

BERBICE ONSHORE SUPPORT SERVICES INC

PROJECT EXECUTIVE SUMMARY

WAREHOUSE STORAGE FACILITY

OVERVIEW:

Berbice Onshore Support Services Inc warehouse is located at Block XXXIX Parcel 76, Garden of Eden, East Bank Demerara, within the Industrial zone of the Town and Country planning regulations and the Caledonia Good Success Neighborhood Democratic Council(NDC) within the county of Demerara. Berbice Onshore Support Services Inc is registered under the Company Act, Laws of Guyana, with directors whom have satisfy the requirements under the Company Act, laws of Guyana.

Warehousing is defined as the immediate storage of goods in between two consecutive phases of a supply chain. Important functions of warehouse include shipping, picking of orders, storage and receiving and these are considered essential constituents of the supply chain

The major focus of operations and process of warehousing around the activity of storage. The warehouse is considered an important element of the logistic system. The ways through which activities of the warehouse are organized have a positive effect on all processes of the business organization. Warehouses are not just a place to store products good and transport; they process 3 kinds of flows that include internal, output and input. The major focus of our warehouse will be operations and process of warehousing around the activity of storage. The warehouse is considered an important element of the logistic system. The ways through which activities of warehouses are organized have a positive effect on all processes of the business.

Berbice Onshore Support Services Inc warehouse is located on the northern half of the second street, Garden of Eden village, bordered on the east by an empty lot, South by main entrance roadway, North by trench, and West by an Empty lot. The Warehouse facility is sited on a land size as follows:

Length 450 feet

Width 100 ft

The land is approximately 2.5 acres

The Warehouse dimension are as follows:

Length 400 ft

Width 50 ft

Height 15 ft

The Warehouse building and erections thereon is made of concrete and zinc, with four(4) openings(metal)doors on the eastern sides measuring 20 ft by 15 ft. There is a concrete driveway situated on the eastern side of the building measuring the entire length of the building. This driveway is approximately 23 feet wide. It is bordered on the east by a surface drain (2ft deep and 2.5 feet wide discharging to the north(trench) and south(street drain. Access to the warehouse and compound is controlled by a metal gate located at the south entrance to the warehouse and secured by 24 hours security personnel.

The warehouse was constructed for the storage/transfer of the following nonhazardous materials to service the Oil and Gas industry.

- Sodium Bromide
- Barite and
- Sacked Cement

These will be housed in regulated approved 1 ton sacks and in slings of 45-50 sacks of cement per sling.

The total capacity of material to be stored within the warehouse is approximately 100 to 150 tones total materials.

Berbice Onshore Support services Inc employees approximately 56 persons on this site the composition mainly drivers and spotters.

PROPOSED PROJECT

The Proposed project has two components. A warehouse storage/transfer facility and main administrative office.

The Warehouse will be sed to store and act as a transfer station for the abovementioned materials between the clients wharfs and operations facility. The estimated turn around timeframe for the materials is 2 -0 3 days at a volume of approximately 60 tones per period.

The area of usage to be occupied is a total of 2 acres and parking spaces for approximately 30 trucks and trailers to the east of the warehouse.

OBJECTIVE

To provide a cost effective and efficient service to our clients.

To provide safe and environmentally friendly storage facility for our client's materials enroute to their operations facility/wharf.

To provide administrative services to administer the operation of Berbice Onshore Support Services Incooperations from a centralized location

Employee Participation

Employees with experience in hazard identification and prevention are vital to workplace safety. Workplace safety is taken seriously if employees are committed to following health and safety procedures and have a sincere interest in developing them.

Process Safety Information

Employers are required to compile written process safety information (PSI). The compilation of written process safety information will help the employer and the workers involved in operating the process to identify and understand the hazards involved in their processes. Process safety information will include information on the hazards of the hazardous chemicals stored, information on the technology of the process, and information on the equipment used in the process. Process safety information for the storage of hazardous chemicals will usually be considerably less extensive than that required for the manufacture or use of such chemicals.

