WASTE TREATMENT AND IMMOBILIZATION PLANT
CHAPTER 4I
BALANCE OF FACILITIES

CHANGE CONTROL LOG

Change Control Logs ensure that changes to this unit are performed in a methodical, controlled, coordinated, and transparent manner. Each unit addendum will have its own change control log with a modification history table. The "**Modification Number**" represents Ecology's method for tracking the different versions of the permit. This log will serve as an up to date record of modifications and version history of the unit.

Modification History Table

Modification Date	Modification Number
08/03/2021	24590-BOF-PCN-ENV-20-002 (8C.2021.Q3)
06/24/2020	8C.2020.3F
07/01/2019	8C.2019.2F
09/05/2017	8C.2017.6F
12/15/2016	8C.2016.Q3

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CHAPTER 4I
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4I Balance of Facilities

The Balance of Facilities (BOF) provides support systems and utilities required for the waste treatment processes within the Pretreatment (PT) Facility, Low-Activity Waste (LAW) Vitrification Facility, High-Level Waste (HLW) Vitrification Facility, Analytical Laboratory (Lab), and the Effluent Management Facility (EMF). These include, but are not limited to, heating and cooling, process steam, process ventilation, chilled water, primary and secondary power supplies, and compressed air. The primary BOF process support systems are:

- Plant service air (PSA).
- Plant cooling water (PCW).
- Low-pressure steam (LPS).
- High-pressure steam (HPS).
- Demineralized water (DIW).
- Process service water (PSW).
- Chilled water (CHW).
- Glass former reagent (GFR).
- Cathodic protection (CPE).

The BOF systems are described in Sections 4I.1 through 4I.10. The BOF support and utility systems described in Sections 4I.2 through 4I.9 do not manage dangerous waste, and are described below for informational purposes only. Section 4I.1 addresses BOF dangerous waste container management areas, and Section 4I.10 addresses the BOF CPE system. The majority of the underground piping systems within the CPE system are not dangerous/mixed waste lines, however, a segment of dangerous/mixed waste underground transfer lines between the PT Facility, and the HLW Vitrification Facility, the LAW Vitrification Facility, and the Lab are cathodically protected. Underground waste transfer lines to support the Direct Feed Low-Activity Waste (DFLAW) configuration are isolated from the soil environment with insulation and a High Density Polyethylene (HDPE) jacket, and are not part of the CPE system.

4I.1 Containers

This section identifies the containers and container management practices that are followed at the BOF. The term “container” is used as defined in Washington Administrative Code (WAC) 173-303-040. Note that in this chapter and throughout the permit, terms other than containers may be used, such as canisters, boxes, bins, flasks, casks, and overpacks.

The container storage areas located within the BOF include:

- Waste Treatment Plant (WTP) Waste Storage Area.
- Transportation Staging Area.

Container storage area dimensions at the BOF are summarized in Table 4I-1.

The following sections address waste management containers:

- Description of Containers - Section 4I.1.1.
- Container Management Practices - Section 4I.1.2.
- Container Labeling - Section 4I.1.3.
- Containment Requirements for Storing Waste - Section 4I.1.4.
- Prevention of Ignitable, Reactive, and Incompatible Wastes in Containers - Section 4I.1.5.

4I.1.1 Description of Containers

The types of waste managed in containers include:

- Miscellaneous mixed waste (secondary waste).
- Miscellaneous nonradioactive dangerous waste (secondary waste).
- Immobilized Low-Activity Waste (ILAW) Containers (Transportation Staging Area).

The waste form dictates the type of containers used for waste management. The following paragraphs describe these types of containerized waste that are managed at the BOF.

Miscellaneous Mixed Waste

Generally, miscellaneous mixed wastes are secondary wastes that may include, but are not limited to, the following items:

- Spent or failed equipment.
- Offgas High Efficiency Particulate Air (HEPA) filters.
- Melter consumables.
- Spent melters.

Spent equipment and offgas filters are typically managed in commercially-available containers such as steel drums or steel boxes, of varying size. The containers for miscellaneous mixed waste comply with transportation requirements, with receiving Treatment, Storage, and Disposal (TSD) Facility waste acceptance criteria, and are compatible with the miscellaneous mixed waste. These containers may or may not include a liner. Final container selection, container and waste compatibility, and the need for liners, is based on the physical, chemical, and radiological properties of the waste being managed.

