

Guideline for establishing a pesticide storage facility in Belize.



The following are the standards for pesticide storage facility in Belize.

1.0 Organization and Management

The storage facility is responsible for the following:

- Safety and occupational health of the workers;
- Protection of the environment;
- Safe dispatching of products;
- Training of personnel;
- Establishment of emergency procedure;
- Good relationship with collaborative government agencies;
- Security and safety of site.

1.1 Material Safety Data Sheet

A safety data sheet for each product stored in premises must be available and should contain the following information:

- I. Chemical product and company identification.
- II. Composition and information on ingredients.
- III. Hazards identification.
- IV. First aid measures.
- V. Accidental release measures.
- VI. Handling and storage.
- VII. Exposure control/personal protection.
- VIII. Physical and chemical properties.
- IX. Stability and reactivity.
- X. Toxicological information.
- XI. Ecological information.
- XII. Disposal considerations.
- XIII. Transport information.
- XIV. Other information

1.2 Training

All personnel working in a pesticide storage facility must be adequately trained. A record that includes who was trained and the subjects covered must be kept. The training must include:

- Knowledge of the product hazard.
- Understanding of pesticide label and pamphlet.
- Appropriate use and selection of personal protective equipment
- Disposal of empty containers
- Triple rinse
- Fire and accident prevention.
- Procedures in case of emergency.

1.3 Security

The following security arrangements must be made to prevent unauthorized entry to the premises:

- During working hours, access must be limited to storeroom personnel only;
- The site must be surrounded by a secure wall or fence.

1.4 Records

When a pesticide is dispatched, the following information must be recorded:

- The name of the pesticide.
- The quantity of pesticides that was dispatched.
- The date the pesticide was released.
- The person to whom the pesticide was released; and
- The signature of the person to whom the pesticide was dispatched.

2.0 Location of building

2.1 Site Selection

- The establishment must be 100 meters from any residential areas, schools, hospitals, shopping areas, food processing or storage premises.
- It must be 150 meters away from all water bodies: rivers, creeks, canals or wells.
- The area must not be prone to flooding under any circumstances.

2.2 Building Layout

The establishment must comply with the following layout criteria:

- Layout must provide ample space to permit easy movement of goods and allow hygienic working conditions.
- The height of the roof must be at least 15 feet.
- Flooring must be built at a slope to enable any pesticide spillage to be washed and channeled to soak away.

2.3 Construction Materials

The establishment must comply with the following criteria regarding building construction material:

- Floors must be impervious to liquids, smooth, and have no cracks.
- Construction materials must be non-combustible.
- Concrete floor, cast roof or zinc roof with metal frame.
- Concrete or metal walls impervious to liquids.

2.4 Washing Facilities

- Must have a hand wash station, emergency eye wash and an emergency shower.
- Equipped with liquid soap, paper towel and waste bin.

2.5 Spill Containment

- All spillages must be contained within a containment barrier. Splash guards or catch trays must be installed in locations where splashes and occasional leaks are expected.
- Must have a soak away to contain spillage and washing out of the premises.
- Must have absorbent materials (sawdust or sand), a spade, broom, dustpan and garbage bins.

2.6 Drainage

- Floor drains must not connect directly into waterways but should lead into a sump (soak away).

2.7 Ventilation

- The warehouse should be well ventilated. Where possible, natural ventilation must be provided using vent-blocks located on the upper and lower walls.
- The placement of extractor fans is recommended where natural ventilation is inadequate.
- For good air circulation, the height of roof to floor should not be less than 15 ft

2.8 Lighting

- Lighting levels must allow for the routine inspection of stored products and provide sufficient light for easy reading of product labels.

2.9 Emergency Exits

- Must have two emergency exits.
- Exits other than the main door must be available for emergency purposes.
- Emergency exits must be clearly marked and kept clear. They must be designed so that they can be easily opened from the inside.

2.10 Electrical Installations

- All electrical installations in the premises must be concealed in conduit pipes and designed in accordance with the electrical code of Belize Electricity Limited.

- Measures must be taken to prevent the buildup of electrostatic charges anywhere in the warehouse.

3.0 Product Storage

Due to their potentially toxic nature, pesticides must not be stored in the same warehouse with foodstuffs, animal feeds or other materials such as clothing, tobacco, cosmetics, etc..

- Shelves must be of metal or any other impermeable material.
- No pesticide should be displayed in air-conditioned rooms or offices.

Indoor Storage – Block Storage

Block storage can make access for firefighting difficult. The dimensions of the blocks must be restricted to:

- A width of 2 pallets, a height of 2 pallets for drums of 200 and 100 liters, a height of 4 pallets for 20 liter containers and boxes or bags, and a length of 8 pallets.
- Inspection aisles of at least 0.5 meters between blocks and a meter gap along the wall.

Outdoor Storage

- All pesticides should be stored under a roof.
- Should have a firm, impermeable base surrounded by a containment sill.
- Only weatherproof containers should be stored outside.
- All containers should be stored on pallets.

