

**DEPARTMENT OF THE ENVIRONMENT (DOE)**

**ENVIRONMENTAL GUIDELINES FOR  
SERVICE STATIONS**

These Guidelines (Operational Standards) are set-forth for the safe and environmentally sound operation of service stations in Belize. It ensures that service stations are properly located, well designed and equip to operate with safety of the public, staff and environment in mind. Operators of all service stations are legally bound to manage their service stations according to these standards.

**1 PROCEDURAL ISSUES:**

- 1.1 The construction of any service station will be required to first obtain the following permits, the process which will be coordinated and facilitated by the granting of Environmental Clearance by the Department of the Environment:

*Note: The issuance of a permit from one agency does not imply that the other has to be granted.*

- 1.1.1 Environmental Clearance from the Department of the Environment;
  - 1.1.2 Permit from the Police Department for storage and use of dangerous goods;
  - 1.1.3 Permit from the Fire Department;
  - 1.1.4 Permit from the relevant building authority in whose jurisdiction the proposed facility falls.
  - 1.1.5 Trade License from the local municipality in whose jurisdiction the proposed facility falls.
- 1.2 Any permit issued will be in the name of the duly registered applicant(s), and for permits to remain valid, any transfer of ownership will require permits to be renewed with the names of new owner(s).
- 1.3 If during the operational phase any change of ownership and/or management occurs, be it due to sale of or rental /lease of or any combination thereof, will require permits be renewed with the name(s) of new owner(s) and/or management for permits to remain valid.
- 1.4 Fees: As has been the requirement for some time now, each application will be subject to:
- 1.4.1 Environmental Processing fee of \$250.00
  - 1.4.2 One time Environmental Monitoring fee of \$1,500.00
- 1.5 The applicant must show proof of ownership of the property on which the facility is being proposed.

## **2 SITE LOCATION:**

In general, attention to selection of sites with the “maximum natural physical benefits” can help to avoid harm to human health and environmental degradation. To address these issues, following are some guidelines.

2.1 Service Stations are to be constructed on properties that have the required setbacks, only.

2.3 Sites should have a minimum set back distance as follows:

### Underground Tank:

- i. A minimum of fifteen (15) feet away from any building within the compound.
- ii. A minimum of thirty (30) feet away from the property line.
- iii. Should be covered with a minimum of three (3) feet of earth and six (6) inch thick concrete reinforced slab.

### Surface Tank:

- i. A minimum of thirty (30) feet away from any building within the compound.
- ii. A minimum of Three hundred (300) feet away from the property line.
- iii. If proposed location is situated within an urban industrial/commercial area and impossible to meet requirements, then the developer must comply with the requirements outlined below with regards to Under Ground Tanks or Vaulted above Ground Tanks.

2.4 The location of a service station must not be immediately adjacent to any school, church, hospital or any such establishments.

## **3 DESIGN:**

3.1 Service Stations must be appropriately designed for its intended purpose, including for example: safety, life span, corrosion resistance and maintenance, ease of access, ease of refilling, and with the least amount of environmental impacts possible.

3.2 The design of the service station and any associated support system will need to be certified by a suitably qualified and experienced professional structural or civil engineer.

3.3 The design of the service station will be such that all electrical network, storage tanks, pumps and pipelines, would be shielded from view and would need to meet the highest code of international standard.

#### **4 VEHICLE FUELING:**

- i. Restrict spillage on driveway during filling and confine to appropriately designed and well maintained sumps where present. Additionally, the concrete floor court should be constructed to direct spills to an oil water separator.
- ii. Mop small spills (less than 1 liter) from surfaced driveways immediately to prevent contamination of storm water runoff. Use dry sand or sawdust to soak up spill. Do not use water as this will spread the fuel or oil.

#### **5 VEHICLE REPAIR:**

- a. Use appropriate panel beating equipment and methods to limit noise disturbance and strictly limit to daytime hours.
- b. Control use of substance used for parts washing, including detergents, and dispose of through an oil interceptor and sand trap into the local sewer.
- c. Use only non-toxic and non-corrosive products for cleaning.
- d. Use and stock only "ozone friendly" propellants.
- e. Prevent spillage of toxic or corrosive substances used in vehicle servicing.
- f. Discarded parts and scrap material should be stored in an appropriate location out of eyesight until removal.
- g. Restrict unnecessary running of engines to prevent high levels of harmful gaseous emissions.