Melter consumables are routinely generated wastes and include spent feed tubes, pressure transducers, bubblers, thermocouples, and discharge risers. LAW melter consumables are placed into approved disposal containers of varying size.

HLW melter consumables will be remotely size reduced, if necessary, and placed into steel baskets with lids. The baskets will be placed into drums and the drums placed into shielded casks for export from the facility.

The LAW Locally Shielded Melter (LSM) is classified as hazardous debris for land disposal restrictions purposes. Any melter removed from the HLW Facility will we stored at the Canister Storage Building as detailed in the Final Tank Closure and Waste Management Environmental Impact Statement for the Hanford Site, Richland, Washington, Records of Decision (TC&WM EIS ROD), dated December 13, 2013.

Each miscellaneous mixed waste container has associated documentation that describes the contents, such as waste type, physical and chemical characterization, and radiological characterization.

Most miscellaneous secondary mixed wastes is spent equipment and consumables such as pumps, air lances, HEPA filters, etc., and are not expected to contain liquids. If wastes are generated that contain liquids, absorbents may be added in order to comply with the receiving TSD facility waste acceptance criteria.

Miscellaneous Nonradioactive Dangerous Waste

Each nonradioactive dangerous waste container has associated documentation that describes the contents, such as waste type and physical and chemical characterization. Commercially available containers are used. The types of containers used for packaging nonradioactive dangerous waste comply with the receiving TSD facility waste acceptance criteria and transportation requirements. However, final container selection, container and waste compatibility, and the need for liners is based on the physical and chemical properties of the waste being managed.

4I.1.2 Container Management Practices

The following paragraphs describe how containers are managed in the BOF container management areas.

4I.1.2.1 Miscellaneous Mixed Waste and Miscellaneous Nonradioactive Dangerous Waste Containers

Waste Treatment Plant Waste Storage Area

The WTP Waste Storage Area will consist of a sloped concrete pad approximately 100 feet (ft.) by 145 ft. Containers on the pad are kept closed unless waste is being added, removed, or sampled. They will routinely be moved by a forklift, crane, or drum cart, and are managed in a manner that prevents ruptures and leaks. The storage capacity for the WTP Waste Storage Area is listed in Table 4I-1. The containers stored in the waste storage area may be stacked two high and aisle spacing will be at least 30 inches (in.) between rows of containers. Containers stored in this area are placed on pallets, or otherwise elevated using skids or runners to prevent contact with liquid, if present. An example of container configuration in the waste storage area is provided in Figure 4I-1. The WTP Waste Storage Area is be designed with positive drainage control and sloped to drain or remove liquid, as necessary. Containers managed in these areas containing liquid are placed in portable secondary containment systems meeting requirements of WAC 173-303-630(7). Portable secondary containment system materials are compatible with all waste stored. The waste storage area is not designed nor intended to provide secondary containment; therefore, no structural integrity assessment is required.

Miscellaneous mixed and nonradioactive dangerous waste (secondary waste) is managed in the WTP Waste Storage Area. Containers are kept closed unless waste is being added, removed, or sampled while in the container storage area. Containers stored in this area are placed on pallets, or otherwise elevated to prevent contact with liquid, if present. Table 4I-1 summarizes the dimensions and maximum capacity of the container storage area. Containers are managed in the container storage area, and then transferred to a suitable TSD facility.

Miscellaneous dangerous waste containers are typically managed in the WTP Waste Storage Area, or in non-permitted waste management units (satellite accumulation areas and less-than-90-day storage areas) located throughout the BOF. Containers are kept closed unless waste is being added, removed, or sampled. They will routinely be moved by forklift or drum cart, and are being managed in a manner that prevents ruptures and leaks. The storage capacity is listed in Table 4I-1. The containers in that area may be stacked two high and aisle spacing will be at least 30 inches (in.) between rows of containers. Containers stored in this area are placed on pallets, or otherwise elevated using skids or runners to prevent contact with liquid, if present.

