Attachment 24
Containment Building and Debris Treatment
Table of Contents

List of Tables

D.9 Containment Building

This Section provides information for the Containment Building, further details are provided in Section C.9.1 of the Facility WAP. The Containment Building (Stabilization and Debris portions) is designed, and operated to meet the criteria for Containment Buildings described under 40 CFR 264 Subpart DD - Containment Building. Operations occur as follows:

- Containment Building storage, including management of hazardous waste containers as described in Section D.1; and
- Containment Building treatment, as described in the following Sections and Section D.10.

The Containment Building is used primarily for hazardous debris storage and treatment. Treatment methods for hazardous debris include the following:

- Physical Treatment, including stabilization; and
- Mechanical Processing, including sorting/size reduction/crushing.

The Containment Building is used to store and treat non-bulk and bulk containers with or without free liquids anywhere within the unit, including in the oversized debris bin and/or on the sort floors.

Also, non-containerized bulk materials with or without free liquids may be stored and treated in limited amounts on the unit floor. Treatment methods for hazardous waste include the following:

- Stabilization;
- Micro-encapsulation;
- Macro-encapsulation;
- Chemical Oxidation;
- Chemical Reduction;
- Deactivation;
- Solidification;
- Neutralization;
- Precipitation;
- Adsorption;
- Bio-Remediation;
- Evaporation;
- Size Reduction; and
- Decanting.

To facilitate size reduction, a crushing system is also located inside the Containment Building. This crusher is regulated as a 40 CFR 264 Subpart X unit. Because the unit is located within a 40 CFR 264 Subpart DD compliant Containment Building the crusher system is designed, constructed, operated, maintained and will be closed in a manner that will ensure protection of human health and the environment. The location of the crusher in the Containment Building is shown on Drawing #'s D2020-A02, -R07 and -R08. The crusher location on Drawing D2020-A02 is indicated as the "Debris Handling Platform Area". The crushing system is physically located within the Containment Building to provide containment for any material spills or release of fugitive dust emissions, for protection from the weather, and to minimize the potential for release of waste constituents.

The crushing system consists of the crusher and support equipment. The crusher is an impact type with an open bottom discharge and is listed at 60 TPH crushing capacity and is fed by a vertical bucket conveyor. There is a recycle take off to a vibrating screen to recycle greater than ⅜ in. size material. The crusher has a 24 in. x 32 in. inlet, the crusher is described in Table I-5 of Section I. The size of the

material is limited by the feed intake of this unit. Daily inspections will be performed when the unit is operated (see Figure F-6). Daily inspections are also performed for the Containment Building (Figures F-6 and F-7). The daily inspections are only performed on the equipment/areas of the building in use on the day of the inspection, with all areas being inspected at least once during the week. Visual inspections for structural integrity on equipment, as well as the work areas, are also part of the inspection activity.

Wastes sized by the crusher are limited to those outlined in USEI's Part A Permit. Primarily the wastes to be sized are those wastes such as process slag whose size meet the definition of Debris but have a treatment standard. Crushing is performed to size the material prior to treatment by stabilization. Crushing could also be done for those debris waste streams that for operational reasons would be more amenable to Micro-encapsulating rather than Macro-encapsulation. The crusher may operate up to a maximum of 50 tons per hour not to exceed 50,000 tons per year. The Debris portion of the Containment Building engineering certification is provided as Appendix D.9.3.

Additionally, the Containment Building is used to store and treat non-bulk and bulk containers with or without free liquids anywhere within the unit, including the Mixing Bin Tanks. Also, non-containerized bulk materials with or without free liquids may be stored and treated.

D.9.a Description of Containment Building

D.9.a.(1) Containment Building (Debris portion)

The Containment Building construction was completed in August of 1994. Additional construction to allow the installation of equipment to facilitate the treatment of bulk wastes has been approved in this permit. As shown on the Facility Site Plan, Figure D-1, the Containment Building is located in the central portion of the facility and consists of a steel framed building supported by concrete spread footings and the walls and roofs are insulated metal panels. The floor consists of a reinforced concrete slab with perimeter curbs underlain by two (2) 80 mil HDPE liners and the liner systems drain to collection sumps, and have monitoring ports to detect and remove liquids. Three steel-lined sort floors are located on the south side of this building, and a steel lined oversized material bin is located on the north side. The installation of additional treatment equipment will result in one, two, or all three sort floors being removed from service. The sort floors will remain, but the additional equipment will be installed in the area(s) of the sort floor(s). The additional equipment will include the installation of two (2) stationary above-grade steel Mixing Bin Tanks and two (2) elevated platforms that will allow mixing equipment to access the waste inside the Mixing Bin Tanks. The design of this building is shown on Drawing #'s D2020-A02, -A03, -A04, -A05, -A06, -A07, -C05, -C08, -H01, -H03, -H04, -R02, -R05, -R07, and -R08.

The above-grade Mix Bin Tanks will be installed in phases. Phase I will include the installation of the first above-grade tank, MBT-3 (referred to as Pan #2 on the design drawings), and an equipment platform. This will result in Sort Floor Nos. 2 and 3 being unavailable for use in debris storage and sorting operations. Phase II will include the installation of the second above-grade tank, MBT-4 (referred to as Pan #1 on the design drawings) and an equipment platform. Phase II will result in Sort Floor No. 1 being unavailable for use in debris storage and sorting operations. Sort Floor No. 1 will remain active until construction commences on MBT-4. When all sort floors become unavailable for use in debris storage and sorting operations, those processes will be performed in other areas of the Containment Building (Stabilization and Debris Portions) as allowed by the permit.

D.9.a(1)(a) Containment Building Traffic Patterns (Debris Portion)

The traffic patterns in the Debris portion of the Containment Building are expected to be consistent with the traffic patterns already in existence at Site-B. Untreated waste will be loaded into the new Mix Bin Tanks through the overhead doors on the South side of the building. This is consistent with the existing procedure for placing debris in the sort floors. The empty trucks will then follow existing traffic patterns for weighing out and exiting the facility. Treated waste will be loaded into dump trucks using an excavator.

