CA

66265.1101 Design and Operating Standards

(a)

All containment buildings shall comply with the following design standards: (1) The containment buildings shall be completely enclosed with a floor, walls, and a roof to prevent exposure to the elements, (e.g., precipitation, wind, runon), and to assure containment of managed wastes. (2) The floor and containment walls of the unit, including the secondary containment system, if required under subsection (b) of this section, shall be designed and constructed of materials of sufficient strength and thickness to support themselves, the waste contents, and any personnel and heavy equipment that operate within the unit, and to prevent failure due to pressure gradients, settlement, compression, or uplift, physical contact with the hazardous wastes to which they are exposed; climatic conditions; and the stresses of daily operation, including the movement of heavy equipment within the unit and contact of such equipment with containment walls. The unit shall be designed so that it has sufficient structural strength to prevent collapse or other failure. All surfaces to be in contact with hazardous wastes shall be chemically compatible with those wastes. The Department will consider standards established by professional organizations generally recognized by the industry such as the American Concrete Institute (ACI) and the American Society of Testing Materials (ASTM) in judging the structural integrity requirements of this subsection. 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) They provide an effective barrier against fugitive dust emissions under subsection (c)(1)(D); and (B) The unit is designed and operated in a fashion that assures that wastes will not actually come in contact with these openings. (3) Incompatible hazardous wastes or treatment reagents shall not be placed in the unit or its secondary containment system if they could cause the unit or secondary containment system to leak, corrode, or otherwise fail. (4) A containment building shall 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.

(1)

The containment buildings shall be completely enclosed with a floor, walls, and a roof to prevent exposure to the elements, (e.g., precipitation, wind, runon), and to assure containment of managed wastes.

(2)

The floor and containment walls of the unit, including the secondary containment system, if required under subsection (b) of this section, shall be designed and constructed of materials of sufficient strength and thickness to support themselves, the waste contents, and any personnel and heavy equipment that operate within the unit, and to prevent failure due to pressure gradients, settlement, compression, or uplift, physical contact with the hazardous wastes to which they are exposed; climatic conditions; and the stresses of daily operation, including the movement of heavy equipment within the unit and contact of such equipment with containment walls. The unit shall be designed so that it has sufficient structural strength to prevent collapse or

other failure. All surfaces to be in contact with hazardous wastes shall be chemically compatible with those wastes. The Department will consider standards established by professional organizations generally recognized by the industry such as the American Concrete Institute (ACI) and the American Society of Testing Materials (ASTM) in judging the structural integrity requirements of this subsection. 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) They provide an effective barrier against fugitive dust emissions under subsection (c)(1)(D); and (B) The unit is designed and operated in a fashion that assures that wastes will not actually come in contact with these openings.

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(B)

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

(3)

Incompatible hazardous wastes or treatment reagents shall not be placed in the unit or its secondary containment system if they could cause the unit or secondary containment system to leak, corrode, or otherwise fail.

(4)

A containment building shall 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.

(b)

For a containment building used to manage hazardous wastes containing free liquids or treated with free liquids (the presence of which is determined by the paint filter test, a visual examination, or other appropriate means), the owner or operator shall include: (1) A primary barrier designed and constructed of materials to prevent the migration of hazardous constituents into the barrier (e.g. a geomembrane covered by a concrete wear surface); (2) A liquid collection and removal system to prevent the accumulation of liquid on the primary barrier of the containment building:(A) The primary barrier shall be sloped to drain liquids to the associated collection system; and (B) Liquids and waste shall be collected and removed to minimize hydraulic head on the containment system at the earliest practicable time that protects human health and the environment; (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 that is capable of detecting failure of the primary barrier and collecting accumulated hazardous wastes and liquids at the earliest practicable time. (A) The requirements of the leak detection component of the secondary containment system are satisfied by installation of a system that is, at a minimum: 1. Constructed with a bottom slope of 1 percent or more; and 2. Constructed of a granular drainage material with a hydraulic conductivity of 1X10-2 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 3X10-5 m2/sec or more. (B) If treatment is to be conducted in the building, an area in which such treatment will be conducted shall be designed to prevent the release of liquids, wet materials, or liquid aerosols to other portions of the building. (C) The secondary containment system shall be constructed of 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. (Containment buildings can serve as secondary containment systems for tanks placed within the building under certain conditions. A containment building can serve as an external liner system for a tank, provided it meets the requirements of section 66265.193(d)(1). In addition, the containment building shall meet the requirements of section 66265.193(b) and (c) to be considered an acceptable secondary containment system for a tank.)

