

Mixed Waste Facility

ATTACHMENT LL

CONTAINER MANAGEMENT PLAN

MIXED WASTE FACILITY
RCRA/TSCA PERMIT

PERMA-FIX NORTHWEST RICHLAND, INC.
RICHLAND, WASHINGTON

PERMIT NUMBER: WAR 0000 10355

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TABLES

- 1 MWF Waste Storage Capacities
- 2 Waste Streams and Container Types
- 3 Empty Container and Overpack Container Inventory

ATTACHMENT 2 CONTAINERS AND WASTE TRACKING ACRONYM LIST

ASTM	American Standards for Testing Material
EPA	Environmental Protection Agency
GASVIT™	Gasification Vitrification
GVB	GASVIT™ Building
HAZMAT	Hazardous Material
HDPE	High-Efficiency Particulate Air
IBC	Intermediate Bulk Container
ISO	International Standards Organization
MWF	Mixed Waste Facility
NFPA	National Fire Protection Agency
OSHA	Occupational Safety and Health Act
PCBs	Polychlorinated Biphenyls
STB	Stabilization Building
TICs	Transportable In-Process Container
TSCA	Toxic Substance Control Act
WAC	Washington Administrative Code
WAP	Waste Analysis Plan
WSB	Waste Storage Building

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1.0 CONTAINERS

Wastes will primarily be stored in various locations within Building 13. These locations will include the staging area in STB Room 2, the waste storage building (WSB), and pre-treatment and treatment staging areas. Waste containing radioactive Polychlorinated Biphenyls (PCBs) and/or dangerous wastes will be stored in designated areas of Building 13. The capacities of waste stored in each of these locations are presented in Table 1. Waste *not* designated as ignitable (D001), corrosive (D002), or reactive (D003) may be stored in any of the storage or staging areas identified in Appendix A.

Waste designated as ignitable, corrosive, or reactive will be placed in one of three modular units within Room 4 of the WSB. Additional storage capabilities for waste with these characteristic is in the HAZMAT cabinets in STB Room 2.

Treated and untreated waste will be stored within the rooms of the WSB. Bulk waste may be stored in B-25 boxes, Intermediate Bulk Container (IBC), and International Standards Organization (ISO) containers within various locations of the WSB. (The various types of containers and wastes that will be stored in the WSB are shown on Figures 1 through 19.) Other types of containers will be accepted if they meet U.S. Department of Transportation (DOT) specifications and are compatible with the MWF systems.

1.1 Types of Containers

Table 2 in conjunction with Figures 1 through 19; provide a description of the different type of waste streams and containers managed at the Mixed Waste Facility (MWF). The chemical resistance guide provided as Appendix A provides guidance for the selection of containers to ensure that the waste to be placed in the container is compatible with the container.

The MWF is designed to receive, store, transfer and package waste in five categories of containers which are: 1) small containers; 2) drums; 3) IBCs; 4) B-25 Boxes; 5) ISO containers. All the containers that will be used for shipment are DOT-approved containers for the phase of waste stored in them (i.e., liquid or solid). The volumes and dimensions of several acceptable containers are illustrated in Figures 1 through 19. Other types of containers will be accepted if they meet U.S. Department of Transportation (DOT) specifications and are compatible with the MWF systems.

1.2 Construction Materials

Basic construction materials for containers and container liners in which the facility will accept waste streams are shown in Table 2 and Figures 1 through 19. Many of the containers received will be made of steel, stainless steel, polyethylene, or high density polyethylene (HDPE). Container construction materials other than those listed in Table 2 will be accepted if they meet U.S. Department of Transportation (DOT) specifications.

1.3 Liners Types

Liners for containers will be of materials that will not react with, and will otherwise be compatible with the waste placed in the container. Acceptable liner materials for many wastes include polyethylene, epoxy resins, and Teflon. Polyethylene drum liners will be acceptable for many liquid and solid wastes, including soil, metal, sludge, and rags. Rigid epoxy or other plastic drum liners must be at least 4-mm thick. Table 2 and Appendix B identify waste types that are

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1 compatible with liner materials. Liner materials other than those listed in Table 2 and
2 Appendix A will be accepted, if the liners meet the U.S. Department of Transportation (US DOT)
3 specifications.
4

5 **1.4 Container Specifications**

6
7 Containers received at the MWF will meet the performance specifications for composition,
8 integrity, and compatibility of the design specifications. Most of the UN performance
9 specifications promulgated in 49 CFR Part 178.6000 have been adopted by the
10 US DOT. The MWF will receive containers in overpacks that conform to the US DOT design
11 specifications found in 49 CFR 173.
12

13 With the exception of US DOT 7A, which applies to containers used to transport radioactive
14 wastes, the US DOT specifications shown in Figures 1 through 19 govern the transport of
15 hazardous waste. Container types other than those shown in Table 1 must satisfy US DOT
16 specification 7A for radioactive wastes and the applicable US DOT specification for the
17 hazardous waste. Containers for storage of wastes containing more than 50 ppm of PCBs should
18 also conform to the specifications of 40 CFR 761.65.
19

20 **1.5 Container Dimensions**

21
22 The MWF will accept containers with dimensions compatible with the facilities materials
23 handling equipment described later in this section. Drums and bins will be received in STB
24 Room 2, the containerized waste staging area. Bulk waste in ISO containers and bulk
25 soils/inorganic debris in B-25 boxes will be received in STB Room 3, the bulk waste staging area.
26 Acceptable dimensions for several container types accepted by the facility are shown in Figures 1
27 through 19.
28

