



**Environmental
Protection
Agency**

Ganges Street, Sophia,
Georgetown, GUYANA
Tel.: (592) 225-0506
Fax: (592) 225-5481
Email: epa@epaguyana.org
Website: <http://www.epaguyana.org>

Environmental 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.:	20190513-UESPD
Fee:	Medium (C2) i.e., US\$ 800 per year
Fee Paid:	US\$ 4000 for Five (5) years (November 2021 – October 2026)
Addressee:	Guyana Sugar Corporation Inc. (GUYSUCO) Uitvlugt Estate Compound Uitvlugt, West Coast Demerara
Activities:	Operation of Sugar Manufacturing Facility, Workshop, Storage of Agro-chemicals and Fuel (Diesel).

Guyana Sugar Corporation Inc. (GUYSUCO), hereinafter referred to as the “Permit Holder”, is hereby authorised in accordance with the Environmental Protection Act, Cap. 20:05, Laws of Guyana, the Environmental Protection (Amendment) Act, 2005, and the Environmental Protection (Authorisations) Regulations, 2000, to operate a Sugar Manufacturing Facility, Work-shop, Storage of Agro-chemicals and Fuel (Diesel) located at Uitvlugt Estate Compound, Uitvlugt, West Coast Demerara, hereinafter referred to as the “Project”, in the manner indicated in the Application submitted on May 13, 2019, and subject to the terms and conditions set forth herein and any other existing or forthcoming regulations made under the said Environmental Protection Act and/or standards relevant to this project.

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

1.0 SUGAR MANUFACTURING

- 1.1 Adhere to the requirements of the Occupational Safety and Health Act, Cap. 99:01, Laws of Guyana
- 1.2 Make an application to the Agency to vary this Permit in instances where it becomes necessary to:
 - i. change the construction, operation, structure, or layout of the facility and all associated buildings;
 - ii. change equipment, machine, apparatus, mechanism, system or technology serving the facility;
 - iii. change the position and design of any outlet at the point or points of discharge

RF

- of effluents; or
- iv. Effect any other change outlined in 20(3) of the Environmental Protection (Authorisations) Regulations.

- 1.3 An Operation Manual shall be developed and implemented. The manual shall address all aspects of the on-going operation, including the required maintenance and inspection (should be done in accordance with manufacturer specification); monitoring /investigation procedures; emergency response; safe transfer operations (from one container to the next); maintenance of containers; and filling of storage containers.
- 1.4 The Operation Manual shall be submitted to the EPA for review and approval by **January 31, 2022.**
- 1.5 An automated system shall be established and maintained to support the manual shut off switch at the Sugar Manufacturing Facility.
- 1.6 All electrical equipment shall be grounded and explosion-proof.
- 1.7 Make all employees, and third parties under your direction, aware of the conditions of this Environmental Permit and provide training on environmental practices.

2.0 AIR QUALITY AND NOISE MANAGEMENT

- 2.1 Adhere to the provisions of the Environmental Protection (Air Quality and Noise Management) Regulations, 2000
- 2.2 The **Best Available Technologies or measures** shall be used to improve boiler technology to reduce carbon monoxide (CO) emissions from the Project.
- 2.3 Conveyors shall be enclosed with well designed, extraction and filtration equipment to prevent the emission of Particulate Matter.
- 2.4 Conduct visual monitoring to determine the opacity of the emissions being released. Immediately respond to visible (opaque, grey to black) emissions that exceed six (6) minutes. Record the date and time of the incident and actions taken to resolve said air pollution episode. All records should be available to the Agency upon request.
- 2.5 Monitor ambient air quality at the boundary of the property to assess compliance with the requisite standards below:

No.	Air Pollutant	Averaging Time	Maximum Permissible Level	Type of Monitoring	Frequency of Monitoring
1.	Carbon Monoxide	1 h	35ppm	Ambient	Annual
2.	Nitrogen Dioxide	1 h	200µg/m ³	Ambient	Annual
3.	Sulphur Dioxide	24 h	20 µg/m ³	Ambient	Annual
4.	PM _{2.5}	24	25 µg/m ³	Ambient	Bi Annual
5.	PM ₁₀	24h	50µg/m ³	Ambient	Bi Annual