The loaded trucks will exit through the north side of the building through the overhead doors. The trucks will then follow the same traffic patterns as those previously established for trucks exiting the Stabilization portion of the Containment Building and traveling to other areas of Site B. The estimated maximum traffic volume exiting the building from the operation of the new Mixing Bin Tanks will be 48- 25yd³ truck loads/tank/day of treated waste. USEI anticipates that existing traffic control measures are adequate for operation of the new Mix Bin Tanks. No additional traffic control measures will be implemented.

D.9.a.(2) Containment Building (Stabilization portion)

The Containment Building construction was completed in 1998, and is located adjacent to the west wall of the Containment Building as shown on the Facility Site Plan, Figure D-1. The Containment Building consists of a steel framed building supported by concrete spread footings. The units' walls and roof are insulated metal panels. The floor consists of a reinforced concrete slab with perimeter curbs underlain by an 80 mil HDPE liner. Two (2) stationary below-grade reinforced concrete Mixing Bin Tanks are located within the building; details for these Tanks are also found in Section D.2 of this Section. The two (2) stationary Mixing Bin Tanks consist of steel wear plates, reinforced concrete interior walls, two (2) 80 mil HDPE liners, and exterior reinforced concrete walls. Both the slab and the Mixing Bin Tank liner systems, of the Containment Building, drain to collection sumps and have monitoring ports to detect and remove liquids. The design of this building is shown on Drawing #'s 793P-C05, -C06, -C07, -C09, -C13, -C14, -C15, -C16, -G01, -H01, -P03, -P04, -R01 and -R02, and 793P-C12.

D.9.a.(3) Primary Barrier Construction

The Containment Building has primary barriers which were designed and constructed of materials to prevent the migration of hazardous constituents through the barriers. The concrete slabs in the Containment Building, and the interior concrete walls associated with the Mixing Bin Tanks are underlain by 80 mil HDPE liners. The concrete and HDPE liners combine to form the primary barriers for these units, which are sufficiently durable to withstand the movement of personnel, wastes, and handling equipment within the units. The compatibility of these with the physical and chemical characteristics of the wastes is described in Section D.4.d and Appendix D.1.2.

The Containment Building concrete slab is a minimum of 10 in. thick; slab reinforcement details are shown on Drawing #'s D2020-C08, -R05, 793P-C15, and –C15. The concrete portion of the primary barriers inside the Containment Building's stationary Mixing Bin Tanks consists of 12 in. thick, minimum, reinforced concrete. Mixing Bin Tanks reinforcing details are shown on Drawing #'s 793P-C13 and -C12.

In addition to the primary barriers described above, the Containment Building sort floors and stationary Mixing Bin Tanks are lined with carbon steel plate for extra durability and protection from the bucket during loading, mixing, and unloading operations.

D.9.a.(4) Liquid Storage

The Containment Building is used to manage liquids as follows:

Debris portion - Liquid wastes are managed in containers as described in Section D.1.b. and in bulk inside the stationary Mixing Bin Tank(s). Additionally, wastes with free liquids may be stored in limited amounts (90 yds^3) in each of the sort floors. With the installation of Mixing Bin Tanks MBT-3 and MBT-4 and the associated excavator platforms, wastes with free liquids will not be stored in the sort floors.

The entire Containment Building is provided with monitoring and collection sumps and a secondary barrier with monitoring and collection sumps as described below.

Stabilization portion - Liquid wastes are managed in containers on the concrete slab in this building as described in Section D.1.b., and in bulk inside the stationary Mixing Bin Tanks.

The entire Containment Building and the stationary Mixing Bin Tanks are each provided with a primary barrier with monitoring and collection sumps, and a secondary barrier with monitoring and collection sumps as described below. As a separate containment system from the Mixing Bin Tanks, the concrete slab floor area inside the Containment Building is provided with a primary barrier with monitoring and collection sumps, as described below. Therefore, in accordance with 40 CFR §§264.1100(c)(3) or 264.1101(b)(3) the floor of the Containment Building is not used to actively manage free liquids.

D.9.a.(4)(a) Primary Barrier

See Section D.9.a.(1).

D.9.a.(4)(b) Containment Building Monitoring and Collection Sumps

D.9.a.(4)(c) General

The concrete floors in the Containment Building are provided with concrete curbs and ramps to facilitate containment/collection of liquids and to minimize the accumulation of liquids on the primary barriers. In addition, the slab inside the Stabilization Portion of the Containment Building is sloped toward the Mixing Bin Tanks to facilitate containment/collection of liquids. The HDPE liners are also sloped to drain any collected liquids to the monitoring and collection sumps. All collected liquids are removed at the earliest practicable time.

D.9.a.(4)(d) Containment Building (Debris Portion)

The Liquid Collection and Removal System (LCRS) under the concrete slab in the Containment Building consists of a minimum of six (6) in. of compacted crushed stone, a geotextile (16 ounces per square yard (oz/yd^2)) and an 80 mil HDPE liner. Details of this system are shown on Drawing # D2020-R05. The LCRS is sloped toward the monitoring and collection sumps at slopes greater than 1% as shown on Drawing # D2020-C05. A detail of the monitoring and collection sumps is shown on Drawing #D2020-R05. Any collected liquids greater than four (4) in. are removed from these sumps. Routine inspections are described in Section F. The crushed stone promotes drainage to the sumps and allows removal of liquids from the primary liner at the earliest practicable time. The existing LCRS for the Debris Portion of the Containment Building will serve as the Leak Detection Collection and Removal System (LDCRS) for the Mixing Bin Tanks, when constructed. The existing LDCRS for the Debris Portion of the Containment Building will serve as tertiary containment for the Mixing Bin Tanks, when constructed.

