Pollution Control Agency

Adopted Permanent Rules Relating to Hazardous Waste; Tanks

Rules as Adopted

7001.0560 GENERAL INFORMATION REQUIREMENTS FOR PART B OF APPLICATION.

Part B of the application must contain the following information:

A. to D. [Unchanged.]

E. A copy of the inspection schedule required by part 7045.0452, subpart 5, item B, including, if applicable, the information set forth in parts 7045.0526, subpart 5; 7045.0528, subparts 5 and 7; 7045.0532, subpart 5; 7045.0534, subparts 5 and 6; 7045.0536, subpart 4; 7045.0538, subpart 5; and 7045.0542, subpart 7.

F. to K. [Unchanged.]

L. A copy of the closure plan and, where applicable, the post-closure plan required by parts 7045.0486, 7045.0490, and 7045.0528, subpart 9, including, if applicable, the specific information in parts 7045.0526, subpart 9; 7045.0528, subpart 9; 7045.0532, subpart 7; 7045.0534, subpart 7; 7045.0536, subpart 8; 7045.0538, subpart 7; and 7045.0542, subpart 8.

M. to U. [Unchanged.]

7001.0580 PART B INFORMATION REQUIREMENTS FOR STORAGE OR TREATMENT TANKS.

Except as otherwise provided in part 7045.0528, subpart 1, if the applicant proposes to use tanks to store or treat hazardous waste, the applicant shall furnish the following information, in writing, in addition to the information required by part 7001.0560:

A. an assessment that is reviewed and certified by an independent, qualified, registered professional engineer as to the structural integrity and suitability for handling hazardous waste of each tank system, as required under part 7045.0528,

subparts 2 and 3;

B. the dimensions and capacity of each tank;

C. a description of feed systems, safety cutoff, bypass systems, and pressure controls such as vents for each tank;

D. a diagram of piping, instrumentation, and process flow for each tank system;

E. a description of materials and equipment used to provide external corrosion protection, as required under part 7045.0528, subpart 3, item A, subitem (3);

F. for new tank systems, a detailed description of how the tank systems will be installed in compliance with part 7045.0528, subpart 3, items B to E;

G. detailed plans and description of how the secondary containment system for each tank system is or will be designed, constructed, and operated to meet the requirements of part 7045.0528, subpart 4;

H. for tank systems for which a petition from the requirements of part 7045.0528, subpart 4, is sought, as provided in part 7045.0075, subparts 6 and 7:

(1) detailed plans and engineering and hydrogeologic reports, as appropriate, describing alternate design and operating practices that will, in conjunction with location aspects, prevent the migration of any hazardous waste or hazardous constituents into the ground water or surface water during the life of the facility, or

(2) a detailed assessment of the substantial present and potential hazards posed to human health or the environment should a release enter the environment;

I. description of controls and practices to prevent spills and overflows, as required under part 7045.0528, subpart 6, item B; and

J. for tank systems in which ignitable, reactive, or incompatible wastes are to be stored or treated, a description of how operating procedures and tank system and facility design will achieve compliance with the requirements of part 7045.0528,

subparts 10 and 11.

7001.0650 INTERIM STATUS.

Subpart 1. to 3. [Unchanged.]

Subp. 4. **Prohibitions.** During the interim status period, an owner or operator shall not:

A. treat, store, or dispose of a hazardous waste not specified in Part A of the application;

B. employ processes not specified in Part A of the permit application;

C. exceed the design capacities specified in Part A of the application; or

D. alter a hazardous waste facility in a manner that amounts to a reconstruction of the facility. For the purpose of this part, reconstruction occurs when the capital investment in the modification of the facility exceeds 50 percent of the capital cost of a comparable new hazardous waste facility. Reconstruction does not include changes made solely for the purpose of complying with the requirements of part 7045.0628, subparts 4 and 5, for tanks and ancillary equipment.

Subp. 5. to 7. [Unchanged.]

7045.0020 DEFINITIONS.

Subpart 1. **Scope.** As used in this chapter, the following words shall have the meanings given them.

Subp. 1a. **Aboveground tank.** "Aboveground tank" means a device meeting the definition of "tank" in subpart 90 and that is situated in such a way that the entire surface area of the tank is completely above the plane of the adjacent surrounding surface and the entire surface area of the tank, including the tank bottom, is able to be visually inspected.

Subp. 2. to 4. [Unchanged.]

