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 the Environmental Protection (Authorisations) Regulations, 2000

Reference No.:	**20140506-TTTUL**
Fee:	**Large (C2)- US$2,000 per year**
Total Fee:	**US$ 4,000 for Two (2) years (August 2023- July 2025)**
Addressee:	**Environmental and Technical Solutions Inc.** **Mr. Shane Singh** **General Manager** **Guyana Shore Base Inc. (GYSBI) Port,** **Houston,** **East Bank Demerara**
Activity:	**Hazardous Waste Storage and Treatment Facility**

Environmental and Technical Solutions 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 the Hazardous Waste Storage and Treatment Facility at GYSBI Port, Houston, East Bank Demerara, hereinafter referred to as the "Project", in the manner indicated in the initial application submitted on May 06, 2014, the Variance Application submitted on November 15, 2022, and the Environmental Assessment Management Plan submitted on September 14, 2022, subject to the terms and conditions set forth herein under the Environmental Protection Act, Cap. 20:05, Laws of Guyana, any existing or forthcoming Regulations made under the said Act, and any existing or forthcoming written law, guidelines, best practices, standards, codes of practice, and other statutory or regulatory instruments relevant to this project.

This is a Renewal of the Environmental Permit, Reference No.: 20140506-TTTUL, issued on April 27, 2023, and expires on July 31, 2023.

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

1.0 AUTHORISATION

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 The Project shall operate in accordance with the Environmental Assessment and Management Plan (EAMP) submitted to the EPA on September 14, 2022.

1.3 Operation, inspection, maintenance, and repair of ALL Treatment Equipment, shall be in accordance with their respective manufacturer's specifications. A summarised copy of the inspection and maintenance report shall be made available to the EPA upon request.

1.4 Emergency spill clean-up kits shall be maintained and made readily available at the Project location. Kits must contain absorbent materials, drain seals, and other appropriate tools for clean-up.

1.5 All employees and third parties under the Project's direction shall be made aware of the conditions of the Environmental Authorisation.

1.6 The Permit Holder shall provide training on good environmental practices. Records of training conducted must be made available to the EPA upon request. Records of training conducted must be made available to the EPA upon request.

1.7 Fire prevention and control equipment shall be maintained in accordance with **Guyana Fire Service Approval.**

1.8 Third-party contractor(s) utilised by the Project for the disposal of waste such as scrap metal shall be authorized by the EPA. Records of third-party contractors hired shall be maintained and submitted to the EPA upon request.

1.9 Adhere to the requirements of the **Occupational Safety and Health Act, Cap. 99:01, Laws of Guyana.**

2.0 COLLECTION & TRANSPORTATION OF HAZARDOUS AND NON-HAZARDOUS WASTE

Hazardous and Non-Hazardous Waste Collection and Transportation

2.1 All collection and transportation of waste to and from the Project shall be in

accordance with the Transportation Plan.

2.2 All employees involved in the transportation of waste shall be trained on the Transportation Plan outlined in **condition 2.1**. The training reports shall be made available to the EPA upon request.

2.3 A highly visible and legible label shall be affixed to the vehicle transporting the waste and shall include the following information:

Danger
Contains Hazardous Material

2.4 **"No Smoking"** signs shall be posted on the vehicle.

2.5 All hazardous waste shall be stored in sealed and labelled containers, appropriate for the waste stream during transport.

2.6 Each individual container of hazardous waste shall be labelled with the contents of the container (waste name) and the hazardous characteristic or property of the waste contained therein by **September 30, 2023.**

2.7 Cargo Carrying Units (CCUs) shall be inspected **before and after** the transportation of waste for signs of leakage, deterioration or corrosion. Damaged containers **must be** replaced **immediately.** Inspection reports must be made available to the EPA upon request.

2.8 A trained operator or carrier shall supervise, monitor and control the collection and transportation of hazardous waste.

2.9 Emergency spill cleanup kits shall be maintained on each vehicle for response to potential spills. Kits shall contain absorbent materials, drain seals and other appropriate tools for clean-up.

2.10 A register or manifest of the quantities of waste collected and transported shall be established and maintained. A summary of the registered information must be made available to the EPA upon request.