29 **1.6 Container Inventories**

30
31 An inventory of empty containers and overpack drums will be kept on site for packaging of
32 treated waste and for repackaging of waste received in incompatible, leaky, or damaged
33 containers. The number of empty drums and overpack containers maintained at the facility will
34 fluctuate with the types of waste scheduled for storage and treatment at the facility. Table 3
35 provides an estimate of the number of empty containers and overpack containers kept on-site.
36

37 **1.7 Condition of Containers**

38
39 The following practices will be employed to ensure that containers used at the MWF will be in
40 good condition (e.g., no severe rusting, apparent structural defects) [WAC 173-303-160(2)].
41

42 **Incoming waste container.** Any leaking or failed container will be addressed in accordance with
43 the procedures described in the Contingency Plan. Waste compatibility with the construction
44 material of the overpack container or empty container will be determined before the leaking
45 container or waste is transferred.
46

47 **Transportable In-process Containers (TICs).** Prior to each use, Transportable
48 In-process Containers (TICs) will be visually inspected to verify that they are empty (as defined
49 by WAC 173-303-160) and are in good condition (e.g., no severe rusting, apparent structural
50 defects). If TIC is not in good condition it will be removed from service.

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1.8 Container Labels and Markings

All waste containers received and shipped at the MWF will be marked and labeled in accordance with the requirements specified under DOT regulations (49 CFR § 172). This includes specific requirements for packages containing 110 gallons or less of dangerous waste specified at 40 CFR § 178.304. Affixing shipping labels to containers received at the MWF will be the responsibility of the generator. Affixing DOT labels to waste shipped from the MWF will be the responsibility of MWF personnel. Containers holding PCBs will be labeled in accordance with the marking requirements referenced in 40 CFR 761.40. The 40 CFR 761.40 requirements are specific to PCB wastes and also specify marking requirements for storage areas.

Storage areas and containers holding 55 gallons or more of PCB waste will be marked with letters and striping on a white or yellow background. The mark will be at least 15.25 centimeters (six inches) on each side. The mark for containers holding less than 55 gallons of PCB waste will be smaller, but is at least five (5) centimeters (two inches) on each side. The larger mark will also be used to identify PCB storage areas.

Labels and markings will be affixed to the sides of the containers. The receipt number will be shown on the waste tracking system marking. Figures 22, 23, and 24 are examples of marking and labels that may be affixed to containers.

The labels will also contain information required by the US EPA and the Department of Ecology (Ecology). In addition to the above labels and marking requirements, all waste containers will be marked as follows:

PERSISTENT (if a WP01 or WP02 waste code);
TOXIC (if a WT01, WT02, or D waste code other than D001, D002, or D003)
FLAMMABLE (if a D001 and other waste codes)
CORROSIVE (if a D002 and other waste codes)
REACTIVE (if a D003 and other waste codes)

Upon transfer of waste from one container to another, new labels will be generated and placed on the new container. Old label(s) or markings on a container will either be removed or otherwise made unreadable by obscuring the label/marking. (For example spray paint may be used to obscure markings or labels.)

The following practices will be employed to ensure that containers managed at the MWF are labeled in a manner which identifies the major risk(s) associated with the contents of the containers [WAC 173-303-160(3)].

In-coming waste container. As part of the acceptance process, in-coming containers will be inspected for the appropriate labeling. If a container is received that is not appropriately labeled, the container will be labeled and the generator notified of the labeling discrepancy.

TICs. TIC will be labeled to identify the major risk(s) associated with the contents of the TIC. Any old labels or marking on the TIC will be removed or otherwise made unreadable. (For example spray paint may be used to obscure markings or labels.)

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2.0 MANAGEMENT OF CONTAINERS

1 Container management practices for the MWF will be in compliance with Washington
2 Administration Code (WAC) 173-303-630. The following structures, equipment and operations
3 will be provided and employed for staging and storage of waste containers.
4

5
6
7 **Waste Receipt and Acceptance.** Incoming trucks will enter facility through the access road off
8 of Battelle Boulevard parking just west of the MWF access gate and outside of the Radiological
9 Control Area (RCA). The trucks will be inspected and surveyed for compliance with the
10 Department of Transportation regulation and shipment documentation review. If the truck does
11 not pass the initial inspection, it will be dealt with according to a “reject process” as described in
12 Attachment 1 (Waste Analysis Plan). As part of the initial inspection, the containers in shipment
13 will be visually inspected for any evidence of damage, leakage or loss of integrity. Any leaking
14 or failed container will be addressed in accordance with the procedures described in the
15 Contingency Plan. Once the shipment passes the initial inspection, the shipment will be allowed
16 to enter the RCA through the MWF access gate. Trucks may be loaded or unloaded inside the
17 MWF, on the truck loading area (TLA) or on the rail loading area (RLA). Typically, containers
18 will be unloaded and placed in container staging areas either in STB or in GVB. Occasionally,
19 large bulky containers will be unloaded using an overhead crane.
20

21 If staging areas in Stabilization Building (STB) or GASVIT™ Building (GVB) are occupied,
22 containers in the shipment will be unloaded from trailer and placed directly in WSB while the
23 staging areas being vacated. After unloading, a duly authorized MWF representative will sign the
24 shipping manifest documents acknowledging “formal receipt” of the waste as per WAC 173-303-
25 370.
26

