**Section 727.900 Containment Buildings**

a) Applicability of This Section. This Section applies to the owner or operator of a facility that treats or stores hazardous waste in containment buildings under a RCRA standardized permit pursuant to 35 Ill. Adm. Code 703.Subpart J, except as provided in Section 727.100(a)(2). Storage or treatment in a containment building is not land disposal, as defined in 35 Ill. Adm. Code 728.102, if the unit meets the requirements of subsections (b), (c), and (d).

BOARD NOTE: Subsection (a) is derived from 40 CFR 267.1100.

b) Design and Operating Standards for Containment Buildings. A containment building must comply with the design and operating standards in this subsection (b). The Agency may consider standards established by professional organizations generally recognized by the industry, such as the American Concrete Institute (ACI) or the American Society of Testing Materials (ASTM), in judging the structural integrity requirements of this subsection (b).

1) The containment building must be completely enclosed with a floor, walls, and a roof to prevent exposure to the elements (e.g., precipitation, wind, run-on, etc.), and to assure containment of managed wastes.

2) The floor and containment walls of the unit, including the secondary containment system, if required pursuant to subsection (d), must be designed and constructed of manmade materials of sufficient strength and thickness to accomplish the following:

A) They must support themselves, the waste contents, and any personnel and heavy equipment that operates within the unit;

B) They must prevent failure due to any of the following causes:

i) Pressure gradients, settlement, compression, or uplift;

ii) Physical contact with the hazardous wastes to which they are exposed;

iii) Climatic conditions;

iv) Stresses of daily operation, including the movement of heavy equipment within the unit and contact of such equipment with containment walls; or

v) Collapse or other failure.

3) All surfaces to be in contact with hazardous wastes must be chemically compatible with those wastes.

4) The facility owner or operator must not place incompatible hazardous wastes or treatment reagents in the unit or its secondary containment system if they could cause the unit or secondary containment system to leak, corrode, or otherwise fail.

5) A containment building must have a primary barrier designed to withstand the movement of personnel, waste, and handling equipment in the unit during the operating life of the unit and appropriate for the physical and chemical characteristics of the waste to be managed.

6) If appropriate to the nature of the waste management operation to take place in the unit, an exception to the structural strength requirement may be made for light-weight doors and windows that meet these criteria:

A) The doors and windows provide an effective barrier against fugitive dust emissions pursuant to subsection (c)(4); and

B) The unit is designed and operated in a fashion that assures that wastes will not actually come in contact with these openings.

7) The facility owner or operator must inspect and record in the facility's operating record, at least once every seven days, data gathered from monitoring equipment and leak detection equipment, as well as the containment building and the area immediately surrounding the containment building to detect signs of releases of hazardous waste.

8) The facility owner or operator must obtain certification by a qualified registered professional engineer that the containment building design meets the requirements of subsections (b)(1) through (b)(6), (c), and (d).

BOARD NOTE: Subsection (b) is derived from 40 CFR 267.1101.

c) Other Requirements for Preventing Releases. The facility owner or operator must use controls and practices to ensure containment of the hazardous waste within the unit and must meet the following minimum requirements:

1) It must maintain the primary barrier to be free of significant cracks, gaps, corrosion, or other deterioration that could cause hazardous waste to be released from the primary barrier;

2) It must maintain the level of the stored or treated hazardous waste within the containment walls of the unit so that the height of any containment wall is not exceeded;

3) It must take measures to prevent personnel or by equipment used in handling the waste from tracking hazardous waste out of the unit. The owner or operator must designate an area to decontaminate equipment, and it must collect and properly manage any rinsate; and

4) It must take measures to control fugitive dust emissions such that any openings (doors, windows, vents, cracks, etc.) exhibit no visible emissions (see Method 22 of appendix A to 40 CFR 60 (Visual Determination of Fugitive Emissions from Material Sources and Smoke Emissions from Flares), incorporated by reference in 35 Ill. Adm. Code 720.111(b)). In addition, the owner or operator must operate and maintain all associated particulate collection devices (for example, fabric filter, electrostatic precipitator, etc.) with sound air pollution control practices. The owner or operator must effectively maintain this state of no visible emissions at all times during routine operating and maintenance conditions, including when vehicles and personnel are entering and exiting the unit.