Transportation Staging Area

The Transportation Staging Area is permitted for the staging (storage) of ILAW transporters with full ILAW containers ready to ship to the Integrated Disposal Facility (IDF) for disposal. This staging area supports the uninterrupted operations of the LAW facility. The staging area is sized to hold three ILAW transporters, and will be comprised of a gravel area, which is surrounded by a perimeter fence with appropriate signage to delineate it as a permitted storage area. During a WTP outage, it may be necessary to stage large pieces of failed equipment loaded on transporters while awaiting approval for shipment to a

TSD facility. When transporters enter or leave the staging area, shipping documentation will be required such as a staging area log and/or a checklist to ensure compliance with storage requirements. This information will be available in the transport vehicles and a shift manager will have access to this documentation. Waste in this area will be on a transport vehicle, tied down, and in closed containers at all times. All transports will be Department of Transportation (DOT) compliant or equivalent. The storage capacity for the Transportation Staging Area is listed in Table 4I-1. An example of container configuration for the transporter system is provided in Figure 4I-3.

4I.1.2.2 Waste Tracking

The plant information network interfaces with the integrated control network and is designed to collect and maintain plant information. The plant information network is currently planned to support the following systems (all systems used at the plants/facilities and BOF are provided for information only):

- Plant data warehouse and reporting system.
- Laboratory information management system.
- Waste tracking and inventory system.

Inventory and Batch Tracking

The waste tracking and inventory system interfaces with the information system data to provide reporting information such as tank volumes, waste characteristics, and facility inventories of process waste. The waste tracking system is also used to query operations parameters when information is needed, as specified by operations, to manage the process system.

Secondary Waste Stream Tracking

The Hanford Solid Waste Information Tracking System (SWITS) is used to inventory and track waste containers within the WTP Waste Storage Area, and non-permitted waste management units. SWITS is used by waste management personnel to track waste containers for the following purposes:

- Provides waste container inventory information and locations for each storage area that facilitates weekly and regular inspections.
- Provides characterization data for each waste stream and container.
- Provides a complete history (cradle-to-grave) of the treatment and disposal of each individual waste container.

The SWITS contains the information necessary to:

- Track each container by location and by waste type.
- Identify each container by unique identification number.
- Track the date of generation, days in storage and ship date.
- Provide reporting at multiple levels (e.g., WTP management, U.S. Department of Energy, regulators).
- Maintain a history of all container movement by date.
- Identify container size and type.
- Identify the type of waste (dangerous, radioactive, mixed, universal, non-regulated).
- Identify and consolidate information on stored waste containers.

Records generated as part of waste management activities are managed in accordance with WAC 173-303-380 and WTP procedures. Records are generated either as hard copies or electronically.

4I.1.3 Container Labeling

The miscellaneous dangerous and mixed waste containers are labeled with the accumulation or generation start date, as appropriate, the major risk(s) associated with the waste and the words "hazardous waste" or "dangerous waste." Labels and markings will be positioned so that required information is visible. The labels meet the WAC 173-303-630(3) requirements.

4I.1.4 Containment Requirements for Storing Waste

Secondary containment is required for areas in which containers hold free liquids. In the Baseline configuration, it is also required for areas managing wastes exhibiting the characteristics of ignitability or reactivity as defined in WAC 173-303-090(5) and (7) and WAC 173-303-630(7) or incompatible waste as defined in WAC 173-303-040. Container Storage Areas managing secondary waste and/or miscellaneous mixed wastes, such as the WTP Waste Storage Area, are inspected at least weekly. Inspections of container storage areas include verifying major risk labels are present and legible, that all containers are closed, and area aisle space is free of liquid and debris. Additional inspection criteria are included in the container storage inspection tables found in Chapter 6A.

Miscellaneous dangerous and mixed waste storage areas may contain waste requiring secondary containment. If wastes containing liquids or wastes exhibiting the characteristics of ignitability or reactivity, or wastes that are incompatible, are generated, portable secondary containment that meets the requirements of WAC 173-303-630(7) will be provided. The portable secondary containment provided is capable of collecting and holding spills and leaks. It has the capacity to contain ten percent of the volume of all containers or the entire volume of the largest container, whichever is greater.

