not hang over the side of pallets used for stacking.

2.14 Secondary containment (bund area) shall be maintained to minimize the spread/release of liquid material spillage occurring within the storage area. The secondary containment wall shall possess the following characteristics:

- i. Capacity equal to 110% of the volume of liquid stored within the largest storage container;
- ii. Walls constructed of earth, steel, concrete, or solid masonry. Cracks and seams shall be sealed to prevent leakage; and
- iii. Liners/flooring constructed of asphalt or concrete and designed to withstand foreseeable loading conditions.

2.15 All employees involved in the management of manufacturing chemicals shall be trained on Hazardous Material Communication and Emergency Preparedness Response. Training reports shall be maintained on-site and made available for inspection by the EPA upon request.

2.16 Third-party contractor(s) utilized for the transport of chemicals to and from the Facility shall be authorized by the EPA.

3.0 SANDBLASTING

3.1 The Best Available Technology (BAT) shall be implemented to contain particles during glass blasting operations to minimize the release of fugitive emissions to the environment.

3.2 Sandblasting activities shall **NOT** be conducted outdoors.

- 3.3 All sandblasting shall be conducted within the confines of an enclosed area, such as tarps, shrouds, or other structures, to minimize airborne emissions.
- 3.4 Sandblasting shall be done at least 3 meters away from open waterways.
- 3.5 Records of the total amount of sandblasting media used and any control methods employed shall be maintained. These records shall be maintained and made available for inspection by the EPA upon request.

4.0 SPRAY PAINTING

- 4.1 The Best Available Technology (BAT) shall be implemented to remove vapours during spray painting operations to minimize the release of fugitive emissions to the environment.
- 4.2 **'NO SMOKING'** signs shall be mounted at the spray-painting area to reduce the risk of fire.
- 4.3 Spray-painting activities shall **NOT** be conducted outdoors. All spray-painting activities shall be conducted within the workshop.
- 4.4 Spray painting chemicals, including paints and flammable solvents, shall be stored within secondary containment (bund area) to minimize the spread/release of spillage from the storage area.
- 4.5 Paint cans shall be tightly sealed and kept off the floor on pallets to reduce the occurrence of spills.
- 4.6 Compressed cylinders shall be stored and managed according to the supplier's recommendations. Air compressors should also be operated per the manufacturer's instructions.
- 4.7 Safety Data Sheets for paints, solvents, and other chemicals shall be readily available and easily accessible at all times at the Project site

5.0 AIR QUALITY MANAGEMENT

- 5.1 Adhere to the provisions of the **Environmental Protection (Air Quality) Regulations, 2000.**
- 5.2 Ambient air quality monitoring shall be conducted at the boundary of the property during normal operations to assess the levels of the following air pollutants in accordance with the WHO Air Quality Guidelines 2021:

No.	Air Pollutant	Averaging Time	Maximum Permissible Level	Type of Monitoring	Frequency of Monitoring
1.	Carbon Monoxide	1 h	25 ppm	Ambient	Annual
2.	Nitrogen Dioxide	1 h	0.08 ppm	Ambient	Annual
3.	Sulfur Dioxide	1 h	0.1 ppm	Ambient	Annual
4.	PM _{2.5}	24 h	15 µg/m ³	Ambient	Bi Annual
5.	PM ₁₀	24 h	45 µg/m ³	Ambient	Bi Annual

Air quality testing shall be conducted 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**.

5.3 In the event of inefficiencies that may result in visible or abnormal emissions into the air, the operator shall:

- 5.3.1 Investigate and undertake remedial action immediately;
- 5.3.2 Adjust the process or activity to minimize those emissions; and
- 5.3.3 Record the events and actions taken. This shall be submitted in the annual report.

6.0 NOISE QUALITY MANAGEMENT

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

6.2 Noise emissions shall be monitored 15 meters away from the source of noise (at the Project's boundary) annually 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)]

Noise Quality monitoring shall be conducted in accordance with the parameters listed above by trained personnel utilizing calibrated equipment. Records of each monitoring exercise shall be maintained, and results shall be submitted to the Agency as a component of the Project's **Annual Report**.

6.3 All significant noise-producing equipment, such as generators, shall be equipped with appropriate silencers or mufflers and/or 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) requirements.

- 6.4 All equipment and machinery shall be placed on a foundation properly designed to ensure effective damping of vibrations.
- 6.5 All mechanical equipment shall be maintained and operated in accordance with the manufacturer's specifications at all times to ensure that the equipment works at its optimal levels and minimizes emissions. Maintenance records shall be maintained and made available for inspection by the EPA upon request.
- 7.0 HAZARDOUS WASTE (Waste Oil, Calcium carbide containers, etc.) MANAGEMENT**
- 7.1 Adhere to the provisions of the **Environmental Protection (Hazardous Waste Management) Regulation 2000.**
- 7.2 Hazardous waste shall be stored in containers appropriate for the waste stream.
- 7.3 Hazardous waste containers shall be labelled with the following:
- i. The words "**Hazardous Waste**"
 - ii. The type of waste
 - iii. Beginning accumulation date, i.e., the date when the container was first placed in the Hazardous Waste Storage Area. Should the hazardous waste container be reused, the date hazardous waste was first placed in the container shall be recorded on the container.
- 7.4 Waste oil containers shall be labelled with the following:
- i. The words "**Waste Oil or 'Used oil.'**"
 - ii. Beginning accumulation date
- 7.5 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.
- 7.6 Calcium carbide containers, prior to disposal, shall be clearly marked and segregated from other waste.
- 7.7 Calcium carbide containers shall be washed with sufficient water to remove dust and left open for days to vent with air. The wastewater shall be disposed of in the hydrated lime pit.
- 7.8 Records shall be maintained of the number of containers washed and made available for inspection by the EPA upon request.