4.0 Occupational Health, hygiene and Personal Safety.

4.1 Housekeeping

Warehouse activities must be conducted in a manner that ensures:

- An orderly, safe, and efficient use of warehouse working space.
- The maintenance of a clean and safe working environment.
- The safe disposal of waste material.

4.2 Personal Protective Equipment

Personal protective equipment must be used and must be based on the hazards posed by the pesticide being handled. The protective equipment must be inspected routinely, maintained in a clean, sound condition and replaced whenever necessary. The following should be always made available and kept in a locker positioned in the warehouse for easy access:

- Impervious rubber gloves.
- Rubber boots.

- PVC apron.
- Goggles or face shield.
- The respirator fitted with vapor cartridge.

4.3 Daily Activities or Warehouse Habits.

The warehouse must comply with the following standards regarding daily activities and habits.

- Eating, drinking and smoking must be prohibited in the workplace.
- The warehouse should provide suitable hand washing facilities.
- A mandatory procedure must be established to ensure the washing of hands and face before eating, drinking or smoking.
- Changing and showering facilities must be provided. They must include separate lockers for work clothes and for personal clothes. Workers must change out of their work clothes at the end of the day.
- Working clothes must be changed for clean ones whenever they are contaminated.
- Washing contaminated clothes must be done appropriately.

Eye/Face Wash Stations

- Eyewash stations should be designed to deliver fluid to both eyes simultaneously at a volume of not less than 1.5 litres/minute (0.4 gallons/minute) for 15 minutes.
- The combination eye and face wash stations require 11.4 litres per minute (3.0 gallons per minute). However, in either case, the volume should not be at a velocity which may injure the eyes. The unit should be between 83.8 and 134.6 cm (33 to 53 inches) from the floor, and a minimum of 15.3 cm (6 inches) from the wall or nearest obstruction.

Emergency Showers

- The emergency shower should deliver a pattern of water with a diameter of at least 50.8 cm (20 inches) at 152.4 cm (60 inches). This diameter ensures that the water will come into contact with the entire body - not just the top of the person's head.
- The shower head be between 208.3 and 243.8 cm (82-96 inches) from the floor. The minimum volume of spray should be 75.7 litres/minute (20 gallons/minute) for a minimum time of 15 minutes.
- The shower should also be designed so that it can be activated in less than 1 second, and it remains operational without the operator's hand on the valve (or lever, handle, etc.).
- This valve should not be more than 173.3 cm (69 inches) in height.
- If enclosures are used, ensure that there is an unobstructed area of 86.4 cm (34 inches) in diameter.

See Annex

4.4 Signs

At every entrance to the warehouse, signs that state the following information must be displayed at eye level.

- A rectangular sign, approximate size 20 x 24 inch lettered to read “No smoking, eating or drinking on premises”



- A rectangular sign, approximate size 20 x 24 inch lettered “Only authorized persons allowed”



- A rectangular sign, approximate size 20 x 24 inch lettered to read “Danger-Keep Out, Pesticide Storage Area”



- A rectangular sign, approximate size 20 x 24 inch lettered to read “The skull and crossbones” posted on outside of warehouse.



4.5 First Aid

The warehouse must comply with the following first aid measures:

- A first aid kit must be readily available and positioned in a location that is easily accessible.
- A first aid kit that includes an updated stock of antidotes for the pesticides handled.
- Emergency telephone number

4.6 Fire Prevention and Fire Fighting.

- The warehouse must be equipped with a telephone to call the fire service.
- Mobile or portable fire extinguisher must be available at the warehouse. The quantity, size and type should be in accordance with the recommendation of the National Fire Service.
- The fire extinguisher must be positioned in easily accessible places, which must be marked with prominent signs and kept clear.
- Fire extinguisher must be checked and maintained in accordance with recommendations from the National Fire Service.
- All personnel must be trained in the use of the types of firefighting equipment present on site.
- A plan showing the position of all firefighting equipment must be displayed.

4.7 Emergency/Contingency Plan

- A fire emergency plan must be established, and all staff members must be trained in practicing the plan.
- An emergency plan must be in place for spillage control and management.
- An emergency plan in reference to natural disasters including hurricane must be in place.

5.0 Spillages

All warehouses must comply with the following standards regarding preparation for and dealing with pesticide spillages:

- All spillages must be reported to a responsible person and must be corrected promptly. Spilled products must not be allowed to accumulate or spread about.
- Powders and granules must be removed, preferably using an industrial quality vacuum cleaner fitted with both a primary and secondary filter.
- If a brush and shovel are used, airborne dust can be reduced by spreading damp sand on the spillage.

- Spilled liquid products must be absorbed onto absorbent material (such as sawdust) before being swept up. After this first cleaning of the floor, the remaining contaminated surface can be carefully washed with a minimum of water.
- The following equipment must be readily available and should be positioned in a location that is readily accessible and marked with a prominent sign:
 - One drum with sawdust, soil, or other absorbent material.
 - A broom, shovel, and rubber wiper.
 - A pack of empty large heavy duty plastic bags.
 - At least one empty open head drum, and
 - Rubber gloves and eye protection.