27 Rail Loading Area (RLA) Waste Receipt and Acceptance

28
29 Incoming rail vehicles will enter the facility through the access gate on the south border of the
30 facility and will be parked outside of the RCA. The rail vehicles will be inspected and surveyed
31 for compliance with the Department of Transportation regulation and shipment documentation
32 review. If the rail vehicle does not pass the initial inspection, it will be dealt with according to a
33 “reject process” as described in Attachment 1 (Waste Analysis Plan). As part of the initial
34 inspection, the containers in the shipment will be visually inspected for any evidence of damage,
35 leakage or loss of integrity. Any leaking or failed container will be addressed in accordance with
36 the procedures described in the Contingency Plan. Within 24 hours of initial receipt, the shipment
37 will be transferred to a truck (via fork truck or crane) and moved inside the RCA through the
38 MWF access gate and unloaded. Containers will be unloaded either in the MWF or at the TLA
39 and placed in the MWF pending inspection and verification prior to “formal acceptance”. After
40 unloading, a duly authorized MWF representative will sign the shipping manifest documents
41 acknowledging “formal receipt” of the waste as per WAC 173-303-370.
42

43 Incoming waste containers will be subjected to an inspection and verification process prior to
44 “formal acceptance” by MWF. This process, described in MWF Waste Analysis Plan (WAP)
45 (see Attachment 1), will consist of placing the incoming containers in the designated container
46 staging areas. Containerized, or bulk radiological PCB and/or dangerous wastes are inspected in
47 the appropriate areas within Building 13. The appropriate areas will be determined and are
48 dependent on various factors. For example the size and contamination levels will be taken in
49 consideration. In these areas, the containers are either moved under a process ventilation hood or
50 inside an enclosure and their caps are removed. Some containers may be formally accepted if a
51 visual inspection confirms that their contents match the description listed on the accompanying

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1 manifest and the approved waste profile documents. Other containers may require sampling and
2 analysis in addition to the visual inspection to verify that the waste in the container meets the
3 descriptions given on the accompanying manifest and approved waste profile documents. During
4 the acceptance process the containers are handled as follows:

5
6 1) The containers will be capped after sampling and inspection operations are complete and
7 will be moved to an appropriate storage area, as described in the following paragraphs.
8 At no time during the sampling and inspection will the container be kept uncovered for
9 more than 2 hours.

10
11 2) Containers that pass the visual inspection and/or verification sampling will be returned
12 back to the designated storage area and their generator will be notified in writing that the
13 container is formally accepted by MWF.

14
15 3) A container that does not pass visual inspection or verification will have a process hold
16 tag placed on the container and the container will be moved to an appropriate storage
17 location as soon as a discrepancy is discovered. The container will be kept there and
18 MWF has 15 days to complete the resolution process. This will include notifying the
19 generator and attempting to resolve the discrepancy. If it becomes evident that the
20 container can not be processed by MWF, arrangements will be made for returning the
21 container back to the generator or to another facility, as authorized by the generator
22 before the 15 day resolution period expires. If the discrepancy is successfully resolved,
23 the container will be formally accepted and the process hold tag will be removed.

2.1 Addition and Removal of Waste from Containers

24
25
26
27 The MWF will be designed to safely receive, stage, and store containerized and bulk dangerous
28 waste and Toxic Substance Control Act (TSCA) regulated PCB contaminated waste. Waste
29 containers are always kept closed during receipt, staging and storage except when waste is
30 sampled, added or removed from containers. As previously discussed, during the waste receipt
31 inspection and verification process containers will be opened either under appropriate ventilation
32 in the rooms discussed in Attachment PP, Attachment 5, Process Engineering Description
33 Stabilization Building. During the inspection task the area is maintained under negative pressure
34 and the exhaust is routed to the process vent system. Therefore any possible emissions that may
35 occur during visual inspection or verification sampling will be controlled and collected by the
36 process vent system. Likewise, bulk waste will be received and containerized in STB Room 3
37 which will be under negative pressure, and the room air exhausted into the process vent system.

38
39 Containerized waste will be staged near the pre-treatment and treatment units for a short period of
40 time to prior to treatment. Containers in these in process surge storage areas will be segregated to
41 preclude incompatible wastes to commingle. Each pre-treatment and treatment unit is designed
42 for the containers to be opened either under negative pressure or inside an enclosure under
43 negative pressure and exhausted to the process vent system. Likewise, when treated or pretreated
44 waste is added to a container the loading of waste is conducted under negative pressure and the
45 exhaust sent to the process vent system. A more detailed discussion of the process vent systems
46 are provided in Attachment 5 (Process Engineering Description Stabilization Treatment Building)
47 and Attachment 6 (Process Engineering Description GASVIT™ Treatment Building).

2.2 Opening Containers

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1 Containers will be opened and closed in accordance with the manufactures specification. Tools
2 used to open and close containers will be selected to minimize the potential for an upset condition
3 (i.e., non sparking tools used when opening a container holding flammable liquids). Before
4 opening, each container will be examined for the following as applicable:
5

- 6 • Dents and bulges
- 7 • Deformation of sealing surfaces
- 8 • Continuity of welds or seams
- 9 • Rust, nicks, etc.
- 10 • Gasket quality and size (if applicable or visible)
- 11 • Weld areas
- 12 • Body and chime
- 13 • DOT marking

14 2.3 Container Handling

15 The handling and transport methodologies that will be used to move containers between the STB,
16 GVB, and the WSB and within these areas will ensure that the containers are not damaged during
17 transport. Waste handlers and equipment operators will be trained in the proper operation of the
18 equipment, in the management of containerized waste, and in response to spill incidences.
19

20 Except for the miscellaneous containers that are less than 10 gallons or 50 pounds, all containers
21 with liquid waste received in STB Room 2 will be moved on pallets with equipment such as
22 forklifts and drum cart. Movement on pallets will minimize the risk of dropping containers.
23 Miscellaneous containers that are less than 10 gallons or 50 pounds of liquid waste will be
24 transported on wheeled carts equipped with liquid tight basins. The basins will provide
25 secondary containment for liquids.
26