There will be one miscellaneous mixed and/or dangerous waste (secondary waste) container storage area at the BOF, as follows:

- WTP Waste Storage Area.

4I.1.4.1 Structural Integrity of the Base

The storage areas are constructed to support storage and transportation of containers within the container storage areas and will be designed with the following:

- Containment system capable of collecting and holding spills and leaks.
- Base is free of cracks and gaps and sufficiently impervious to contain leaks.
- Positive drainage control.
- Sufficient containment volume.
- Sloped to drain or remove liquid, as necessary.

4I.1.4.2 Containment System Capacity

Each container holding liquid mixed and/or dangerous waste is placed into portable secondary containment that meets the requirements of WAC 173-303-630(7). The waste container functions as the primary containment while the portable containment device will function as the secondary containment.

Each portable secondary containment has the capacity to contain 10% of the volume of all containers within the containment area, or the volume of the largest container, whichever is greater.

4I.1.4.3 Control of Run-On

The WTP Waste Storage Area is be designed with positive drainage control and sloped to drain or remove liquid, as necessary. Containers managed in these areas containing liquid are placed in portable secondary containment systems meeting requirements of WAC 173-303-630(7). Portable secondary containment system materials are compatible with all waste stored. The Waste Storage Area is not designed nor intended to provide secondary containment; therefore, no structural integrity assessment is required.

4I.1.4.4 Removal of Liquids from Containment System

Portable secondary containment devices are provided for individual containers that contain liquids. Hand pumps or similar devices are used to remove liquid released to the portable secondary containments. Spilled, leaked, or other accumulated liquids such as precipitation are removed from portable containment systems in a timely manner necessary to prevent overflow in accordance with WAC 173-303-630(7)(a)(ii).

4I.1.4.5 Demonstration that Containment is not Required Because Containers do not Contain Free Liquids

Portable secondary containment systems are provided for individual containers that manage liquids, and D001 and D003 wastes. Wastes with the F020-F023, F026, and F027 numbers are not identified for the Double-Shell Tank (DST) System. Therefore, these waste numbers are not present at the BOF.

4I.1.5 Prevention of Reaction of Ignitable, Reactive, and Incompatible Wastes in Containers

In the Baseline configuration, potentially incompatible wastes are not expected to be managed in the BOF container storage areas. Personnel inspect containers for proper packaging, marking, labeling, and waste information before transferring waste to the BOF waste storage areas. Any areas managing D001 and D003 waste will follow special requirements of WAC 173-303-630(8) and WAC 173-303-395, including annual Fire Code inspections. If such wastes are managed in these areas, the containers of incompatible wastes or chemicals will not be stored in close proximity to each other. Acids and bases will be stored on separate portable secondary containment devices; oxidizers will be stored in areas separate from combustible materials; and corrosive chemicals will be stored on a separate portable secondary containment devices. These separate storage areas within the unit will be clearly marked with signs indicating the appropriate waste to be stored in each area.

4I.2 Plant Service Air / Instrument Service Air Systems

The BOF PSA system provides a continuous supply of clean, dry air for the process systems in the PT Facility, Lab, LAW Vitrification Facility, EMF, and HLW Vitrification Facility. Each facility maintains a reservoir of PSA to accommodate load fluctuations and distributes the compressed air to the designated end users. The air distributed from the BOF PSA system to each facility is the source of the PSA and the Instrument Service Air (ISA) within each facility.

The PSA system components consist of compressors, dryers, air receiver vessels, distribution piping, pressure control stations, air amplifiers, valves, vents, drains, utility racks, filters, and monitoring instruments.

The ISA system is a distribution piping network that reduces and controls downstream air pressure and supplies compressed air to designated equipment, instruments, and other end users located throughout the facility. It maintains a reservoir of compressed air received from the BOF PSA system, and in doing so, dampen pressure fluctuations caused by variations in the supplied airflow or in end-user demands. In addition, the PT Facility and LAW Vitrification Facility are designed to use ISA stored air as a short-term supply of backup air in the event that services from the BOF PSA are interrupted.

The air supplied by PSA and ISA systems within each facility supports operation of tanks and miscellaneous unit systems, instruments and ancillary equipment.

