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DEPARTMENT OF TRANSPORTATION
ENVIRONMENTAL COMPLIANCE OFFICE
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TDOT STANDARD OPERATING PROCEDURE - ENVIRONMENTAL

NO.
005

Subject: **EMPTY CONTAINER MANAGEMENT**

Reviewed and
approved by:

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Date

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1.0 PURPOSE AND SCOPE

Most of the products that are used at TDOT facilities and job sites are received, stored, and handled in containers. When these products are used, "empty containers" are generated which must be properly managed. Many such "empty containers" may still have some residue in them and, because some of the products that are used may be hazardous to human health or the environment, these containers may still pose a problem, even if they are principally empty. Some specialized containers, such as compressed gas cylinders (e.g., oxygen and acetylene), are managed through exchange programs with suppliers and vendors and are thus never discarded. TDOT facilities are to apply the principles and procedures outlined below in their management of empty containers which are discarded or deemed surplus.

2.0 DEFINITION OF AN EMPTY CONTAINER

To be considered an "empty container", a container must meet the following criteria:

1. All of the product has been removed from the container using the practices commonly employed to remove materials from that type of container (e.g., pouring, pumping, and aspirating); and

2. One of the following applies:
 - a. No more than one inch of residue remains on the bottom of the container or inner container liner (*most TDOT containers fall under this one inch rule*);or
 - b. For containers less than or equal to 110 gallons in size, no more than 3% by weight of the total capacity of the container remains in the container or in the inner liner; or
 - c. For containers greater than 110 gallons in size, no more than 0.3% by weight of the total capacity of the container remains in the container or inner liner.

Containers that do not meet the above definition of “empty container” must be managed as “waste” instead of as an empty container.

Note that product containers shipped to TDOT with labels that include any of the following words;

Explosive	Dangerous When Wet
Poison	Oxidizer
Flammable	Organic Peroxide
Corrosive	Infectious or
Spontaneously Combustible	Radioactive

contain hazardous materials and, therefore, may contain hazardous residues even when emptied. These containers should not be reused for waste storage, unless the same material (as the waste) is being accumulated. For large containers (such as 55-gallon drums), TDOT managers should seek arrangements with the suppliers of such products to exchange empty product containers with full containers at delivery, if economically feasible. Without such exchange, these containers must be managed as waste.

Additionally, containers (and/or container inner liners) of pesticides (e.g., herbicides, insecticides, fungicides, and rodenticides) must be managed in accordance with the pesticide label instructions. This may require that the container or liner be rinsed up to three times with clean solvent (e.g., water) before discard, with the rinsate to be added to the pesticide mix solution. Empty herbicide or pesticide containers should be disposed of according to the label requirements and not be reused.

3.0 EMPTY CONTAINER MANAGEMENT OPTIONS

Empty containers (not including those with hazardous materials or pesticides) may be managed in one of several ways. Empty containers may be:

- Reused as waste containers,
- Accumulated for use as future waste containers,
- Shipped as recyclable scrap metal,
- Disposed off-site as non-hazardous solid waste, or
- Sold commercially as surplus property (with specific approval).

3.1 Reused as Waste Containers

Empty containers may be reused as waste management containers at TDOT facilities provided that:

1. The wastes to be placed in the container have, after evaluation and/or testing, been found to be compatible with the previous contents of the container. If the container was previously equipped with an inner liner that kept the product from contacting the container inner surfaces, and the liner has been removed, then this provision will not apply.
2. Prior to the addition of waste to the container, any markings or labels identifying the former container contents (but not the new contents) must be removed, painted over, or covered by new labels identifying the new contents.
3. Empty containers which are reused solely for the collection and accumulation of nonhazardous solid or liquid wastes, but not for offsite transport (i.e., as a temporary accumulation container), must simply have sufficient structural integrity to effectively contain the collected volume of the waste (i.e., no leaks) while the container is being handled.
4. Empty containers which are reused for offsite transport of either hazardous or special waste or recyclable materials:
 - a. Must be in good condition and equipped with properly operating lids, caps, and/or rings that enable the container to be securely closed; and
 - b. Must meet the container specifications under U.S. Department of Transportation hazardous material transportation regulations for the type and quantity of hazardous material it is to hold (if the content is a hazardous material).
5. Empty product containers may be used as collection containers for routine facility trash and debris but must be labeled for trash, with the exception of empty product containers that previously held hazardous materials:
 - a. The use of empty containers that previously held a "hazardous material" (see note on page 2) should be avoided; and
 - b. Larger reused containers (e.g., 55-gallon drums) should not be thrown into the trash/debris receptacle along with their waste contents. Most waste hauling/disposal vendors will not accept such containers unless they have been crushed.