Subp. 4a. **Ancillary equipment.** "Ancillary equipment" means any device including, but not limited to, such devices as piping, fittings, flanges, valves, and pumps, that is used to distribute, meter, or control the flow of hazardous waste from its point of generation to a storage or treatment tank, between

hazardous waste storage and treatment tanks to a point of disposal on site, or to a point of shipment for disposal off site.

Subp. 5. to 9. [Unchanged.]

Subp. 9a. **Component.** "Component" means either the tank or ancillary equipment of a tank system.

Subp. 10. to 13. [Unchanged.]

Subp. 13a. **Corrosion expert.** "Corrosion expert" means a person who, by reason of his knowledge of the physical sciences and the principles of engineering and mathematics, acquired by a professional education and related practical experience, is qualified to engage in the practice of corrosion control on buried or submerged metal piping systems and metal tanks. Such a person must be certified as being qualified by the National Association of Corrosion Engineers (NACE) or be a registered professional engineer who has certification or licensing that includes education and experience in corrosion control on buried or submerged metal piping systems and metal tanks.

Subp. 14. to 23. [Unchanged.]

Subp. 23a. **Existing tank system or existing component.** "Existing tank system" or "existing component" means a tank system or component that is used for the storage or treatment of hazardous waste and that is in operation, or for which installation has commenced on or before July 14, 1986. Installation will be considered to have commenced if the owner or operator has obtained all federal, state, and local approvals or permits necessary to begin physical construction of the site or installation of the tank system and if either (1) a continuous on-site physical construction or installation program has begun, or (2) the owner or operator has entered into contractual obligations, which cannot be canceled or modified without substantial loss, for physical construction of the site or installation of the tank system to be completed within a reasonable time.

Subp. 24. to 43a. [Unchanged.]

Subp. 43b. **Inground tank.** "Inground tank" means a device

meeting the definition of "tank" in subpart 90 whereby a portion of the tank wall is situated to any degree within the ground, thereby preventing visual inspection of that external surface area of the tank that is in the ground.

Subp. 44. and 45. [Unchanged.]

Subp. 45a. **Installation inspector.** "Installation inspector" means a person who, by reason of his knowledge of the physical sciences and the principles of engineering, acquired by a professional education and related practical experience, is qualified to supervise the installation of tank systems.

Subp. 46. to 51. [Unchanged.]

Subp. 51a. **Leak-detection system.** "Leak-detection system" means a system capable of detecting the failure of either the primary or secondary containment structure or the presence of a release of hazardous waste or accumulated liquid in the secondary containment structure. Such a system must employ operational controls, such as daily visual inspections for releases into the secondary containment system of aboveground tanks, or consist of an interstitial monitoring device designed to detect continuously and automatically the failure of the primary or secondary containment structure or the presence of a release of hazardous waste into the secondary containment structure.

Subp. 52. to 59. [Unchanged.]

Subp. 59a. **New tank system or new tank component.** "New tank system" or "new tank component" means a tank system or component that will be used for the storage or treatment of hazardous waste and for which installation has commenced after July 14, 1986. However, for purposes of obtaining approval for a petition pursuant to part 7045.0075, subpart 7, a new tank system is one for which construction commences after July 14, 1986.

Subp. 59b. **Onground tank.** "Onground tank" means a device meeting the definition of "tank" in subpart 90 and that is situated in such a way that the bottom of the tank is on the same level as the adjacent surrounding surface so that the

external tank bottom cannot be visually inspected.

Subp. 60. to 87. [Unchanged.]

Subp. 87a. **Sump.** "Sump" means any pit or reservoir that meets the definition of "tank" and those troughs or trenches connected to it that serves to collect hazardous waste for transport to hazardous waste storage, treatment, or disposal facilities.

Subp. 88. to 90. [Unchanged.]

Subp. 90a. **Tank system.** "Tank system" means a hazardous waste storage or treatment tank and its associated ancillary equipment and containment system.

Subp. 91. to 98. [Unchanged.]

Subp. 98a. **Underground tank.** "Underground tank" means a device meeting the definition of "tank" in subpart 90 whose entire surface area is totally below the surface of and covered by the ground.

Subp. 98b. **Unfit-for-use tank system.** "Unfit-for-use tank system" means a tank system that has been determined through an integrity assessment or other inspection to be no longer capable of storing or treating hazardous waste without posing a threat of release of hazardous waste to the environment.

Subp. 99. to 108. [Unchanged.]