Process Hazard Analysis (PHA)

Berbice Onshore Support Services Inc will implement a process hazard analysis is an organized and systematic effort to identify and analyze the significance of potential hazards associated with the processing and handling of hazardous chemicals. The team will include an independent safety consultant, manager of Berbice Onshore Support Services Inc and selected employees. The PHA team will comprised of personnel that are knowledgeable in engineering and process operations, at least one employee familiar with the process being evaluated, and at least one employee knowledgeable in the specific process hazard analysis methodology being used.

The team analyzes potential causes and consequences of fires, explosions, releases of toxic or flammable chemicals, and major spills of nonhazardous chemicals. The team conducting the PHA will make recommendations for additional safeguards to adequately control identified hazards or to mitigate their effects. Safeguards may include inherently safer or passive approaches to hazard control, or suggesting new engineering controls (e.g., improved fire detection and suppression systems at facilities that store heat-sensitive chemicals) or administrative controls (e.g., new operating procedures, inventory control measures, separation of nonhazardous chemicals into different storage areas)

Process hazard analyses will be reviewed and revalidated at least every three to five years.

Operating Procedures

Berbice Onshore Support Services Inc will develop and develop and implement written operating procedures that provide clear instructions for safely conducting activities involved in each covered process consistent with the process safety information. Operating procedures will cover not only normal operations, but also other situations such as startup, temporary operations, and emergency shutdown. Important safety information, including the basic hazards encountered or that could be encountered in the process, shall be included in the operating procedures.

Although storage facilities typically have relatively few procedures, when hazardous chemicals are involved, it is still critically important that these procedures are thorough, clear, and communicated effectively to employees. Operating procedures will be covered in training sessions for employees

involved in the process and reviewed during mandatory three year PSM compliance audits. Training/toolbox talks will ensure that employees both understand and routinely follow the procedures. Examples of storage facility operating procedures include:

- Container transfer/storage procedures – including proper handling of the container to avoid loss of containment; appropriate locations for stored chemicals; and signs of damaged storage containers
- Storage tank loading/unloading procedures – including proper connection/valve operating sequence, maximum intended inventory, maximum intended pressure, and receiving documentation procedures
- Administrative procedures – including limited personnel access to storage areas, restrictions for forklift access or ignition source introduction
- Emergency operations – including loss of containment, fire response, and evacuation procedures

Training

Berbice Onshore Support Services Inc will provide initial and refresher training to every employee involved in operating a PSM-covered process. Training will also cover the facility's procedures for emergency operations, such as loss of containment scenarios. The level of training may vary for each employee. For example, those who work in the area or operate the equipment will receive more extensive training than visitors or other nonoperational personnel, which would require awareness training. Berbice Onshore Support Services Inc will also train contractors or temporary employees on known potential fire, explosion, or toxic release hazards associated with their work and the processes

Emergency Planning and Response

The PSM emergency planning and response requirements largely refer to other OSHA standards, particularly the Emergency Action Plan standard(13), which requires an emergency action plan, employee alarm system, employee training on the plan, and provisions for reviewing the plan; employers may also be covered under the nonhazardous Waste Operations and Emergency Response standard.

Chemical storage facilities with a PSM-covered process should already be complying with these standards. Storage facilities should consider addressing:

- Procedures for reporting emergencies
- Procedures for handling small releases
- Emergency evacuation procedures
- Procedures for employees who must implement critical operations before evacuating
- Procedures for accounting for all evacuated employees
- Procedures for employees who perform rescue or medical duties
- A list of contacts for employees with specific duties and responsibilities in emergencies

Triple D's Inc Warehouse storage facilities with PSM-covered processes will also ensure that contractors and visitors who may be present at the storage facility understand how to respond during emergencies.

Personal Protective Equipment.

