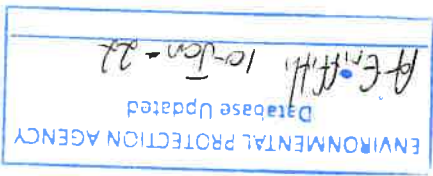




Environmental Permit

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.: | 20200812-RCICP |
| Fee: | Medium (C2) i.e. US\$800 per year |
| Fee Paid: | US\$4,000.00 for (5) years (November, 2021- October, 2026) |
| Addressee: | Mr. Nateram Rupall Director / Company Secretary Readymix Concrete Limited 69-74 Industrial Estate Eccles East Bank Demerara |
| Activity: | Operation of a Concrete Batching Plant with supporting Fuel Storage |



Readymix Concrete Limited, hereinafter referred to as the "Permit Holder", is hereby authorised in accordance with the Environmental Protection Act, Cap. 20:05, the Environmental Protection (Amendment) Act, 2005, and the Environmental Protection (Authorisations) Regulations, 2000, to operate a Concrete Batching Plant with supporting Fuel Storage at 69-74, Industrial Estate, Eccles, East Bank Demerara, hereinafter referred to as the "Project", in a manner indicated in the Application for Environmental Authorisation submitted on August 12, 2020, and subject to the terms and conditions set forth herein under the Environmental Protection Act, Cap. 20:05, existing and/or forthcoming regulations made under the said Act, and/or any other applicable laws, guidelines, best practices and standards relevant to this project.

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

1.0 OPERATION

1.1 The Permit Holder shall adhere to the Occupational, Health and Safety (OHS) Act, Cap. 99:10, 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;

[Handwritten signature]

- ii. change equipment, machine, apparatus, 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.
- 1.3 An Environmental Management Plan (EMP) for the Project shall be submitted by **May 31, 2022**. The EMP shall contain but not limited to the following information:

- a. A description of the Project including details of the location (identification of soil type, water streams and surrounding land uses).
- b. A risk assessment of the Project which will include an outline of adverse environmental impacts and mitigation measures that are/ will be implemented to reduce the significance of the impacts.

- c. An **Emergency Response Plan (ERP)**. The Plan shall include, but not be limited to procedures for addressing all possible emergencies including spills and fires, local emergency response authorities, notification of national and local authorities, coordination of clean-up activities and assessment of health hazards to humans and the environment.

- 1.4 Guyana Fire Service Approval shall be maintained annually and shall be submitted as a component of **the Annual Report**. The Project shall maintain fire prevention and control equipment in accordance with the Guyana Fire Service Approval. This may include a smoke detection and alarm system, fire extinguishers, fire hydrants or sprinkler systems as appropriate.

- 1.5 The Permit Holder is required to submit to the EPA upon receipt, the requisite approvals from the Central Housing and Planning Authority (CH&PA), the relevant Municipality or any other authority with jurisdiction and oversight over the Project.
- 1.6 Make all employees, and third parties under your direction, aware of the conditions of the Environmental Authorisation and provide training on good environmental practices. Annual training records shall be maintained on site and submitted to the EPA upon request.

- 1.7 All equipment used in the Project shall be monitored and maintained in accordance with the manufacturer's specifications. Maintenance records shall be maintained on site and submitted to the EPA upon request.

- 1.8 An automated system shall be installed to support the manual shut off switch at the Concrete Batching Plant by **January 31, 2022**.

- 1.9 Servicing of machinery and transport equipment at the Project, including but not limited to generators and trucks, shall be conducted on an impervious base, to reduce

AIR QUALITY

the risk of soil and water contamination by hydrocarbon fluids.

- 1.10 Adhere to the provisions of the **Environmental Protection (Air Quality) Regulations, 2000**

- 1.11 Best Available Technologies (BATs) shall be implemented to prevent the overfilling of silo and bulk containers holding dusty materials beyond capacity.
- 1.12 Raw materials such as sand and cement shall be stored in bays enclosed on three sides with solid walls.
- 1.13 Stockpiles within bays shall be kept at least 0.5m below the top of the walls and 0.5m inside open ends of the bays.
- 1.14 Aggregate stock-piles stored on-site shall not exceed two (2) meters in height.

- 1.15 Specialized Bulk Cement Carriers shall be used to transport and off-load cement to the plant.