D.9.a.(4)(e) Containment Building (Stabilization Portion)

The LCRS under the concrete slab floor in the Containment Building consists of a minimum of eight (8) in. of compacted crushed stone, a geotextile (16 oz/yd^2), a drainage net, and an 80 mil HDPE liner. Detail of the LCRS is shown on Drawing # 793P-C13 and -C15. The LCRS liner is sloped toward two monitoring and collection sumps at slopes greater than 1%. The two (2) sumps (CBS15 and CBS 16) are located to the north of the two (2) Mixing Bin Tanks as shown on Drawing #793P-C06. Any collected liquids are removed from these sumps as described in Section D.2 of this section. Routine inspections are described in Section F. The 24 in. of crushed stone and the drainage net promote drainage to the sumps and allow removal of liquids from the primary liner at the earliest practicable time.

D.9.a.(4)(f) Stabilization Portion Mixing Bin Tanks

The LCRS under the reinforced concrete inner walls of the stationary Stabilization Portion Mixing Bin Tanks in the Containment Building consists of the following components, from top to bottom:

- Visqueen (polyethylene sheeting) liner;
- Synthetic drainage net; and
- 80 mil HDPE primary liner.

Details of the LCRS for the stationary Mixing Bin Tanks are shown on Drawing #'s 793P-C13 and -C14. The liner systems are sloped toward the monitoring and collection sumps (CBS12 and CBS13) as shown on Drawing #793P-C06. A detail of the monitoring and collection sumps is shown on Drawing # 793P-C15. Any collected liquids greater than four (4) in. are removed from these sumps as described in Section D.2 of this Section. Routine inspections are described in Section F. The drainage nets promote drainage to the sumps and allow removal of liquids from the primary liner at the earliest practicable time.

D.9.a.(4)(g) Secondary Containment

D.9.a.(4)(h) General

As described above, the entire Containment Building and stationary Mixing Bin Tanks are provided with a Liquid Detection, Collection and Removal System (LDCRS) that meets the requirements described under 40 CFR §§264.1100(c)(3) and 264.1101(b)(3). These LDCRS's include secondary HDPE liners designed and constructed to prevent migration of hazardous constituents into the barriers and leak detection systems capable of detecting failure of the LCRS and facilitating removal of accumulated liquids at the earliest practicable time. The LDCRSs all have bottom slopes greater than 1%. In addition, the synthetic geonet drainage materials used in these LDCRSs have a transmissivity greater than 3×10^{-5} m^2/sec.

Treatment in containers occurs on the concrete slabs inside the buildings and in the stationary Mixing Bin Tanks inside the Containment Building. Operating procedures are designed to limit the release of liquids, wet materials, or aerosols to other portions of the buildings when treatment in containers is performed. The Containment Building's stationary Mixing Bin Tanks located in the Stabilization Portion extend a minimum of 10 in. above the surrounding concrete floor slab and, as described in Section D.9.a.(2)(b), have ventilation hoods. These design features, coupled with stabilization operating procedures, limit the release of liquids, wet materials, or aerosols to other portions of the Containment Building.

As described in Section D.9.b.(1), the HDPE liners and geonets are chemically resistant to the wastes and liquids managed in the Containment Building's stationary Mixing Bin Tanks. These materials are also of sufficient strength and thickness to prevent collapse under the pressure of the overlying materials and by any equipment used in the units. Design calculations for the Debris portion of the Containment Building are included in Appendix D.9.1. Appendix D.9.2 provides the design calculations for the Stabilization portion of the Containment Building.

The concrete slab floor area inside the Containment Building (Stabilization portion) does not have secondary containment as described under 40 CFR §264.1100(c)(3) or 264.1101(b)(3). As such, the Containment Building (Stabilization portion) operates in accordance with the requirements of 40 CFR §264.1101(d) by not managing bulk liquids directly on those portions of the Containment Building floor. These regulations address Containment Buildings that contain areas both with and without secondary containment, by not managing bulk liquids on the concrete slab floor area of the Containment Building. However, water may be used to wash the floors and adjacent areas if it is immediately removed upon completion of washing.

D.9.a.(4)(i) Containment Building

The LDCRS underlying the primary barrier system in the Containment Building consists of a synthetic drainage net and an 80 mil HDPE secondary liner placed over compacted backfill. A detail of the LDCRS is shown on Drawing # D2020-R05. The LDCRS secondary liner system is sloped toward the secondary monitoring and collection sumps as shown on Drawing #D2020-C05. Collected liquids are removed from these sumps. Routine inspections are described in Section F. The drainage net promotes drainage to the sumps and allows removal of liquids from the secondary liner at the earliest practicable time.

D.9.a.(4)(j) Stabilization Portion Mixing Bins

A LDCRS is located under the LCRS of the Containment Building's stationary Mixing Bin Tanks. The LDCRS consists of the following components, from top to bottom:

- Synthetic drainage net;
- 80 mil HDPE secondary liner;
- 16-ounce per square yard (oz/yd^2) geotextile; and
- Reinforced outer concrete bin wall placed on a compacted backfill sub-grade.

Details of the LDCRS are shown on Drawing #793P-C13 and -C14. The secondary liner is sloped toward the secondary monitoring and collection sumps (CBS12 and CBS13) as shown on Drawing #793P-C06. A detail of the secondary monitoring and collection sumps is shown on Drawing #793P-C15. Collected liquids are removed from these sumps. Routine inspections are described in Section F. The drainage nets promote drainage to the sumps and allow removal of liquids from the secondary liner at the earliest practicable time.

