

## **ATTACHMENT 7 MANAGEMENT OF WASTES IN CONTAINERS**

### **7.1 Container Secondary Containment**

#### **7.1.1 Design, Dimensions, and Materials**

The slab and collection trenches for the container storage areas in the warehouses are made of steel-reinforced concrete, poured so that no cracks or gaps exist between them. The impervious liner applied to the steel-reinforced concrete was applied in a two-coat application procedure. ICO Guard 51 self-leveling epoxy aggregate system was used for a base coat, Then ICO Guard coating with a safety working anti-slip texture was used as a final coat. Steel grates cover the trench to facilitate the movement of containers and equipment across it. A stainless steel liner has been placed in the concrete trench and is welded such that no gaps between the floor and liner exist. The impervious liner details are located in Appendix E-11 (“Product Data Sheet for ICO Guard 51 Epoxy Floor Coating”).

#### **7.1.2 Standing Liquids and Drainage**

The floors and trenches re sloped to drain standing liquids away from containers. Also, all waste containers in the service center warehouse are palletized to prevent contact with standing liquids.

#### **7.1.3 Capacity for Storage**

The container storage area has secondary containment in the form of a sloped floor with a capacity of 1,703 gallons and a 12' × 2' × 3' (457 gallons) collection trench. No more than 6,912 gallons of spent solvents will be stored in the container storage area at any one time. In addition, no container larger than 457 gallons will be used for storage (see section 7.4). Appendix E-5 (“Facility Construction Details”) provides a cross section of the secondary containment trench. Appendix C-16 (“Warehouse Plan Showing Example Inventory Storage Plan”) provides specifications of the secondary containment capacity.

#### **7.1.4 Preventing or Managing Run-On**

Since the storage area is closed, precipitation will not be allowed to collect. The container storage area is indoors so run-on and run-off are prevented.

#### **7.1.5 Removal of Accumulated Liquids**

Any spilled or leaked waste shall be removed from the secondary containment systems. Daily inspections of the sump will result in the immediate removal of any accumulated liquids. Any leaking or deteriorating containers shall be emptied into containers of adequate integrity and then destroyed. The containment structure shall be inspected for cracks, corrosion, and other signs of deterioration. The procedures for removal are identical to those in the Contingency Plan for the removal of liquids in a paved area (Attachment 4, section 4.3.1 and 4.3.2). Removed liquids will be containerized, stored in the container storage area and treated as hazardous waste. The

trenches can be emptied using a wet / dry vacuum cleaner or absorbents, depending on the volume of liquid. All liquid material collected will be treated as hazardous waste. The material will be sampled and analyzed at Safety-Kleen's recycle center and, depending on the percentage of recoverable solvent, the material will be reclaimed or disposed of.

## **7.2 Demonstration for Containers Without Free Liquids**

The wastes stored in the container storage area at the Chandler service center do contain free liquids, therefore, this section is not applicable.

## **7.3 Ignitables, Reactives, and Incompatibles Locations**

The Appendix C-15 ("Site Plan Showing Construction Soil Samples") contains the buffer zone information required to demonstrate compliance with 40 CFR 264.177(c). No containers holding ignitable wastes are stored less than 50 feet from the property line. See Attachment 3, section 3.4.3 ("Potential Fire Sources") for additional information on ignitable precautions and procedures.

## **7.4 Incompatible Containerized Waste Provisions**

### **7.4.1 Waste Types Stored**

The container storage area in the warehouse is used only for the storage of the following hazardous wastes:

1. Waste aqueous brake cleaner (see Attachment 2 "Waste Analysis Plan" for a listing of potentially applicable EPA waste codes).
2. Waste branch contaminated debris (see Attachment 2 "Waste Analysis Plan" for a listing of potentially applicable EPA waste codes).
3. Waste immersion Cleaner (see Attachment 2 "Waste Analysis Plan" for a listing of potentially applicable EPA waste codes).
4. Waste parts washer solvent (105) (see Attachment 2 "Waste Analysis Plan" for a listing of potentially applicable EPA waste codes).
5. Waste parts washer solvent (150) (see Attachment 2 "Waste Analysis Plan" for a listing of potentially applicable EPA waste codes).
6. Waste parts washer solvent sludge (see Attachment 2 "Waste Analysis Plan" for a listing of potentially applicable EPA waste codes).
7. Waste paint gun cleaner (see Attachment 2 "Waste Analysis Plan" for a listing of potentially applicable EPA waste codes).
8. Waste paint waste other (see Attachment 2 "Waste Analysis Plan" for a listing of potentially applicable EPA waste codes).
9. Waste dry cleaner (perc) bottoms (see Attachment 2 "Waste Analysis Plan" for a listing of potentially applicable EPA waste codes).
10. Waste dry cleaner (perc) filter powder (see Attachment 2 "Waste Analysis Plan" for a listing of potentially applicable EPA waste codes).
11. Waste dry cleaning naphtha (see Attachment 2 "Waste Analysis Plan" for a listing of potentially applicable EPA waste codes).

Note: The two other hazardous waste streams at the facility are not stored in containers:

1. Waste parts washer solvent (105/150) is transported to the site in USDOT specification containers and is emptied into the drum washer units and stored in the aboveground waste storage tank, and
2. Waste parts washer solvent tank bottoms collects in the bottom of the aboveground waste storage tank and is removed by vacuum tanker truck and transported to a Safety-Kleen recycle center.

#### **7.4.2 Segregation of Wastes and Products**

The wastes are not mixed while on site and different wastes are in labeled containers to indicate their contents. Hazardous wastes are segregated from products and non-hazardous wastes. No incompatible wastes or products are stored at the facility.

