



**Environmental  
Protection  
Agency**

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## **Environmental Permit (Renewed & Modified)**

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

Reference No.:	20210426 - EMASC
Fee:	Medium (C3) i.e., US\$1100 per year
Fees Paid:	US\$ 1100 for One (1) Year (April 2025 – March 2026)

Addressee(s): Mr. Ershad Mahamad  
Vice President/Chief Pilot  
GUYDRONES  
Lot 13, Area G  
Ogle  
East Coast Demerara

### **Activity: Aerial Application of Fertilizers, Pesticides, Herbicides, and Seeds.**

GUYDRONES, 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, for the operation of Aerial Spraying using ten(10) Drones within Regions 3, 4, 5 & 6 and stored at Lot 13, Area G Ogle, East Coast Demerara hereinafter referred to as the "Project", in a manner indicated in the Application for Renewal of Environmental Authorisation submitted on September 17, 2024, and subject to the terms and conditions set forth herein under the Environmental Protection Act, existing and/or forthcoming regulations made under the said Act, and/or guidelines, best practices and standards relevant to this project.

This is a Renewal and Modification of Environmental Permit (Renewed and Modified), Reference No. 20210426-EMASC issued on December 19, 2023, and 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 OPERATION**

- 1.1 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 of effluents; or
  - iv. effect any other change outlined in 20(3) of the Environmental Protection (Authorisations) Regulations.
- 1.2 Obtain approval from the Ministry of Agriculture, NAREI for the use and dispersal of genetically modified seeds and submit approval to the EPA.
- 1.3 Obtain approval for the use and management of toxic chemicals from the Pesticide and Toxic Chemical Control Board. A copy of the Approval shall be submitted to the EPA upon receipt.
- 1.4 Detailed records of each application must be maintained, including the type and quantity of chemicals used, location, weather conditions, and operator details. Information such as:
- a. Starting date, time, location, GPS coordinates, and contact information for field operator(s).
  - b. A detailed map of the location clearly displaying:
    - i. The Spray area
    - i. Buffer Zones
    - ii. The designated emergency dumping location
    - iii. Non-target farmers' plots, housing areas, pastures, roadways, waterways, aquaculture, forested areas, or any other operation where human activities are taking place.
    - iv. List of all chemicals and materials to be applied, the rate of application, quantities to be applied, and an appropriate anti-drift.
- 1.5 Operator(s) shall be trained by a credibly recognized authority (PTCCB) on the safe use and handling of pesticides and fertilizers. Training certificates and schedules to be provided to the Agency upon request.
- 1.6 Aerial applications must only be conducted during suitable weather conditions, avoiding high winds, extreme heat, or heavy rainfall to minimize drift and environmental contamination.



- 1.7 Maintain fire protection measures as determined by Guyana Civil Aviation Authority (GCAA) for drones such as fire extinguishers in accordance with Guyana Civil Aviation (Air Navigation) Regulations, 2001, and amendments. Ensure all firefighting equipment is maintained and serviced regularly.
- 1.8 **Drones must be calibrated to ensure minimal drift and precise application, reducing airborne pesticide and fertilizer dispersal.**
- 1.9 **The use of volatile or highly toxic chemicals that pose a significant risk to air quality must be strictly controlled.**
- 1.10 Maintain Drones according to Guyana Civil Aviation Authority (GCAA) approval certification as it relates to spill prevention for fertilizers, pesticides, and seeds from the aircraft.
- 1.11 Emergency spill clean-up kits shall be maintained and made readily available at the Project location. Kits should include absorbent materials, drain seals, and other appropriate tools for clean-up.
- 1.12 The Operation and Maintenance Manual shall be maintained on-site at all times.
- 1.13 The Permit Holder shall provide training on good environmental practices. Records of training conducted must be made available to the EPA upon request.
- 1.14 Fire prevention and control equipment shall be maintained in accordance with **Guyana Fire Service Approval.**
- 1.15 Adhere to the requirements of the **Occupational Safety and Health Act, Cap. 99:01, Laws of Guyana.**
- 1.16 Adhere to the **Pesticides & Toxic Chemicals Control Board Guidelines for Aerial Application of Pesticides, Guyana, 2016.**

## **2.0 AIR QUALITY MANAGEMENT (Aerial drift and over-spraying)**

- 2.1 Adhere to the provisions of the **Environmental Protection (Air Quality) Regulations, 2000.**
- 2.2 Members of the public and surrounding communities shall be notified at **least three (3) days** prior to the aerial application. Records of such notifications are to be submitted to the Agency as a part of the **Annual Report.**
- 2.3 The buffer zone for the aerial application of Pesticides shall be in accordance with the World Health Organisation (WHO) minimum buffer zone requirements see below:



**Table 1.1 Illustrating the buffer zone Requirements**

<b>World Health Organisation Pesticide Toxicity Class</b>	<b>Colour Codes</b>	<b>Minimum Buffer Zone (meter)</b>
1a-Extremely Hazardous	Red	Aerial Application Prohibited
1b- Highly Hazardous	Red	Aerial Application Prohibited
II-Moderately Hazardous	Yellow	1600 m
III- Slightly Hazardous	Blue	900 m
IV/U- Unlikely to present acute hazard	Green	2