All Employees/ visitors/contractors operating within the Berbice Onshore Support Services Inc Warehouse facility will be required to wear their required PPE when carrying out their work task. These included but not limited to:

Hard hats,

Goggles

Dust mask/respirators

Coveralls long sleeve

Steel/composite toe safety boots

Ear plugs/muffs

Gloves

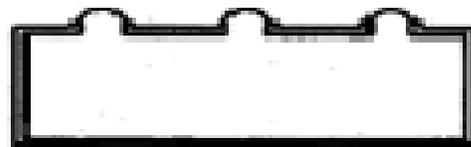
Health/Comfort



a. Monitor.



b. Bilateral.



c. Skylights.

- Provide **proper ventilation** under all circumstances.
- Provide local exhaust for restrooms and entire warehouse
- Install CO₂ sensors to provide real time monitoring of air quality.
- Provide for natural lighting where possible. Provide lighting controls that turn off lights when sufficient daylight exists. Integrate daylighting with the electric lighting system.

Operations Plan

Berbice Onshore Support Services, everyday short-term processes include all of the tasks involved in running the warehouse business, including answering calls, scheduling shipments, transporting materials within the warehouse, leasing/renting commercial space to our clients.

Long-term goals

Berbice Onshore Support Services Inc. long term goals are to provide a modern technologically advance and safe storage warehouse to satisfy the ever-growing needs of the business community, including the Oil and Gas sector. Safety and health and environmental compliance will be the hallmark of our activity ensuring compliance with all regulatory agency and safety and health and environmental standard.

Potential environmental hazards and control methods

The are potential hazards that the project will be subjected to are:

1. Noise pollution
2. Dust pollution
3. Traffic Control

What will we do?

1. Noise pollution.

The potential noise nuisance/pollution for this project may arise from the vehicular traffic entering and leaving this compound. The source of this noise will be the Man and International diesel truck whose engine capacity generate a reasonable noise output.

However with the advancement in manufacture's engineers modification and significantly reduction in exhaust emission and sound, the result is that the noise out from these vehicles are within the 85db range as specified by our clients (Exxon] Vehicles not complying with the above standards will be refused entry to our facility.

Noise control is an essential safety consideration in our warehouse activity The effective management of health and safety risks is an essential part of a good health and safety management system. Berbice Onshore Support Services (BOSS)

through our line managers have a responsibility to protect all workers from the harmful effects of noise generated in their workplace. This includes all workers whether employed on a temporary, permanent, or casual basis, as well as all visitors and contractors who may enter a noise zone in the workplace. The hierarchy of control is important to ensure the exposures are reduced to as low a level as possible.

Here are some strategies for mitigating noise hazards in warehouses:

Engineering Controls:

Modify the paths by which the noise travels through the air to the people exposed. Erect enclosures around machines to reduce the amount of noise emitted into the workplace or environment. Use barriers and screens to block the direct path of sound. Position noise sources further away from workers.

Administrative Controls:

Operate noisy machines during shifts when fewer people are exposed. Limit the amount of time a person spends at a noise source. Provide quiet areas where workers can gain relief from hazardous noise sources. Control noise exposure through distance is often an effective, yet simple and inexpensive administrative control.

Personal Protective Equipment (PPE):

Personal hearing protection within the warehouse environment will not be used as the only source of protection as noise can cause damage through the transfer of noise through vibrations which are transferred via the skull bone to the cochlear, However, PPE will be used in conjunction with other controls to provide additional protection. Some of the ear protection to be used are:

- ✓ Ear Muffs with a noise reduce rating (NRR) of 20-30db
- ✓ Ear plugs with a noise reduce rating (NRR) of 20 -30 dB

Other options include

- silencers, either reactive or dissipative;
- plenum chambers; acoustic coatings;
- noise barriers;
- vibration dumping or insulation

Dust Pollution.

