

PART B REVIEW CHECKLIST

SECTION D - PROCESS INFORMATION - CONTAINMENT BUILDINGS

Last updated: May 2005

Facility/ID #		Date	
Reviewer		DO	

Relevant Guidance Documents: RCRA, Superfund & EPCRA Call Center Training Module: Containment Buildings.

Located at: <http://www.epa.gov/nscep/>

	YES	NO	NA	Page #	Notes - NOD Comment #	Include on Inspection Checklist?
D-3 <u>Containment Buildings</u>						
D-3a <u>Design Standards</u>						
D-3a(1) <u>Structural Design Standards</u> OAC 3745-205-100 (A) & (B), 3745-205-101 (A) (1)-(4)						
Does the application provide evidence that the floor and containment walls of the unit, including the secondary containment system if required under OAC Rule 3745-205-101 (B), is or must be designed and constructed:						
(1) Of man made materials of sufficient strength to support themselves, the waste contents, and any personnel and heavy equipment that operates within the unit?						
(2) To prevent failure due to:						
(a) Pressure gradients, settlement, compression, or uplift?						
(b) Physical contact with the wastes to which they are exposed?						
(c) Climatic conditions?						

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(d) The stresses of daily operation, including the movement of heavy equipment within the unit and contact of such equipment with containment walls?						
(3) So that is has sufficient structural strength to prevent collapse or other failure?						
Does the application provide evidence that all surfaces to be in contact with hazardous waste are chemically compatible with those wastes?						
Are the 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), used in demonstrating that the unit meets the structural integrity requirements of OAC 3745-205-100 (A) and 3745-248-101 (A)?						
If lightweight doors and windows are used in the structure, the application must provide evidence that the following criteria have been met for an exception to the structural strength requirement to be made:						
(1) The use of the doors and windows is appropriate to the nature of the waste management operation to take place in the unit.						
(2) The doors and windows provide an effective barrier against fugitive dust emissions as required in OAC 3745-205-101 (C)(1)(d).						
(3) The unit is designed and operated in a manner that assures that waste will not actually come in contact with these openings.						
Does the application state that incompatible hazardous waste or treatment reagents will 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?						

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Does the application provide evidence that the containment building has a primary barrier that is :						
(1) Designed to be sufficiently durable to withstand the movement of personnel, waste, and handling equipment in the unit during the operating life of the unit?						
(2) Appropriate for the physical and chemical characteristics of the waste to be managed?						
Based on the above criteria, does the application provide evidence that the unit is a completely enclosed, self supporting structure, possessing four walls, a roof, and a floor, that prevents exposure to the elements (e.g., precipitation, wind, run-on), and assures containment of managed waste, thereby qualifying it as a containment building?						
D-3a(2) <u>Free Liquid Management</u> OAC 3745-205-100(C), 3745-205-101 (B)						
Does the containment building manage a hazardous waste containing free liquids, as determined by the paint filter test, a visual examination, or other appropriate means?						
If yes, does the application demonstrate that the containment building has:						
(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 designed and constructed to minimize the accumulation of liquid on the primary barrier of the containment building?						
(a) Is the primary barrier sloped to drain liquids to the associated collection system?						

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(b) Is it stated that liquids and wastes will be collected and removed to minimize hydraulic head on the containment system at the earliest practicable time?						
(3) A secondary containment system including:						
(a) A secondary barrier designed and constructed to prevent migration of hazardous constituents in to the barrier?						
(b) 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?						
Is the leak detection system constructed, at a minimum:						
(1) With a bottom slope of one per cent or more; and						
(2) Constructed of a granular drainage material with a hydraulic conductivity of 1×10^{-2} cm/sec or more and a thickness of twelve inches (30.5 cm) or more, or constructed of synthetic or geonet drainage materials with transmissivity of 3×10^{-5} m ² /sec or more?						
If treatment is to be conducted in the building, is the area in which such treatment will be conducted designed to prevent the release of liquids, wet materials, or liquid aerosols to other portions of the building?						
Is the secondary containment system:						
(1) Constructed of materials that are chemically resistant to the waste and liquids to be managed in the containment building?						