- 2.4 Pesticides, Herbicides and fertilizers **shall not** be dispensed from the Drones under the conditions listed below, including but not limited to wind speed; direction, humidity, temperature inversion, and lapse as well as volatility:
- i. Whereby the applied pesticides and fertilizers would drift outside of the target area to be treated and cause or create a hazard; resulting in pesticides and fertilizers overspray.
  - ii. which adversely affects humans or the non-target environment;

### **3.0 WATER QUALITY**

- 3.1 Adhere to the provisions of the **Environmental Protection (Water Quality) Regulations, 2000.**
- 3.2 The aerial application of Pesticides, Herbicides, and Fertilizers into waterways adjacent to the required buffer zone is **STRICTLY PROHIBITED.**
- 3.3 Decontamination of equipment shall be conducted within the designated area namely, the Agricultural Aircraft Washing Bay, GUYSUCO Aircraft Department at Eugene F. Correia International Airport.
- 3.4 The effluent generated by the designated area (collection pond) shall be treated and tested prior to discharge into the environment. Testing shall be in accordance with the Guyana National Bureau of Standards (GNBS) *Interim Guidelines for Industrial Effluent Discharge into the Environment and shall not exceed the limits below:*

<b>Parameter</b>	<b>Daily Maximum Concentration</b>	<b>Units</b>	<b>Sample type</b>
pH	(pH 5.0-9.0)		Grab
Temperature	<40	°C	Grab
Total Suspended Solids	< 50	mg/L	Composite



(TSS)			
Oil and Grease	< 10	mg/L	Composite
Biochemical Oxygen Demand (BOD)	< 50	mg/L	Composite
Chemical Oxygen Demand	>250	mg/L	Grab
Phosphorus	<2	Mg/L	Grab

The following information from the above testing shall be recorded and submitted cumulatively as a component of the project's **Annual Report**:

- i. The laboratory certificate;
- ii. Training certificate for individual(s) who performed the sampling;
- iii. Certificate of calibration for the equipment used;
- iv. The exact place, date, and time of sampling;
- v. The analysis of the results of the monitoring conducted;
- vi. Copies of original laboratory analytical reports.

3.5 GPS Coordinates for this final discharge point(s) shall be submitted to the **EPA annually within the Environmental Annual Report**.

#### **4.0 WASTE MANAGEMENT**

- 4.1 Adhere to the provisions of the **Environmental Protection (Litter Enforcement) Regulations, 2013**, where applicable.
- 4.2 Burning of waste is **strictly prohibited**. All solid waste shall be disposed of at an approved solid waste disposal site by an EPA Authorised Waste Disposal Company.
- 4.3 Good housekeeping, sanitary, and hygienic practices shall be maintained at all times. The Project's drains and surroundings shall be kept free of vegetation and litter.
- 4.4 Solid waste receptacles shall be secured when not in use.
- 4.5 Promote waste minimization and the reuse and/or recycling of waste and other materials where practical.
- 4.6 Waste collection areas shall be kept clean. Dry methods shall be used when cleaning waste handling and disposal areas (e.g., sweeping, use of absorbents).



- 4.7 Acid-contaminated waste shall be disposed of by an EPA-authorized Hazardous Waste Disposal Facility where applicable.
- 4.8 Septic Tank(s) shall be maintained in accordance with the Guyana National Bureau of Standards *Code of Practice for the Design and Construction of Septic Tanks and Associated Secondary Treatment and Disposal Systems*:
- i) The septic tank shall not be located within 1.5 meters of a building or property boundary;
  - ii) septic tanks shall be installed with a sand and charcoal filter bed, or other appropriate design for further treatment; and
  - iii) shall be accessible for cleaning and de-sludging.
- 4.9 Any modification to the Septic tank shall be in accordance with the Guyana National Bureau of Standards (GNBS) *Code of Practice for the Design and Construction of Septic Tanks and Associated Secondary Treatment and Disposal Systems*.
- 4.10 The disposal of bulk liquid waste at any Landfill is **STRICTLY** prohibited. Liquid waste is waste that;
- i. Has a solids content of less than 20% and liberates free liquids when transported and or stored; or
  - ii. Does not produce free liquids when tested in accordance with the US EPA Paint Filter Liquids Test and liberates no free liquids when transported.

## **5.0 ENVIRONMENTAL EMERGENCY RESPONSE MANAGEMENT**

- 5.1 The Project shall be equipped with the following:
- i. An internal communications or alarm system capable of providing immediate emergency instruction to facility personnel.
  - ii. Portable fire extinguishers, fire control equipment (including special extinguishing equipment, such as that using foam, inert gas, or dry chemicals), spill control equipment, and decontamination equipment.
  - iii. Water at adequate volume and pressure to supply water hose streams, foam-producing equipment, automatic sprinklers, or water spray systems.
- 5.2 Standard Operating Procedures (SOPS) shall be maintained for inspecting and maintaining safety and emergency equipment, security devices, and operating and structural equipment that are important to preventing, detecting, or responding to environmental or human health hazards.
- 5.3 Aisle space shall be maintained at the Project to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of the facility in an emergency.