27 Drums will be handled individually using either a hand-truck drum dolly, a fork-lift truck with a
28 “barrel grappler”. For transport and eventual staging the drums containing liquids or particulate
29 will be placed on a drum cart with built-in secondary containment (Figure 21) or on pallets with
30 built-in secondary containment that can be handled by a forklift truck. A maximum of four
31 drums will be placed on each pallet and two drums on the drum transport cart. (See the vendor
32 descriptions in Exhibit D-2d for descriptions of the acceptable pallets and fork lifts.)
33

34 B-25 boxes, IBCs and other containers mounted on a pallet will be transported with a forklift.
35 Roll off bins, ISO cargo containers, and other containers mounted on wheels will be either moved
36 manually or towed with a large forklift.
37

38 If the original container is unsuitable for transport within the pre-treatment and treatment tank
39 systems, wastes will be transferred to another container; for example a transportable in-process
40 containers (TICs). For liquids, pump-able sludge, and flowing powders that are easily airborne,
41 closed-top drums of up to 85 gallons, and IBCs of up to 350 gallons will be used as TICs. TICs
42 for non-pump-able sludge and solids will include open-top drums, small ISO cargo containers,
43 and B-25 boxes.
44

45 There are also additional procedures that apply within the GVB. These additional procedures will
46 facilitate the placement of solid waste materials into the GASVIT™ batch feeder or the
47 continuous feeder, or if liquid waste into the liquid feeder. These procedures are specified in
48 Attachment 6, Process Engineering Description for GASVIT™ Building.
49
50

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1
2 The same procedures described for transferring liquid wastes into the STB treatment systems that
3 handle liquid wastes, TP-04 and TP-06 will be used to transfer liquid wastes into the liquid feed
4 tank for the GASVIT™ process. Operations involving transfer of liquids and solids from
5 containers in STB are presented in Attachment 5, Process Engineering Description for
6 Stabilization Building.
7

8 2.4 Compatibility of Waste in Containers 9

10 Generator waste characterization and packaging data will be checked by MWF to ensure that
11 waste containers and their liners are compatible with the waste. In addition, the following steps
12 are undertaken by MWF staff to ensure that in each application the containers are selected to be
13 compatible with the waste as well as MWF system requirements.
14

- 15 1. For any given application (e.g., offsite shipment, in-process application, waste
16 packaging), compatibility of waste with the container and/or liner materials will be
17 checked before the waste is placed in the container or before a waste package is
18 authorized for shipment to the MWF.
19
- 20 2. All containers weighing more than 35 pounds must be suitable for lifting by a fork lift or
21 a hand cart. The maximum weight for containers must not exceed the lifting capacity of
22 the MWF forklift(s).
23
- 24 3. Containers requiring triple rinse cleaning must be compatible with the empty container
25 rinse system (TT-06) or any other provision at MWF. This system can accept drums,
26 IBCs and boxes. Small containers will be rinsed inside the liquid consolidation system
27 (TP-09). ISO containers, if subject to triple rinse requirement, will be triple rinsed at their
28 unloading station (which is in front of the STB Room 3) with portable high-pressure
29 water rinse equipment.
30
- 31 4. TSCA-regulated PCBs which are contaminated with radioactive and/or dangerous waste
32 containers must fit into the storage HAZMAT cabinets. Accordingly, only small
33 containers, drums, IBCs and B-25 containers which fit in to the HAZMAT cabinets will
34 be used for radiological PCB and/or dangerous wastes. Larger containers may be placed
35 into the other areas within WSB Room 4.
36
- 37 5. Containers must be compatible with the overpack types stored at the MWF for
38 emergency conditions involving leaky containers. If containers are not compatible with
39 the overpacks listed in this plan, arrangements must be made by the generator in advance
40 to ship a suitable empty overpack container to MWF at least 15 days before the waste
41 shipment occurs.
42
- 43 6. Containers must be compatible with the equipment in the designated treatment line.
44
 - 45 • **Stream 100.** Soils and inorganic debris may be shipped in small containers, drums
46 or B-25 boxes. The container construction material and liner, if any, must be
47 compatible with the waste type. It is preferred that waste not requiring size reduction
48 or drying be shipped in IBCs or 55-gallon drums. Wastes requiring drying must be
49 shipped in drums or B-25 box containers. The total free liquid in B-25 containers
50 must not exceed 7.5 gallons.
51

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- 1 • **Stream 200.** Inorganic liquids may be shipped in small containers, drums or IBCs.
2 The container construction material and liner, if any, must be compatible with the
3 waste type. Sludges and solid wastes, including TSCA-Regulated PCB wastes may
4 also be shipped in small containers, drums, or IBCs.
5
- 6 • **Stream 300.** Metal and bulk lead debris waste may be shipped in small containers,
7 drums, B-25 box and ISO containers. The container construction material and liner,
8 if any, must be compatible with the waste type.
9
- 10 • **Stream 400.** Heterogeneous debris may be shipped in small containers, drums, B-25
11 boxes, or ISO containers. The container construction material and liner, if any, must
12 be compatible with the waste type.
13
- 14 • **Stream 500.** Organic RCRA and PCB liquids may be shipped in small containers,
15 drums or IBCs. PCB contaminated debris solids may be shipped in a small container,
16 drum, or B-25 box container. The container construction material and liner, if any,
17 must be compatible with the waste type. RCRA heterogeneous and debris waste may
18 be shipped in small containers, drums, B-25 boxes, or ISO containers.
19

20 2.5 Row Width

21
22 Containers staged or stored at the MWF will be managed in a manner that ensures that a row of
23 containers is no more than two containers wide [WAC 173-303-630(5)(c)]. Sufficient access to
24 containers will be provided in case a container needs to be moved either for processing or because
25 of a problem identified during routine inspections.
26

27 2.6 Aisle Spacing

28
29 Container storage areas will provide aisle spacing of at least 30 inches between rows of waste
30 containers. Rows of drums will be no more than two drums wide to facilitate inspections [WAC
31 173-303-630(5)(c)]. Sufficient access will be provided in order for a container to be moved either
32 for processing or because of a problem identified with the container during routine inspections.
33

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2.7 Maximum Volume, Number and Stacking Height

Containers will be stacked in the open areas of Room 4 and within the enclosed HAZMAT cabinets in Room 4 of the WSB. In the open areas of Room 4 containers will be stacked no more than three containers high and the heaviest containers will be placed at the bottom of the stack.