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(2) Of sufficient strength and thickness to prevent collapse under the pressure exerted by overlaying materials and by any equipment used in the containment building?						
If the containment building is used to serve as a secondary containment system for tanks placed within the building, does it meet the requirements of OAC Rule 3745-55-93 (B), (C)(1), and (C)(2)?						
If the owner or operator of an existing unit, other than a ninety-day generator, wishes to obtain a variance to delay the secondary containment requirement for up to two years, have they:						
(1) Demonstrated that the unit substantially meets the standards in OAC Rules 3745-205-100 to 3745-205-102?						
(2) Provided a written notice to the director of their request, describing the unit and its operating practices with specific reference to the performance of existing containment systems, and describing their specific plans for retrofitting the unit with secondary containment?						
(3) Responded within thirty days to any comments from the director on these plans?						
(4) Fulfilled the terms of the revised plans if such plans are approved by the director?						
D-3b(1) <u>Emission Controls, Containment, and Operating Standards:</u> OAC 3745-205-100 (D) & (E), 3745-205-101 (C) & (D)						
Does the application provide evidence that the owner or operator will use controls and practices to ensure containment of the hazardous waste, and at a minimum:						

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(1) 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) 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) Take measures to prevent the tracking of hazardous waste out of the unit by personnel or by equipment used in handling the waste?						
(a) Is there an area designated for the decontamination of equipment?						
(b) Is it provided that any rinseate must be collected and properly managed?						
(4) Take measures to control fugitive dust emissions such that any openings (doors, windows, vents, cracks, etc.) exhibit no visible emissions (see 40 CFR part 60, appendix A, method 22- visual determination of fugitive emissions from material sources and smoke emission from flares)?						
(a) Are all associated particulate collection devices (e.g., fabric filter, electrostatic precipitator) operated and maintained with sound air pollution control practices (see 40 CFR part 60, subpart 292 for guidance)?						
(b) Is the state of no visible emissions to be maintained effectively at all times during routine operating and maintenance conditions, including when vehicles and personnel are entering and exiting the unit?						

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Does the application state that the owner or operator will obtain certification by a qualified professional engineer registered in the state of Ohio that the containment building design meets the requirements of paragraphs (A) to (C)(4) of OAC Rule 3645-205-101, and place it in the facility's operating record (or in on-site files for generators who are not formally required to have operating records) prior to operation of the unit?						
Does the application state that the owner or operator will repair promptly upon detection any condition that could lead to or has caused a release of hazardous waste throughout the active life of the facility?						
Upon detection of a condition that has led to a release of hazardous waste (e.g., upon detection of leakage from the primary barrier), is it stated that the owner or operator will:						
(1) enter a record of the discovery in the facility operating record?						
(2) immediately remove from service the portion of the containment building affected by the condition?						
(3) Determine what steps must 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?						
(4) Notify the director of the condition within seven days after the discovery of the condition, and provide a written plan to the director with a description of the steps taken to repair the containment building and with the schedule for accomplishing the work within fourteen working days?						

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Upon completing all repairs and cleanup, is it documented that the owner or operator will notify the director in writing and provide a verification, signed by a qualified professional engineer registered in the state of Ohio, that the repairs and cleanup have been completed according to the written plan submitted in accordance with OAC Rule 3745-205-101 (C)(3)(a)(iv)?						
Does the application state that the owner or operator will inspect and record in the facility's operating record data gathered from monitoring equipment, leak detection equipment, the containment building, and the area immediately surrounding the containment building at least once every seven days in order to detect signs of releases of hazardous waste?						
Does the application state that the owner or operator of containment buildings that contain both areas with secondary containment and without secondary containment will:						
(1) Design and operate each area in accordance with the requirements in OAC Rule 3745-205-101 (A) to (C)(4)?						
(2) Take measures to prevent the release of liquids or wet materials into areas without secondary containment?						
(3) Maintain in the facility's operating record a written description of the operating procedures used to maintain the integrity of areas without secondary containment?						
D-3c(1) <u>Waiver From Secondary Containment Requirements:</u> OAC 3745-205-101 (E)						
Does the owner or operator wish that the director waive the requirements for secondary containment for a permitted containment building?						
If yes, is it demonstrated in the permit, notwithstanding any other provisions of OAC Rules 3745-205-100 to 3745-205-102, that:						

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(1) The only free liquids in the unit are limited amounts of dust suppression liquids required to meet occupational health and safety requirements?						
(2) Containment of managed wastes and liquids can be assured without a secondary containment system?						