2.11 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**.

2.12 Clearly marked routes for vehicle movements shall be delineated at the Project to prevent any accident which may lead to spillage of waste. This route must be kept clear of waste material and free of obstacles, surface water drainage systems and equipment.

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2.13 Non-hazardous solid wastes collected shall be disposed of at an EPA Authorized Waste Disposal Site.

3.0 WASTE ACCEPTANCE

3.1 The Project shall maintain a clearly defined Waste Acceptance Criteria as defined by the Waste Acceptance Criteria submitted on May 19, 2021, for waste treated by the Project, including consideration of the following factors:

i. Concentration, boiling, and flash point of volatile organic contaminants
ii. Water content, pH, and physical and chemical characteristics of waste material
iii. Presence of inorganic contaminants, chlorinated compounds, and odorous materials.

3.2 The following wastes are not permitted under this Project:

i. Radioactive Waste
ii. Waste containing Halogenated/Chlorinated Organics
iii. Waste containing Polychlorinated biphenyls (PCB)
iv. Explosive Wastes

3.3 Wastes shall only be accepted if it conforms to the Project Waste Acceptance Criteria; or where applicable, the most recent version of the Criteria.

3.4 Hazardous wastes accepted for treatment by the Project shall be profiled in accordance with the EPA approved Waste Profile Sheet. Hazardous waste generators profile sheet shall:

i. Be current and available for review upon request by the Agency.
ii. Contain the waste designation and the necessary information for how that designation was determined.

4.0 HAZARDOUS WASTE HANDLING AND STORAGE

4.1 A register of the types and quantities of hazardous waste accepted and stored onsite shall be established and maintained. The register must also record the source of waste generation for each waste type accepted. A summary of the registered information shall be maintained and must be made available to the EPA upon request.

4.2 Hazardous waste shall be contained in bunded storage areas. This area shall be provided with the following:

i. Low traffic
ii. No floor drains
iii. Bunded area which shall provide 110% containment of the largest volume stored therein.

4.3 The Hazardous Waste Storage areas shall be clearly labelled, secured and well illuminated when not in use. The following warning signs shall be clearly posted:

i. "Hazardous Waste Storage Area"
ii. Danger- "Authorized Personnel Only"
iii. No Smoking
iv. No Eating or Drinking

4.4 Where applicable, hazardous waste storage areas shall possess ventilation in accordance with one of the following:

i. Gravity ventilation to the outside with a capacity of one cubic foot per minute per square foot or floor space
ii. Mechanical ventilation with on/ off switches at points of ingress that are capable of exhausting to the outside.
iii. Natural ventilation

4.5 Hazardous waste shall be stored away from ignition sources.

4.6 Hazardous waste shall be stored in sealed containers appropriate for the waste stream. That is:

a) Sealed Plastic Containers:
i. Water- based wastes:
ii. Fountain Solutions, Pre-Press

b) Sealed Metal or Plastic Containers:
i. Solvents and Petroleum- based products; and
ii. Oil and Oily Absorbents.

4.7 Hazardous waste containers shall be labelled with the following:
i. The words **"Hazardous Waste"**
ii. The type of waste
iii. Beginning accumulation date by **September 30, 2023**- 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.

4.8 Waste oil containers shall be labelled with the following:
i. The words **"Waste Oil or "Used oil"**
ii. Beginning accumulation date

4.9 Hazardous waste storage containers shall remain closed during storage, except when it is necessary to add or remove waste.

4.10 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 must be made available to the EPA upon request.

4.11 Standard Operating Procedures (SOPs) for safe transfer operations (from storage containers to the treatment plant), maintenance of containers and filling of storage containers shall be maintained. The SOP must be made available to the EPA upon request.

4.12 All employees shall be trained on these SOPs outlined in **condition 4.11**. Records of training conducted must be made available to the EPA upon request.

5.0 MANAGEMENT OF WASTE TREATMENT SYSTEMS

5.1 The following records shall be maintained for all treatment systems identified at the Project:

1. Waste treatment verification results
2. Operating logs
3. Shutdown events
4. Failed batches and their re-treatment

5.2 The records outlined in **condition 5.1** must be made available to the EPA upon request.

5.3 Records or Manifests of all bi-products generated from each treatment system shall be maintained and submitted to the EPA as a component of the **Annual Report**.