Sources of Dust in the Warehouse

There will be numerous sources of dust within the warehouse. Some common sources include;

1. Wearing of tires on forklifts and vehicles entering the warehouse from the outside (causes black dust on the floor and walls)
2. Airborne dust that enters the warehouse from the outside
3. Silica dust from the wearing down of floors
4. The natural decay of wood pallets
5. Soot from vehicle exhaust, including forklift exhaust
6. As a by-product of tasks associated with regular warehouse maintenance
7. Barite sacks

Depending on warehouse dust, it can be bad for employees. It can cause several health problems, such as dermatitis, allergic reactions, and asthma attacks. Over the long term, it can also cause respiratory issues such as bronchitis, chronic obstructive pulmonary disease (COPD), and lung cancer.

The most significant risk from warehouse dust is from fine particles, which are often invisible to the human eye. While larger dust particles are filtered by the structures in your nose and airways, finer particles can penetrate the deepest parts of your lungs.

Dust pollution within the warehouse will not pose a significant health or environmental risk due to the standards regulating our materials to be stored within the warehouse.

Mitigation dust control methods to be implemented

Here are some ways to prevent dust from entering the warehouse:

1. Installation of a dust control system. This is an industrial ventilation system designed to filter out dust from the air in within the warehouse.
2. Minimize the influx of dust from the outside. This will involve installing sealed control doors, and industrial curtains.
3. Cover surfaces to prevent dust from gathering on them. This has the added effect of making machinery more effective, as dust can hamper the working of numerous delicate parts of a machine. It also makes products look cleaner and reduces the risk of accidentally sending dusty products to clients.
4. Limit the movement of materials. The more traffic in a warehouse, the greater the chance dust will form. Review the traffic flow and reduce any unnecessary

activities, especially those that involve forklifts and other vehicles. Not only does this reduce the dust in the space, but it will also make the warehouse more effective as our employees are no longer spending time on unnecessary cleaning tasks.

5. Segregate areas prone to dust. If some areas of the warehouse are particularly prone to attracting dust (whether due to their location near the doors or the type of activity in that section), partitioning them from the rest of the warehouse can make cleaning easier.
6. Clean and inspect the warehouse regularly. Cleaning dust from the warehouse should be a regular part of warehouse maintenance. This can include giving employees the responsibility of keeping their areas clean, as well as larger-scale actions, such as using vacuum systems. Conduct regular inspections to ensure the warehouse is maintained at an optimal level of cleanliness.
7. All employees working within the warehouse will be required to wear personal protective equipment, which will be provided by management and supervised by their respective supervisor.

All barite sacks are required to be transported and stored in seal sacks, any damaged sacks are resealed prior to transportation and storage. Additionally, the outer perimeter of the warehouse (driveway is water sprayed twice daily to reduce the possibility of the dust affecting person in the immediate environment also the surrounding areas (see attached picture of power washer). All dust particles will be confined within the permissible exposure limit as regulated by the EPA regulations with quarterly sampling done by an independent agency. Data will be recorded and stored for future reference and records.

Traffic Management

Due to the close proximity the main roadway, (East Bank Public Road), Berbice Onshore Support Services Inc will be utilizing our security to monitor closely traffic entering and exiting the warehouse compound to avoid congestion and accidents. All vehicles will be required to adhere to the rules of this compound and the traffic personnel on duty. Priority will be given to road users who are within this vicinity as well as pedestrians to avoid traffic buildup.

Waste Management

Solid waste is collected and stored in seal plastic bins around the compound for collection cycle and collected for final disposal by our contracted waste disposal company, Purans Waste Disposal company twice weekly. Commercial skip bins

are provided for collection and storage of commercial waste and collected weekly by the contracted waste disposal company (see picture).



COMMERCIAL WASTE COLLECTION VEHICLE

The above project summary is subject for annual review in keeping with evolving tread and updated regulations that may be changed from time to time.

Date this the 14th day of July 2023.