#### **6 CAR WASHING:**

- a. Use only non-toxic and non-corrosive detergents.
- b. Foaming agents that are not biodegradable should not be used.
- c. Collect waste water and ensure that it passes through oil separation and sand traps.

#### **7 DRAINAGE SYSTEMS:**

- a. Clean out (monthly) all sand traps, gulleys and drainage channels to ensure free flow of water effluent.

- b. Arrange for petroleum/oil interceptors to be cleaned every six months (and after a spill).

## **8 TANK MAINTENANCE AND FUEL DELIVERY:**

- a. Solvents used for cleaning and the resultant effluent must not be allowed to enter storm water drains, or septic tanks, or any natural water bodies (eg. streams, wetlands, ponds, lakes). Effluent must pass through an oil interceptor and sand trap into the local sewer.
- b. If possible avoid delivery and filling of tanks at peak traffic periods.
- c. Avoid spillage (connecting/disconnecting) or overfilling during delivery by proper training staff.

## **6. VEHICLE CONTROL:**

- a. Do not allow vehicles to idle unnecessarily (limit emissions and save fuel).
- b. Ensure that directional markings on driveway are clear (prevent congestion).

## **7. WASTE STORAGE, INTERCEPTION AND REMOVAL:**

- a. Waste originating from the workshop and driveway should be sorted (i.e. scrap metal, discarded parts, tires, empty metal/plastic/paper container, air filters, oil filters, batteries and other corrosive substances, different oils, oily rags and sawdust) and recycled where possible.
- b. All waste oil should be regarded as hazardous in accordance with the Environmental Protection Act 1. Approved storage for waste oil must be provided and arrangements made for disposal.
- c. Burning of waste should not be allowed. Only organic waste may be buried if necessary.
- d. Pit sludge should be cleaned out and stored for collection and proper disposal. Do not dispose of into sewers, water courses, septic tanks, or stormwater drains.
- e. Prevent foreign substances from entering septic tank systems, eg. large volume of detergents.
- f. Erect notices in toilets serviced by a septic tank to warn the public not to deposit foreign substance or objects.

**8. LITTER CONTROL:**

- a. Provide adequate waste bins of appropriate design.
- b. Provide litter bags for customers to keep in their vehicles. Collect car litter bags regularly.
- c. Provide containers for items which can be recycled.
- d. **As an incentive to control waste generated at the site, service stations are required to collect oil containers generated as a result of oil/lubricants purchased from the business by customers.**

**9. ENERGY MANAGEMENT:**

- a. Lighting is a high energy user and should be managed by replacing lamps to match those originally fitted and with time switches on those circuits not required during certain periods.
- b. Heating and cooling equipment should be properly maintained and vents, grilles and filters kept clean through a regular housekeeping programme.

**10. PRODUCT STORAGE:**

- a. Inflammable substances should be stored separately, away from electrical installations etc.
- b. Keep toxic substances out of reach of children.

**11. HOUSEKEEPING / BUILDING MAINTENANCE:**

- a. Ensure that gardens are well maintained. Use indigenous plants as they require minimal care.
- b. Use water sparingly in maintaining gardens.
- c. Keep temporary signage to a minimum and remove when no longer applicable.
- d. Ensure that service station lightning does not disturb surrounding residents (eg. direction, glare, flashing).

- e. Institute an appropriate building and site maintenance programme.
- f. Ensure that fire fighting equipment is adequate and regularly serviced.
- g. Avoid using CFC's and Halogen propellants in fire extinguishers.
- h. Maintain a strict odor control policy (eg. fuel vapors, sewage vents, toilets).
- i. Regularly inspect paving at filling points for impermeability.
- j. Strictly control noise from equipment, workshop, and car wash.

**12. EQUIPMENT MAINTENANCE:**

- a. Ensure optimum functioning of workshop machinery such as compressor and car wash to limit noise levels and vibration.
- b. Prevent leakage of pumps, valves, taps and other equipment by regular inspection and repair.

**13. SERVICE STATION STAFF:**

- a. Staff should be trained as part of an ongoing education programme so that they can understand the rationale behind various procedures and be able to respond effectively. This is the responsibility of the operator of all stations. The Belize National Fire Service personnel will be invited to attend these drills to evaluate and ensure the drills meet the satisfaction of the BNFS.
- b. A contingency plan must be developed and updated regularly. Staff must attend annual assimilation drills organized by their company, to be prepared for emergencies. These drills are to be offered by a private entity in collaboration with standards of the Belize National Fire Service that will provide a certificate of Participant.
- c. An emergency evacuation plan must be provided by the operator within six months of obtaining a licence and environmental clearance.