D.9.a.(5) Dust Emissions

D.9.a.(5)(a) Containment Building

The Containment Building is enclosed with insulated metal panel walls and roof. Additionally, the truck unloading stations are equipped with split curtains and air pollution control equipment (i.e. baghouse filters) to control the particulate emissions. The Containment Building's general ventilation system removes 25,000 cubic feet per minute (cfm) from the Containment Building through baghouse filters to control fugitive dust emissions and to meet the no visible emission requirement of 40 CFR §264.1101 (c)(l)(iv). The average calculated air face velocity through building openings in the Containment Building is between 15 feet per minute (fpm) and 53 fpm depending on the number of process ventilation systems operating. These face velocities were calculated conservatively assuming that 50% of the doors in the building are open. The general ventilation causes air to be drawn into the building, creating a general negative pressure, and thereby controlling particulate emissions. Drawing #'s D2020-H01, -H03 and -H04 provide design details of the air handling and pollution control system for the Containment Building.

In areas inside the Containment Building where waste is exposed in such a manner that it can become mobile (waste stockpile, open drum, open bins, or uncontainerized materials), equipment has been installed to collect airborne particulate:

- Sort Floors and Mixing Bin Tank(s) - Each of the sort floor areas is equipped with ducting to collect airborne particulates that may come from opening drums, dumped waste loads, opened bagged loads of debris, open bins, off-loading waste into the Mixing Bins and during stabilization mixing activities ; and
- General Ventilation - The building has three (3) general ventilation intakes to maintain overall air quality.

Drawing #D2020-H03 shows the location of all the dust collection ducting and intakes inside the Containment Building.

D.9.a.(5)(b) Containment Building (Stabilization portion)

The Containment Building is enclosed, and the truck unloading stations are equipped with split curtains and air pollution control equipment (i.e. baghouse filters) to control the particulate emissions. The Containment Building's ventilation system removes 50,000 cfm from the building through the APC system as described in the Permit to Construct (PTC) to control fugitive dust emissions and to meet the no visible emission requirement of 40 CFR §264.1101(c)(l)(iv). The average calculated air face velocity through building openings in the Containment Building is between 15 fpm and 80 fpm depending on the number of process ventilation systems operating. These face velocities were calculated conservatively assuming that 50% of the doors in the building are open. The ventilation system causes air to be drawn into the building, creating a general negative pressure, and thereby controlling particulate emissions. Drawing #'s 793P-R01, -R02, -G01, -H01 and -P03 provide design details of the air handling and pollution control system.

In areas inside the Containment Building where waste is exposed in such a manner that it can become mobile (waste stockpile, open drum, open bins, or uncontainerized materials), the following APC equipment has been installed to collect air borne particulates:

- Mixing Bins Tanks - Each of the two (2) Mixing Bins has a collection hood to collect airborne particulates and a water spray system for controlling dust that may be generated when dumping waste loads into the bin or during stabilization mixing activities; and
- General Ventilation - The building has three (3) general ventilation intakes to maintain overall air quality in the building.

Drawing # 793P-H01 shows the location of all the dust collection hoods and intakes inside the Containment Building.

D.9.a.(6) Operation

The Containment Buildings were designed and are operated to provide containment of and prevent the tracking of materials from the units by personnel or equipment. Both portions of the Containment Building were constructed with truck unloading aprons sloped to their own collection trenches and have LCRSs and LDCRSs with monitoring and collection sumps, underneath. The truck unloading apron liners are identical to the liners beneath their associated building floor slabs. The liner systems and APC systems inside each of the buildings also provide containment of materials.

D.9.b Design and Operating Standards

D.9.b.(1) Containment Building

D.9.b.(1)(a) General

The Containment Building is fully enclosed with floors, walls, and roofs to prevent exposure to precipitation, wind, and run-on and to provide containment of managed wastes. Additionally, run-on is prevented by adequate site grading and drainage as shown on Drawing # PRMI-T04 and in the Surface Water Management Plan (Appendix D.4.7).

D.9.b.(1)(b) Materials

The floors and walls of the buildings, including the secondary containment systems, were designed and constructed of materials of sufficient strength and thickness to support themselves, the waste contents, and the personnel and equipment within the buildings (see Section D.9.a). Both buildings were designed to have sufficient structural strength to prevent collapse or other structural failure as detailed in Appendix D.9.1.and D.9.3. The concrete, steel, and HDPE liner and drainage net materials that may contact the hazardous wastes are all compatible with the wastes managed in the buildings. The compatibility of these materials with the wastes managed at the facility are described in Appendices D.1.2, D.4.4, D.4.5 and D.6.3.

D.9.b.(1)(c) Incompatible Wastes

Incompatible hazardous wastes or treatment reagents are not managed in the units or in contact with their secondary containment systems in any way that would cause the unit or its secondary containment system to leak, corrode, or otherwise fail. Procedures to prevent incompatibilities are described in the WAP.

D.9.b.(1)(d) Primary Barrier

The primary concrete/HDPE barriers for the Containment Building are described in Section D.9.a.

D.9.b.(2) Liquid Hazardous Waste Containment Building

The Containment Building and the stationary Mixing Bins Tanks are used to store liquid hazardous wastes. Furthermore, the entire Containment Building, and the stationary Mixing Bin Tanks have primary barriers and monitoring and collection sumps meeting the requirements of 40 CFR §264.1101(b)(1), (2) and (3).

D.9.b.(3) Owners or Operators of Containment Buildings

D.9.b.(3)(a) Control Practices

As required under 40 CFR §264.1101(c)(1), the following control practices are used to contain hazardous wastes within the units:

- The primary barriers are maintained free of significant cracks, gaps, corrosion, or other deterioration that would allow hazardous waste to be released from the primary barrier.
- The level of uncontained stored/treated hazardous waste within the containment walls of the units are maintained such that the height of any containment wall is not exceeded. The containment walls include the sort floor walls, the oversized material bin walls, the Mixing Bin Tank walls, and the perimeter curbing/slab.
- There are no visible emissions from the Containment Building. Visible emissions outside these buildings are prevented during routine operations, including when vehicles and personnel are entering and exiting the buildings, through the use of collection hoods and other APC. All particulate collection devices are operated and maintained using air pollution control practices per 40 CFR §260.292.
- The maximum waste processing rate for the Containment Building (Stabilization portion) shall not exceed 325 tons of waste per hour based on a daily average, nor shall it exceed 780,400 tons of waste per year.