- 1.16 A Plan to implement the Best Available Technology (BAT) to enclose the hopper, conveyor belt and the areas designated for dispensing, storage and loading shall be established and submitted to the EPA by **April 30, 2022** to minimise the impact of dust on the receiving environment.

- 1.17 The carriage way, driveway and passageway within the Project shall be maintained with impervious materials such as crush and run, asphalt road to reduce dust emissions.

- 1.18 Wet suppression techniques shall be used to prevent excessive dust onto the environment if crush and run is used.

- 1.19 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 |
|-----|-------------------|----------------|---------------------------|--------------------|
| 1. | PM _{2.5} | 24 | 25 µg/m ³ | Ambient |
| 2. | PM ₁₀ | 24h | 50µg/m ³ | Ambient |

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**.

- 1.20 Screens measuring at least 2m in height shall be installed around the boundaries of the Project.

1.21 Raw materials such as sand and cement shall be transported in trucks with enclosed tops.

2.0 FUEL HANDLING AND STORAGE

2.1 Adopt and comply with the National Standard "Guidance for the Design, Construction, Modification, and Maintenance of Petrol Filling Stations" and any forthcoming code of practice/guidelines pertaining to the operation of fuel storage.

2.2 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, filling hoses and valves) shall protrude outside the bund.

2.3 Fuel shall at all times be stored above-ground, away from ignition sources. 'No Smoking' signs shall be posted where fuel is handled or stored.

2.4 Existing secondary containment around the fuel tank shall be inspected for cracks and leakage to ensure they are liquid tight to withstand hydrostatic pressure of any contained liquid when full. Summarised inspection reports shall be maintained on site and submitted to the EPA upon request.

2.5 All opening, cracks and damages found on the secondary containment bund shall be sealed by February 25, 2022.

2.6 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, filling hoses and valves) shall protrude outside the bund.

2.7 Fuel storage tanks shall be visually inspected to verify their integrity. Summarised inspection reports shall be maintained on site and submitted to the EPA upon request.

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

2.9 Maintenance and/or repair of fittings, pipes and hoses shall be conducted in accordance with manufacturer's specifications. Summarised inspection report shall be maintained on site and submitted to the EPA upon request.

2.10 The following labels shall be posted on ALL fuel storage tanks in accordance with the Global Harmonization Standards (GHS) by January 31, 2022:

- i. The name of the fuel stored,
- ii. The tank capacity
- iii. Warning signs ("Danger", "no-Smoking", etc.)

- 2.11 Overfill protection shall be installed and maintained on all fuel tanks by **January 31, 2022**. This may include an automatic shut off device or an audible or visible overfill alarm.
- 2.12 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.
- 2.13 Dispensing equipment shall be designed with the Best Available Technology (BAT) to minimise spills e.g. suction, pressure or gravity systems.

3.0 STORAGE OF CHEMICALS (Lubricants, Cement additives, Grease, Paint, etc.)

- 3.1 Chemicals used at the Project shall be stored in bunded/kerbed storage areas. This area shall satisfy the following requirements:
- i. Low traffic
 - ii. No floor drains
 - iii. Bunded area which shall provide 110% containment of the largest volume stored therein.
- 3.2 The chemicals storage area shall be clearly labeled with "Danger, Hazardous Storage Area- Authorized Personnel Only" where applicable as a spill control measure.
- 3.3 Where applicable, chemical storage areas shall possess ventilation in accordance with at least 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

- 3.4 Chemicals shall be stored away from ignition sources and in accordance with their hazard characteristics compatibility.

- 3.5 Chemicals shall be stored in containers appropriate for the chemical. That is:

a) Sealed Plastic Containers

- i. Water- based wastes

- ii. Fountain Solutions, Pre- Press

b) Sealed Metal Containers

- i. Solvents and Petroleum- based products

- ii. Waste ink, Press-wash, Oil and Oily Absorbents

- 3.6 Chemical containers shall be labelled with the following:
- i. The words "Hazardous Materials"
 - ii. The type of chemicals

iii. Beginning accumulation date- Date when the container was first placed in the Chemical Storage Area. Should the chemical storage container be reused, the date chemical was first placed in the container shall be recorded on the container.

3.7 Safety Data Sheets for all chemicals shall be readily available and easily accessible at all times at the Project.

3.8 Chemical storage containers shall remain closed during storage, except when it is necessary to add or remove the chemical.

3.9 Chemical storage containers shall be inspected for signs of leakage, deterioration or corrosion and damaged containers **must be replaced immediately**. Inspection reports must be maintained and signed by the appropriately qualified inspecting officer and his/her supervisor.