BOARD NOTE: Subsection (c) is derived from 40 CFR 267.1102.

d) Additional Design and Operating Standards When Liquids Are in the Containment Building. If a containment building will be used to manage hazardous wastes containing free liquids or treated with free liquids, as determined by the paint filter test, by a visual examination, or by other appropriate means, the facility owner or operator must include the following:

1) A primary barrier designed and constructed of materials to prevent the migration of hazardous constituents into the barrier (for example, a geomembrane covered by a concrete wear surface);

2) A liquid collection and removal system to minimize the accumulation of liquid on the primary barrier of the containment building, as follows:

A) The primary barrier must be sloped to drain liquids to the associated collection system; and

B) The facility owner or operator must collect and remove liquids and waste to minimize hydraulic head on the containment system at the earliest practicable time;

3) A secondary containment system, including a secondary barrier designed and constructed to prevent migration of hazardous constituents into the barrier, and a leak detection system capable of detecting failure of the primary barrier and collecting accumulated hazardous wastes and liquids at the earliest practical time, as follows:

A) The facility owner or operator may meet the requirements of the leak detection component of the secondary containment system by installing a system that meets the following minimum construction requirements:

i) It is constructed with a bottom slope of one percent or more; and

ii) It is constructed of a granular drainage material with a hydraulic conductivity of 1 × 10-2 cm/sec or more and a thickness of 12 inches (30.5 cm) or more, or constructed of synthetic or geonet drainage materials with a transmissivity of 3 × 10-5 m2sec or more;

B) If the facility owner or operator will be conducting treatment in the building, it must design the area in which the treatment will be conducted to prevent the release of liquids, wet materials, or liquid aerosols to other portions of the building; and

C) The facility owner or operator must construct the secondary containment system using materials that are chemically resistant to the waste and liquids managed in the containment building and of sufficient strength and thickness to prevent collapse under the pressure exerted by overlaying materials and by any equipment used in the containment building.

BOARD NOTE: Subsection (d) is derived from 40 CFR 267.1103.

e) Alternatives to Secondary Containment Requirements. Notwithstanding any other provision of this Section, the Agency must, in writing, allow the use of alternatives to the requirements for secondary containment for a permitted containment building where the Agency has determined that the facility owner or operator has adequately demonstrated both of the following:

1) The only free liquids in the unit are limited amounts of dust suppression liquids required to meet occupational health and safety requirements; and

2) The containment of managed wastes and dust suppression liquids can be assured without a secondary containment system.

BOARD NOTE: Subsection (e) is derived from 40 CFR 267.1104.

f) Requirements Where the Containment Building Contains Areas Both With and Without Secondary Containment. For a containment building that contains both areas that have secondary containment and areas that do not have secondary containment, the facility owner or operator must fulfill the following requirements:

1) It must design and operate each area in accordance with the requirements enumerated in subsections (b) through (d);

2) It must take measures to prevent the release of liquids or wet materials into areas without secondary containment; and

3) It must maintain in the facility's operating log a written description of the operating procedures used to maintain the integrity of areas without secondary containment.

BOARD NOTE: Subsection (f) is derived from 40 CFR 267.1105.

g) Requirements in the Event of a Release. Throughout the active life of the containment building, if the facility owner or operator detects a condition that could lead to or has caused a release of hazardous waste, it must repair the condition promptly, in accordance with the following procedures.

1) Upon detection of a condition that has led to a release of hazardous waste (for example, upon detection of leakage from the primary barrier), the owner or operator must undertake each of the following actions:

A) It must enter a record of the discovery in the facility operating record;

B) It must immediately remove the portion of the containment building affected by the condition from service;

C) It must determine what steps it will need to take to repair the containment building, to remove any leakage from the secondary collection system, and to establish a schedule for accomplishing the cleanup and repairs; and

D) Within seven days after the discovery of the condition, it must notify the Agency of the condition, and within 14 working days, provide a written notice to the Agency with a description of the steps taken to repair the containment building, and the schedule for accomplishing the work.

2) The Agency must review the information submitted, determine whether the containment building must be removed from service completely or partially until repairs and cleanup are complete, and notify the owner or operator of the determination and the underlying rationale in writing.

3) Upon completing all repairs and cleanup, the facility owner or operator must notify the Agency in writing and provide a verification, signed by a qualified, registered professional engineer, that the repairs and cleanup have been completed according to the written plan submitted in accordance with subsection (g)(1)(D).

BOARD NOTE: Subsection (g) is derived from 40 CFR 267.1106.

h) A Containment Building That Can Be Considered Secondary Containment. A containment building can serve as an acceptable secondary containment system for tanks placed within the building if both of the following conditions are fulfilled:

1) The containment building can serve as an external liner system for a tank if it meets the requirements of Section 727.290(g)(2); and

2) The containment building also meets the requirements of Section 727.290(f)(1), (f)(2)(A), and (f)(2)(B).

BOARD NOTE: Subsection (h) is derived from 40 CFR 267.1107.

i) Requirements When the Owner or Operator Stops Operating the Containment Building. When the facility owner or operator close a containment building, it must remove or decontaminate all waste residues, contaminated containment system components (liners, etc.), contaminated subsoils, and structures and equipment contaminated with waste and leachate and manage them as hazardous waste unless 35 Ill. Adm. Code 721.103(d) applies. The closure plan, closure activities, cost estimates for closure, and financial responsibility for containment buildings must meet all of the requirements specified in Sections 727.210 and 727.240.

BOARD NOTE: Subsection (i) is derived from 40 CFR 267.1108.

(Source: Amended at 43 Ill. Reg. 6095, effective May 2, 2019)