Monitoring shall be conducted during normal operations (determined by the Permit Holder and approved by the EPA) by trained personnel utilizing calibrated equipment. Results of all monitoring exercises shall be maintained and submitted in the **Annual Report**

- 2.6 Monitor stack emissions of all boilers older than five (5) years at least once during the life of the Permit to determine compliance with the requisite standards outlined below:

No.	Air Pollutant	Averaging Time	Maximum Permissible Level
6.	Carbon Monoxide	1000mg/m ³	Stack
7.	Oxides of Nitrogen	350mg/m ³	Stack
8.	Sulphuric Trioxide	100mg/m ³	Stack
9.	Particulate Matter	100mg/m ³	Stack

- 2.7 Stack emission testing and analysis shall be conducted by qualified personnel using calibrated equipment and US EPA Approved Methods.
- 2.8 The results from the monitoring exercises inclusive of the GPS point(s) of each monitoring location shall be submitted as a component of the project's **Annual Report**.
- 2.9 The calibration certificates of the equipment used for monitoring shall be submitted to the EPA as a component of the project's **Annual Report**.
- 2.10 The **Best Available Technologies or measures**; e.g., silencers, mufflers, enclosures or other appropriate devices, shall be utilized to mitigate adverse noise impacts from heavy machinery on the environment.
- 2.11 Noise emissions from the operation shall be monitored at the property boundary to determine compliance with the Guyana National Bureau of Standards (GNBS) Guidelines for Noise Emission into the Environment, not exceeding the industrial limits listed below:

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

- 2.12 Monitoring (determined by the Permit Holder and approved by the EPA) shall be conducted by trained personnel using calibrated Type 2 Sound Level Meters. Records of all monitoring exercises should be maintained and submitted as part of the **Annual Report**
- 2.13 All equipment and machinery shall be placed upon foundations properly designed to ensure effective damping of vibrations.
- 2.14 Idling of machinery, equipment or vehicles shall be limited, as far as practical and all equipment or vehicles switched off when not in use.
- 2.15 In the event of equipment malfunction or **inefficiencies** which may result in visible emissions to air or, in the event of the malfunction leads to abnormal emissions, the operator shall:
- investigate and undertake remedial actions **immediately**;
 - adjust the process or activity to minimize those emissions; and
 - record the events and actions taken. This shall be submitted as a component of the Annual Report.
- 2.16 Equipment, machinery and generator shall be serviced in accordance with manufacturer's specification to ensure efficiency and reduce the level of noise and air emissions produced. A summarised maintenance report shall be submitted to the Agency as a component of the **Annual Report**.
- 3.0 STORAGE OF AGRO-CHEMICALS (Herbicides), GREASE AND LUBE OIL**
- 3.1 Emergency spill clean-up kits shall be maintained at the Project for response to spills. Kits must contain absorbent materials, drain seals and other appropriate tools for clean-up. Kits must be readily available and clearly identified at the Project.
- 3.2 Guyana Fire Service Approval shall be maintained annually and shall be submitted to the Agency as a component of the Annual Report.
- 3.3 Fire prevention and control equipment shall be maintained in accordance with this Guyana Fire Service Approval.
- 3.4 Storage Areas shall be clearly labeled "Danger: Hazardous Chemicals Storage Area-Authorized Personnel Only" where applicable.
- 3.5 Flammable materials shall be stored away from ignition sources. '**No Smoking**' signs shall be posted where these materials are handled and stored.
- 3.6 Chemicals shall not be stored in direct sunlight or near localized heat source.
- 3.7 Secondary containment (bunded area) shall be established and maintained around

storage areas of all liquid chemicals. The secondary containment (bund area) shall possess 110% of the volume of liquid stored within the largest storage container and walls shall be constructed of impermeable materials.