STB Capacity. The STB secondary containment system volume is significantly more than that required by the currently planned operations. Also, the calculations see Attachment 13 demonstrate the maximum capacity of liquid waste plus F027 wastes that can be stored in STB is 8546 cubic feet. Should operations require additional liquid waste storage capacity; the limit of liquids stored in STB will not exceed the design limit of 8546 cubic feet.

Corrosive, ignitable and reactive wastes are stored in STB Room 2, containerized waste staging area, in cabinets that are separated by a metal wall and have their own separate secondary containment. Rejected liquid wastes are stored in cabinets with their own secondary containment. Following is a list of storage cabinets that will be located in STB Room 2.

<u>Quantity</u>	<u>Tag Number</u>	<u>Size (L'xD'xH')</u>	<u>Capacity (Containers)</u>	<u>Application</u>
1	SB-07-Z-0001	14x5x15	36 Drums	Corrosive
1	SB-07-Z-0002	14x5x15	36 Drums	Reject Corrosive
1	SB-07-Z-0003	14x5x15	36 Drums	Reactive
1	SB-07-Z-0004	14x5x15	36 Drums	Ignitable
2	SB-07-Z-0005	4.5x3x5	3 Drums	Reject Ignitable
1	SB-07-Z-0006	4.5x3x5	3 Drums	Reject Reactive
1	SB-07-Z-0007	4.5x3x5	3 Drums	Ignitable
1	SB-07-Z-0008	4.5x3x5	3 Drums	Ignitable

GVB Capacity. The GVB secondary containment system volume for RCRA wastes is also significantly more than that required by the currently planned operations. Also, the calculations (see Attachment 13) demonstrate the maximum capacity of RCRA liquid waste plus F027 wastes that can be stored in GVB is 4525 cubic feet. Should operations required additional RCRA liquid waste storage capacity in GVB, the limit of RCRA liquids stored in GVB will not exceed the design limit of 4525 cubic feet.

The storage of PCB contaminated liquids in GVB is limited to the size of the secondary containment system in the HAZMAT enclosure (GVB Room 4) and the solids storage area (GVB Room 3). Both of these rooms have a monolithic secondary containment system in accordance with the TSCA regulations.

The secondary containment volume of HAZMAT enclosure (GVB Room 4) is 825 gallons and 375 gallon storage tanks are located in this enclosure. The containment size of the GVB solids storage area (GVB Room 3) is 122 cubic feet and the volume of PCB waste that can be stored in this room assuming a 25 percent secondary containment requirement is 480 cubic feet. There are no regulatory limitations if RCRA solid waste is stored in GVB Room 3.

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WSB Capacity. The secondary containment system volume in WSB rooms is significantly more than that required by the currently planned operations. The design limit for the maximum volume of liquid waste plus F027 wastes that can be stored in each room is:

- WSB Room 1: 2066 cubic feet
- North WSB Room 2: 2511 cubic feet
- South WSB Room 3: 2515 cubic feet

In the event operations require additional liquid waste storage capacity in WSB, the limit of liquids stored in each will not exceed the design capacities.

WSB Room 4 will contain enclosed cabinets storing liquids contaminated with PCBs as well as liquids or solids having ignitable, corrosive and reactive hazards. The purchase specifications for these units will be used to ensure adequacy of the containment system (see Attachment 10). The following table contains information on the HAZMAT cabinets installed in WSB Room 4.

<u>Quantity</u>	<u>Tag Number</u>	<u>Size (L'xD'xH')</u>	<u>Capacity (Containers)</u>	<u>Application</u>
1	WS-06-Z-0001	21x5x10	32 Drums	Reactive
1	WS-06-Z-0002	21x5x10	32 Drums	Corrosive
1	WS-06-Z-0003	21x5x10	32 Drums	Flammable
1	WS-06-Z-0004	21x5x10	32 Drums	Reject Combustible
7	WS-06-Z-0004	21x5x10	32 Drums	Combustible
	to			
	WS-06-Z-0011			
4	WS-06-Z-0012	14x5x9	3 IBCs or B-25	Flammable
	to			
	WS-06-Z-0015			
1	WS-06-Z-0016	14x5x9	3 IBCs or B-25	PCBs
1	WS-06-Z-0017	14x5x9	3 IBCs or B-25	Reject PCBs
1	WS-06-Z-0018	4.5x3x5	3 Drums	Reject Reactive
1	WS-06-Z-0019	4.5x3x5	3 Drums	Reject Corrosive
1	WS-06-Z-0020	4.5x3x5	3 Drums	Reject Flammable

2.8 Vehicle Loading and Unloading

Trucks may be loaded or unloaded inside the MWF, on the truck loading area (TLA) or on the rail loading area (RLA). Typically fork lift trucks will be used for loading, unloading and transfer operations from the shipping vehicles to Building 13. Occasionally large or bulky items will be unloaded using a crane.