**14. STOCK CONTROL:**

- a. Ensure that leakages are detected and treated as early as possible.

**ENVIRONMENTAL CONTINGENCY PROCEDURES**  
**FOR**  
**PRODUCT SPILLS, FIRES & TANK LEAKS**

Any environmental problem arising from unforeseen incidents must be reported immediately to the Department of the Environment (DOE) and contingency procedures implemented by the operator in conjunction with the relevant person or body.

**PRODUCT SPILLS:**

**SPILLAGE OF OIL/FUELS/CHEMICALS ON PAVING (LARGE):**

- a. Prevent any of these substances from entering stormwater systems or septic tanks, or from contaminating any natural water system.
- b. Mop up and contain spill immediately with Drizit, sandbags, sand or soil.
- c. If any of the spills enters the stormwater system the flow must be intercepted before it can contaminate other environments.
- d. If natural water systems are contaminated use straw bales, sorbent booms and sandbag dams for containment and absorption.

**SPILLAGE OF OIL/FUEL/CHEMICALS ON SOIL (LARGE):**

- a. Prevent spread of the substance by using sandbags, sand or soil, sorbent booms or planking to divert flow.
- b. Prevent any of these substances from contaminating groundwater (it may be necessary to remove contaminated oil).
- c. Rescue any endangered plants immediately.
- d. Plough soil for aeration and apply fertilizer/suitable neutralizing chemicals if viable (not detergents).
- e. Water soil to bring oil to surface - "mop up" with sorbent material such as Drizit.

## **COMPATIBLE ACTIVITIES:**

- A. LPG DEPOTS AND SERVICE STATIONS WILL BE ALLOWED TO COEXIST ADJACENT TO EACH OTHER PROVIDING THESE ARE IN COMPLIANCE WITH MINIMUM SETBACKS BETWEEN THE CYLINDERS, AS PER THE ENVIRONMENTAL GUIDELINES FOR LPG DEPOTS & DISTRIBUTION OUTLETS AND SERVICE STATIONS.**

## **FIRE**

- a. Prevent spread of fire to surrounding buildings or vegetation.
- b. Limit use of toxic substances for firefighting.
- c. Prevent effluent from firefighting (foam, water, fuel, chemicals) from entering surface/groundwater, storm water systems and septic tanks.

## **TANK AND PIPELINE LEAKS**

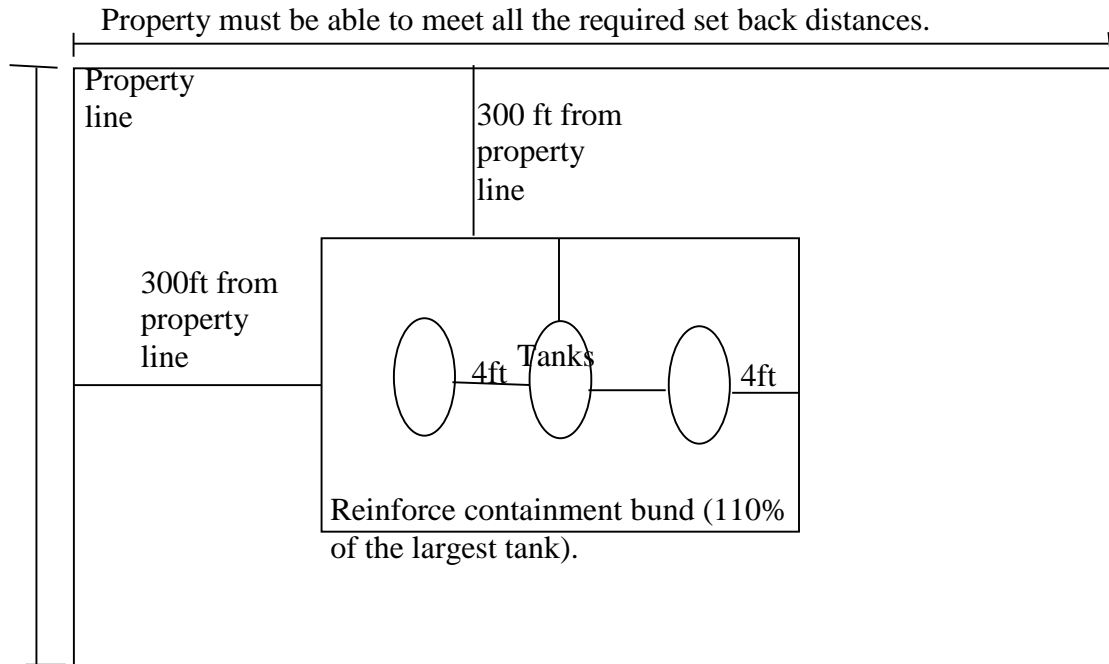
- a. Operator should inform the Department of the Environment (DOE) immediately of any leaks.
- b. Find the source of the leaks and stop any further leakage.
- c. If soil has been contaminated it must be rehabilitated as follows: plough soil for aeration, apply fertilizer, and keep moist. For very permeable soils, venting and bio treatments including nutrient and bacteria are required.
- d. Prevent fuel from contaminating groundwater.
- e. Only double wall pipe lines approved for Service Station standards or equally to API Standards will be installed where necessary. No other pipes will be allowed unless the pipe proposed to be used by the developer(s) exceeds the expectation(s) of the pipes allowed by the permitting agencies.



