Name of Project: No. 62 Village Storage Facility

Name of Developer: Mr. Rayaadul Hakh

Contact Details:

Email: reyaadulhakh@gmail.com or eesguyana@gmail.com

Phone: 623-8787

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Prepared by: Kenita Roberts

Email: kenita.eesguyana@gmail.com

Introduction

The No. 62 village storage facility for Strangroen employees has approximately 8 employees on sight. It is a multi-million dollar investment entity capable of exporting rice to different parts of the world. The storage facility for rice paddy is important during the cropping season for rice. Cropping season occurs twice a year from March to April and September to October. Onsight, the paddy is generally cleaned of the initial debris present during harvesting. It is then packaged and transported for further processing upon demand. There is no specific period that the paddy is stored in the storage bins, daily, trucks would collect the paddy for further processing. During the Cropping season, paddy is received every day for initial cleaning and storage.

The facility was constructed in July 2021 and currently employs 8 persons. The operation of the facility requires the following components

1 Office and Laboratory

Male and female washroom

1 Living Quarter

1 Scale

4 storage bins

4 paddy cleaners

3 generators

1 fuel tank (53,096 litres)

1 compressed air equipment

1 control room

1 storage bond

1 loader

1 water tank

1 sky track

1 forklift

Description of Location

The No. 62 Village storage facility occupies approximately 0.81 hectares on a 4.17-hectare plot of land within Region 6, Corentyne Berbice, along the low coastal plain of Guyana. Residents are mostly situated in the northern and eastern directions of the facility which is along the Corentyne, public road. The buffer zone for the facility is 50m. The map below highlights the main aspects of the rice storage facility.

Map showing the layout of the facility

Project Design

The NO. 62 village constructed facility is used as a paddy storage facility for the Strangroen, Mahaicony Rice mill.

Onsight, the following process occurs;

1. The farmer transports the paddy to the facility where it is weighed and the paddy grains are tested within the laboratory to assess the quality of the rice.
2. Once the paddy is acceptable, it is transferred to the storage bins at the facility.
3. It is then cleaned of debris such as straw, grass and mud using the paddy cleaner.
4. The cleaned paddy is placed back into the storage bins. Once paddy is needed, the stored paddy is placed into tonne sacs and transported to other facilities to complete the process of manufacturing rice.
5. The waste generated is stockpiled in the yard for some time and later used for landfilling within the compound or given to farmers for various uses.

The facility also stores fertilizers for farmers. These fertilizers are:

600 bags of Urea. This is nitrogen-intensive fertilizer which must be applied to crops properly to be effective.

600 bags of NPK (6-25-25) which is known as Nitrogen, Phosphorus and Potassium. This is a balanced fertilizer which generally provides the necessary nutrients for crops.

600 bags of TSP (15-15-15) which is known as Triple Superphosphate. This fertilizer is phosphorus-intensive to aid in the growth of leguminous crops.

Utility Services

- The electricity for the facility is provided by three generators which are powered by Diesel fuel. The fuel storage capacity on site is with a capacity of 53,000 litres. The fuel is contained within a containment bond.
- The water at the facility is supplied by Guyana Water Incorporated (GWI).
- Communication for the facility is provided by Guyana Telegraph and Telecommunications (GTT) with telephone connectivity and internet services.

Waste

The waste generated at the facility includes;

1. Solid waste such as straws, grass and mud. The quantity of waste is 3 tonnes per crop.
2. Domestic waste

Potential Environmental effects

The limited operation that occurs on sight contributes to lower environmental impact.

Air Pollution – The cleaning of the paddy releases debris through a pipe which has the potential to release particulate matter into the atmosphere. The stockpiling of debris after cleaning also contributes to the release of particulate matter especially when dry weather and winds are experienced. In this case, the air quality of the location should be monitored to determine the levels of dust released. This would determine the next steps for mitigation.

Water Pollution– There are no discharge points as a result of the operations. Water may be used for washing down the yard or for domestic purposes. Water quality may be of concern if there is a spillage at the fuel storage area which is released into the western drainage due to stormwater. Oil-water separators are installed at the facility.

Land Pollution – The stockpiling of debris after the initial cleaning of the paddy is a cause of concern due to the aesthetic implications and the biodegradation of the material. Over time, the rice mill would use the material for landfilling or farmers would collect it from the facility.

Noise Pollution – The noise generated is a result of the paddy cleaner, the operation of machinery and generators especially during the cropping season. It is expected that the workers would be the only persons affected due to the proximity of the facility to residents. Workers are expected to be equipped with hearing protection during these periods.

Fuel Spillage – Diesel can be spilt when refilling fuel tanks or accessing fuel for generators. Therefore, the clean-up of spills must be efficient.

Approved by:

Mr. Rayaadul Hakh

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