The rail loading area will serve as a loading and unloading area for incoming or outgoing rail vehicles during container loading and unloading operations. Within 24 hours of initial receipt, the shipment will be transferred to a truck (via fork truck or crane) and moved inside the RCA through the MWF access gate and unloaded. Occasionally large or bulky items will be unloaded using a crane.

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1 | In the event of a spill incident exceeding de minimis losses as described in Section G.3 of the
2 | Contingency Plan, the contingency plan will be activated to start the spill response actions.
3 | Including the removal of the spilled liquids and the execution of the subsequent remediation
4 | activities according to the procedures established by the contingency plan, (see Attachment 15.)
5 |
6 |

7 | **2.9 Storage Locations**

8 |
9 | Most wastes will be stored within the WSB. After receipt, or when waiting processing or
10 | shipment, some wastes will be stored in the staging areas in Building 13. Small quantities of
11 | waste will also be stored within the treatment tank systems in surge storage to facilitate
12 | processing of the waste.
13 |

14 | **Waste Storage Building (WSB).** The WSB will consist of four storage areas. The storage areas
15 | are: 1) Room 1 (solid waste storage); 2) Room 2 (solid waste storage [north]); 3) Room 3 (solid
16 | waste storage [south]); and Room 4 (covered storage pads). The locations of these storage areas
17 | are shown in Figure 25.
18 |

19 | **In Process Surge Storage.** In addition to the staging and storage units described above, small
20 | quantities of in-process will be stored wastes in their original containers or TICs near the pre-
21 | treatment or treatment units for a short period of time (usually less than 7 days). The anticipated
22 | types of containers and the volume of in-process waste stored near each system are shown in
23 | Appendix A.
24 |

25 | **Process Hold Container Storage Provisions.** The MWF will include areas for storage of
26 | containers requiring a process hold. Containers will be kept in appropriated areas until the
27 | resolution process is complete and the containers are either formally accepted or rejected and
28 | loaded into vehicles for off-site shipments.
29 |

30 | **Process Hold Container Storage in STB Room 2.** Any containerized dangerous waste that is
31 | tagged with a process hold during waste inspection, pre-treatment and treatment operations will
32 | be taken to the appropriate HAZMAT storage cabinets located in the Room 2. Process hold
33 | containers stored in this area will include those having a corrosive, reactive or ignitable hazard
34 | classification. Storage cabinets used for storage of corrosive, reactive, ignitable and corrosive
35 | wastes will be equipped with proper OSHA safety equipment, secondary containment, and NFPA
36 | approved fire protection systems.
37 |

38 | **Process Hold Container Storage in WSB.** Any containerized dangerous waste that is tagged
39 | with a process hold during waste inspection, pre-treatment and treatment operations may be taken
40 | to WSB. A process hold tag will be placed on the container.
41 |

42 | **Process Hold PCBs Container Storage in WSB Room 4.** Any PCBs waste container that is
43 | tagged with a process hold during waste inspection, pre-treatment and treatment operations will
44 | be taken to the designated PCBs container process hold storage cabinet in WSB Room 4.
45 |

46 | **2.10 Staging Locations**

47 |
48 | **Containerized Waste Staging Area (STB Rooms 2 and 4).** The containerized waste staging
49 | area in STB will have two rooms and will be equipped with storage racks, and a vent hooded
50 | inspection station. One of the rooms, Room 2, will be maintained under negative pressure by the
51 | STB confinement system. The other room, Room 4, and will be maintained under negative

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1 pressure by the STB process vent system. Containerized dangerous wastes will be off-loaded in
2 the RCA by a fork lift truck and sent to the STB where they will be inspected for acceptance.
3 Containers will be opened either under the vent hood or will be taken to the inspection room
4 (Room 4). Inspections will involve maintaining negative ventilation (e.g., in the hooded area, or
5 in a TCS or in a room), removing the container cap, conducting a visual inspection and, if
6 necessary, obtaining a sample from the waste. If the containers are formally accepted after
7 inspection, they will be capped and transported by a fork-lift truck to WSB for interim storage. If
8 additional time is required before a container is formally accepted, the container will be tagged
9 with a process hold and it will be taken to an area in STB Room 2 or in WSB for storage. When
10 the waste container is formally accepted, the process hold tag will be removed. When the
11 container is scheduled for treatment, the fork lift truck will transport it from WSB either directly
12 to the designated treatment system or to STB containerized waste staging area for pre-sorting and
13 transfer operations. Transfer operations will be accomplished under the hood or in Room 4,
14 inspection room. Transfer operations may include removing the waste over-pack material and
15 transferring waste objects from containers into TICs, or removing large objects from a container
16 and placing them in a TIC. When a transfer operation is complete, TICs containing wastes will
17 be sent to the designated treatment system. All treated wastes will be packaged for final disposal.
18 The locations of these storage areas are shown in Figure 26.
19

20 **Bulk Waste Staging Area (STB Room 3).** The bulk waste staging area in STB will have one
21 room that is maintained under negative pressure by the process vent system. Bulk solid
22 dangerous waste containers (ISO container), boxes and ICBs will be handled in this room.
23 Typically, containers will be off-loaded in the RCA by a fork-lift truck and sent to STB where it
24 will be inspected for acceptance in the bulk waste staging area. In a typical operation, boxes and
25 ICBs will be taken inside the room. ISO containers (20-foot and 40-foot) will be placed outside
26 the STB Room 3 truck entrance gate and a flexible boot seal will be mounted around the ISO
27 container access door and the Room 3 access roll-up door. Before opening the ISO container
28 door, all other Room 3 access doors will be closed to allow establishing a negative ventilation
29 pressure in the work area. Inspections of containers will involve maintaining negative ventilation
30 in the area, opening container, doors or caps, conducting a visual inspection and, if necessary,
31 obtaining a sample from the waste. If the bulk containers are formally accepted after inspection,
32 its door will be closed and transported by a fork-lift truck to WSB for interim storage. If
33 additional time is required before a container is formally accepted, a process hold tag will be
34 placed on the container and the container will be moved to an appropriate storage area. When the
35 waste container is formally accepted, the process hold tag will be removed. Also, a container may
36 be rejected at any time during operations, should this be the case the container will be tagged with
37 a process hold tag. When a container is scheduled for treatment, the fork lift truck will transport it
38 from WSB to the bulk staging room for pre-sorting and transfer operations. Transfer operations
39 will include removing waste objects from the container and transferring them to another
40 container. As with the inspection operations, the transfer operations will be conducted when a
41 negative air pressure is established in the work areas. When a transfer operation is complete,
42 wastes will be transported to the designated treatment system.
43