4I.3 Plant Cooling Water System

The BOF PCW system provides a continuous supply of cooling water to selected plant equipment for heat removal. The BOF PCW receives potable make-up water from the Domestic Water System (DOW) at the cooling tower. A backup source is provided from the Raw Water System (RWW). The PCW system supplies cooling water to the chiller /compressor plant, steam plant and process areas. The system removes heat from active process equipment and cooling coils in process buildings and transfers this heat to the atmosphere through evaporation at the cooling tower. In the PT Facility, the PCW is used in the waste Feed Evaporation Process (FEP), Treated LAW Evaporation Process (TLP), Cesium Nitric Acid Recovery Process (CNP), and Pretreatment Vessel Vent Process (PVP) systems.

Cooling water for the HLW Vitrification Facility supports the HLW Melter Feed Process (HFP), HLW Melter Process (HMP), HLW Melter Offgas Treatment system (HOP), and melter power supplies. For the LAW Vitrification Facility, the major user is the LAW Melter Process system (LMP), pour cave cooling panels, and LAW melter power supplies.

The BOF PCW system includes, but is not limited to, the cooling tower, cooling tower basin, the primary cooling water circulation pumps, filter pumps, chemical injection tanks, and associated piping. The cooling water system is designed with primary and secondary loops to remain uncontaminated by mixed waste constituents. The primary loop circulates cooling water through heat exchangers within the HLW Vitrification Facility, LAW Vitrification Facility, and PT Facility and through equipment in the BOF chiller compressor plant. The system also provides cooling water to quench the steam plant blow down. The HLW Vitrification Facility, LAW Vitrification Facility, and PT Facility also have closed secondary loops that distribute cooling water to process equipment. Cooling water is chemically treated to promote system operability and service life of 40 years.

4I.4 Low-Pressure Steam System

The LPS provides a continuous supply of low-pressure steam for various users in the PT Facility, Lab, LAW Vitrification Facility, EMF, and HLW Vitrification Facility. The process facilities main use of steam is for tank heating for the evaporation process, and for Heating, Ventilation, and Air Conditioning (HVAC) heating coils.

The LPS is supplied from the high-pressure steam system through pressure-reducing stations. The low pressure applications consists of air handling units, humidifiers, and booster heaters. The steam condensate and feed system collects condensate from the low-pressure steam users, monitor for mixed waste contamination, and return it to the steam plant for re-use.

4I.5 High-Pressure Steam System

The HPS provides a continuous supply of high-pressure steam to the PT Facility, Lab, LAW Vitrification Facility, EMF, and HLW Vitrification Facility. The high pressure saturated steam is generated in the BOF Steam Plant Facility, which consists of six fire tube boiler packages (five continuously operating at peak conditions, and one in standby), and associated supporting equipment. The HPS distributes steam through above ground piping to process equipment, ejectors for transfer of fluids, and hot water heaters in the PT Facility, Lab, LAW Vitrification Facility, EMF, and HLW Vitrification Facility.

4I.6 Demineralized Water System

The DIW treats process service water, and produces, stores, and distributes the treated water through an underground piping distribution system to users in BOF, PT Facility, Lab, LAW Vitrification Facility, EMF, and HLW Vitrification Facility. Demineralized water is produced in the BOF water treatment building by pumping process service water through a series of cartridge filters and reverse osmosis units. The treated water is stored in the BOF demineralized storage tank. Demineralized water is pumped from the storage tank through an ultraviolet sterilization system to decontaminate biological organisms then sent through a final cartridge filter before it is fed into the distribution system.

Demineralized water is primarily used for boiler makeup, chemical reagent makeup, equipment decontamination, process pipeline flushes, sampling pipeline flushes, vessel and bulge rinses, pump priming, Wet Electrostatic Precipitator misting, and instrumentation rinses.

4I.7 Process Service Water System

The PSW provides filtered water for operations and maintenance purposes. The water is stored and distributed to the PT Facility, LAW Vitrification Facility, EMF, HLW Vitrification Facility, and Lab. The system consists of two storage tanks, filters, pumps, and distribution piping and supply filtered water to end users for various systems, such as offgas treatment, plant wash, and make-up to chilled water. The PSW receives water directly from the Hanford site potable DOW. Equipment for the PSW is located in the water treatment building, except for the tanks, which are located outside.