- The maximum waste processing rate for the Containment Building shall not exceed 50 tons per hour (tph) for the crusher system and 100 tph for the sort floor based on daily averages. ,

D.9.b.(3)(b) Certification

Certification from a qualified registered professional engineer that the design of the Containment Building (Debris) meets the requirements set forth under 40 CFR 264 Subpart DD - *Containment Buildings* is provided in Appendix D.9.3.

Certification from a qualified registered professional engineer that the design of the Containment Building (Stabilization) meets the requirements set forth under 40 CFR 264 Subpart DD - *Containment Buildings* is provided in Appendix D.9.4.

D.9.b.(3)(c) Releases of Hazardous Waste

Throughout the active life of the Containment Building, any detected condition that could lead to or that has caused a release of hazardous waste is repaired promptly in accordance with the following procedures:

Upon detection of a condition that has led to a release of hazardous waste, USEI will:

- Enter a record of the discovery in the facility's operating record;
- Immediately remove from service the portion of the Containment Building affected by the condition, if the condition could lead to or has caused a release of hazardous waste;
- Determine what steps must be taken to repair/replace the portion of the Containment Building;
- Remove any leakage from the secondary containment system;
- Establish a schedule for cleanup and repairs;
- Within seven (7) days after the discovery of the condition, notify the IDEQ of the condition;
- Within 14 days after the discovery of the condition, provide a written notice to the IDEQ with a description of the steps taken to repair the Containment Building and the schedule for accomplishing the remaining work; and
- Upon completing all repairs and cleanup, IDEQ will be notified in writing and provided with a verification signed by a qualified, registered professional engineer that the work was completed in accordance with the written plan submitted.

D.9.b.(3)(d) Record of Data

Inspections of the Containment Building are described in Section F. Results of these inspections are recorded in the facility's operating record.

D.9.b.(4) Containment Building With and Without Secondary Containment

As previously described, the Containment Building has areas with secondary containment (i.e., the stationary Mixing Bin Tanks) meeting the requirements of 40 CFR §§264.1100(c)(3) and 264.1101(b)(3) and areas without secondary containment (i.e., the concrete slab floor area). As such:

- Each area has been designed and is operated in accordance with the relevant requirements listed in 40 CFR §264.1101(a) through (c). Specifically, in areas without secondary containment wastes with free liquids are managed in non-bulk or bulk containers, and non-containerized wastes with free liquids are not actively managed on the floor of the stabilization portion of the

Containment Building. In areas with secondary containment bulk wastes with or without free liquids are actively managed;

- Measures to prevent the release of liquids or wet materials into areas without secondary containment have been taken; and
- The facility's operating log maintains a written description of the operating procedures used to maintain the integrity of areas without secondary containment.

D.9.c Closure and Post-Closure Care

Closure of the Containment Building is described in detail in the Closure Plan (Section I). As the Containment Building will be closed clean and no post-closure care will be required.