**GUIDELINES FOR THE SITING AND PLACEMENT OF FUEL  
STORAGE TANKS FOR A SERVICE STATION**

**I. SURFACE TANKS:**

- (1) When above ground these tanks should be:
  - (a) A minimum of thirty (30) feet away from any building within the compound.
  - (b) A minimum of \_Three hundred (300) feet away from the property line. IF proposed location is situated within an urban industrial/commercial area and impossible to meet requirements, then the developer must comply with the requirements outlined below with regards to Under Ground Tanks or Vaulted above Ground Tanks.
- (2) The tanks should be placed on a concrete pavement above ground (the pavement should be reinforced powered and steel floated with resistance of 3,500psi).
- (3) A catchment area around the tank will need to be constructed. The capacity of the catchment area should be 110% of the total capacity of the tank(s). This area should be secured/fenced to prevent easy access to unauthorized persons.
- (4) The fuel pump, when extended to its maximum length, should not be within five (5) feet from the edge of any waterway.
- (5) Adequate disposal facility must be provided for the disposal of the containers from the lubricants.
- (6) Each tank must have at least one vent of no less than twenty feet (20') high from the ground level.
- (7) Space for the parking of the oil tankers, should be adequately provided.
- (8) Proper equipments and gears for the workers must be provided (OSHA Standards).
- (9) Inventory of fuels should be kept and proper mixing facilities should be made available.
- (10) No smoking signs and other safety measures must be undertaken.