3.10 Emergency spill cleanup kits shall be maintained at the Project for response to potential spills including fuel spills. Kits should contain absorbent materials, drain seals and other appropriate tools for clean-up.

3.11 A register of the types and quantities of chemicals and fuel stored onsite shall be maintained on site and submitted to the EPA upon request.

3.12 Employees managing chemicals shall be trained on Hazardous Material Communication and Emergency Preparedness Response. Training reports shall be maintained and submitted to the EPA upon request.

4.0 WATER QUALITY

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

4.2 A sump with a pump for the discharge of effluent within the containment shall be installed by **January 31, 2022**. There shall be no release valve on the secondary containment.

4.3 Pipes from the pump shall be installed over the secondary containment and discharge directly into the oil- water separator.

4.4 Effluent discharge from the Concrete Batching Plant shall be directed to a settling pond for settlement before discharge.

4.5 Effluent collected in the settlement pond shall be neutralized prior to final discharge.

4.6 A plan to neutralize the effluent shall be developed and submitted to the EPA by **April 30, 2022**.

4.7 Effluent from the oil-water separator and the settlement pond should be in accordance with the Guyana National Bureau of Standards (GNBS) *Interim Guidelines for Industrial Effluent Discharge into the Environment*. The following allowable limits should not be exceeded:

| Parameter | Maximum Concentration | Units | Sample type |
|-----------------------------|--|-------|-------------|
| pH | 5.0 – 9.0 | | Grab |
| Temperature | <40 | °C | Grab |
| Dissolved Oxygen | >40 | mg/L | Grab |
| Total Suspended Solid (TSS) | 50 | mg/L | Grab |
| Oil and Grease | Total Petroleum Hydrocarbon (TPH) < 40 | mg/L | Grab |

The Permit Holder shall determine a water quality monitoring plan and submit said plan to the EPA. Monitoring shall be conducted by trained personnel using calibrated equipment. Records of all monitoring exercises shall be maintained and submitted as part of the **Annual Report**.

4.8 GPS coordinates for the final discharge points connected to the oil-water and the settlement pond shall be submitted to the EPA by **December 30, 2021**.

4.9 Fuel/lubricants including waste oils shall not be drained from equipment onto the ground or into waterways.

4.10 Interceptor drains shall be maintained on site. These must be adequately sloped to collect storm flow.

5.0 NOISE MANAGEMENT

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

5.2 All significant noise-producing equipment, such as the mixing plant and the generators, shall be equipped with silencers or mufflers and/or be enclosed in suitable acoustic enclosures where necessary, to reduce noise levels impacting the surrounding environment to achieve compliance with Guyana National Bureau of Standards (GNBS) requirement.

- 5.3 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.
Industrial Limits: 100 dB (Day-time (06:00 h - 18:00 h))
80 dB (Night-time (18:00 h - 06:00 h))

- 5.4 Monitoring should be conducted bi-annually 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**.

- 5.5 Respond to any complaints from the public regarding noise disturbance. Maintain a record of the complaint and the action taken to resolve same. All records should be available to the Agency upon request.

6.0 WASTE MANAGEMENT

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

7.0 HAZARDOUS WASTE (waste oil and sludge and empty chemical containers) MANAGEMENT

- 7.1 Adhere to the provisions of the **Environmental Protection (Hazardous Waste Management) Regulations 2000**.
- 7.2 Hazardous waste shall be stored in containers appropriate for the waste stream. That is:

(c) Sealed Plastic Containers

- iii. Water-based wastes
- iv. Fountain Solutions, Pre-Press

(d) Sealed Metal Containers

- iii. Solvents and Petroleum-based products
- iv. Waste ink, Presswash, Oil and Oily Absorbents

- 7.3 Hazardous waste containers shall be labelled with the following:
- iv. The words "Hazardous Waste"
 - v. The type of waste

vi. Beginning accumulation date- Date when the container was first placed in the Hazardous Waste Storage Area. Should the hazardous waste container be reused, the date hazardous waste was first placed in the container shall be recorded on the container.

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

7.5 Hazardous waste shall be stored in a covered, bunded area. This area shall include the following:
 i. Signage- "Hazardous Waste Storage Area"
 ii. Low traffic
 iii. No floor drains
 iv. Secondary containment capable of containing 110% of the largest volume therein.