Unit Name		Maximum Non-Bulk or Bulk Container Capacity By Area & Unit		Non-Bulk Containers with Free Liquid (1.)					Bulk Containers with Free Liquid (1.)					Non-Bulk/Bulk Containers without Free Liquid				Largest Container with Free Liquids (11.)		Greater Value of Largest Container Volume or 10% of Total Volume of Typical Containers (10.)	Required Containment Volume with Free Liquids	Actual Containment Volume of Containment System	Surface Area of Storage Area	Design Volume for Rainfall (3.)	Remarks/ Comments
		Gallons	yd^3	Number of Typical Containers (2.)	Typical Size of Containers (2.)		Total Volume of Typical Containers	10% of Total Volume of Typical Containers	Number of Typical Containers (2.)	Typical Size of Containers (2.)		Total Volume of Typical Containers	10% of Total Volume of Typical Containers	Number of Typical Containers	Typical Size of Containers		Total Volume of Typical Containers	Gallons	yd^3	Gallons	Gallons	Gallons	ft^2	Gallons	
		Gallons	yd^3		Gallons	yd^3	Gallons	Gallons		Gallons	yd^3	Gallons	Gallons		Gallons	yd^3	Gallons	Gallons	yd^3	Gallons	Gallons	Gallons	ft^2	Gallons	
CONTAINER MANAGEMENT UNITS																									
Container Storage Pad 4 (CSP #4)	Area 4A	279,310	1,383	1,000	55	0.27	55,000	5,500	1	19,841	52	19,841	1,984	14	10,503	52	147,037	19,841	98	19,841	27,931	27,931	7,415	8,090	
	Area 4B	32,420	161	240	55	0.27	13,200	1,320	1	2,420	10	2,420	242	4	10,503	52	42,011	2,420	11	2,420	3,242	3,242	754	822	
	Area 4C	31,200	154	240	55	0.27	13,200	1,320	1	2,319	10	2,319	232	4	10,503	52	42,011	2,319	11	2,319	3,120	3,120	735	801	
	Area 4D	11,390	56	120	55	0.27	6,600	660	1	738	3	738	74	2	10,503	52	21,005	738	3	738	1,139	1,139	367	401	
	Area 4E	10,580	52	120	55	0.27	6,600	660	1	657	3	657	66	2	10,503	52	21,005	657	3	660	1,061	1,058	367	401	
Total - Container Storage Pad 4		**364,900**	**1,807**	**1,720**	**55**	**0.27**	**94,600**					**25,975**					**364,900**				**36,493**	**36,490**	**9,638**	**10,515**	
Container Storage Pad 5 (CSP #5)	Area 5A	26,770	133	280	55	0.27	15,400	1,540	12	808	4	9,695	969	2	10,503	52	21,005	1,643	8	1,643	2,677	2,677	948	1,034	
	Area 5B	19,750	98	160	55	0.27	8,800	880	12	808	4	9,695	969	2	10,503	52	21,005	927	4	969	2,017	1,975	960	1,048	
	Area 5C	23,520	116	220	55	0.27	12,100	1,210	12	808	4	9,695	969	2	10,503	52	21,005	1,304	6	1,304	2,352	2,352	960	1,048	
	Area 5D	47,650	236	460	55	0.27	25,300	2,530	12	2,020	10	24,237	2,424	4	10,503	52	42,011	2,671	13	2,671	4,766	4,766	1,921	2,095	
	Area 5E	56,130	278	580	55	0.27	31,900	3,190	12	2,020	10	24,237	2,424	4	10,503	52	42,011	3,545	17	3,545	5,613	5,613	1,896	2,068	
	Area 5F	27,660	137	300	55	0.27	16,500	1,650	12	808	4	9,695	969	2	10,503	52	21,005	1,732	8	1,732	2,766	2,766	948	1,034	
	Area 5G	19,400	96	150	55	0.27	8,250	825	12	808	4	9,695	969	2	10,503	52	21,005	892	4	969	2,017	1,940	960	1,048	
	Area 5H	21,730	108	190	55	0.27	10,450	1,045	12	808	4	9,695	969	2	10,503	52	21,005	1,126	5	1,126	2,174	2,174	960	1,048	
Total - Container Storage Pad 5		**242,610**	**1,201**	**2,340**	**55**	**0.27**	**128,700**					**106,642**					**242,610**				**24,382**	**24,263**	**9,554**	**10,423**	based on individual containment areas (6.)
RCRA(Pad 7)/PCB Building (CSP #7) (4.)(8.)	Area 7A	33,820	167	614	55	0.27	33,770	3,377	12	2,020	10	24,240	2,424	3	10,503	52	31,509	3,382	1	3,382	3,520	3,533	2,500	n/a	Covered area, no reductions for rainfall.
	Area 7B	33,840	168	614	55	0.27	33,770	3,377	12	2,020	10	24,240	2,424	3	10,503	52	31,509	3,384	1	3,384	3,520	3,533	2,500	n/a	Covered area, no reductions for rainfall.
	Area 7C	22,900	113	320	55	0.27	17,600	1,760	12	808	4	9,696	970	2	10,503	52	21,006	2,290	1	2,290	1,760	2,544	1,000	n/a	Covered area, no reductions for rainfall.
	Area 7D	24,310	120	320	55	0.27	17,600	1,760	12	808	4	9,696	970	2	10,503	52	21,006	2,431	1	2,431	1,760	2,611	1,000	n/a	Covered area, no reductions for rainfall.
	Area 7E	25,170	125	320	55	0.27	17,600	1,760	12	808	4	9,696	970	2	10,503	52	21,006	2,517	1	2,517	1,760	2,611	1,000	n/a	Covered area, no reductions for rainfall.
	Area 7F	22,770	113	320	55	0.27	17,600	1,760	12	808	4	9,696	970	2	10,503	52	21,006	2,277	1	2,277	1,760	2,611	1,000	n/a	Covered area, no reductions for rainfall.
	Area 7G	19,420	96	320	55	0.27	17,600	1,760	12	808	4	9,696	970	2	10,503	52	21,006	1,942	1	1,942	1,760	2,544	1,000	n/a	Covered area, no reductions for rainfall.
Total - RCRA(Pad 7)/PCB Building		**182,230**	**902**	**2,828**	**55**	**0.27**	**155,540**	**15,554**				**96,960**		**16**			**168,048**	**18,223**		**18,223**	**15,840**	**19,987**	**10,000**	**n/a**	
Stabilization Facility	Area #1	42,011	208	300	55	0.27	16,500	1,650	4	4,039	20	16,158	1,616	4	10,503	52	42,011	4,739	23	4,739	6,261	6,261	1,395	1,522	
	Area #2	126,032	624	1,200	55	0.27	66,000	6,600	12	10,503	52	126,032	12,603	12	10,503	52	126,032	13,084	64	13,084	18,544	18,544	5,005	5,460	
	Sub-Total Apron Area	**161,579**	**800**	**1,500**	**55**	**0.27**	**82,500**	**8,250**				**142,190**	**14,219**				**168,042**				**24,805**	**24,805**	**6,400**	**6,982**	
	Area #3	21,005	104	0	0	0.00	0	0	1	10,503	52	10,503	1,050	2	10,503	52	21,005	10,839	53	10,839	12,118	12,118	1,173	1,280	
	Area #4	31,508	156	0	0	0.00	0	0	0	0	0	0	0	3	10,503	52	31,508	3,213	15	3,213	4,982	4,982	1,622	1,769	
	Area #5	52,513	260	0	0	0.00	0	0	5	10,503	52	52,513	52,513	2	10,503	52	21,005	13,714	67	52,513	54,949	16,150	2,233	2,436	
	Area #6	31,508	156	0	0	0.00	0	0	3	10,503	52	31,508	31,508	2	10,503	52	21,005	14,727	72	31,508	33,941	17,160	2,230	2,433	
	Area #7	94,524	468	0	0	0.00	0	0	9	10,503	52	94,524	94,524	9	10,503	52	94,524	37,106	183	94,524	101,038	43,620	5,971	6,514	upto el 68.33' - bulk only