4I.8 Chilled Water System

The CHW system supplies chilled water to selected equipment in the HLW Vitrification Facility, EMF, Lab, LAW Vitrification Facility, and PT Facility. The CHW system consists of chillers, fixed-speed distribution pumps, adjustable-speed drive booster pumps, an expansion vessel, a chemical feed vessel, an air separator, piping, valves, in-line components, instruments, and controls.

Each of these facilities is equipped with a secondary CHW loop that draws from the primary distribution. The HLW Vitrification Facility, Lab, EMF, and LAW Vitrification Facility secondary loops supplies water to air handling units, fan coil units, in-bleed cooling coils, and breathing service air system compressors. Both the LAW Vitrification Facility and PT Facility secondary loops supply water to heat exchangers used by the process cooling loops.

The chilled water system is designed to remain uncontaminated by mixed waste constituents. The process cooling loops are closed loops systems and do not share circulating water with the secondary or primary loops. The process cooling loops in the LAW Vitrification Facility and PT Facility are used for cooling both process vessel cooling coils and process vessel cooling jackets. Secondary chilled water returns from the HLW Vitrification Facility, Lab, LAW Vitrification Facility, EMF, and PT Facility and cascades through the PSA dryer coolers before it is cooled and once again returns to the end users.

The CHW system primary and secondary loops, as well as the LAW and PT Facility CHW process cooling loops, receives corrosion inhibitors and pH adjustment chemicals, as needed, to limit deterioration of the materials that are in contact with the cooling medium and the fouling of heat transfer surfaces.

4I.9 Glass Former Reagent System

The GFR provides glass formers reagents and sucrose to the LAW Vitrification Facility and HLW Vitrification Facility. The system will also provide silica to the LAW Container Finishing Handling system (LFH) for inert void fill for Immobilized LAW containers. Sucrose may also be mixed with the glass formers prior to addition of the radioactive waste (in the Melter Feed Preparation Vessels). Addition of sucrose mitigates the generation of nitrogen oxides in the off-gases generated in the melters. The GFR system is comprised of the equipment needed to receive, store, blend, and transport glass formers to the LAW Vitrification Facility and HLW Vitrification Facility. The GFR system includes the glass former handling equipment in BOF, the glass former mixers in HLW Vitrification Facility and LAW, and the inert fill hoppers in the LAW. The LAW Vitrification Facility and HLW Vitrification Facility portions of the GFR system are described in WTP DWP Permit Sections 4E.2.1 and 4F.2.1, respectively.

4I.10 Cathodic Protection System

An impressed current cathodic protection system is used for eliminating or mitigating corrosion on interplant underground piping as well as the interior surfaces and bottoms of most field erected tanks. The cathodic protection system maintains a negative polarized potential between the protected pipe or tank and a saturated copper/copper sulfate reference electrode. The impressed current cathodic protection system uses direct current provided by a rectifier that is powered from the plant's normal 480 volts

alternating current power system. The direct current from the rectifier is connected across the buried anode wire and the protected pipe or tank bottom. The current flows from the anode wire, which is positive, through the electrolyte, to the protected surface, which is negative, and back to the rectifier completing the electrical circuit.

BOF non-dangerous/mixed waste containing pipelines and equipment that is cathodically protected include:

- Plant service air main headers.
- Diesel fuel oil pipelines (between the diesel fuel oil tank and the steam plant facility).
- Anhydrous ammonia reagent pipeline.
- PSA-integral transportation system compressed air pipeline.
- Metallic piping and fittings that are within the zone of influence of the cathodic protection system.

BOF non-dangerous/mixed waste field erected tanks that are cathodically protected include:

- Fuel oil tank.
- Domestic potable water tank.
- Process service water feed tank.
- Process service water supply tank.
- Non-rad effluent tank.
- Fire water tanks.

Additionally, various underground waste transfer pipelines that manage mixed waste are cathodically protected. Underground mixed waste transfer pipelines within WTP that are cathodically protected include:

- Transfer lines between the PT Facility and the HLW Vitrification Facility.
- Transfer lines between the PT Facility and the LAW Vitrification Facility.
- Transfer lines between the Lab and the PT Facility.