- 3.8 Agro-chemicals, grease and lube oils shall be stored in accordance with the manufacturer's directions or Safety Data Sheet (SDS) instructions.
- 3.9 Safety Data Sheets shall be readily available and easily accessible to all employees at all times.
- 3.10 Agro-chemicals, grease and lube oils shall be stored away from non-hazardous materials.
- 3.11 Agro-chemicals, grease and lube oils shall be segregated according to the following compatibility to reduce the risk from mixed spillages or fire:
- i. Acids separate from Flammables;
 - ii. Bases separate from Flammables;
 - iii. Oxidizers separate from Compressed Flammable Gases;
 - iv. Corrosives separate from Flammables;
 - v. Oxides separate from all other chemicals;
 - vi. Organic reactives separate from inorganic reactives (metals); and
 - vii. Any other stipulated standards for storage or segregation of chemicals.
- 3.12 Chemical storage containers shall be clearly labelled and maintained in accordance with the Globally Harmonized System for 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
- 3.13 Storage containers shall be inspected for signs of leakage or corrosion and damaged containers **shall be replaced immediately**. Inspection reports shall be maintained and signed by the appropriately qualified inspecting officer and his/her supervisor.
- 3.14 Container inspection reports shall be summarised and submitted to the Agency as part of the **Annual Report**.
- 3.15 Chemicals **shall not** be stored on damaged, or inadequately secured racking or on damaged pallets.

- 3.16 A register of the quantities of Agro-chemicals, grease and lube oils stored at the Project shall be established and maintained. A summary of the registered information shall be submitted to the Agency as part of the **Annual Report**.

4.0 FUEL HANDLING AND STORAGE

Adopt and comply with the National SOP "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.

- 4.1 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.

Secondary Containment

- 4.2 Existing secondary containment around the fuel tanks shall be inspected for cracks and breakage to ensure they are liquid tight to withstand hydrostatic pressure of any contained liquid when full. A summarized inspection report shall be submitted to the EPA as a component of the **Annual Report**.
- 4.3 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.
- 4.4 The base of the secondary containment of the fuel storage facility shall be of impervious material.

Fuel and Pipeline Tank Maintenance

- 4.5 Fuel storage tanks shall be visually inspected to verify their integrity. A summarised inspection report shall be compiled and submitted to the EPA as part of the **Annual Report**.
- 4.6 Protection measures for fuel storage tanks such as painting and coating shall be maintained to minimise corrosion of fuel tanks.
- 4.7 Maintenance and/ or repair of fittings, pipes and hoses shall be in accordance with manufacturer's specifications. A summarised inspection report shall be compiled and submitted to the EPA as part of the **Annual Report**.

Overfill Protection & Leak Detection

- 4.8 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.

- 4.9 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 bund.

Fuel Transfer

- 4.10 The Best Available Technology/ Technique (BAT) shall be employed to capture fuel lost during the unloading of fuel to storage tanks and refueling of equipment.
- 4.11 Secondary containment, drip trays or other overflow and drip containment measures shall be installed and maintained at connection points or other possible overflow points.
- 4.12 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 by **January 31, 2022**.
- 4.13 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**.

5.0 WATER QUALITY MANAGEMENT

- 5.1 Adhere to the provisions of the **Environmental Protection (Water Quality) Regulations, 2000**.
- 5.2 Untreated effluent discharge from the Project into the surrounding environment is **strictly prohibited**.
- 5.3 Spills occurring during handling and loading of hydrocarbon materials and fuel, **shall be** immediately cleaned and disposed (as guided by the respective Safety Data Sheet) at an EPA authorized disposal facility.
- 5.4 Oil water separators shall be maintained at the final discharge point of fuel storage facilities and workshops.
- 5.5 Pipes from the fuel storage pump shall discharge directly into the oil- water separator.
- 5.6 Effluent discharge from the Project 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:

Table 1: Parameter and limits for water quality assessments at the point sources.

Parameter	Daily Maximum Concentration	Units
1. pH	5.0 – 9.0	
2. Temperature	<40	°C
3. Chemical Oxygen Demand (COD)	<250	mg/L
4. Total Suspended Solids (TSS)	<100	mg/L
5. Biological Oxygen Demand (BOD)	<100	mg/L
6. Ammonical Nitrogen (as NH ₃ -N)	<50	mg/L
7. Oil & Grease	<10	mg/L
8. Total Phosphorus	<2	mg/L

Monitoring shall be conducted on a regular basis (**determined by the Permit Holder and approved by the EPA**) by trained personnel using calibrated equipment. Records of all monitoring exercises shall be maintained and submitted as part of the **Annual Report**.

6.0 WASTE MANAGEMENT

- 6.1 In accordance with 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 base at strategic locations, both within and outside facility.
- 6.2 Bagasse (husk) generated from the manufacturing of sugar shall be re-used to fuel the boilers.
- 6.3 Bagasse shall be stored in a fully enclosed area so as to not be susceptible to wind erosion.