	Area #8	94,524	468	0	0	0.00	0	0	9	10,503	52	94,524	94,524	9	10,503	52	94,524	37,475	185	94,524	100,676	43,628	5,640	6,153	upto el 68.33' - bulk only
	Area #9	21,005	104	80	55	0.27	4,400	440	0	0	0	0	0	2	10,503	52	21,005	454	2	454	3,739	3,739	3,011	3,285	upto 66.75'
	Sub-Total Remaining Area	**282,764**	**1,400**	**80**	**55**	**0.27**	**4,400**	**440**	**27**			**283,572**		**29**			**304,577**					**141,397**	**21,880**	**23,870**	
	Total - Stabilization Facility	**444,343**	**2,200**	**1,580**	**55**	**0.27**	**86,900**	**8,690**				**425,761**					**472,619**					**166,203**	**28,280**	**30,851**	
Truck Unloading Apron # 1 (located adjacent to the Containment Building, Stabilization Portion)		14,138	70	120	55	0.27	6,600	660	11	606	3	6,665	667	1	14,138	70	14,138	705	3	705	1,545	1,545	770	840	
Truck Unloading Apron # 2 (located adjacent to the Containment Building, Stabilization Portion)		14,138	70	120	55	0.27	6,600	660	11	606	3	6,665	667	1	14,138	70	14,138	705	3	705	1,545	1,545	770	840	
Truck Unloading Apron #3 (located adjacent to the Containment Building, Debris Portion)	Area No. 1	14,138	70	120	55	0.27	6,600	660	6	1,616	8	9,695	969	1	14,138	70	14,138	1,865	9	1,865	3,125	3,125	1,155	1,260	
	Area No. 2	14,138	70	120	55	0.27	6,600	660	6	1,616	8	9,695	969	1	14,138	70	14,138	1,814	8	1,814	3,074	3,074	1,155	1,260	
	Area No. 3	14,138	70	120	55	0.27	6,600	660	6	1,616	8	9,695	969	1	14,138	70	14,138	1,947	9	1,947	3,177	3,177	1,128	1,230	
Total - Truck Unloading Apron #3		**42,415**	**52**	**360**	**55**	**0.27**	**19,800**					**29,084**		**3**	**14,138**	**70**	**42,415**					**9,376**	**3,438**	**3,750**	
Container Storage Area 1 (CSA #1)		662,475	3,280	0	0	0.00	0	0	0	0	0	0		82	8,079	40	662,475	0	0	0	0	0	0	0	**(5.)**
Total - Container Storage Built		1,276,497	6,320																						
Containment Building (Debris Treatment Portion)(4.)	Mixing Bin Tank No. 3 (Permit Limit)	12,000	226	0	0	0	0	0	1	12,000	59	12,000	1,200	1	45,646	226	45,646	12,000	59	12,000	12,000	45,135	0	0	**(9.)**
	Mixing Bin Tank No. 3 (Tot. Capacity)	60,996	302	0	0	0	0	0	1	60,996	302	60,996	6,100	1	60,996	302	60,996	60,996	302	60,996	N/A	N/A	0	0	**(9.)**
	Mixing Bin Tank No. 4 (Permit Limit)	12,000	226	0	0	0	0	0	1	12,000	59	12,000	1,200	1	45,646	226	45,646	12,000	59	12,000	12,000	45,135	0	0	**(9.)**
	Mixing Bin Tank No. 4 (Tot. Capacity)	60,996	302	0	0	0	0	0	1	60,996	302	60,996	6,100	1	60,996	302	60,996	60,996	302	60,996	N/A	N/A	0	0	**(9.)**
	Sort Floor No. 1	18,178	90	120	55	0.27	6,600	660	10	808	4	8,079	808	1	18,178	90	18,178	875	4	875	875	875	0	0	upto el 100'-0"
	Sort Floor No. 2	18,178	90	120	55	0.27	6,600	660	10	808	4	8,079	808	1	18,178	90	18,178	853	4	853	853	853	0	0	upto el 100'-0"
	Sort Floor No. 3	18,178	90	120	55	0.27	6,600	660	10	808	4	8,079	808	1	18,178	90	18,178	853	4	853	853	853	0	0	upto el 100'-0"
	Bldg Floor Below Elev 100'-0"	16,158	80	152	55	0.27	8,360	836	10	808	4	8,079	808	2	8,079	40	16,158	875	4	875	875	875	0	0	not including the sort floors
	Bldg Floor From Elev 100'-0" to Elev 100'-6"	210,053	1,040	1,048	55	0.27	57,640	5,764	20	10,503	52	210,053	21,005	20	8,079	40	161,579	42,703	211	42,703	42,703	42,703	0	0	not including the sort floors
Total - Containment Building (Debris Portion) w/ Sort Floors		**252,468**	**1,250**	**1,560**	**55**	**0.27**	**85,800**					**242,369**					**232,270**					**46,159**	**0**	**0**	
Total - Containment Building (Debris Portion) w/ Mixing Bin Tanks		**250,211**	**1,724**									**242,132**					**299,729**								
Total - Containment Building (Debris Portion) with Excavator Ramps																						**45,135**			
Containment Building (Stabilization Portion) (4.)	Mixing Bin Tank No. 1	22,390	111	0	0	0.00	0	0	1	22,390	111	22,390	2,239	1	22,390	111	22,390	22,390	111	22,390	22,390	22,390	0	0	upto el 97.33' with free board
	Mixing Bin Tank No. 1	25,993	129	0	0	0.00	0	0	1	25,892	128	25,593	2,559	1	25,993	128	25,993	25,993	128	25,993	25,993	25,993	0	0	upto el 99.33' without free board
	Floor only upto el 99.58'	80,790	400	60	55	0.27	3,300	330	1	4,039	20	4,039	404	10	8,079	40	80,790	4,275	21	4,275	4,275	4,275	0	0	from el 97.33' upto el 99.58'
	Floor only upto el 100.0'	80,790	400	200	55	0.27	11,000	1,100	5	6,059	30	30,296	3,030	10	8,079	40	80,790	6,926	34	6,926	6,926	6,926	0	0	from el 97.33' upto el 100.0'
	Floor only upto el 100.5'	105,027	520	400	55	0.27	22,000	2,200	10	10,503	52	105,027	10,503	10	8,079	40	80,790	14,503	71	14,503	14,503	14,503	0	0	from el 97.33' upto el 100.5'
	Mixing Bin Tank No. 2	21,632	107	0	0	0.00	0	0	1	21,632	107	21,632	2,163	1	21,632	107	21,632	21,632	107	21,632	21,632	21,632	0	0	upto el 97.33' with free board
	Mixing Bin Tank No. 2	25,198	125	0	0	0.00	0	0	1	25,198	124	25,198	2,520	1	25,198	124	25,198	25,198	124	25,198	25,198	25,198	0	0	upto el 99.33' without free board
	Floor only upto el 99.58'	80,790	400	60	55	0.27	3,300	330	1	4,039	20	4,039	404	10	8,079	40	80,790	4,262	21	4,262	4,262	4,262	0	0	from el 97.33' upto el 99.58'
	Floor only upto el 100.0'	80,790	400	200	55	0.27	11,000	1,100	5	6,059	30	30,296	3,030	10	8,079	40	80,790	7,054	34	7,054	7,054	7,054	0	0	from el 97.33' upto el 100.0'
	Floor only upto el 100.5'	105,027	520	400	55	0.27	22,000	2,200	10	10,503	52	105,027	10,503	10	8,079	40	80,790	15,268	75	15,268	15,268	15,268	0	0	from el 97.33' upto el 100.5'
Total - Containment Building (Stabilization Portion)		**260,844**	**1,293**	**800**	**55**	**0.27**	**44,000**					**260,844**					**212,770**					**80,962**	**0**	**0**	
Total - Containment Building Storage Available		**494,836**	**2,450**	**2,360**	**55**	**0.27**	**129,800**					**503,213**					**445,040**					**127,121**	**0**	**0**	