3.2 Accumulated For Use as Future Waste Containers

Empty containers may be accumulated and stored for future use provided that:

1. Any original labels and markings on the container identifying its former contents are retained until the wastes to be placed in the container have been identified and determined to be compatible with the former contents.
2. The container is clearly marked or labeled with the word "EMPTY" Before this marking/label is placed on a container, it must be inspected and determined to meet the definition of an "empty container" as defined previously defined in Section 2. This determination should be made and the container marked or labeled as soon as reasonably possible after the container has been emptied.

3. The container is placed in an upright position and otherwise managed so that any residues remaining in the empty container cannot drain out.
4. The container is managed in a manner that prevents rain water from accumulating in the container. Such containers should be stored indoors. If they must be stored outdoors, then the lids and caps should be maintained firmly in place. Because container condition will deteriorate much more rapidly under the influence of the elements, any such outdoor storage time should be kept to a minimum.
5. If multiple empty containers are to be stored for future use, a specific area for such storage should be established and designated by a clearly visible sign that reads "Empty Container Storage Area". This area could also be used to accumulate emptied containers until they can be verified to meet the definition of "empty container", and/or while determinations are being made as to their suitability for reuse.
6. Empty containers should normally be stored with their lids, caps, and rings in place so as to discourage use as trash receptacles. If it is desired that the containers be left open to allow the residues to "dry," this should be done in a well-ventilated area, for the shortest time necessary, and otherwise in a manner such that any resulting vapors do not pose a significant risk of harm to employees or the facility itself. In general, this practice should be limited to those containers (e.g., latex paint containers) which did not hold a hazardous material.

3.3 Shipped as Recyclable Scrap Metal

Empty metal containers (e.g., steel drums) will frequently be accepted by local scrap metal recyclers for metal reclamation, although this may involve issues concerning container sizes, conditions, transport/delivery, and value/price. Smaller metal containers may be undesirable to the recycler, and recyclers may require crushing of larger containers. Recycling arrangements should be made directly by TDOT facility personnel with their local scrap metal recycler.

Similarly, plastic and fiber (e.g., paper cardboard) recyclers may be available in some areas. Again, TDOT facility personnel should make such arrangements directly with local recyclers.

3.4 Disposed Offsite as Non-Hazardous Solid Waste

Empty containers can also typically be disposed of along with the facility's normal trash and debris. However, some conditions may apply relating to the size, condition, and number of empty containers that may be added to the facility's trash/debris receptacles or transported to the landfill.

As described previously, most waste haulers and landfill operators may require that larger intact containers (e.g., 55-gallon drums) be crushed before they will be accepted. Similarly, most waste disposal companies do not accept large accumulations of containers of any size in their normal trash/debris receptacles and may refuse to pick up the container or reject such a load at the landfill unless a Special Waste Disposal Approval is obtained from both the Tennessee Division of Solid Waste Management and the landfill operator. Each TDOT facility should work with its waste transportation and disposal vendor(s) to determine their policies and limits concerning the acceptance of empty containers.

3.5 Sold Commercially as Surplus Property

Only after specifically approved (in writing by the Environmental Compliance Office) on a case-by-case basis, empty containers may be sold commercially (e.g., as surplus property) to container recyclers or other users. This will normally apply only to steel and perhaps plastic containers of 55-gallon size or greater.

*For further clarification on Empty Containers,
contact the Environmental Compliance Office.*