(1)

A primary barrier designed and constructed of materials to prevent the migration of hazardous constituents into the barrier (e.g. a geomembrane covered by a concrete wear surface);

(2)

A liquid collection and removal system to prevent the accumulation of liquid on the primary barrier of the containment building:(A) The primary barrier shall be sloped to drain liquids to the associated collection system; and (B) Liquids and waste shall be collected and removed to minimize hydraulic head on the containment system at the earliest practicable time that protects human health and the environment;

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The primary barrier shall be sloped to drain liquids to the associated collection system; and

(B)

Liquids and waste shall be collected and removed to minimize hydraulic head on the containment system at the earliest practicable time that protects human health and the environment;

(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 that is capable of detecting failure of the primary barrier and collecting accumulated hazardous wastes and liquids at the earliest practicable time. (A) The requirements of the leak detection component of the secondary containment system are satisfied by installation of a system that is, at a minimum: 1. Constructed with a bottom slope of 1 percent or more; and 2. Constructed of a granular drainage material with a hydraulic conductivity of 1X10-2 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 3X10-5 m2/sec or more. (B) If treatment is to be conducted in the building, an area in which such treatment will be conducted shall be designed to prevent the release of liquids, wet materials, or liquid aerosols to other portions of the building. (C) The secondary containment system shall be constructed of 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. (Containment buildings can serve as secondary containment systems for tanks placed within the building under certain conditions. A containment building can serve as an external liner system for a tank, provided it meets the requirements of section 66265.193(d)(1). In addition, the containment building shall meet the requirements of section 66265.193(b) and (c) to be considered an acceptable secondary containment system for a tank.)

(A)

The requirements of the leak detection component of the secondary containment system are satisfied by installation of a system that is, at a minimum: 1. Constructed with a bottom slope of 1 percent or more; and 2. Constructed of a granular drainage material with a hydraulic conductivity of 1X10-2 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 3X10-5 m2/sec or more.

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(B)

If treatment is to be conducted in the building, an area in which such treatment will be conducted shall be designed to prevent the release of liquids, wet materials, or liquid aerosols to other portions of the building.

(C)

The secondary containment system shall be constructed of 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. (Containment buildings can serve as secondary containment systems for tanks placed within the building under certain conditions. A containment building can serve as an external liner system for a tank, provided it meets the requirements of section 66265.193(d)(1). In addition, the containment building shall meet the requirements of section 66265.193(b) and (c) to be considered an acceptable secondary containment system for a tank.)

(c)

Owners or operators of all containment buildings shall: (1) Use controls and practices to ensure containment of the hazardous waste within the unit; and, at a minimum, (A) 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; (B) Maintain the level of the stored/treated hazardous waste within the containment walls of the unit so that the height of any containment wall is not exceeded; (C) Take measures to prevent the tracking of hazardous waste out of the unit by personnel or by equipment used in handling the waste. An area shall be designated to decontaminate equipment and any rinsate shall be collected and properly managed; and (D) Take measures to control fugitive dust emissions such that any openings (doors, windows, vents, cracks, etc.) exhibit no visible emissions In addition, all associated particulate collection devices (e.g., fabric filter, electrostatic precipitator) shall be operated and maintained with sound air pollution control practices (see 40 CFR part 60 subpart 292 for guidance). This state of no visible emissions shall be maintained effectively at all times during normal operating conditions, including when vehicles and personnel are entering and exiting the unit; (2) Obtain certification by a qualified registered professional engineer that the containment building design meets the requirements of paragraphs (a) through (c) of this section. For units placed into operation prior to February 18, 1993, this certification shall be placed in the facility's operating record (on-site files for generators who are not formally required to have operating records) no later than 60 days after the date of initial operation of the unit. After February 18, 1993, PE certification will be required prior to operation of the unit; (3) Throughout the active life of the containment building, if the owner or operator detects a condition that could lead to or has caused a release of hazardous waste, shall repair the condition promptly, in accordance with the following procedures. (A) Upon detection of a condition that has lead to a release of hazardous waste (e.g., upon detection of leakage from the primary barrier) the owner or operator shall: 1. Enter a record of the

discovery in the facility operating record; 2. Immediately remove the portion of the containment building affected by the condition from service; 3. Determine what steps shall be taken to repair the containment building, remove any leakage from the secondary collection system, and establish a schedule for accomplishing the cleanup and repairs; and 4. Within 7 days after the discovery of the condition, notify the Department of the condition, and within 14 working days, provide a written notice to the Department with a description of the steps taken to repair the containment building, and the schedule for accomplishing the work, (B) The Department will review the information submitted, make a determination regarding whether the containment building shall 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. (C) Upon completing all repairs and cleanup the owner or operator shall notify the Department 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 (c)(3)(A)4; and (4) 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.