#### **7.4.3 Compatibility of Wastes with Containers and Container Liners**

All containers containing waste, whether being stored or transported, shall meet USDOT specifications (e.g., 49 CFR and 40 CFR 262.30). Wastes accepted at the facility have been evaluated to ensure compatibility with containers used for short term and long term storage.

- Mineral spirits, a major component of parts washer solvent, is sometimes used as a rust preventative coating for steel.
- Dry cleaning still bottoms, filters, and powder residue are stored in USDOT-specification containers. In addition, for long term storage purposes (as opposed to short-term transportation purposes), any polyethylene containers used will be pre-treated to be resistant to dry cleaning solvents.
- Corrosive materials will be stored in polyethylene lined or polyethylene containers (e.g., high-density polyethylene HDPE containers).

Furthermore, containers are stored indoors in a temperature-controlled warehouse to reduce the possibility of corrosion of steel and coal tar epoxy coatings. If a container holding hazardous waste is not in good condition, or if it begins to leak, its contents must be transferred into a container that is in good condition.

#### **7.4.4 Size and Quantity of Containers for Each Waste**

The size of containers is limited by:

1. No container will be more than 457 gallons, the capacity of the secondary containment trench,
2. The size of the container will be appropriate for the type of forklift or material handling equipment used (to prevent unloading accidents and damage to containers).
3. The container size, material thickness, and container waste type and the double pallet stacking, will be considered in the maximum bearing load of the pallets used.

4. The size of the container for each waste will be as specified in Appendix D-4 (“Qualitative Acceptance Criteria”), which allows visual volume waste screening to be done, and
5. Use of several small containers should be avoided if possible, as it impedes inspection of containers for corrosion, proper lid closure, etc.

#### 7.4.5 Container Storage Configurations

The containers will be stored in the configurations shown on the Appendix C-16 (“Warehouse Plan Showing Example Inventory Storage Plan”).

- a. Aisle Spacing
  1. At least two (2) feet of aisle space will be maintained.
  2. At least four (4) feet of aisle space will be maintained between NFPA-30-1990 Class Ib and Class II wastes.
  3. At least eight (8) feet of aisle space will exist for the main aisle. The main aisle includes the roll-up doors, an aisle through the warehouse, and the door to the return and fill station.
  4. At least four (4) feet of aisle space will be maintained to allow unobstructed escape through the emergency exits.
- b. Palletizing and Stacking
  1. USDOT-specification containers of waste in the storage area will be placed and stacked on pallets in the following numbers of containers per pallet:

USDOT Specification Container Size	Suggested (☒ = Required) Waste Type <sup>1</sup>	Number Of Containers Per Pallet <sup>2</sup>	Stacking of Pallets and Containers
5-Gallon steel	—Waste Paint And Thinner	16	Containers can be placed two high on a pallet and pallets can be stacked two high.
15-Gallon Poly	☒Waste Dry Cleaner (Perc) Bottoms	8	Containers will be placed one high on a pallet and pallets can be stacked no more than two high.
16-gallon-Steel	—Waste Parts Washer Solvent —Waste Parts Washer Solvent Sludge ☒Waste Immersion Cleaner —Waste Paint And Thinner ☒Waste Dry Cleaner (Perc) Filter Powder	20	Containers will be placed one high on a pallet and pallets can be stacked no more than two high.
Split 30 (15-Gallon) Steel	☒Waste dry cleaner cartridges	5	Containers can be placed four high on a pallet and pallets can

<sup>1</sup> Those wastes marked with “☒” are required to be stored in the containers designated to meet Appendix D-4 (“Qualitative Acceptance Criteria”).

<sup>2</sup> Each container will rest at least 80 percent on the pallet, and the container will be stable for transport and storage (e.g., no tipping when in motion or when touched).

USDOT Specification Container Size	Suggested (☒ = Required) Waste Type <sup>1</sup>	Number Of Containers Per Pallet <sup>2</sup>	Stacking of Pallets and Containers
			be stacked no more than one high. <sup>3</sup>
30-Gallon	—Waste Aqueous Cleaners —Waste Parts Washer Solvent ☒Waste dry cleaner filters		
Other Containers ≤ 10 Gallons			Containers can be placed two high on a pallet and pallets can be stacked two high.
Other Containers > 10 Gallons ≤ 55 Gallons			Containers can be placed two high on a pallet and pallets can be stacked two high.
Other Containers > 55 Gallons ≤ 457 Gallons			Containers can be placed two high on a pallet and pallets can be stacked two high.

2. Pallets will be moved with a forklift or pallet jack.
3. In addition, container height limitations (NFPA-30 1990) will not be exceeded.

c. NFPA 30, Protected Storage, Liquid Warehouse Requirements

The following statements are taken from NFPA-30 1990 Section 4-5. In addition to the following requirements, any other applicable requirements contained in Appendix E-15 (“NFPA-30 1990 ‘Flammable and Combustible Liquid Code’, Applicable Pages”) will be adhered to.

Class IB Liquids<sup>4</sup>:

Maximum Storage Height	6’ 6”
Maximum Pile Size	5,000 Gallons
Aisle Width between Piles <sup>5</sup>	4’ 0” <sup>6</sup>
Maximum Distance of Container to Aisle	12’ 0”

<sup>3</sup> Not including highly acute toxics, ADEQ Hazardous Waste Permitting Unit policy typically allows small container stacking up to two high, and for all containers (except very large containers), pallets no more than two high. Because the ignitable nested design containers are an exception, the container design is included in Appendix E (“Equipment Information”).

<sup>4</sup> Class II combustible (e.g., parts washer solvent) liquids may be stored with Class IB flammable (e.g., paint waste, some dry cleaner waste) but Class IB restrictions will apply to the entire pile.

<sup>5</sup> The aisle width requirement applies to Class II liquids also.

<sup>6</sup> NFPA Class II pile size limit is 10,000 gallons.