The underground waste transfer lines installed to support the DFLAW configuration are coaxial lines that are constructed of stainless steel primary pipe, with a carbon steel encasement pipe that is coated with Fusion Bonded Epoxy (FBE). The coating system and water barrier consist of the FBE, polyurethane insulation, and a jacket or thermoplastic outer water barrier made of HDPE. To protect against corrosion, the cathodic protection system will remain operational for the intra-facility waste transfer lines even though wastes are not managed in these lines during DFLAW operations.

Table 4I-1 Balance of Facility Container Storage Areas

Container Storage Area	Maximum Waste Volume (US Gallons)[1]	Approximate Dimensions (L × W × H, in feet)[2]
1. WTP Waste Storage Area (located on the Part A Figures)	253,440[3]	145’ × 100’ × 10’
2. Transportation Staging Area	18,095	136’ × 60’

[1]The conversion factor used to convert from cubic feet to gallons is 7.4805 gal/ft^3.

[2]The dimension for height (H) is based on the height of the largest waste container stored in the area (i.e., LAW container is 7.5 ft, HLW canister is 15 ft, melters are assumed to be 16 ft, and a B-25 box is 5 ft - stacked a maximum of two high is 10 ft).

[3]Based on 4608 drum equivalents spaced two wide and stacked 2 high and including 30 inch aisle space, 33,880 ft^3.