Respectively prepared and submitted by:

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**Environmental
Protection
Agency - Guyana**

ENVIRONMENTAL AUTHORISATION SCREENING REPORT

NAME OF COMPANY: Berbice Onshore Support Services Inc.

TYPE OF PROJECT: Storage of Barite, Sodium Bromide, and Cement (ONLY) and Fuel Storage for Power Generation

LOCATION OF PROJECT: Block XXXIX, 76, Garden of Eden, East Bank Demerara.

PROJECT OVERVIEW

On **April 14, 2023**, the EPA received an application for Environmental Authorisation from **Biddle Inc. Sac** for the Transportation of Oil and Gas Chemicals at Block XXXIX, 76, Garden of Eden, East Bank Demerara. The Project was first assigned to the Environmental Officer, Ms. Letisha Noel. However, due to her workload, it was reassigned to Ms. Tricia Braithwaite, on **June 12, 2023**. A verification inspection was conducted on **June 22, 2023**. The inspection confirmed the following:

1. This is an existing operation; oil and gas chemicals were stored in the warehouse during the verification inspection.
2. This project has a fully enclosed warehouse (Length 400ft * width 50ft * height 15ft.) facility.
3. The warehouse is situated on the western half of the compound, while the eastern half is currently used as a parking lot to accommodate trucks.
4. The front warehouse was being used as an office space.
5. **There was a large quantity of Borcoat EA165E stored onsite at the time of the verification inspection; however, the Developer indicated that the Borcoat EA165E would have been removed and ONLY Barite, Sodium Bromide, and Cement would be stored.**
6. Fuel (1000L) was stored in a fuel tank installed by SOL at the southwestern of the project site.
7. The back of the chemical storage facility (northwestern) was used as a laydown yard to store oil and gas equipment.

Following the verification inspection, a meeting was held on **August 17, 2023**, to inform the Developer that the application was incomplete and did not include the storage of hazardous chemicals. At the meeting, the Agency was notified that the Developer operates under three business names as a consequence of the local content bill: Biddle Inc. Sac, Berbice Onshore Support Services Inc., and Biddle Verwey Inc. However, the recommendation was made that the Developer choose a business name and resubmit the application to include all of the Project activities under that name.

The application was resubmitted in **September 2023**, and prescreening was conducted. During this exercise, it was noted that the new application was submitted under the company name **Berbice Onshore Support Services Inc (BOSS) for the Storage of Hazardous Chemicals**. Additionally, the application was incomplete (the project summary was not submitted) and did not include the Transportation of Hazardous Chemicals. Further, the updated Project summary was submitted on **October 17th, 2023**, and a clarification of the type of cement to be stored was submitted on **November 9, 2023**.

DESCRIPTION OF ACTIVITY

The project activity involves the storage of **barite, cement, and sodium bromide**. The chemicals are stored in 1-ton FIBC sacks (barite and sodium bromide) and slings of 45-50 sacks (of cement per sling). The total capacity of the materials to be stored within the chemical storage warehouse is approximately 100 to 150 tons of chemicals. Berbice Onshore Support Services Inc. (BOSS) chemical storage warehouse acts as a transfer station between the client's wharf and the operations facility for the abovementioned chemicals. The estimated turnaround timeframe for the materials is 2-3 days at a volume of approximately 60 tons per period.

The listed chemicals are collected and stored in a warehouse 400ft in length and 50ft in width. The chemical storage warehouse is a concrete structure with an impervious concrete floor and a zinc roof. The building was constructed with vent blocks that allow for ventilation of the storage facility. Additionally, the building has four metal doors on the eastern side, each measuring 20ft by 15ft (see image below). There is a concrete driveway, approximately 23ft wide, on the eastern side of the facility that is equivalent to the length of the building. This

driveway is bordered by a surface drain (2ft deep and 2.5ft wide and discharges stormwater into the north and south trenches. Access to the warehouse and compound is controlled by a metal gate at the south entrance to the warehouse and secured by 24-hour security personnel.