Subp. 109. **Zone of engineering control.** "Zone of engineering control" means an area under the control of the owner or operator that, upon detection of a hazardous waste release, can be readily cleaned up before the release of hazardous waste or hazardous constituents to ground water or surface water.

7045.0075 PETITIONS.

Subpart 1. **Petitions for equivalent testing or analytical methods.** Any person seeking to use a testing or analytical method other than those described in parts 7045.0100 to 7045.0141, 7045.0450 to 7045.0544, or 7045.0552 to 7045.0642 may petition under these provisions. The person must demonstrate to the satisfaction of the commissioner that the proposed method is

equal to or superior to the corresponding method prescribed in parts 7045.0100 to 7045.0141, 7045.0450 to 7045.0544, or 7045.0552 to 7045.0642 in terms of its sensitivity, accuracy, precision, and reproducibility. Each petition must include:

A. to G. [Unchanged.]

After receiving a petition for an equivalent testing or analytical method, the commissioner may request any additional information on the proposed method which the commissioner may reasonably require to evaluate the method.

Subp. 2. to 5. [Unchanged.]

Subp. 6. **Petition for alternate design or operating practices for secondary containment of tank systems.** A person may submit a petition to the commissioner for approval to use alternate design or operating practices in lieu of the requirements of parts 7045.0528, subpart 4, and 7045.0628, subpart 4. The commissioner's decision shall be based on a demonstration by the petitioner that the alternate design and operating practices, together with location characteristics, will prevent the migration of any hazardous wastes or hazardous constituents into surface and ground water as effectively as the secondary containment requirements of parts 7045.0528, subpart 4, and 7045.0628, subpart 4, during the active life of the tank system.

A. In order to determine equivalent protection, the commissioner shall consider:

(1) the nature and quantity of the wastes;

(2) the proposed alternate design and operating practices;

(3) the hydrogeologic setting of the tank system, including the thickness of soils present between the tank system and ground water; and

(4) factors that would influence the quality and mobility of the hazardous constituents and the potential for them to migrate to ground water or surface water.

B. The following procedures must be followed for submittal of a petition for alternate design or operating

practices for secondary containment of permitted tank systems.

(1) The commissioner must be notified in writing by the owner or operator that he or she intends to conduct and submit a demonstration for a petition from secondary containment for existing tank systems. This notification must be submitted at least 24 months before the date that secondary containment must be provided in accordance with part 7045.0528, subpart 4, item A. For new tank systems, this notification must be submitted at least 30 days before entering into a contract for installation.

(2) As part of the notification, the owner or operator must also submit to the commissioner a description of the steps necessary to conduct the demonstration and a timetable for completing each of the steps. The demonstration must address each of the factors listed in item A.

(3) The demonstration for a petition must be completed within 180 days after notifying the commissioner of an intent to conduct the demonstration.

(4) If a petition is granted under this subpart, the commissioner will require the permittee to construct and operate the tank system in the manner that was demonstrated to meet the requirements for the petition.

C. The following procedures must be followed for submittal of a petition for alternate design or operating practices for secondary containment of interim status tank facilities and generator's tanks.

(1) The owner or operator must notify the commissioner in writing that a demonstration will be conducted and submitted to obtain approval to use alternate design or operating practices. For existing tank systems this notification must be submitted 24 months before the date that secondary containment must be provided in accordance with part 7045.0628, subpart 4, item A. For new tank systems this notification must be submitted 30 days before entering into a contract for installation of the tank system.

(2) As part of the notification, the owner or

operator must also submit a description of the steps necessary to conduct the demonstration and a timetable for completing each of the steps. This description must be submitted to the commissioner and must address each of the factors listed in item A.

(3) The demonstration for a petition must be completed and submitted to the commissioner within 180 days after notifying the commissioner of the intent to conduct the demonstration.

(4) The commissioner will notify the public, through a newspaper notice, of the availability of the demonstration for a petition. The notice shall be placed in a daily or weekly major local newspaper of general circulation and shall provide at least 30 days from the date of the notice for the public to review and comment on the demonstration. Public comments shall be made in accordance with the procedures and requirements in part 7001.0110. If public comments request that a contested case hearing be held, the commissioner shall review the requests using the standards in part 7001.0120 or 7001.0130, whichever applies. If a public information meeting or contested case hearing is held, the commissioner shall give notice of the hearing or meeting in accordance with the requirements of part 7001.0120 or 7001.0130, whichever applies, except that the commissioner shall give notice at least 30 days before the date of the hearing or meeting. In addition, notice of the hearing or meeting may be given at the same time as the notice of availability of the demonstration for a petition.