5.4 Bi-products generated from the treatment systems shall be subjected to analytical testing prior to discharge or disposal. The results shall be submitted cumulatively as a component of the project's **Annual Report.**

5.5 Solid waste bi-products generated from the V-IR, incinerator, double auger system, bulb crusher, and aerosol unit shall be subjected to a Toxicity Characteristic Leaching Procedures (TCLP) prior to disposal. The results must be within the allowable limits in accordance with the following table:

Contaminant Group	Contaminant	Regulatory Level (mg/L)	CAS No.
Metals	Arsenic	5.0	7440-38-2
	Barium	100.0	7440-39-3
	Cadmium	1.0	7440-43-9
	Chromium	5.0	67-66-3
	Lead	5.0	7439-92-1
	Mercury	0.2	7439-97-6
	Selenium	1.0	7782-49-2

	Silver	5.0	7740-22-4
Volatile Organic Compounds	Benzene	0.5	71-43-2
	Carbon tetrachloride	0.5	56-23-5
	Chlorobenzene	100.0	108-90-7
	Chloroform	6.0	67-66-3
	1,4-Dichlorobenzene	7.5	10-46-7
	1,2-Dichloroethane	0.5	107-06-2
	1,1-Dichloroethylene	0.7	75-35-4
	Methyl ethyl ketone	200.0	78-93-3
	Tetrachloroethylene	0.7	127-18-4
	Trichloroethylene	0.5	79-01-6
	Vinyl chloride	0.2	74-01-4
Semi volatile Organic Compounds	o-Cresol	200.0	95-48-7
	m-Cresol	200.0	108-39-4
	p-Cresol	200.0	106-44-5
	Cresol (total)	200.0	N/A
	2,4-Dinitrotoluene	0.13	121-14-2
	Hexachlorobenzene	0.13	118-74-1
	Hexachlorobutadiene	0.5	87-68-3
	Hexachloroethane	3.0	67-72-1
	Nitrobenzene	2.0	98-95-3
	Pentachlorophenol	100.0	87-86-5
	Pyridine	5.0	110-86-1
	2,4,5-Trichlorophenol	400.0	95-95-4
	2,4,6-Trichlorophenol	2.0	88-06-2
Pesticides	Chlordane	0.03	57-74-9
	Endrin	0.02	72-20-8
	Heptachlor (and its Epoxide)	0.008	76-44-8
	Lindane	0.4	58-89-9
	Methoxychlor	10.0	72-43-5
	Toxaphene	0.5	8001-35-2
Herbicides	2,4-D	10.0	94-75-7
	2,4,5-TP (Silvex)	1.0	93-72-1

5.6 Solid wastes bi-products generated from the V-IR, incinerator, double auger system, bulb crusher, and aerosol unit that are within the allowable limits noted in **condition 5.5** shall be disposed at an EPA Authorised Waste Disposal Site.

5.7 Employee shall be trained on Operations Manuals for the waste treatment systems they are assigned to operate. Records of training conducted must be made available to the EPA upon request.

5.8 All waste treatment systems shall be situated in a bunded area which shall provide

100% containment of the largest volume stored therein.

5.9 Representative samples of new waste streams and new waste generation sources shall be taken and analyzed in a certified laboratory to characterize the waste material and identify contaminants prior to treatment.

5.10 Sample size and numbers shall be large enough to adequately represent the range of waste characteristics and contaminants contained in the waste material.

5.11 All treatment cycles shall be operated in accordance with the optimum operating criteria for the treatment plant, specifically maximum and minimum temperature range, waste feed rate, residence time and air flow determined by the waste trial.

Vertical Infrared System (V-IR)

5.12 The V-IR shall only accept waste with the following properties identified in the Waste Acceptance Criteria submitted to the EPA:

i. Volume (up to 2,000 m^3)
ii. VOC Content % –2.5%

5.13 As indicated in the Waste Acceptance Criteria submitted to the EPA, each V-IR boxes shall not treat more than 25 bbl of waste per day.