1

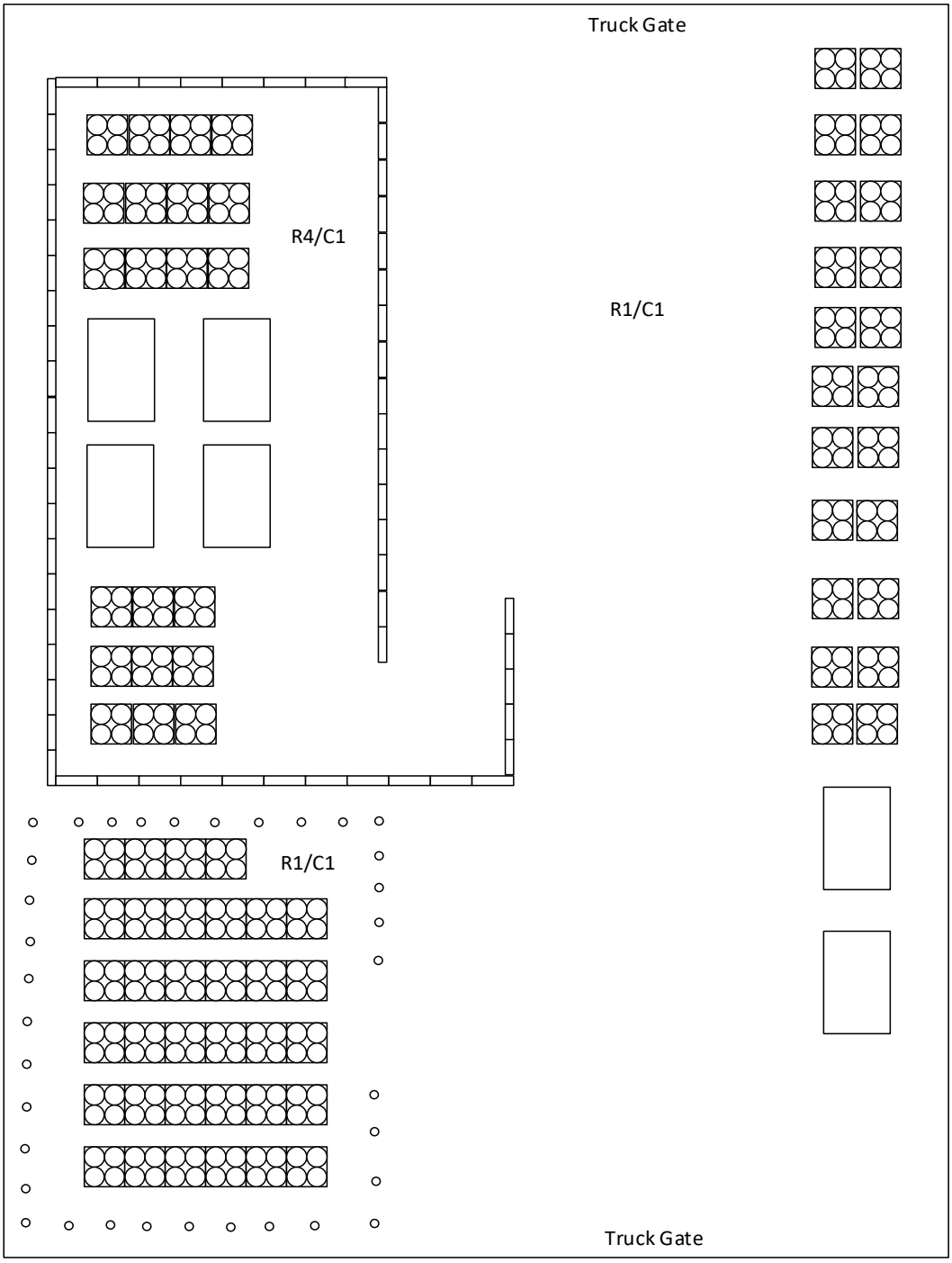

Figure 4I-1 Example of Container Configuration in Waste Management Area

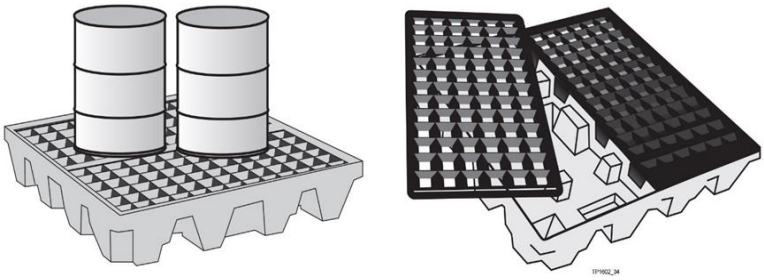

Figure 4I-2 Example of Typical Secondary Containment Pallets

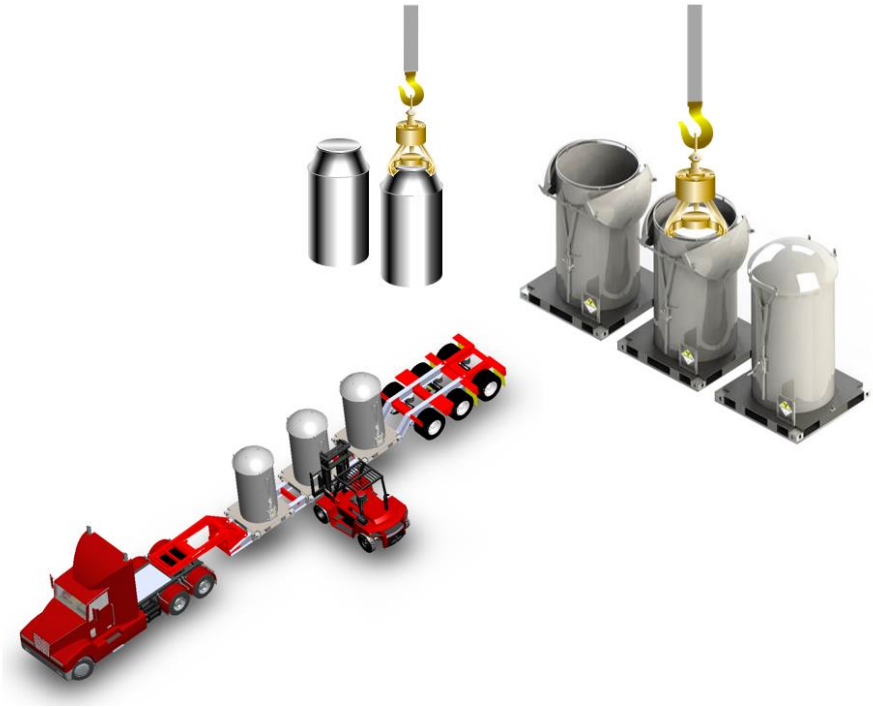

Figure 4I-3 Example of a Transporter Container Configuration