- 5.4 A Contingency Procedure/Plan shall be established and maintained for the Project. The Procedure shall include, but not be limited to:
- i. Procedures to be followed in the event of Plant malfunction.
  - ii. The actions facility personnel must take to respond to fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water at the facility.
  - iii. Systems for notification of national and local emergency response authorities
  - iv. The names and contact information of all persons qualified to act as emergency coordinators.
  - v. A list of all emergency equipment at the facility (such as fire extinguishing systems, spill control equipment, communications and alarm systems (internal and external), and decontamination equipment), where this equipment is required.
  - vi. An evacuation plan for facility personnel where there is a possibility that evacuation could be necessary. This plan must describe signal(s) to be used to begin evacuation, evacuation routes, and alternate evacuation routes (in cases where the primary routes could be blocked by releases of hazardous waste or fires).
- 5.5 All employees shall be trained on the Contingency Plan outlined in condition 5.4.

## **6.0 COMPLIANCE MONITORING AND REPORTING**

- 6.1 Comply with any lawful directions given by the EPA from time-to-time in furtherance of the implementation of any international or other obligation for the environmental protection of Guyana.
- 6.2 Monitor the implementation of the conditions of this Environmental Permit (Renewed and Modified), insofar as they involve adherence by your employees and all third parties under your direction.
- 6.3 Submit to the EPA, the **Environmental Annual Reports** on the status of the project, progress of the implementation of the monitoring activities and compliance with the conditions contained herein by **March 31** every year (Please see attached, the *Guidelines for the preparation of Environmental Annual Reports*).
- 6.4 Conform to all terms and conditions under which this Environmental Permit (Renewed and Modified) is granted and shall be liable for any loss or damage which arises from the project as a result of the Permit Holder's activities or breach of any term or condition of this Permit.



- 6.5 Inform the Agency prior to or **within thirty (30) days** of any change of name or ownership of the operation.
- 6.6 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.
- 6.7 Notify the EPA **within one (1) hour** of the occurrence of any environmental emergencies such as a sudden onset disaster, accident, natural, technological or human induced factors that cause or threaten to cause severe environmental damage as well as harm to human health or livelihood.
- 6.8 Report to the Agency any non-compliance(s) with this Environmental Permit (Renewed and Modified) within twenty-four (24) hours of the time the Holder of the Environmental Permit (Renewed and Modified) becomes aware of the non-compliance outlining the anticipated manner in which human health or the environment may be impacted.
- 6.9 Within seventy-two (72) hours of the time the Holder of the Environmental Permit (Renewed and 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.

## **7.0 INSTITUTIONAL AUTHORITY/LIABILITIES**

- 7.1 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.
- 7.2 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.
- 7.3 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 (Renewed and Modified), pursuant to s. 19 of the Environmental Protection Act, Cap. 20:05, Laws of Guyana.
- 7.4 The Permit Holder shall be liable to compensate any person who suffers any loss or damage as a result of contravening conditions 7.2 and 7.3 of this Environmental Permit (Renewed and Modified) pursuant to s. 19 of the Environmental Protection Act, Cap. 20:05, Laws of Guyana.





- 7.5 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.
- 7.6 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.
- 7.7 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.
- 7.8 The EPA reserves the right to enter at any time the permitted facility and 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.
- 7.9 The EPA has the right to modify, cancel or suspend this Permit for breach of any of the terms and conditions contained herein.
- 7.10 **This Environmental Permit (Renewed and Modified) is not the final consent; all relevant Permissions should be obtained from other regulatory bodies for continued operation.**
- 7.11 This Environmental Permit (Renewed and Modified) is effective for the period stipulated herein; **April, 2025 to March, 2026.**
- 7.12 This Environmental Permit (Renewed and Modified) shall remain valid until **March 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, Environmental Protection (Amendment) Act, 2005, and the Environmental Protection (Authorisations) Regulations, 2000.
- 7.13 This Permit(varied) 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 **October 31, 2025.**
- 7.14 Any late submission of renewal application after the specified date as stated above, the Agency 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,**

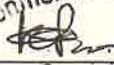



**Environmental Permit (Renewed and Modified)-Ref. No 20210426-EMASC**

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until such renewal application is submitted to the Agency, without prejudice to any other rights of the Permit Holder in connection therewith.

- 7.15 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.**  
Executive Director

Date 16 - 4 - 2025

I hereby accept the above terms and conditions upon which this Environmental Permit (Renewed and Modified) 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:	<u>ERSHAD ALFAHMAN</u>
DESIGNATION:	<u>VICE PRESIDENT / CHIEF PILOT.</u>
SIGNATURE:	
DATE:	<u>25th APRIL 2025</u>





# Environmental Protection Agency

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Date:

No. 30867

Received From:

Two hundred thirty one thousand three hundred and ninety five dollars and ninety five cents

The Sum of Two hundred thirty one thousand three hundred and ninety five dollars and ninety five cents

25 APR 2025

For:

FINANCE DIVISION

Cash Cheques Wire Transfer

PAID

Balance due Amt. \$

Signature:

[Signature]