(5) When the commissioner approves or disapproves a petition request, the owner or operator will be notified in writing of the petition decision. The commissioner will also notify each person who submitted written comments or requested notice of the petition decision.

D. Upon approval of a petition for alternate design or operating practices, as provided in item A, the owner or operator of a tank system must comply with the following requirements in the event of a release of hazardous waste from

the primary tank system that has not migrated beyond the zone of engineering control. The owner or operator must:

(1) comply with the requirements of part 7045.0528, subpart 8, except for item D; or for interim status facilities and generator's tanks, the requirements of part 7045.0628, subpart 8, except for item D;

(2) decontaminate or remove contaminated soil to the extent necessary to enable the tank system for which the variance was granted to resume operation with the capability for the detection of releases at least equivalent to the capability it had before the release, and prevent the migration of hazardous waste or hazardous constituents to ground water or surface water; and

(3) if contaminated soil cannot be removed or decontaminated in accordance with subitem (2), comply with the requirement of part 7045.0528, subpart 9, item B; or for interim status facilities or generator's tanks, the requirement of part 7045.0628, subpart 9, item B.

E. Upon approval of a petition for alternate design or operating practices under item A, the owner or operator of a tank system must comply with the following requirements in the event of a release of hazardous waste from the primary tank system that has migrated beyond the zone of engineering control. The owner or operator must:

(1) Comply with the requirements of part 7045.0528, subpart 8, items A to D; or for interim status facilities or generator's tanks, the requirements of part 7045.0628, subpart 8, items A to D.

(2) Prevent the migration of hazardous waste or hazardous constituents to ground water or surface water, if possible, and decontaminate or remove contaminated soil. If contaminated soil cannot be decontaminated or removed or if ground water has been contaminated, the owner or operator must comply with the requirements of subpart 9, item B; or for interim status facilities or generator's tanks, the requirements of part 7045.0628, subpart 9, item B.

(3) If repairing, replacing, or reinstalling the tank system, provide secondary containment in accordance with part 7045.0528, subpart 4; or for interim status facilities or generator's tanks, part 7045.0628, subpart 4, reapply for a variance from secondary containment and meet the requirements for new tank systems in part 7045.0528, subpart 3, if the tank system is replaced. The owner or operator must comply with these requirements even if contaminated soil can be decontaminated or removed and ground water or surface water has not been contaminated.

Subp. 7. **Petition for demonstration of no substantial hazard from tank systems.** A person may submit a petition to the agency for an exemption from the secondary containment requirements of parts 7045.0528, subpart 4, and 7045.0628, subpart 4. The agency's decision shall be based on a demonstration that, in the event of a release that migrates to ground water or surface water, no substantial present or potential hazard will be posed to human health or the environment. No petition may be granted under this subpart for new underground tank systems.

A. In order to determine no substantial present or potential hazard, the agency shall consider the following factors.

(1) The potential adverse effects on ground water, surface water, and land quality, taking into account:

(a) the physical and chemical characteristics of the waste in the tank system, including its potential for migration;

(b) the hydrogeologic characteristics of the facility and surrounding land;

(c) the potential for health risks caused by human exposure to waste constituents;

(d) the potential for damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents; and

(e) the persistence and permanence of the

potential adverse effects.

(2) The potential adverse effects of a release on ground water quality, taking into account:

(a) the quantity and quality of ground water and the direction of ground water flow;

(b) the proximity and withdrawal rates of ground water users;

(c) the current and future uses of ground water in the area; and

(d) the existing quality of ground water, including other sources of contamination and their cumulative impact on ground water quality.

(3) The potential adverse effects of a release on surface water quality, taking into account:

(a) the quantity and quality of ground water and the direction of ground water flow;

(b) the patterns of rainfall in the region;

(c) the proximity of the tank system to surface waters;

(d) the current and future uses of surface waters in the area and any water quality standards established for these surface waters;

(e) the existing quality of surface water, including other sources of contamination; and

(f) the cumulative impact on surface water quality.

(4) The potential adverse effects of a release on the land surrounding the tank system, taking into account:

(a) the patterns of rainfall in the region; and

(b) the current and future uses of the surrounding land.

B. The following procedures must be followed for the submittal of a petition for an exemption from secondary containment for permitted facilities.