5.14 The V-IR shall not accept any waste which requires more than 871°C to be acceptably treated in accordance with the standards outlined in the Guyana National Bureau of Standards (GNBS) *Interim Guidelines for Industrial Effluent Discharge into the Environment* and any other standards mentioned in the Waste Acceptance Criteria.

5.15 All treated material shall be cooled prior to transfer from the contained system in order to prevent fugitive releases and to ensure the temperature of the material is safely below the auto-ignition temperature of any potential residual volatile contaminants.

5.16 Automatic system alarms and/or trips shall be installed for relevant operating parameters such as temperature, pressure, thermal oxidizer temperature, fan/ air flow temperature, waste feed and condenser failure.

Wastewater Treatment System

5.17 The Wastewater Treatment System shall only accept waste with the following properties identified in the Waste Acceptance Criteria submitted to the EPA:

I. Flammable/Inflammable Liquids
II. Flash Point up to (300°C)
III. Kinematic Viscosity – up to 500 CST
IV. Freezing points (-50°C)

5.18 Hoses shall be inspected weekly for signs of leakage, deterioration or corrosion and damaged hoses **must be** replaced **immediately.** A summarised inspection report shall be compiled and must be made available to the EPA upon request.

5.19 Secondary containment, drip trays, sump, or other overflow and drip containment measures shall be utilized to capture spillage at connection points and other possible overflow points.

5.20 Connection points shall be tightly secured using the Best Available Technology.

5.21 The Wastewater Treatment System shall not treat more than 400 bbl of wastewater per day.

5.22 Overfill protection shall be maintained on all franc tanks. This may include an automatic shut-off device or an audible or visible overfill alarm.

5.23 The safe fill level shall be clearly identified on the gauge and set at 90% to prevent overfilling of the franc tanks by **September 30, 2023**. In the event of overfilling, all discharges shall be released into the containment bund.

5.24 Water recovered from the treatment process shall be directed to a storage tank made of plastic or metal, for testing prior to being discharged.

Used-Oil Processing Unit

5.25 Waste oil managed by the Project including the waste oil which is recovered from the oil-water shall be directed to the Used Oil Processing Unit to be treated and re-used.

5.26 The Used Oil Processing Unit shall treat no more than 80bbl of oil per day.

5.27 Overfill protection shall be maintained on all franc tanks. This may include an automatic shut off device or an audible or visible overfill alarm.

5.28 The safe fill level shall be clearly identified on the gauge and set at 90% to prevent overfilling of the franc tanks. In the event of overfilling, all discharges shall be released into the containment bund.

5.29 The Project shall maintain register of the recovered oil including the system used to treat it. The register must be made available to the EPA upon request.

Incinerator

5.30 The incinerator shall only accept waste with the following properties identified in the Waste Acceptance Criteria submitted to the EPA:

i. Volume (up to 2,000 m^3)
ii. Flashpoint (up to 1700°C)

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5.31 As indicated in the Waste Acceptance Criteria submitted to the EPA, the Incinerator shall not treat more than 3,600kg of waste per day.

5.32 All treated material shall be cooled prior to transfer from the contained system in order to prevent fugitive releases and to ensure the temperature of the material is safely below the auto-ignition temperature of any potential residual volatile contaminants. The temperature of the incinerator must be kept below 626.7°C as indicated in the Waste Acceptance Criteria, to allow for cooling.

5.33 Automatic system alarms and/or trips shall be installed for relevant operating parameters such as temperature, pressure, thermal oxidizer temperature, fan/air flow temperature, waste feed and condenser failure.

Double Auger System

5.34 The Double Auger System shall only accept drilling muds and mud slops waste.

5.35 Not more than 80 metric tonnes of waste shall be treated by the Double Auger System per day.

5.36 Automatic system alarms and/or trips shall be installed for relevant operating parameters such as temperature, pressure, thermal oxidizer temperature, fan/ air flow temperature, waste feed and condenser failure.

5.37 Fork lifts being used to lift the cement and waste streams into the Double Auger System shall have rated capacity to support the full weight of the items.