Table 1: List of Chemicals to be Stored at Project Site

Name of Chemical	Type of Storage Container	GHS Rating- (Health Hazard, Physical Hazard, Environmental Hazard)
Barite	1-ton FIBC sacks	Carcinogenicity Category 1A Specific Target Organ Toxicity - Repeated Exposure) Category 1
Class G Cement	Sack	Skin corrosion/irritant (Category 2), H315 Serious eye damage/eye irritation (Category 1), H318 Skin sensitization (Category 1B) H317 Carcinogenicity (Category 1A) H350 Specific target organ toxicity - single exposure (Category 3 resp), H335
Sodium Bromide	1-ton FIBC sacks	Non Hazardous

NB: There was a large quantity of Borcoat EA165E stored onsite at the time of the verification inspection; however, the Developer indicated that the Borcoat EA165E would have been removed and **ONLY Barite, Sodium Bromide, and Cement would be stored.** Additionally, the back of the chemical storage warehouse was being used as a laydown yard to store oil and gas equipment; however, according to the developer, this will also be removed.

Notably, the Developer was informed that the **Environmental Permit** would be issued for the **Storage of Barite, Sodium Bromide, and Cement (ONLY)** and that should the Agency visit at any time and observe chemicals not on the list submitted in the project summary being stored, the company will be in contravention of its Permit.

BOSS Inc. employs approximately 36 persons onsite. BOSS will develop and implement written operating procedures that provide clear instructions for safely conducting activities involved in each process, consistent with the process safety information. Important safety information, including the primary hazards encountered or that could be encountered, shall be included in the operating procedures.

Further, operating procedures will be covered in the training session for employees involved in the process and reviewed during mandatory PSM compliance audits. The storage facility operating procedures include:

- Storage procedures – including proper handling of the container/packing to avoid loss of containment, appropriate locations for stored chemicals, and identification of damaged storage containers.
- Fuel storage (tank load/unloading – including proper connection/valve operating sequence, maximum intended inventory, maximum intended pressure, and receiving documentation procedures.
- Administrative procedures – including restricted personnel access to storage areas and restrictions for forklift access.
- Emergency operations – including loss of containment, fire response, and evacuation procedures.

PROJECT LOCATION

The project is situated at Block XXXIX, 76, Garden of Eden, East Bank Demerara. It is bounded by a residential dwelling 144m west, Grandeast Seafood ~80m east, a canal ~173m north, and a canal and the main access road ~190m south. This area is comprised mainly of commercial and agricultural activities.



Google Image 1: Zoomed-in image of the project and the distance from sensitive receptors



Google Image 2: Zoomed-out image of the project location and the surrounding environment

CHARACTERISTICS OF POTENTIAL IMPACTS

AIR QUALITY

According to Oloruntobi, O., Mokhtar, K., Rozar, N.M., Gohari, A., Asif, S., and Chuah, L.F. (2023) as it relates to warehouses emissions of CO₂ and particulates are of concern, and these emissions from diesel vehicles have been linked to numerous health issues. Within BOSS's chemical storage warehouse, a forklift is used to move and stack chemicals. This activity results in the release of CO, CO₂, NO_x, Hydrocarbons, and O₂.

During the operational phase, there is a risk of accidental spills during the movement and stacking of chemicals. The physical state of the chemicals to be stored is solid (powder). These, if released, can lead to an increase in sulfur dioxide, nitrogen oxide, carbon monoxide, particulate matter, etc. Most importantly, releasing these chemicals can have adverse environmental and health effects (see Table 1).

The mitigation measures proposed and will be required by the project but not limited to are:

1. Wet suppression
2. The facility is fully enclosed with ventilated using extractor fans.
3. Limit the movement of materials.
4. Review the traffic flow and reduce any unnecessary activities, especially those that involve forklifts and other vehicles.
5. Clean and inspect the warehouse regularly.
6. Conduct regular inspections to ensure the warehouse is maintained at an optimal level of cleanliness.
7. All employees working within the warehouse will be required to wear personal protective equipment.
8. The forklift will be maintained and operated in accordance with the manufacturer's specifications.