(1) The agency must be notified in writing by the

owner or operator that he or she intends to conduct and submit a demonstration to be exempted from secondary containment requirements. For existing tank systems, this notification must be submitted at least 24 months before the date secondary containment must be provided in accordance with part 7045.0528, subpart 4, item A. For new aboveground, onground, or inground tank systems, this notification must be submitted at least 30 days before entering into a contract for installation.

(2) As part of the notification, the owner or operator must also submit to the agency a description of the steps necessary to conduct the demonstration and a timetable for completing each of the steps. The demonstration must address each of the factors listed in item A.

(3) The demonstration for a petition must be completed within 180 days after notifying the agency of the intent to conduct the demonstration.

(4) If a petition is granted under this subpart, the agency will require the permittee to construct and operate the tank system in the manner that was demonstrated to meet the requirements for the petition.

C. The following procedures must be followed for submittal of a petition for an exemption from secondary containment for interim status or generator's tanks.

(1) The owner or operator must notify the agency in writing that a demonstration will be conducted and submitted to obtain approval to use alternate design or operating practices. For existing tank systems, this notification must be submitted 24 months before the date that secondary containment must be provided in accordance with part 7045.0628, subpart 4, item A. For new aboveground, onground, or inground tank systems, this notification must be submitted 30 days before entering into a contract for installation of the tank system.

(2) As part of the notification, the owner or operator must also submit a description of the steps necessary to conduct the demonstration and a timetable for completing each of the steps. This description must be submitted to the agency

and must address each of the factors listed in item A.

(3) The demonstration for a petition must be completed and submitted to the agency within 180 days after notifying the agency of the intent to conduct the demonstration.

(4) The agency will notify the public, through a newspaper notice, of the availability of the demonstration for a petition. The notice shall be placed in a daily or weekly major local newspaper of general circulation and shall provide at least 30 days from the date of the notice for the public to review and comment on the demonstration. Public comments shall be made in accordance with the procedures and requirements in part 7001.0110. If public comments request that a contested case hearing be held, the agency shall review the requests using the standards in part 7001.0120 or 7001.0130, whichever applies. If a public information meeting or contested case hearing is held, the agency shall give notice of the hearing or meeting in accordance with the requirements of part 7001.0120 or 7001.0130, whichever applies, except that the agency shall give notice at least 30 days before the date of the hearing or meeting. In addition, notice of the hearing or meeting may be given at the same time as the notice of availability of the demonstration for a petition.

(5) When the agency approves or disapproves the petition request within 90 days, the owner or operator will be notified in writing of the petition decision. The agency will also notify each person who submitted written comments or requested notice of the petition decision.

7045.0120 EXEMPT WASTES.

The following wastes may be stored, labeled, transported, treated, processed, and disposed of without complying with the requirements of this chapter:

A. to P. [Unchanged.]

Q. Secondary materials that are reclaimed and returned to the original process or processes in which they were generated where they are reused in the production process

provided that:

(1) only tank storage is involved and the entire process, through completion of reclamation, is closed by being entirely connected with pipes or other comparable enclosed means of conveyance;

(2) reclamation does not involve controlled flame combustion such as occurs in boilers, industrial furnaces, or incinerators;

(3) the secondary materials are never accumulated in such tanks for over 12 months without being reclaimed; and

(4) the reclaimed material is not used to produce a fuel, or used to produce products that are used in a manner constituting disposal.

7045.0219 SPECIAL REQUIREMENTS FOR SMALL QUANTITY GENERATORS OF HAZARDOUS WASTE.

Subpart 1. to 4. [Unchanged.]

Subp. 5. **Management requirements.**

A. Small quantity generators shall comply with the following requirements of this chapter:

(1) to (6) [Unchanged.]

(7) parts 7045.0626 and 7045.0629.

B. and C. [Unchanged.]

Subp. 6. [Unchanged.]

7045.0292 ACCUMULATION OF HAZARDOUS WASTE.

Subpart 1. **When allowed without a permit.** A generator may accumulate hazardous waste on-site without a permit or without having interim status if:

A. [Unchanged.]

B. the waste is placed in containers which meet the standards of part 7045.0270, subpart 4 and are managed in accordance with part 7045.0626, subparts 4 to 6; or in tanks provided the generator complies with the requirements of part 7045.0628 except part 7045.0628, subpart 9, item C, and subpart 12;

C. to H. [Unchanged.]

Subp. 2. to 4. [Unchanged.]

7045.0452 GENERAL FACILITY STANDARDS.

Subpart 1. to 4. [Unchanged.]