- 7.9 Hazardous waste storage containers shall be inspected weekly for signs of leakage, deterioration, or corrosion, and damaged containers **must be replaced immediately**. A summarised inspection report shall be compiled and made available for inspection by the EPA upon request.
- 7.10 Hazardous waste shall be treated and/or disposed of by an EPA-authorised Hazardous Waste Disposal Facility.
- 7.11 The Project shall retain a signed copy of the **Waste Manifest Form** submitted by the Hazardous Waste Transporter for a period of three years. The copies shall be maintained on-site, and an annual summary of these records shall be submitted to the EPA as a component of the **Annual Report**.

8.0 WATER QUALITY

- 8.1 Adhere to the provisions of the **Environmental Protection (Water Quality) Regulations, 2000**.
- 8.2 The direct discharge of untreated effluent into the environment is **strictly prohibited**.
- 8.3 The project shall maintain the integrity of the existing waterways at all times. Discharges into the environment should 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 the general environment and should not be exceeded:

Parameter	Daily Maximum Concentration	Units	Frequency
pH	(pH 5.0-9.0)		Annually
Temperature	<40	°C	Annually
Biological Oxygen Demand (BOD)	<50	mg/L	Annually
Chemical Oxygen Demand (COD)	< 250	mg/L	Annually
Total Nitrogen (TN)	<10	mg/L	Annually
Total Phosphorus (TP)	<2	mg/L	Annually
Total Suspended Solid (TSS)	<50	mg/L	Annually

Oil and Grease	<10	mg/L	Annually
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Water Quality Monitoring shall be conducted **annually** at the approved sampling point/s, 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**.

9.0 WASTE MANAGEMENT

- 9.1 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.
- 9.2 Burning of solid waste is **strictly prohibited**. All solid waste shall be disposed of, by an EPA-authorized waste disposal company, at an approved Solid Waste Disposal Site.
- 9.3 Good housekeeping, sanitary, and hygienic practices shall be maintained at all times. The facility surroundings shall be kept free of vegetation and litter.
- 9.4 Promote waste minimisation by the appropriate disposal and/or reuse of scrap materials, gas cylinders, and other suitable materials where practical.
- 9.5 Septic Tank(s) shall be constructed and maintained in accordance with Guyana National Bureau of Standards Code of Practice for the Design and Construction of Septic Tanks and Associated Secondary Treatment and Disposal Systems.
- 9.6 Septic Tank(s) shall at all times be accessible for cleaning and de-sludging by an EPA-authorized waste disposal company.
- 9.7 Any modification to the Septic Tank(s) must be in accordance with the Guyana National Bureau of Standards (GNBS) Code of Practice for the Design and Construction of Septic Tanks and Associated Secondary Treatment and Disposal Systems.

10.0 COMPLIANCE MONITORING AND REPORTING

- 10.1 Notify the Environmental Protection Agency within one (1) hour of the discovery of the occurrence of environmental emergencies (e.g., oil spills, hazardous materials/wastes spill, 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). Notification, as prescribed by Section 19(3)(a) of the Environmental Protection Act, shall be submitted to the EPA within twenty-four (24) hours of the discovery of the incident occurring.
- 10.2 The Company shall respond to all environmental emergencies (e.g., chemical spills, fires, etc.) in accordance with the **Emergency Response Plan (ERP)** submitted to the EPA.
- 10.3 Monitor the implementation of the conditions of this Permit insofar as they involve adherence by your employees and all third parties under your direction.
- 10.4 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.
- 10.5 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.
- 10.6 Maintain and submit to the Agency records of the type, composition, and quantity of contaminant released (i.e., any solid, liquid, gas, odour, sound, vibration, radiation, heat or combination of any of them).
- 10.7 Submit an **Annual Report** to the EPA on your compliance with this Permit on or before **March 31 each year**.
- 10.8 Report to the Agency any non-compliance(s) with the Environmental Permit (Renewed):
- i. Within **twenty-four (24) hours** of the time, the Holder of the Environmental Permit (Modified) becomes aware of the non-compliance outlining the anticipated manner in which human health or the environment may be impacted.
 - ii. Within **seventy-two (72) hours** of the time the Holder of the Environmental Permit (Modified) becomes aware of the non-compliance, submit to the Agency a written report containing a description of the non-compliance, its cause, the period of non-compliance, including exact dates and time and the anticipated time it is expected to continue if the non-compliance(s) has not been corrected.
- 10.9 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.
- 10.10 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 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, 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 activities as part of its monitoring and enforcement requirements under the Environmental Protection Act, Cap 20:05, 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. Pursuant to Section 38 of the Environmental Protection Act, Cap. 20:05, Laws of Guyana, it is an offense to assault, obstruct, or hinder an authorized 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 is not the final consent; all relevant Permits should be obtained from other regulatory bodies for continued operation.**
- 11.14 This Environmental Permit (Renewed) is effective for the period stipulated herein: **October 2024 to September 2029.**
- 11.15 This Environmental Permit (Renewed) shall remain valid until **September 30, 2029**, unless otherwise suspended, canceled, 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.

- 11.16 This Permit Shall be renewed by submitting a completed Renewal Application Form for Environmental Authorisation to the Agency at least six months before this Permit expires, that is, no later than **March 31, 2029**.
- 11.17 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 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 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.
- 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



Date

2024.10.14

Environmental Permit (Renewed) - Ref. No. 20100114-JPHIO
(Issued under the Environmental Protection Act, Cap. 20:05, Laws of Guyana, the Environmental Protection (Amendment) Act, 2005, and Environmental Protection Regulations, 2000)

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, 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:	Natasha Persaud
DESIGNATION:	Director
SIGNATURE:	Natasha Persaud
DATE:	2024 / 10 / 23