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

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 spills, sudden onset disaster, natural, technological or human- induced factors that cause or threaten to cause severe environmental damage as well as harm to human health or livelihood).

8.2 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.

8.3 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.

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

8.5 Submit Annual Reports to the EPA on the progress of the operation and compliance with the conditions under which this Permit was granted on or before March 31, each year.

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

- I. Within **twenty-four (24) hours** of the time the Holder of the Environmental Authorisation for Operation becomes aware of the non-compliance(s), the anticipated manner in which it may endanger human health or the environment.
- II. Within **seventy-two (72) hours**, submit to the Agency a written report containing a description of the non-compliance(s), its cause and the period of non-compliance including exact dates and time.
- III. Submit a report to the Agency indicating the reasons and the anticipated time it is expected to continue if the non-compliance has not been corrected.
- 8.7 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.
- 8.8 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 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.
- 9.2 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.
- 9.3 The Permit Holder, His Servants, Agents and/or Sub-Contractors shall at all times, allow entry to the permitted facility to any Officer designated by the EPA for the purposes of conducting inspections or any other legitimate business of the Agency. Pursuant to s.38 of the Environmental Protection Act, Cap. 20:05, Laws of Guyana, it is an offence to assault, obstruct or hinder an authorised person in the execution of his/her duty under the said Act or its Regulations and the Permit Holder shall be liable to penalties prescribed under paragraph (c) of the Fifth Schedule for doing so.
- 9.4 The EPA shall have the right to cancel or suspend this Permit for breach of any of the terms and conditions contained herein.

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

a. For any activity that causes, or is likely to cause pollution of the environment, unless the person takes all reasonable and practicable measures to prevent or minimise any resulting adverse effect, in accordance with Section 19(1)(a) of the

P.F.

- b. For any activity which results in the discharge, release or entry into the environment of any contaminant in any amount, concentration or level in excess of that prescribed by the regulations or stipulated by this Permit, in accordance with Section 19(1)(b) of the Environmental Protection Act, Cap. 20:05 Laws of Guyana.
- c. The discharge or release of contaminants, such as hydraulic fluids, lubricants, fuel, or other industrial fluids relative to the Project, which are not stipulated herein, or by Regulations under the Environmental Protection Act, are strictly prohibited. Any such discharge or release shall be a violation of Section 19(1)(b) of the Environmental Protection Act.

- d. For the compensation of any Party who suffers any loss or damage as a result of the project. (s.19(3)(e)) Environmental Protection Act, Cap. 20:05, Laws of Guyana.

- e. For any material or serious environmental harm caused by pollution of the environment, whether intentionally or recklessly, in accordance with section 39 (1), (2), (3) and (4) of the Environmental Protection Act, 20:05, Laws of Guyana.
- f. Any gross negligence or wilful misconduct resulting in serious risk, or adverse effects to the marine environment, biodiversity, protected species and natural habitat with respect to any release or discharge, spill, contaminant fluids, oil, or lubricants from any facilities permitted under this project.

- g. For the payment of all costs and expenses related to the assessment of damage and investigations required, as result of any pollution incidents attributable to the activity for which this Permit has been issued.

- 9.6 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.

- 9.7 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.

- 9.8 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.

- 9.9 This Environmental Permit is effective for the period stipulated herein; **November**

2021, to October, 2026.

9.10 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, Environmental Protection (Amendment) Act, 2005, and the Environmental Protection (Authorisations) Regulations, 2000.

9.11 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 **April 30, 2026**.

9.12 Any late submission of renewal application (s) 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, until such renewal application is submitted to the Agency**, without prejudice to any other rights of the Permit Holder in connection therewith.

9.13 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.

on behalf of the Environmental Protection Agency.

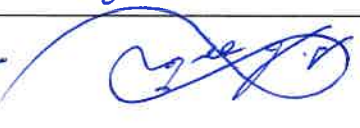


Signed by

2021. 11. 18

Date

I hereby accept the above terms and conditions upon which this Operation Permit is granted and agree to abide by the Environmental Protection Act, Cap. 20:05, the Environmental Protection (Amendment) Act, 2005, and the Environmental Protection (Authorisations) Regulations, 2000, and any existing or forthcoming regulations, guidelines, best practices and standards made under this Act.

| | |
|-------------|---|
| NAME | Amber Davis |
| DATE | 24/11/21 |
| SIGNATURE |  Amber Davis |
| DESIGNATION | Area Keeper |