44 2.11 Staging and Storage Time Limits

45
46 The following waste container staging and storage limits are to be employed during MWF waste
47 management operations. A container will be staged no longer than 60 days in the STB or GVB
48 staging areas. Staging of waste near treatment units (e.g., TICs) will be no longer than seven (7)
49 consecutive days. Repackaged bags and canisters will be stored no longer than seven (7) days in
50 the GVB solids storage area. Waste will be treated within one year after formal acceptance.
51 Onsite generated waste will be treated and/or shipped off-site within one year after generation.

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2.12 TSCA Regulated Storage Areas

Waste Storage Building (WSB). PCB wastes will be stored in the HAZMAT cabinets and in the open areas within WSB Room 4 (covered storage pad). The locations of these storage cabinets are shown in Figure 25. WSB Room 4 will store small containers, drums, IBCs and B-25 boxes.

2.13 TSCA Regulated Staging Areas

Solids Staging Area. Solid wastes contaminated with PCBs will be staged and surge stored in PCBs staging areas located within Building 13. The surge storage area is designated as GVB Room 3. The hooded station or TCS will be maintained under negative pressure by the GVB process vent system. PCBs containerized waste will be off-loaded by a fork-lift and brought GVB for inspection and confirmation prior to formal acceptance. Containers with PCBs contaminated solid waste will either be placed under the inspection hood in GVB or in a TCS. The container lid will be removed to perform a visual inspection and related activities, such as sampling. If the containers are formally accepted after inspection, they will be capped and transported by a fork-lift truck to WSB for interim storage. If additional time is required before a container is formally accepted, a process hold tag will be placed on the container and the container will be moved to an appropriate storage area. When a TSCA waste container is formally accepted, the process hold tag will be removed.

HAZMAT Enclosure (GVB Room 4). Dangerous and/or PCBs contaminated liquids waste containers will be staged in the Hazardous Material (HAZMAT) enclosure, designated as GVB Room 4, in GVB. The hooded station in the HAZMAT enclosure will be maintained under negative pressure by the GVB process vent system. Liquid waste containers will be off-loaded by a fork-lift and brought to HAZMAT enclosure for inspection and confirmation prior to formal acceptance. Containers will be placed under the inspection hood, and their cap will be removed to perform a visual inspection. Other inspection activities, such as sampling, will also be performed, as necessary. If the containers are formally accepted after inspection, they will be capped and transported by a fork-lift truck to WSB for interim storage. If additional time is required before a container is formally accepted, a process hold tag will be placed on the container and the container will be moved to an appropriate storage area. When a TSCA waste container is formally accepted, the process hold tag will be removed.

2.14 Incompatible Wastes

Incompatible wastes will be identified prior to receipt at the MWF. Suspect incompatible materials will be sampled upon receipt in the containerized waste storage system STB Room 2 and analyzed to determine incompatibilities. If analysis is required to determine compatibility, the analysis will be conducted in accordance with American Standards for Testing Material (ASTM) Method D5058-90, *Standard Test Methods for Compatibility Screening Analysis of Waste* (ASTM 1990). Corrosive materials (and suspect corrosives) will be tested using pH test paper to determine if the materials are acidic or basic.

Upon receipt shipping containers holding incompatible wastes will immediately be segregated into compatible groups. Each compatible group will then be stored in STB Room 2 in a separate storage unit with its own secondary containment. For example, acidic and basic wastes, which are both corrosive, will be stored in separate storage cabinets. If an acidic waste is stored in the corrosive storage cabinet, then either the ignitable or the reactive storage cabinet will be used to store basic waste.

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1 If incompatible materials are inadvertently shipped in the same container, as may occur with lab
2 packs, the container will be sorted. During sorting the individual waste packages will be sorted
3 with compatible groups and placed in separate containers.
4

5 Incompatible wastes will only be handled together within a single containment zone when at least
6 one of the wastes is provided with a secondary containment system, by either the basin within the
7 hazardous waste enclosure for the liquids feed tank that will prevent the incompatible waste from
8 spilling onto the floor or by placing the waste on a secondary containment pallet. The MWF will
9 never rely on the same containment zone to provide secondary containment for incompatible
10 wastes. Nor will incompatible wastes ever be processed together within the pre-treatment or
11 treatment systems. With the provision of independent secondary containment as described
12 previously, incompatible wastes will be stored within a GASVIT™ containment zone for a
13 limited time, typically the time required to confirm laboratory analysis.
14

15 Incompatible wastes will not be placed in the same container or on the same secondary
16 containment pallet unless the requirements of WAC 173-303-395(1)(b) are met. In addition,
17 dangerous waste will not be placed in an unwashed container that previously held an
18 incompatible waste or material.
19