9. The driveway is paved to reduce dust emissions and facilitate smooth traffic.
10. Install CO₂ sensors to provide real-time monitoring of air quality.

AIR QUALITY IMPACT SIGNIFICANCE

Impacts on air quality are **not significant** given that gas (Co, SO₂, NO_x, O₃, etc.) and particulate matter emissions will not be long-term and will be non-continuous and low, given the mitigation measures. Further, with implementing the above-mentioned mitigation measures, impacts are expected to be reversible and minor and hence **not significant**.

NOISE QUALITY

A forklift is utilized to move and stack chemicals. Forklifts produce a significant amount of noise (65-90dB), based on the make and model (specifications). Additionally, there is the potential that noise pollution from this project may arise from vehicular traffic, i.e., trucks entering and leaving this compound.

The mitigation measures which will be implemented to reduce any noise emissions are as follows:

1. All equipment will be inspected before use to ensure suitability. Additionally, all equipment is subjected to scheduled preventative maintenance.
2. Noise-generating equipment or machinery will be used with the necessary muffling apparatus to reduce operational noise to acceptable levels.
3. Standard operating procedures for loading and offloading have been established.

NOISE POLLUTION IMPACT SIGNIFICANCE

Given that the average sound level emissions for a forklift fluctuate between 65-90dB noise levels with the implementation of the above-mentioned mitigation measures, the operation of the forklift should fluctuate within that range. Therefore, this impact is **not** expected to be **significant**, given that sound-level emissions during operations will be short-term, non-continuous, and within regulatory standards. Additionally, the impacts will be confined within the boundaries of the project area and its immediate surrounding environment.

WATER POLLUTION

The project stores approximately 1000L of fuel (diesel) for operating a 120kVA diesel generator. This fuel, if improperly stored or transferred, can spill and lead to contamination of soil and water. Diesel is one of the most acutely toxic oil types and can affect fish and invertebrates that come in direct contact with diesel (National Oceanic and Atmospheric Administration, 2023). Further, according to the National Oceanic and Atmospheric Administration (2023), "fish kills have been reported for small spills in confined, shallow water and in streams, where weathering and mixing are reduced."

The mitigations proposed to reduce the impacts on water quality are as follows:

1. The fuel is stored within a bunded area.
2. Fuel is stored in an above-ground metal tank
3. The fuel storage tank and pipe fittings will be regularly serviced and maintained.
4. An EPA-authorized waste management company, Sandip, collects waste.

WATER QUALITY IMPACT SIGNIFICANCE

Impacts on water quality are **not significant** given that with the implementation of the abovementioned mitigation measures, the impacts are expected to be minor and confined within the boundaries of the project site.

SUMMARY OF SIGNIFICANCE

Impact	Significance	Summary of Reasons
Air Quality	Not Significant	Impacts on air quality are not significant given that gas (Co, SO ₂ , NO _x , O ₃ , etc.) and particulate matter emissions will not be long-term and will be non-continuous and low, given the mitigation measures. Further, with implementing the above-mentioned mitigation measures, impacts are expected to be reversible and minor and hence not significant .
Noise Quality	Not Significant	Given that the average sound level emissions for a forklift fluctuates between 65-90dB noise levels from the movement of chemicals should fluctuate within this range. However, this impact is not expected to be significant given that sound-level emissions during operations will be short-term and non-continuous. Additionally, the impacts will be confined within the boundaries of the project area and its immediate surrounding environment. Further, with the implementation of the mitigation measures, impacts are expected to be reversible and minor.
Water Quality	Not Significant	Impacts on water quality are not significant given that with the implementation of the abovementioned mitigation measures, the impacts are expected to be minor and confined within the boundaries of the project site.

