

Attachment 24

Indoor Stabilization Building and Debris Treatment Table of Contents

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D.9 Indoor Stabilization Building

This Section provides information for the Indoor Stabilization Building, further details are provided in Section C.9.1 of the Facility WAP. Operations occur as follows:

- Stabilization Building treatment, as described in the following Sections and Section D.10.

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

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

The Indoor Stabilization Building is used to treat non-bulk and bulk containers with or without free liquids anywhere within the unit.

D.9.a Description of Indoor Stabilization Building

D.9.a.(1) Indoor Stabilization Building - Containment Design

The Indoor Stabilization Building construction will be completed in 2020, and is located adjacent to the west side of Container Storage Pad #8 as shown on the Facility Site Plan, Figure D-1. The building will occupy a portion of the footprint that was previously occupied by the Stabilization Portion of the Containment Building. The Indoor Stabilization 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. Two (2) stationary below-grade reinforced Mixing Tanks are located within the building; details for these Tanks are also found in Section D.2.

Floor Containment

The interior floor of the Indoor Stabilization building is not permitted as a waste storage area. However, the concrete slabs located inside the Indoor Stabilization Building are recessed below the perimeter elevations, which is intended to promote containment of any incidental spillage of hazardous liquids and to contain wash water associated with periodic maintenance cleaning. The central portions of the floor slab are recessed about 2.5 inches below the southern edge of the building and about 8.5 inches below the northern edge of the building perimeter (see Drawing #STAB-19-02). The concrete floor is amended with Xypex (or equivalent) additive to retard concrete permeability against incidental liquids.

The concrete floor has a typical slab thickness of 10 inches, and is reinforced as shown on Drawing #STAB-19-07. The concrete floor slab is sufficiently durable to withstand the movement of the heavy equipment, including excavators and haul trucks, which operate within the building.

Mixing Tank Containment

The Indoor Stabilization Building's stationary Mixing Tanks consist of reinforced concrete vaults with steel plate liner. The steel plate liner serves as the primary containment and is welded at all seams to form a water-tight seal. The steel plates are exposed to abrasion and mixing forces during the mixing of wastes, which is performed with an excavator. When the steel plates exhibit excessive wear, then additional steel plates will be installed, as needed, to maintain primary containment.

The reinforced concrete vault serves as the secondary containment. The 12-inch thick concrete vaults are reinforced with steel rebar to provide structural strength and are amended with Xypex (or equivalent) additive to retard concrete permeability. Water stop features will be installed along all cold joints, located inside the vaults, to preclude leakage through the construction joints. The compatibility of the Xypex (or equivalent) amended concrete with the physical and chemical characteristics of the wastes is described in Appendix D.9.6.

An annulus space is provided between the primary containment and the secondary containment to allow for leak detection monitoring behind the primary containment. The depth of the annular space varies from about two (2) to five (5) inches and is accessed via a 4-inch diameter inspection port that will be utilized to inspect for leakage and removal of any liquids that accumulated inside the leak detection annulus. This system is designed to manage both solid and liquid type waste streams that require treatment prior to landfill disposal. The floor of each concrete vault is graded slightly towards the north side, where the leak detection ports are located. Collected liquids will be removed from the Mixing Tank inspection port, on a daily basis, as needed, as described in Section D.2. Routine inspections are described in Section F.

The design of the Mixing Tank components are shown on Drawing #'s STAB-19-08, 09, 10, 11, and 12.

D.9.a.(2) Liquid Storage

The Indoor Stabilization Building is used to manage liquids as follows:

Liquid wastes are managed in containers that might be temporarily staged on the floor inside of the Indoor Stabilization Building or on the exterior Truck Aprons located in front of this building, as described in Section D.1.b. Liquid waste streams received in bulk tankers are transferred directly into the Mixing Tanks. Liquid wastes are not stored overnight in the Mixing Tanks. Leak detection monitoring ports are provided for each of the Mixing Tanks, as described in the previous section.

D.9.a.(3) Indoor Stabilization Building – Floor Design

The floor within the Stabilization Building is amended with Xypex (or equivalent) additive to increase the strength and impermeability of the concrete. Liquids within the building flow toward and are collected within the stationary Mixing Bin Tanks. Routine inspections are described in Section F.

The secondary containment for the Mixing Bin Tanks is comprised of concrete vaults, as described in Section D. 9.a.(1).

D.9.a.(4) Dust Emissions

D.9.a.(4)(a) Indoor Stabilization Building – Dust Mitigation

The Indoor Stabilization Building is an enclosed structure. The building is equipped with an air pollution control (APC) system which includes baghouses, with air ducts. Individual hoods and retractable curtains are located over each of the Mixing Tanks to control particulate emissions during the offload and/or transfer of dusty waste streams. The Stabilization Building's APC system is designed to remove 50,000 cfm from the building. Specific performance criteria of the APC system will comply with the Permit to Construct (PTC), which is issued separately by IDEQ. The air permit related analysis will address air velocity, filter media efficiency, stack height, and other relevant considerations for the PTC.

Drawing # STAB-19-03 and 04 shows the location of dust collection hoods and retractable curtains, located inside the Indoor Stabilization Building.

D.9.a.(5) Operation

The Indoor Stabilization Building was designed and will be operated to provide containment of and prevent the tracking of materials from the unit by personnel or equipment. The existing exterior truck unloading aprons are paved with asphalt and concrete surfaces to facilitate surface cleaning and removal of incidental spillage that may occur during waste transfer. These will be utilized for offload, staging, and handling of containerized wastes. The truck unloading aprons slope 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 described in Appendix D.1.2. Removal of gross contamination from equipment and personnel is performed prior to movement of personnel and equipment from the process area.

D.9.b Design and Operating Standards

D.9.b.(1) Indoor Stabilization Building

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

The Indoor Stabilization Building is fully enclosed with floors, walls, and a roof to prevent exposure to precipitation, wind, and run-on. Incidental waste materials that come in contact with the floor are also contained due to the recessed floor layout. Surface run-on is prevented by grading all exterior pavement surfaces away from the Stabilization Building directing surface flow towards the site drainage features, 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 were designed and constructed of materials of sufficient strength and thickness to support themselves, the waste contents, and the personnel and equipment within the building (see Section D.9.a). The building was designed to have sufficient structural strength to prevent collapse or other structural failure as detailed in Appendix D.9.7 and D.9.8. 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 building. 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, D.6.3, and D.9.6.

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 barriers for the Indoor Stabilization Building are described in Section D.9.a.

D.9.c Closure and Post-Closure Care

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