20 **2.15 Inspections**

21
22 At least weekly, container staging and storage areas will be inspected for leaking containers and
23 for deterioration of containers and the containment systems caused by corrosion, deterioration, or
24 other factors. Weekly inspections will be recorded in an inspection log. At a minimum the
25 following information will be recorded: 1) date and time of the inspection, 2) the printed name
26 and handwritten signature of the inspector, 3) a notation of the observations made, and 4) the date
27 and nature of any repairs or remedial actions taken [WAC 173-303-630(6)].
28

29 **2.16 Ignitable and Reactive Wastes**

30
31 Ignitable, reactive, and incompatible wastes, if present, will be segregated and stored in separate
32 areas of the MWF to prevent reaction. Untreated wastes might include reactive, corrosive, and
33 flammable/ignitable waste. Each type of untreated waste will be segregated in separate modular
34 storage structures. Flammable/ignitable waste will be stored in a modular storage structure with
35 fire rated construction, vapor detection and fire suppression systems.
36

37 The MWF will be designed and constructed to meet National Fire Protection Codes and will be
38 equipped with fire, heat, and smoke detectors along with a fire suppression system. Ignitable
39 waste with a flash point less than 100°F and in containers greater than 55-gallons will *not* be
40 accepted for treatment by the non-thermal MWF. Oxidizers with an EPA code of D001 will be
41 accepted.
42

43 Nonetheless, ignitable waste that is received might require temporary storage while its disposition
44 is determined. Ignitable waste will be stored in Room 4 within the WSB in a cabinet equipped
45 with an independent, internal fire-suppression system. This cabinet will also be fire-proof,
46 explosion-proof, and heat-resistant, with an internal secondary containment system to contain
47 spilled waste. All ignitable waste will be stored in accordance with the Uniform Fire Code.
48

49 **2.17 Removal of Liquids from Containment Systems**

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1 Facility operators will remove spilled or leaked waste from sumps or collection areas within
2 24 hours after the waste is detected. Small quantities of liquid wastes, less than 100 gallons, will
3 be removed with the hand pumps used to pump liquids from barrels into the liquid pre-treatment
4 and treatment tank systems. Larger quantities of spilled liquids will be removed with electrically-
5 driven pumps similar to those used to move liquids within and between the liquid treatment tank
6 systems.

7
8 Liquids removed from the sumps will usually be managed on-site. Spilled liquids managed on-
9 site will be processed in the MWF facility with or without testing. If the history of the spilled
10 liquids is well known, the liquids will be returned to an appropriate processing unit within the
11 MWF without testing. If the process history of the liquids is unknown, the liquids will be tested
12 as to determine whether or not they are suitable for processing within the MWF. If spilled liquids
13 are unsuitable for processing within the facility, they will be characterized to determine if they are
14 hazardous and then shipped out of the facility to an appropriate treatment or disposal facility.

15 NOTES:

- 16
17
18 (1) Waste streams accepted must have a Land Disposal Restriction (LDR) treatment standard (see 40
19 CFR 268) capability offered by the Mixed Waste Facility. The treatment capabilities were
20 included in either the August 1996 Permit Application or in the December 1996 Addendum. Both
21 of these submittals were transmitted to the Washington State Department of Ecology and the
22 treatment capabilities are as follows: stabilization (STABL), combustion (CMBST),
23 neutralization (NEUTR), chemical oxidation (CHOXD), chemical reduction (CHARD),
24 deactivation (DECAT), macro-encapsulation (MACRO) and physical extraction.

25
26 Streams contaminated with RCRA Wastes and WAC wastes that are subject to a concentration
27 based LDR treatment standards may be subjected to a recipe development. The recipe
28 development will provide 'proof of principle' documentation that will allow the eventual
29 processing of the waste batch.

- 30
31 (2) For this waste type, generators will be notified of acceptable container types after their Mixed
32 Waste Profile Received is reviewed.

33
34 HOC = Hologenated Organic Compounds

35 TOC = Total Organic Carbon

36 TSS = Total Suspended Solids

- 37
38 * Refer to Chemical Resistance Chart in Container Management Plan for container and liner material
39 compatibility with waste streams.

40
41 Table D-1 Notes (continued)

42 43 44 *Container Figure Numbers (all Figures are in MWF Container Management Plan)

45 Small Containers

- 46
47 1 Plastic Carboys, 1,2 & 5 Gal.
48 2 Stainless Steel Carboys, 1,2 & 5 Gal.
49 3 Plastic Bottles, 0.5 1 & 4 Gal.

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1	Drums	
2	4	Steel Drum, Open top 5, 20, 30, 55 & 85 Gal.
3	5	Steel Drum, Closed Top 5, 20, 30, 55 & 85 Gal.
4	6	Steel Drum, Open Top 110 Gal.
5	7	Stainless Steel Drum, Open top 30 & 55 Gal.
6	8	Stainless Steel Drum, Closed Top 30 & 55 Gal.
7	9	HDPE Drum, Open top 30 & 55 Gal.
8	10	HDPE Drum, Closed Top 30 & 55 Gal.
9	Intermediate Bulk Container (IBC)	
10		
11	11	Steel (for solids, steel hopper bottom tote) 62 Ft. ³
12	12	Steel (for solids, SS hopper bottom bulk tote) 62 Ft. ³
13	13	Stainless Steel Liquid Tote - 350 Gal.
14	14	HDPE Liquid Tote - 330 Gal.
15		
16	B-25 Boxes	
17	15	Micro-encapsulated waste container 96 Ft. ³
18	16	Stabilized waste container - 96 Ft. ³
19	17	Holds 6 drums - 96 Ft. ³
20	18	64 and 96 Ft. ³
21		
22	ISO Containers (Seavans)	
23	19	20 and 40 Ft. long, 1440 and 2880 Ft. ³