



## **SHAM MINI MART GAS STATION PROJECT SUMMARY**

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### **Project Description**

Our gas station will operate as a private Gas Station, which would be wholesaling and retailing petroleum products principally for commercial, household and industrial uses.

The petroleum products would be purchased from local distributors. The Petroleum will be transported by the distributor and off-loaded at our project site located at 1-5 Perth Essequibo Coast, Region 2.

Wholesaling would engage farmers; it is anticipated that 4 - 6 workers would be employed at this facility with most workers residing in the Locality.

Petroleum products such as gasoline, diesel, kerosene fuel, lubricants are essential to the industrial and commercial development of Guyana`s economy and our gas station is positioned in making a positive contribution to our country`s development.

## **Description of Site**

### **Location**

The project is located at Lot 1-5 Perth Essequibo Coast Region 2.

### **Area**

The proposed storage area is (60ft x 70ft).

### **Layout**

The storage area consists of three (3) cylindrical metal double wall tanks which stores one 3000 gallons Gasoline, one 3000 gallons Diesel, which would be underground and one (1)3000 gallons Kerosene above ground. These tanks are supported individually by a concrete slab and would have a containment bund around to capture any spillage in the event of an accident.

### **Drainage**

The property would have a network of concrete conduits, sumps, and filter system to drain the project area.

### **Land Use**

The district in which the project lies is a mix of residential and commercial. Adjacent lots to the project have established a residential house.

## **Infrastructure and Services**

### **Electricity**

Power to service the facility would be from The Guyana Power and Light (GPL) and possibly a portable generator for back in the event of a power outage.

### **Water**

Water for domestic uses would be supplied by the Guyana Water Inc (GWI). A regular supply of water for drinking purposes of staff would be made by certified suppliers with daily procurement of bottled water.

### **Informational Signs**

Identifying tank contents is of primary importance to the management of fuels: Signs prohibiting highly flammables and no smoking will be erected around the facility.

## Fire Protection Equipment

Portable fire extinguishers are required when fuel is stored. Fire protection for the storage, use, and dispensing, mixing, handling, and on-site transportation of flammable and combustible liquids several fire protection posts will be assigned on the property all clearly marked as directed by Guyana Fire Service.

## Protection against Vehicular Damage to Tanks

It is important to protect your aboveground storage tanks from damage by vehicles. Pipes, valves, and fittings can be protected with steel guard posts placed at least three feet from the tanks being protected.

## Project Design

The project will be implemented in the following phases:

### Phase 1: Construction

- Site surveys
- Topographic guided by the design layout submitted with this summary
- Geotechnical soil and subsurface investigations

### Hydrographic survey

- Building construction
- Commissioning of operations

### Phase 2: Operational

The number of workers for proposed works would be determined by the contractor.  
Operational: 3-5

## Site Establishment and Preliminary Activities

During surveys and preliminary investigations	Marking of survey points will be done with the Engineers approval.
	Vegetation clearing is already at a minimum with and the area is generally flat.
Setting up and construction area	<ul style="list-style-type: none"><li>- There will be no overnight accommodation available at the Contractors Camp.</li><li>- The size of the construction camp should be kept to a minimum.</li><li>- Adequate parking would be provided for staff and visitors.</li><li>- The contractor would be required to attend to the drainage of the camp site to avoid standing water and / or erosion.</li></ul>

	<ul style="list-style-type: none"> <li>- Temporary toilet facilities would be provided.</li> <li>- Bins and / or skips shall be provided at convenient intervals for disposal of waste within the construction camp.</li> <li>- Bins would have liner bags for efficient control and safe disposal of waste.</li> <li>- Recycling and the provision of separate waste receptacles for different types of waste would be encouraged.</li> </ul>
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**Storage Areas**

Storage Areas During Construction	<ul style="list-style-type: none"> <li>- Choice of location for storage areas must take into consideration prevailing winds, and general on-site topography.</li> <li>- Storage areas would be designated, demarcated, and fenced if necessary.</li> <li>- Storage areas would be secured to minimize the risk of crime. They should be safe from access by children and animals, etc.</li> <li>- Fire prevention facilities (extinguishers, sand buckets, etc.) shall be present at all storage facilities.</li> </ul>
Hazardous Substances and Materials	<ul style="list-style-type: none"> <li>- No Hazardous substances would be stored.</li> </ul>

**ENVIRONMENTAL ISSUES**

**General Maintenance**

Dry grass, weeds, and combustible materials shall not be allowed to accumulate around petroleum tanks.

**Containment and Filling**

All outdoor storage tanks will have secondary containment large enough to accommodate a total of 110% spill from the largest tank plus a 24-hour rainfall event. Each tank may be filled to only 95 percent capacity.