Bulb Crusher

5.38 As indicated in the Waste Acceptance Criteria submitted to the EPA, the bulb crusher shall only accept fluorescent bulbs with Mercury Vapour < 0.1 (mg/m3).

5.39 Bulbs and drums shall be crushed individually and not in bulk.

5.40 Crushed bulbs shall be treated in the Double Auger System prior to disposal.

Aerosol Unit

5.41 The aerosol unit shall only be used to crush aerosol cans.

5.42 Aerosol cans shall be crushed individually and not in bulk.

5.43 The liquid waste released from aerosol cans shall be treated in the Wastewater Treatment System.

6.0 WASH BAYS

6.1 The bases of the wash bays shall be elevated at a sloped angle to allow for effluent to be contained within the parameters of the wash bay operation.

6.2 The effluent shall be pumped **daily** from the wash bays into the wastewater treatment system to prevent the overflowing of effluent beyond the parameters of the wash bay operation.

6.3 The wash bay floor shall maintain an impervious surface.

6.4 Secondary containment shall be maintained around the wash bays. Secondary containment shall be impervious and provide 110% containment of the largest volume therein.

7.0 FUEL HANDLING AND STORAGE

7.1 Adopt 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.

7.2 A register of the types and quantities of fuel and associated hazardous materials stored onsite shall be established and maintained. A summary of the registered information must be made available to the EPA upon request.

7.3 Fuel shall at all times be stored above-ground, in a cool, dry place and away from ignition sources.

7.4 Fuel storage tank shall be visually inspected to verify their integrity.

7.5 Protection measures such as painting and coating shall be maintained to minimise corrosion of the fuel tanks.

Secondary Containment

7.6 Secondary containment around fuel storage tanks shall provide containment sufficient to contain at least 100% of the contents of the largest storage tank.

7.7 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 must be made available to the EPA upon request.

7.8 Containment bunds shall remain sealed and all piping must enter or exit the bund over the wall. Bunds shall provide total containment, and no part of the tank infrastructure (e.g., dispenser, filing hoses and valves) shall protrude outside the

bund. There shall be no discharge point within the secondary containment bund.

Fuel Tank and Pipeline Maintenance

7.9 Fuel storage tanks shall be visually inspected to verify their integrity. A summarised inspection report shall be compiled and must be made available to the EPA upon request.

7.10 Maintenance and/or repair of fittings, pipes and hoses shall be conducted in accordance with the manufacturer's specifications. A summarised inspection report shall be compiled and must be made available to the EPA upon request.

Overfill Protection & Leak Detection

7.11 Overfill protection shall be maintained on all fuel tanks. This may include an automatic shut off device or an audible or visible overfill alarm.

7.12 The safe fill level shall be clearly identified on the gauge and set at 90% to prevent overfilling by of the franc tanks. In the event of overfilling, all discharges shall be released into the containment bund.

7.13 Dispensing equipment shall be designed with the Best Available Technology (BAT) to minimise spills e.g., suction, pressure or gravity systems.

Fuel Transfer

7.14 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.

7.15 Secondary containment, drip trays or other overflow and drip containment measures shall be installed and maintained at connection points or other possible overflow points.

7.16 A Standard Operating Procedure (SOP) for fuel transfer operations including a checklist of measures to follow during filling operations shall be established and maintained. The SOP must be made available to the EPA upon request.

7.17 All employees shall be trained on the SOP outlined in **condition 7.16.** Records of training conducted must be made available to the EPA upon request.

8.0 WATER QUALITY

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

8.2 Discharge of untreated wastewater from into the environment is **strictly prohibited.**

8.3 All contaminated wastewater generated by the Project and it supporting operations including effluent from Wet Scrubbers shall be collected and directed to the Waste Water Treatment System.

8.4 Storm water discharge shall be directed away from the Project and hazardous waste storage areas.

8.5 Storm water shall be treated via the oil-water separator prior to final discharge.

8.6 Hazardous waste shall not be stored in an area where it could potentially enter any waterways as a result of heavy rainfall or high winds. All hazardous waste shall be stored at least **5m** away from any drains on site.

8.7 All equipment re-fueling shall be conducted on an impervious base to prevent leakage into the soil and surrounding waterways.