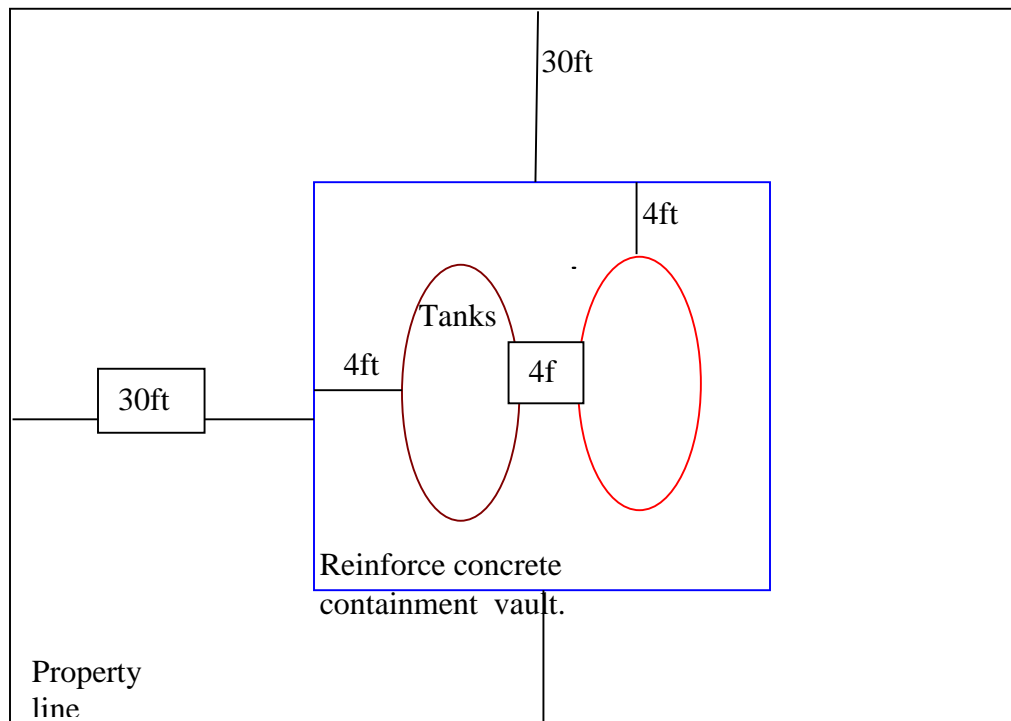


## II. UNDERGROUND TANKS

**All underground steel tanks are required to be placed within a concrete vaulted area. Double wall fiber glass tanks may be vaulted at the request of the developer but is not required.**

- (1) When underground, these tanks should be:
  - a) Covered with a minimum of three (3) feet of earth and six (6) inch thick concrete reinforce powered slab.
  - b) A minimum of fifteen (15) feet away from any building within the compound.
  - c) A minimum of thirty (30) feet away from the property line.
  - d) A minimum of fifty (50) feet away from the nearest residence.
- (2) Proper construction of the pit that will house the tanks.
- (3) A catchment area connected to a pump, incase of a spill, should be installed. The capacity of the catchment area should be 110% of the capacity of the tank(s).
- (4) Each tank must have at least one vent of no less than twenty (20) feet high from the ground level.

- (5) Adequate disposal facility must be provided for the disposal of the containers from the lubricants.
- (6) Space for the parking of the oil tankers, should be adequately provided.
- (7) Proper equipment and gears for the workers must be provided (OSHA Standards).
- (8) Inventory of fuels should be kept and proper mixing facilities should be made available.
- (9) The area should be properly ventilated, should have fire extinguishers and proper lighting.
- (10) No smoking signs and other safety measures must be undertaken.



<b>TANK TYPE</b>	<b>INDIVIDUAL TANK CAPACITY</b>	<b>FROM the nearest important building on the same property</b>	<b>From nearest fuel dispensing device</b>	<b>From the property line</b>	<b>From the nearest side of any public way</b>	<b>Minimum Distance between tanks</b>
Underground tanks in vaults	0-15,000 gallons	0	25	15	15	4
Protected above ground tanks	≤ (Less than or equal to) 6,000	30	25	30	30	4
Protected above Ground tanks	6,001-12,000	15-30	25-50	25-50	300-600	4
Fire resistance Tanks	0-12,000	25	25	50	25	4
Other tanks meeting the requirements of NFPA 30	0-12,000	50	50	100	50	4

### **III. VAULTED ABOVE GROND TANKS**

In instances where the minimum set back distance for above ground storage tanks cannot be meet and practical reasons will not permit the installation of underground tanks/vaults; above grounds vaults will be entertained or considered in compliance with the following.

- (1) Vaults shall be design and constructed to meet the following requirements:

## MINIMUM SEPARATION REQUIREMENTS FOR VAULTED ABOVEGROUND TANKS

Minimum distances (ft).

1. The walls and floor of the vault should be constructed of reinforce concrete at least 150 mm (6 inches) thick.
2. The top should be constructed with non combustible material and shall be design to be weaker than the walls of the vault to ensure that the trust of any explosions occurring inside the vault is directed upwards before destructive internal pressure develops within the vault. Hence, the top of the tank should be designed to relieve or contain any explosion occurring inside the vault.
3. The top and floor of the vault and the tank foundation shall be designed to withstand the anticipated loading, including loading from vehicular traffic, where applicable.
4. Adjacent vaults shall be permitted to share a common wall.
5. There shall be no openings in the vault enclosure except those necessary for access to; inspection of; and filling, emptying, and venting o f the tank.
6. The vault shall be design to be wind resistant in accordance with good engineering practices.
7. The vault shall be provided with connections to permit ventilation to dilute, disperse, and remove any vapors prior to personnel entering the vault.
8. The vault shall provide means for personnel entry and with an approved means to admit a fire suppression agent.