**Storm Water**

Serious financial and environmental impacts can be caused by unmanaged storm water.	a) To prevent storm water damage, the increase in storm water runoff resulting from the construction activities must be estimated and the drainage system accessed accordingly. A
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	<p>drainage programmed would be submitted to the Civil Engineer in Charge for approval.</p> <p>b) During site establishment, storm water culverts and drains are to be located and covered with metal grids to prevent blockages if deemed necessary by the Engineer.</p> <p>c) Temporary cut-off drains and berms maybe required to capture storm water and promote infiltration, or to divert storm water flow to avoid erosion.</p>
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**Education and Awareness**

<p>Worker Education on General Environmental Conduct  <i>These points need to be made clear to staff on site before the project begins and reinforced during the project</i></p>	<p>Topics to be covered should include:</p> <ul style="list-style-type: none"> <li>• What is meant by “environment”?</li> <li>• Why the environment needs to be protected and conserved.</li> <li>• How construction activities can impact on the environment</li> <li>• What can be done to mitigate against such impacts?</li> <li>• Awareness of emergency and spills response provisions</li> <li>• Social responsibility during construction, e.g., being considerate to residents.</li> </ul> <p>It is the contractors` responsibility to provide the site foreman with no less than 1 hour’s environmental training and to ensure that the foreman has sufficient understanding to pass this information onto the construction staff</p>
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**Worker Conduct on Site**

During staff induction, followed by ongoing monitoring.

<p>A general regard for the social and ecological well-being of the site and adjacent areas is expected of the site staff. Workers need to be made aware of the following general rules:</p>
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- 1) No alcohol / drugs to be present on site.
- 2) No firearms allowed on site or in vehicles transporting staff to / from site (unless used by security personnel).
- 3) Prevent excessive noise.
- 4) Prevent unsocial behavior.
- 5) Bringing pets e.g., caged birds onto the site is forbidden.
- 6) No harvesting of firewood from the site or from the adjacent areas.
- 7) Construction staff are to make use of the facilities provided for them, as opposed to ad-hoc alternatives, (e.g., fires for cooking, the use of surrounding areas / bush as a toilet is forbidden).
- 8) Trespassing on private / commercial properties adjoining the site is forbidden.
- 9) Driving and operating plant and equipment under the influence of alcohol is prohibited.
- 10) Other than the pre-approved security staff, no workers shall be permitted to live on site.

### **Air Quality / Dust Pollution**

- Vehicles and mobile equipment travelling along the internal access road must adhere to the speed limits to avoid creating excessive dust.
- Building construction- areas that have been stripped of vegetation must be dampened periodically to avoid excessive dust.

### **Soil Erosion**

The general area and soil type is laterite.  
a) Erosion is not foreseen

### **Waste Management**

All protective measures should be taken to ensure that wastes management systems are put in place if pollution is to be avoided:

- 1) Minimize waste production.
- 2) Practice correct handling and disposal of all waste materials in an environmentally friendly manner.
- 3) Reuse and reclaim materials whenever possible.
- 4) Effluent should pass through the oil-water separator.
- 5) A private disposal service would be contracted for disposal of waste at the facility.

### **Environmental Management**

Gas stations can be the source of several contaminants when oil and gas spilled onto paved areas are easily washed away by water, either from hoses, piping or rainfall. The following actions are planned for implementation on a sustained basis at the facility:

## **Facility – General**

- "Spot clean" leaks and drips routinely. Leaks are not cleaned up until the absorbent is picked up and disposed of properly.
- A spill response plan will be rolled-out and ensure that employees are trained on the elements of the plan.
- Manage materials and waste to reduce adverse impacts
- Training of all employees upon hiring and annually thereafter on proper methods for handling and disposing of waste.
- Make sure that all employees understand storm water discharge
- Use a training log or similar method to document training.
- Label drains within the facility boundary, by paint/stencil (or equivalent), to indicate whether they flow to an oil/water separator, directly to the sewer, or to a storm drain.

## **Fuel Dispensing Areas**

- Maintain fuel dispensing areas using dry cleanup methods such as sweeping for removal of litter and debris, or use of rags and absorbents for leaks and spills. Fueling areas should never be washed down unless the wash water is collected and disposed of properly.
- Fit fuel dispensing nozzles with "hold-open latches" (automatic Shut-offs) except were prohibited by Guyana Fire Service.