8.8 Samples of **treated water** from the Waste Water Treatment System shall be collected for analysis from the Wastewater Treatment System prior to final discharge into the environment.

8.9 Samples of **effluent discharge** shall be collected for analysis from the final discharge points on a **quarterly** basis.

8.10 The treated water and effluent discharge shall be in accordance with the Guyana National Bureau of Standards (GNBS) *Interim Guidelines for Industrial Effluent Discharge into the Environment*. The following allowable limits shall not be exceeded:

Parameter	**Daily Maximum Concentration**	**Units**	**Sample type**
pH	(pH 5.0-9.0)		Grab
Temperature	<40	°C	Grab
Total Suspended Solids (TSS)	< 50	mg/L	Composite
Oil and Grease	< 10	mg/L	Composite
Biochemical Oxygen Demand (BOD)	< 50	mg/L	Composite
Faecal Coliform	<400	MPN per 100	Grab

		ml	
Total Petroleum Hydrocarbon (TPH)	< 40	mg/L	Grab

8.11 The following information from the monitoring exercise 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.

8.12 GPS Coordinates for this final discharge point(s) shall be submitted to the EPA by **September 30, 2023.**

9.0 NOISE QUALITY MANGEMENT

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

9.2 Noise monitoring shall be conducted **quarterly** using a calibrated Noise Meter, at least 3.5 metres from any reflecting surface and 1.5 above ground. Records of each monitoring exercise and the certificate of calibration of the monitoring equipment used shall be maintained and submitted cumulatively as a component of the project's **Annual Report.**

9.3 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** during the daytime (06:00 h - 18:00 h)
80 dB during the night-time (18:00 h - 06:00 h)

9.4 Noise monitoring shall be conducted **quarterly** using a calibrated Noise Meter, at least 3.5 metres from any reflecting surface and 1.5 above ground. Records of each monitoring exercise shall be maintained and results submitted to the Agency as a component of the project's **Annual Report.**

9.5 All machines and equipment including generators shall be serviced in accordance with the manufacturer's specification to ensure efficiency and reduce the level of

noise produced. A summarised maintenance report shall be provided to the EPA upon request.

10.0 AIR QUALITY MANAGEMENT

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

10.2 The wet scrubber and quencher installed on the emission stack of the V-IR and incinerator shall be maintained.

10.3 Stack emission monitoring of air quality shall be conducted **bi-annually** at the emission stack connected to the V-IR and incinerator to determine compliance with the requisite standards outlined below:

Table 2. – A list of Air pollutants, parameters and permissible levels for required assessment within a given period.

No.	Air Pollutant	Averaging Time	Maximum Permissible Level	Frequency of Monitoring
1.	Carbon Monoxide	1 h	35ppm	bi-annually
2.	Nitrogen Dioxide	1 h	200µg/m^3	bi-annually
3.	Sulphur Dioxide	24 h	20 µg/m^3	bi-annually
4.	$PM_{2.5}$	24h	25 µg/m^3	bi-annually
5.	PM_{10}	24h	50µg/m^3	bi-annually
6.	Total Suspended Particles (TSP)	24h	20 µg/m^3	bi-annually

10.4 Monitoring shall be conducted during normal operations by certified laboratory or trained personnel utilizing calibrated equipment.

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

vii. The laboratory certificate;
viii. Training certificate for individual(s) who performed the monitoring exercise;
ix. Certificate of calibration for the equipment used
x. The exact place the monitoring was conducted;
xi. Duration of the monitoring exercise
xii. The analysis of the results of the monitoring conducted;
xiii. Copies of original laboratory analytical reports

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10.6 The Permit Holder shall immediately respond to any visible (opaque) emissions that exceeds six minutes. A record of each air pollution episode and the actions to resolve same shall be maintained by the Permit Holder.

10.7 The **Best Available Technique (BAT)** for wet dust suppression shall be utilised in the areas of the Project which are not enclosed, to reduce the emission of particulate matters.

11.0 WASTE MANAGEMENT

11.1 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.

11.2 Burning of waste is **strictly prohibited**. All solid waste shall be disposed at an approved solid waste disposal site by an EPA Authorised Waste Disposal Company.