Footnotes:

1. Wastes with Codes F020, F021, F022, F023, F026 and F027 will be stored following the procedures for Wastes with Free Liquids.
2. The number and size of typical containers is for example only. For materials with free liquids, the maximum size of the container is as listed in the column titled "Volume of Largest Container with Free Liquids."
3. Design volume for rainfall is based on an intensity for a 25 year, 24 hour storm event = 1.75 inches
4. Enclosed unit with run-on controls, therefore rainfall volume not included for containment volume calculations.
5. Wastes with Codes F020, F021, F022, F023, F026 and F027 will not be stored in these units. See Appendix D.4.9.
6. Totals are for compatibility between the areas within the unit unless noted.
7. Totals are without compatibility between the areas within the unit.
8. TSCA regulates liquid storage in PCB portion
9. Mix Bin Tank Nos. 3 and 4 have a permitted capacity for liquid waste management of 12,000 gallons each. The capacities for waste without free liquids is 226 cubic yards each.
10. Containers are stored on pallets within secondary containment areas. Volume of containment consumed by pallets is negligible, and therefore is not deducted from maximum volume.
11. The largest container with free liquids is assumed to be a container with volume equal to the available containment capacity.

Table D-1A

Container Storage Location	Maximum Allowable Inventory of Containers	Maximum Allowable Liquid Inventory (gal)	Largest Liquid Volume Allowed in a Single Container (gal)	Actual Containment Capacity (gal)	Required Containment Capacity (gal)
Pad 4					
4A	1,000	279,310	19,841	27,931	27,931
4B	240	32,420	2,420	3,242	3,242
4C	240	31,200	2,319	3,120	3,120
4D	120	11,390	738	1,139	1,139
4E	120	10,580	657	1,058	1,058
Pad 5					
5A	280	26,770	1,643	2,677	2,677
5B	160	19,750	927	1,975	1,975
5C	220	23,520	1,304	2,352	2,352
5D	460	47,650	2,671	4,765	4,765
5E	580	56,130	3,545	5,613	5,613
5F	300	27,660	1,732	2,766	2,766
5G	150	19,400	892	1,940	1,940
5H	190	21,730	1,126	2,173	2,173
RCRA (Pad 7) /PCB Storage Building					
7A	614	33,820	3,382	3,382	3,382
7B	614	33,840	3,384	3,384	3,384
7C	320	22,900	2,290	2,290	2,290
7D	320	24,310	2,431	2,431	2,431
7E	320	25,170	2,517	2,517	2,517
7F	320	22,770	2,277	2,277	2,277
7G	320	19,420	1,942	1,942	1,942
Stabilization					
Area #1	300	42,011	4,739	6,261	6,261
Area #2	1200	126,032	13,084	18,544	18,544
Area #3	NS	21,005	10,839	12,118	12,118
Area #4	NS	31,508	3,213	4,982	4,982
Area #5	NS	52,513	13,714	16,150	16,150
Area #6	NS	31,508	14,727	17,160	17,160
Area #7	NS	94,524	37,106	43,620	43,620
Area #8	NS	94,524	37,475	43,628	43,628
Area #9	80	4,540	454	3,739	3,739
Truck Unloading Apron #1	120	15,450	705	1,545	1,545
Truck Unloading Apron #2	120	15,450	705	1,545	1,545

Container Storage Location	Maximum Allowable Inventory of Containers	Maximum Allowable Liquid Inventory (gal)	Largest Liquid Volume Allowed in a Single Container (gal)	Actual Containment Capacity (gal)	Required Containment Capacity (gal)
Truck Unloading Apron at Contain. Building					
Area #1	120	31,250	1,865	3,125	3,125
Area #2	120	30,740	1,814	3,074	3,074
Area #3	120	31,770	1,947	3,177	3,177

NS: Not Specified, the total number of containers is not provided since areas typically store a wide range of container sizes, however the total allowable liquid inventory is provided, which will be used in the event areas are used for storage.
Note: Table D-1A provides a summary of storage capacities for the most commonly used areas. Refer to Table D-1 for detail on other areas