## **Outdoor Waste Receptacle Area**

- Spot clean leaks and drips routinely to prevent runoff of spillage.
- Minimize the possibility of storm water pollution from outside waste receptacles by doing at least one of the following:
  - Use only watertight waste receptacle(s) and keep the lid(s) closed, or
  - Grade and pave the waste receptacle area to prevent run-on of storm water, or
  - Install a roof over the waste receptacle area, or
  - Install a low containment berm around the waste receptacle area, or
  - Use and maintain drip pans under waste receptacles.

## **Fuel Dispensing Areas**

Fuel dispensing areas must be paved with cement concrete (or, equivalent smooth impervious surface), with a 2% to 4% slope to prevent ponding, and must be separated from the rest of the site by a grade break that prevents run-on of storm water to the extent practicable. The fuel dispensing area is defined as extending 6.5 feet from the corner of each fuel dispenser or the length at which the hose and nozzle assembly may be operated plus 1 foot, whichever is less. The paving around the fuel dispensing area may exceed the minimum dimensions of the "fuel dispensing area" stated above.

The fuel dispensing area must be covered, and the cover's minimum dimensions must be equal to or greater than the area within the grade break or the fuel dispensing area, as defined above. The cover must not drain onto the fuel dispensing area.

## **Outdoor Waste Receptacle Area**

Grade and pave the outdoor receptacle area to prevent run-on of storm water to the extent practicable

### **Maintenance of Water Quality**

Incorrect disposal of substances and materials and polluted run-off can have serious negative effects on groundwater quality.

- a) Storage areas that contain hazardous substances must be banded with an approved impermeable liner.
- b) Spills in banded areas must be cleaned up, removed and disposed of safely from the banded area as soon after detection as possible to minimize pollution risk and reduced banding capacity.

### **Management of Mitigation Measures**

The possibility of spills during fueling operations always exists, and spills of gasoline, diesel and kerosene fuel during discharges from tankers fueling are a common source of pollution and these will be effectively managed.

### **Design and construction of facility**

Therefore, installation of equipment that can minimize the occurrence of spills and taking precautions to contain, absorb, and minimize the spread of petroleum products spilled during fueling operations.

**Spill Prevention, Control, and Countermeasures (or SPCC) Plan** is being designed and developed for the facility.

### **Short-Term Actions**

- Take immediate action to safely stop and contain the release.
- Report the release to the EPA and local regulatory authority within 24 hours.
- Make sure the release poses no immediate hazard to human health and safety by removing explosive vapors and fire hazards. The fire department would be able to help or advise with this task.
- Removal of petroleum from the AST system to prevent further release into the environment.
- Investigate if the release has impacted the soil and subsurface environment. This investigation will determine the extent of contamination both in soils and groundwater. Report to EPA.

### **Use automatic shutoffs and or electric shutoffs to reduce fuel loss.**

An electric shutoff will be located onsite of easily access. The shutoff automatically stops fuel movement when the system senses passage of a high volume of fuel through the line. This shutoff can also be manually closed when the fuel is not in operation or during emergencies.

Regular inspection, maintenance, and replacement fuel hoses, pipes, and tanks as part of Reliability Maintenance program. Install easy-to-read signs at strategic locations that explain proper fueling, spill prevention, and spill reporting procedures.

### **Spill response**

In event of any spill all practical and reasonable actions must be taken immediately to minimize the effect of the spill on the environment and to safeguard the health of the public, self and employees. The EPA will be notified of a spill within 24 hours;

All spills and leakage must be recorded with the necessary prevention measures implemented to avoid recurrences; and a spill kit would be provided at all sites that are prone to spills. Kits should contain absorbent material, drain seals disposal container and others appropriate tools.

### **Aboveground Storage Tanks**

Provision of corrosion protection for ASTs and any buried piping. Options include elevating tanks, resting tanks on continuous concrete slabs, installing double-walled tanks, or catholically protecting the tanks and piping.

Prevent rainwater from filling containment areas, you may need to cover the tank with a roof structure. Regularly check the dispenser hoses and piping for any leaks (a common problem). On-site staff should be trained to handle emergencies, such as leaks or explosions.

### **Checklist for Above Ground Storage Tank**

All ASTs would have a secondary bund of containment capable of holding 110% of the largest tank capacity plus sufficient room to hold storm water/rainwater.

Buried piping must be protectively wrapped and/or coated with anti-corrosive paint.

Routinely monitor ASTs to ensure they are not leaking. Areas to inspect include tank foundations, connections, coatings, tank walls, and piping systems. The new SPCC rule requires combining tank inspection with integrity testing based on industry standards.

Oil handling employees must be trained in proper handling of oil and applicable pollution control laws, rules, and regulations. Training records will be maintained for at least three years.

### **Closure**

Decommissioning and/or closure of the facility is not anticipated. However, should this be required for any reason, the Environmental Protection Agency will be consulted for guidance.