PROJECT SIGNIFICANCE

Criterion 1 Project Location (for example, a densely populated area or a high-density industrial zone)

This project is in an area comprised of mainly commercial and residential activities. The area is not considered densely populated. (*Refer to Google image 1 above*).

Criterion 2 Environmental Sensitivity

The project is not located in close proximity to any areas that have special environmental attributes worthy of retention or special care, have ecological significance, or have rare ecosystems or habitats with species at risk (*Refer to Google images 1 & 2*).

Criterion 3 Levels of Public Concern:

Interviews were conducted with the residents and nearby business establishments, and the responses are as follows:

- S. Daniels of 38 Garden of Eden, EBD – no objections or concerns to BOSS's operations.
- Name not given – 38 Garden of Eden, EBD - no objections or concerns to BOSS's operation; however, concerns were expressed about the operation of Grandeast Inc. (seafood packaging) and Royal Chicken.

- S. Roopnarine of 37 Garden of Eden, EBD, is sometimes affected by noise from the movement of the trucks; however, he has no objections to the project.
- T. Zinul of 69 Garden of Eden, EBD - **objected** to the project and stated that she is **affected** by noise and dust emissions originating from the compound.
- Grandeast Inc. of Parcel 75 Block XXIX, Garden of Eden, EBD – no objections or concerns to BOSS’s operation; however, concerns were expressed about the operation of Royal Chicken.

CONCLUSION & RECOMMENDATION

It can be concluded, based on the existing data, technical review, observation/ field inspections, and exercise of discretion, that the impacts of this activity will not be significant. The main impacts that originate from this activity include air, noise, and water. However, given the mitigation measures that will be implemented, the impacts will be short-term, temporary, and non-significant.

Additionally, **no EIA is required** given that the potential impacts of the project on the physical, biological, and socioeconomic environment will not be significant, given that the operation of the storage facility will be done in an enclosed and controlled environment. The project shall, therefore, be placed on **30 days' public notice** and forwarded to **permitting** if there are no objections.

Further, it is recommended that Environmental Authorisation be granted for the **Storage of Barite, Cement and Sodium Bromide (Only)**. It is also recommended that an application be submitted for the Transportation of Hazardous Chemicals by **December 31, 2023**.

PHOTOS



Image 1: Barite being stored in tote bags

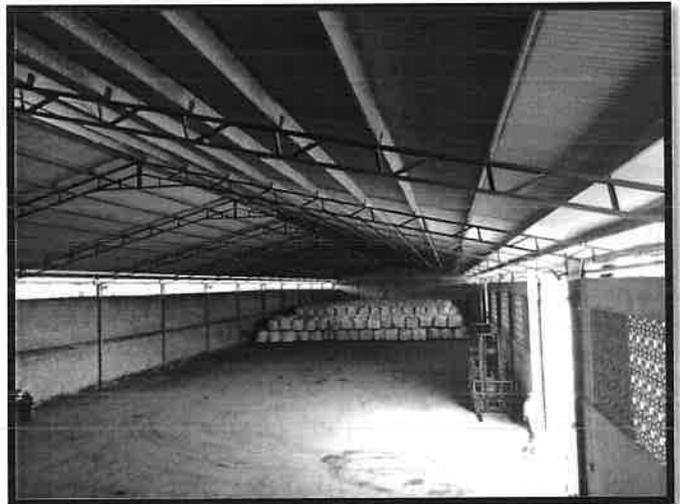


Image 2: Barite stacked on pallets three bags high within the chemical storage warehouse.



Image 3: Borcoat EA165E stored on pallets within the chemical warehouse



Image 4: Chemical Storage Facility



Image 5: Laydown yard area at the back of the storage facility



Image 6: Western stormwater drain



Image 7: Fuel storage tank and secondary containment area.



Image 8: Bucket of sand and fire extinguisher.