7.0 HAZARDOUS WASTES (WASTE OIL) MANAGEMENT.

- 7.1 Adhere to the provisions of the **Environmental Protection (Hazardous Waste Management) Regulations 2000**. Waste oil shall be stored in sealed metal

containers, appropriate for the waste stream.

- 7.2 Waste oil containers shall be labelled with the following:
1. The words “**Waste Oil or “Used oil”**”; and
 2. Beginning accumulation date.
- 7.3 Waste oil 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; and
 - iv. Secondary containment capable of containing 110% of the largest volume therein.
- 7.4 Hazardous waste shall be treated and/ or disposed by an EPA authorised hazardous waste treatment/disposal facility.
- 7.5 A register shall be maintained and available during each transportation of waste. The registered information must contain the following:
- i. The name and address of the generator;
 - ii. The name, description and hazard class of the waste;
 - iii. The number and type of containers;
 - iv. The quantity of waste being transported and collected; and
 - v. The name and address of the facility designated to receive the waste
- 7.6 Subsequent to each transportation of hazardous waste, the register or manifest referred to in **Condition 5.5** shall be submitted to the EPA via email at: industry@epaguyana.org.
- 7.7 An incident spill report shall document **EVERY** occurrence of spills during collection and/or transportation of hazardous waste. A copy of the spill report shall be submitted to the Agency **within twenty-four (24) hours of the incident**.
- 7.8 A Notification and Clean-up Plan for the Project shall be submitted by **June 30, 2022**. The plan shall include, but not be limited to, the location of all materials stored and a notification and clean-up plan for each proposed site of operation in the event of a spill.
- 8.0 COMPLIANCE MONITORING AND REPORTING**
- 8.1 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).

- 8.2 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 limited to Employees working in confined spaces and prolonged noisy areas.
- 8.3 Monitor the implementation of the conditions of this Permit, insofar as they involve adherence by your employees and all third parties under your direction.
- 8.4 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.
- 8.5 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.
- 8.6 Submit Annual Reports to the EPA on your compliance with this Environmental Permit on or before **March 31** each year.
- 8.7 Report to the Agency any non-compliance(s) with the Environmental Permit:
- A. Within **twenty-four (24) hours** of the time the Holder of the Environmental Permit becomes aware of the non-compliance outlining the anticipated manner in which human health or the environment may be impacted.
 - B. Within **seventy-two (72) hours** of the time the Holder of the Environmental Permit 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
- 8.8 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.
- 8.9 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.
- 9.0 INSTITUTIONAL AUTHORITY/ LIABILITIES**
- 9.1 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.

- 9.2 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.
- 9.3 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.
- 9.4 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.
- 9.5 The Permit Holder shall be liable to compensate any person who suffers any loss or damage as a result of contravening conditions 7.3 and 7.4 of this Environmental Permit, pursuant to s. 19 of the Environmental Protection Act, Cap. 20:05, Laws of Guyana.
- 9.6 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, 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.
- 9.7 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.
- 9.8 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.
- 9.9 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.
- 9.10 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.

- 9.11 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 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.
- 9.12 The EPA has the right to modify, cancel or suspend this Permit for breach of any of the terms and conditions contained herein.
- 9.13 This Environmental Permit is not the final consent; all relevant Permissions should be obtained from other regulatory bodies for continued operation.
- 9.14 This Environmental Permit is valid for the period stipulated herein **November, 2021 to October, 2026.**
- 9.15 This Environmental Permit shall remain valid until **October 31, 2026**, 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, the 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 **April 30, 2026.**
- 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 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.
- 9.18 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.

Environmental Permit-Ref: 20190513-UESPD
Issued under the Environmental Protection Act, Cap. 20:05, Environmental Protection
(Amendment) Act, 2005, and the Environmental Protection (Authorisations)
Regulations, 2000.

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

Date 2021.11.11

I hereby accept the above terms and conditions upon which this Environmental 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 forthcoming regulations, guidelines, best practices and standards made under this Act.

NAME	<i>Randy Fuchs</i>
DESIGNATION	<i>Quality Assurance Officer</i>
SIGNATURE	<i>R. Fuchs</i>
DATE	<i>2022-02-08</i>