(1)

Use controls and practices to ensure containment of the hazardous waste within the unit; and, at a minimum, (A) 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; (B) Maintain the level of the stored/treated

hazardous waste within the containment walls of the unit so that the height of any containment wall is not exceeded; (C) Take measures to prevent the tracking of hazardous waste out of the unit by personnel or by equipment used in handling the waste. An area shall be designated to decontaminate equipment and any rinsate shall be collected and properly managed; and (D) Take measures to control fugitive dust emissions such that any openings (doors, windows, vents, cracks, etc.) exhibit no visible emissions In addition, all associated particulate collection devices (e.g., fabric filter, electrostatic precipitator) shall be operated and maintained with sound air pollution control practices (see 40 CFR part 60 subpart 292 for guidance). This state of no visible emissions shall be maintained effectively at all times during normal operating conditions, including when vehicles and personnel are entering and exiting the unit;

(A)

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;

(B)

Maintain the level of the stored/treated hazardous waste within the containment walls of the unit so that the height of any containment wall is not exceeded;

(C)

Take measures to prevent the tracking of hazardous waste out of the unit by personnel or by equipment used in handling the waste. An area shall be designated to decontaminate equipment and any rinsate shall be collected and properly managed; and

(D)

Take measures to control fugitive dust emissions such that any openings (doors, windows, vents, cracks, etc.) exhibit no visible emissions In addition, all associated particulate collection devices (e.g., fabric filter, electrostatic precipitator) shall be operated and

maintained with sound air pollution control practices (see 40 CFR part 60 subpart 292 for guidance). This state of no visible emissions shall be maintained effectively at all times during normal operating conditions, including when vehicles and personnel are entering and exiting the unit;

(2)

Obtain certification by a qualified registered professional engineer that the containment building design meets the requirements of paragraphs (a) through (c) of this section. For units placed into operation prior to February 18, 1993, this certification shall be placed in the facility's operating record (on-site files for generators who are not formally required to have operating records) no later than 60 days after the date of initial operation of the unit. After February 18, 1993, PE certification will be required prior to operation of the unit;

(3)

Throughout the active life of the containment building, if the owner or operator detects a condition that could lead to or has caused a release of hazardous waste, shall repair the condition promptly, in accordance with the following procedures. (A) Upon detection of a condition that has lead to a release of hazardous waste (e.g., upon detection of leakage from the primary barrier) the owner or operator shall: 1. Enter a record of the discovery in the facility operating record; 2. Immediately remove the portion of the containment building affected by the condition from service; 3. Determine what steps shall be taken to repair the containment building, remove any leakage from the secondary collection system, and establish a schedule for accomplishing the cleanup and repairs; and 4. Within 7 days after the discovery of the condition, notify the Department of the condition, and within 14 working days, provide a written notice to the Department with a description of the steps taken to repair the containment building, and the schedule for accomplishing the work, (B) The

Department will review the information submitted, make a determination regarding whether the containment building shall 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. (C) Upon completing all repairs and cleanup the owner or operator shall notify the Department 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 (c)(3)(A)4; and

(A)

Upon detection of a condition that has lead to a release of hazardous waste (e.g., upon detection of leakage from the primary barrier) the owner or operator shall: 1. Enter a record of the discovery in the facility operating record; 2. Immediately remove the portion of the containment building affected by the condition from service; 3. Determine what steps shall be taken to repair the containment building, remove any leakage from the secondary collection system, and establish a schedule for accomplishing the cleanup and repairs; and 4. Within 7 days after the discovery of the condition, notify the Department of the condition, and within 14 working days, provide a written notice to the Department with a description of the steps taken to repair the containment building, and the schedule for accomplishing the work,

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Enter a record of the discovery in the facility operating record;

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Immediately remove the portion of the containment building affected by the condition from service;

3.

Determine what steps shall be taken to repair the containment building, remove any leakage from the secondary collection system, and establish a schedule for accomplishing the cleanup and

repairs; and

4.

Within 7 days after the discovery of the condition, notify the Department of the condition, and within 14 working days, provide a written notice to the Department with a description of the steps taken to repair the containment building, and the schedule for accomplishing the work,

(B)

The Department will review the information submitted, make a determination regarding whether the containment building shall 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.

(C)

Upon completing all repairs and cleanup the owner or operator shall notify the Department 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 (c)(3)(A)4; and

(4)

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.

(d)

For containment buildings that contain areas both with and without secondary containment, the owner or operator shall:(1) Design and operate each area in accordance with the requirements enumerated in paragraphs (a) through (c) of this section; (2) Take measures to prevent the release of liquids or wet materials into areas without secondary containment; and (3) Maintain in the facility's

operating log a written description of the operating procedures used to maintain the integrity of areas without secondary containment.

(1)

Design and operate each area in accordance with the requirements enumerated in paragraphs (a) through (c) of this section;

(2)

Take measures to prevent the release of liquids or wet materials into areas without secondary containment; and

(3)

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

(e)

Notwithstanding any other provision of this article, the Department may waive requirements for secondary containment for a permitted containment building where the owner or operator demonstrates that the only free liquids in the unit are limited amounts of dust suppression liquids required to meet occupational health and safety requirements, and where containment of managed wastes and liquids can be assured without a secondary containment system.