5.1 Management of Disposal

All pesticide waste management and disposal must be conducted in accordance with national accepted disposal guidelines.

Obsolete Pesticides

- It must be separated from other pesticides and other products.
- Relabeled to allow the pesticide (name and active ingredient) to be identified
- A record of obsolete pesticides must be kept and updated annually and reported to the Pesticides Control Board.

Expired pesticides

- It must be separated from other pesticides and other products.
- Must be placed in a location marked with a prominent sign (Expired Products) to be sold at a discounted price to the farming community.
- If expiry date is over 2 years, it should be returned to manufacturer for safe disposal.
- A record on the inventory of expired product should be made available to Inspectors of the Pesticides Control Board upon inspection.

Empty containers

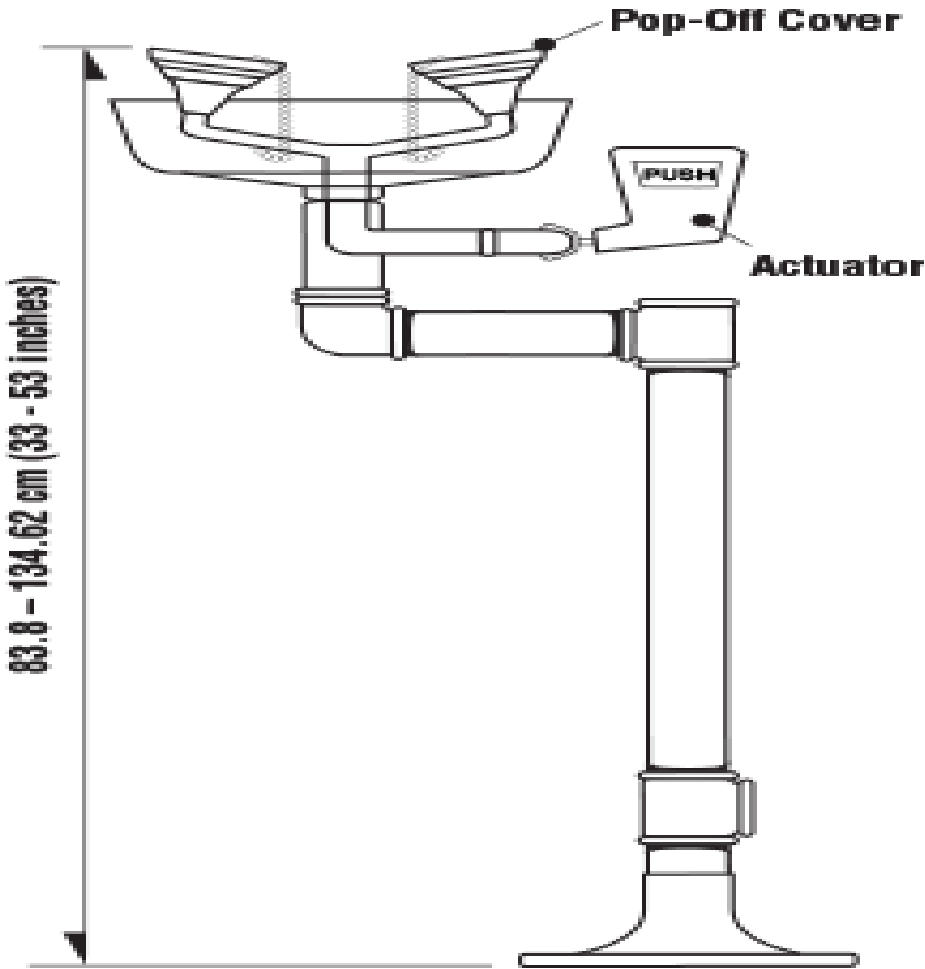
- All empty pesticide containers must be triple rinsed, perforated and placed in separate storage areas for final disposal.
- All triple rinsed containers can be sent to Full Circle Belize for shredding and recycling.

5.2 Drum Management

Pesticide drums must be managed according to the standards in the following decision tree:

1	Has drum been triple rinsed?	<p>If yes, go to No. 2</p> <p>If not, triple rinse and go to No. 2</p>
2	Can drum be returned to product supplier?	<p>If yes, return to supplier</p> <p>If not, go to No 3</p>
3	Is drum suitable for reconditioning?	<p>If yes, send for reconditioning for non-food use</p> <p>If no, go to No. 4</p>
4	Is there a non-food, non-water use available for the drum (eg use as garbage receptacle, storage for fuel)	<p>If yes, bore holes at bottom of drum and sell or donate for non-food, non-water use.</p> <p>If not, go to No. 5</p>
5	Is a drum crusher available?	<p>If yes, crush drum and dispose in accordance Solid waste management authority regulations</p> <p>If not, bore holes in drums and sell or donate for non-food water use.</p>

Eye Wash Station



Emergency shower station

Stay-Open Valve and Actuator Ring