11.3 Good house-keeping, sanitary, and hygienic practices shall be maintained at all times. The Project's drains and surroundings shall be kept free of vegetation and litter.

11.4 Solid waste receptacles shall be secured when not in use.

11.5 Promote waste minimisation and the reuse and/or recycling of waste and other materials where practical.

11.6 Waste collection areas shall be kept clean. Dry methods shall be used when cleaning around waste handling and disposal areas (e.g., sweeping, use of absorbents).

11.7 The disposal of bulk liquid waste at any Landfill is prohibited. Liquid waste is waste which;

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 USEPA Paint Filter Liquids Test and liberates no free liquids when transported.

11.8 Maintain the septic tank system onsite. Septic Tanks at all times shall be accessible for cleaning and de-sludging. Septic tanks should be installed with a sand and charcoal filter bed, or other appropriate design for further treatment. This must be 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.

11.9 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.

12.0 ENVIRONMENTAL EMERGENCY RESPONSE MANAGEMENT

12.1 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.

12.2 Standard Operating Procedures (SOPS) shall be established 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. The SOP must be made available to the EPA upon request.

12.3 All employees shall be trained on the SOP outlined in **condition 12.2.** Records of training conducted must be made available to the EPA upon request.

12.4 All facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, must be tested and maintained as necessary to assure its proper operation in time of emergency.

12.5 Aisle space must 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 facility operation in an emergency.

12.6 An EPA-approved Emergency Preparedness Plan shall be established and maintained for the Project, and communicated to Staff and Contractors of 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 Project.

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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 Project (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).

vii. Clean-up Plan for the different areas of the operation.

viii. Analysis of potential accidents and the proposed responses.

12.7 All employees shall be trained on the Emergency Response Plan outlined in the EAMP referenced in **condition 1.2.** Records of training conducted must be made available to the EPA upon request.

13.0 COMPLIANCE MONITORING AND REPORTING

13.1 Notify the Environmental Protection Agency **within one (1) hour** of the occurrence of any 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).

13.2 Make all employees, and third parties under your direction, aware of the conditions of the Environmental Authorisation and provide training on good environmental practices.

13.3 Monitor the implementation of the conditions of this Permit, insofar as they involve adherence by your employees.

13.4 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.

13.5 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.

13.6 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).

13.7 Submit an **Annual Report** 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.**

13.8 Report to the Agency any non-compliance(s) with the Environmental Permit (Renewed):

i. Within **twenty-four (24) hours** of the time the Permit Holder becomes aware of the non-compliance, the anticipated manner in which it may endanger human health or the environment.

ii. Within **seventy-two (72) hours**, submit to the Agency a written report containing a description of the non-compliance, its cause and the period of non-compliance including exact dates and time.

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.

13.9 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.

13.10 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.

14.0 INSTITUTIONAL AUTHORITY/ LIABILITIES

14.1 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.

14.2 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.

14.3 The Permit Holder 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.

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

14.5 The Permit Holder, his Servants and/or Agents 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 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, Cap 20:05, Laws of Guyana.

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, Cap. 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 a result of any pollution incidents attributable to the activity for which this Permit has been issued.

14.6 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.

14.7 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.

14.8 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.

14.9 This Environmental Permit (Renewal) is subject to other relevant authorities' approval.

14.10 This Environmental Permit (Renewal) is effective for the period stipulated herein; **August 2023 to July 2025.**

14.11 This Renewed Environmental Permit shall remain valid until **July 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.

14.12 This Permit must be renewed by submitting a completed Renewed Application Form for Environmental Authorisation (Environmental Permit) to the Agency at least six months before this Permit expires, that is, no later than **January 31, 2025.**

14.13 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.

14.14 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.

Signed by Kemraj Rajick on behalf of the Environmental Protection Agency.

Environmental Protection Agency
Mr Kemraj Parsram
Executive Director
Executive Director

Date 2023-08-08

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 written law, guidelines, best practices, standards, codes of practice and other statutory or regulatory instruments made under this Act.

NAME	SHANE SINGH
DATE	09/08/2023
SIGNATURE	
DESIGNATION	GENERAL MANAGER.