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Submitted: September 6,2021

Two Brothers Fuel Station



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Project Description

For many marinas or Marine Service Station, fueling boats is an essential service to boaters and an important revenue generator. Marinas with fueling services must evaluate all aspects of their operation, including fuel station design, delivery, and dispensation, to ensure that their facility complies with safety, fire, and environmental laws.

Two Brothers Marine Service Station is a Guyanese registered company with interest in purchase, wholesaling and retailing Gas, Diesel and Kerosene principally for hinterland-based industries such as mining, logging and locals.

The petroleum products would be purchased locally in Guyana. The Petroleum be transported by suppliers and off-loaded at our project site at Grant Good Intent, Left Bank Pomeroon River Essequibo Region 2.

Wholesaling would engage Farmers and miners for conveyance to the hinterland sites. It is anticipated that 2-3 workers would be employed at this facility with most workers residing in the Locality.

Description of Site

The location of the gas station is approximately nine miles from charity which is schedule to have a twelve-hour working period (6a.m - 6p.m). The project is located at Grant Good Intent, Left Bank Pomeroon River Essequibo Region 2. The proposed land area is (330 ft. x 260 ft.) which is a portion of the total project area would be used.

The storage area would consist of three (3) above the ground cylindrical metal double wall tanks which stores 1 500 gallons Gasoline, 1 000 gallons Diesel and 500 Kerosene. 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 as directed by the Environmental Protection Agency In addition, there will be two (2) fuel dispensers to serve customers.

Drainage

The property would have a network of natural drains and filter system to drain the project area into the Pomeroon River.

Land Use

The district in which the project lies is a mix of residential, commercial, and Agricultural.

Electricity

Power to service the facility would be from electric generator (5Kva) will be installed to supply power.

Water

Water for domestic uses would be source from the river and rainfall. A regular supply of water for drinking purposes would be purchase from suppliers of filter water. Rainwater harvesting will be installed with storage tanks (450 gallons) at the facility.

Informational Signs

Identifying tank contents is of primary importance to the management of fuels: Signs prohibiting highly flammable 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. There would be fire extinguisher and sand buckets onsite.

Project Design

The project will be implemented in the following phases:

Phase 1: Construction

The Marine Service Station would be built in accordance with the plan submitted to the EPA.

- Building construction
- Commissioning of operations

Site Establishment

Setting up and construction area

- There will be no overnight accommodation available at the Contractors Camp.
- The size of the construction camp should be kept to a minimum.

The contractor would be required to attend to the drainage of the camp site to avoid standing water and / or erosion.

- Temporary toilet facilities would be provided.
- Bins and / or skips shall be provided at convenient intervals for disposal of waste within the construction camp.
- Bins would have liner bags for efficient control and safe disposal of waste.

Recycling and the provision of separate waste receptacles for different types of waste would be encouraged.

Storage Areas During Construction

- Choice of location for storage areas must take into consideration prevailing winds, and general on-site topography.

- Storage areas would be designated, demarcated, and fenced if necessary.
- Storage areas would be secured to minimize the risk of crime. They should be safe from access by children and animals, etc.

Fire prevention facilities (extinguishers, sand buckets, etc.) shall be present at all storage facilities.

Hazardous Substances and Materials

- No Hazardous substances would be stored

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, as directed by the EPA.

Storm Water

Serious financial and environmental impacts can be caused by unmanaged stormwater.

- 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.
- b) During site establishment, stormwater culverts and drains are to be located and covered with metal grids to prevent blockages if deemed necessary.
- c) Temporary cut-off drains and berms maybe required to capture stormwater and promote infiltration, or to divert stormwater flow to avoid erosion.

Education and Awareness

Worker Education on General Environmental Conduct

These points need to be made clear to staff on site before the project begins and reinforced during the project. 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.

Worker Conduct on Site

During staff induction, followed by ongoing monitoring.

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:

- 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 staffs 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) no workers shall be permitted to live on site.

Air Quality / Dust Pollution

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 clay.

There is revetment in place for erosion and this 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.

Environmental Management

Marine Service Stations can be the source of several contaminants when oil and gas spilled into waterways are easily washed away by water and tidal change. The following actions are planned for implementation on a sustained basis at the facility:

Facility – General

- 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.

Preventing Fuel Spills When Refueling a Boat

Before Fueling Your Boat

- Know the total capacity of boat’s fuel tank, and estimate how much fuel is needed by checking the fuel gauge.
- Have absorbent pads and a spill kit ready to tackle any spills that might occur from the filler nozzle or fuel tank vent.

- Put an absorbent pad or fuel bib around the fuel filler nozzle to catch any fuel splashes.
- Always hold the fuel filler trigger when refueling, and never rely on the automatic cutoff clip, which can fail.
- Keep the fuel filler nozzle and the deck fill tube in constant contact with one another to avoid sparks or excess splashing.
- Refuel the tank slowly, and listen for the sound of the tank approaching its full capacity.
- If you spilled fuel into the water, try to clean it up with absorbent pads or a marina spill kit.
- Never use chemicals or detergents to disperse a fuel spill, as doing so is against the law. Instead, notify the fuel dock staff and the Coast Guard, or the EPA as required by regulations.
- Fit fuel dispensing nozzles with "hold-open latches" (automatic Shut-offs) except were prohibited by Guyana Fire Service.
- Sail the boat slowly into the station
- Tie the boat securely to the fuel dock
- Avoid tying-up the boat alongside another boat
- Turn off power supply, electrical switches and other sources of ignition
- Put away any fabric soaked with flammable material
- Check out the fuel tank, conveyance tube and battery to confirm good condition
- Ensure there is no slippery material on the floor of the boat
- Ask all passengers to step out of the boat for optimum personal safety

During refuelling

- Inform filler standing on the jetty about your product needs and mode of payment
- Receive the appropriate nozzle from the filler
- Insert the nozzle into fuel tank and ensure that it is fully inserted inside the fill neck
- Ensure nozzle is securely in place and avoid producing nozzle-neck friction and sparks
- Start filling after the filler lifts up the nozzle lever at the dispenser side

- Ensure there is no overflowing or spillage of fuel

After refuelling

- Remove the nozzle carefully and close the fuel tank
- Return the nozzle to the filler
- Give the filler the payment either by cash or card
- Open all hatches so as to ventilate the boat
- Inspect bilges and properly clean up leakages and spillages, if any
- Start the engine
- Reload the passengers
- Sail the boat slowly out of the station

Preventing Fuel Spills from Portable Fuel Cans

- Only use no-spill portable fuel cans, and have absorbent pads ready to tackle any spills.
- Fill the fuel cans while on shore on a level surface to reduce spills.
- Use drips pan during filling.

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) 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 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 and diesel 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.

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.

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

CONCLUSION

The facility will be built and operate in accordance with all the relevant Agencies especially the EPA and is committed to ensuring that its operation does not have significant adverse impacts on the environment in which it functions.