Subp. 5. **General inspection requirements.** General inspection requirements include the following:

A. and B. [Unchanged.]

C. The frequency of inspection may vary for the items on the schedule. However, it must be based on the rate of possible deterioration of the equipment and the probability of an environmental or human health incident if the deterioration or malfunctions or any operator error goes undetected between inspections. Areas subject to spills, such as loading and unloading areas, must be inspected daily when in use. The inspection schedule must include the terms and frequencies called for in parts 7045.0526, subpart 5; 7045.0528, subparts 4, 5, and 7; 7045.0532, subpart 5; 7045.0534, subparts 5 and 6; 7045.0538, subpart 5; and 7045.0542, subpart 7, where applicable. The inspection schedule must be submitted with the permit application. The commissioner shall evaluate the schedule along with the rest of the application to ensure that it adequately protects human health and the environment. As part of this review, the commissioner may modify or amend the schedule as necessary.

D. and E. [Unchanged.]

7045.0478 OPERATING RECORD.

Subpart 1. and 2. [Unchanged.]

Subp. 3. **Record information.** All of the following information must be recorded, as it becomes available, and maintained in the operating record until closure of the facility:

A. to G. [Unchanged.]

H. Monitoring, testing, or analytical data where required by parts 7045.0484; 7045.0528, subparts 2, 4, 5, and 7; 7045.0532, subpart 5; 7045.0534, subparts 5 and 6; 7045.0536, subparts 5, 6, and 8; 7045.0538, subparts 5 and 6; and 7045.0542, subpart 7.

I. and J. [Unchanged.]

7045.0490 POST-CLOSURE.

Subpart 1. **Scope.** Except as otherwise provided in part 7045.0450, the provisions of subparts 2, 3, and parts 7045.0492 to 7045.0496 apply to:

A. the owner or operator of a hazardous waste disposal facility;

B. the owner or operator of a waste pile or surface impoundment that is required by part 7045.0532, subpart 7, or 7045.0534, subpart 7, to have a post-closure plan; and

C. the owner or operator of tank systems that are required under part 7045.0528, subpart 9, to meet the requirements for landfills.

Subp. 2. and 3. [Unchanged.]

7045.0498 FINANCIAL REQUIREMENTS.

Subpart 1. **Scope.** Parts 7045.0502, 7045.0504, and 7045.0518 to 7045.0524 apply to owners and operators of all hazardous waste facilities, except as provided otherwise in this part or in part 7045.0450, subpart 3.

Parts 7045.0506 and 7045.0508 apply only to owners and operators of:

A. disposal facilities;

B. waste piles, and surface impoundments from which the owner or operator intends to remove the wastes at closure, to the extent that he or she is required to develop a contingent closure and post-closure care plan in parts 7045.0532, subpart 7; and 7045.0534, subpart 7; and

C. tank systems that are required under part 7045.0528, subpart 9, to meet the requirements for landfills.

Parts 7045.0512 to 7045.0516 apply only to owners and operators of facilities that treat, store, or dispose of hazardous waste in surface impoundments, waste piles, land treatment units, or landfills.

The state and the federal government are exempt from the requirements of parts 7045.0498 to 7045.0524.

Subp. 2. [Unchanged.]

7045.0528 TANKS.

Subpart 1. **Scope.** This part applies to owners and operators of facilities that use tanks to treat or store hazardous waste, except as part 7045.0450, and items A and B provide otherwise.

A. Tanks that are used to store or treat hazardous waste that contains no free liquids and are situated inside a building with an impermeable floor are exempted from the requirements in subparts 4 and 5. To demonstrate the absence or presence of free liquids in the stored or treated waste, EPA Method 9095 (Paint Filter Liquids Test) as described in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods" (EPA Publication No. SW-846) must be used.

B. Tanks, including sumps, as defined in part 7045.0020, that serve as part of a secondary containment system to collect or contain releases of hazardous wastes are exempt from the requirements in subparts 4 and 5.

Subp. 2. **Assessment of existing tank system's integrity.** The following requirements apply to existing tank systems:

A. For each existing tank system that does not have secondary containment meeting the requirements of subparts 4 and 5, the owner or operator must determine whether the tank system is leaking or is unfit for use. Except as provided in item C, the owner or operator must obtain and keep on file at the facility a written assessment reviewed and certified by an independent, qualified registered professional engineer, that attests to the tank system's integrity. The certification must include the statements in parts 7001.0070 and 7001.0540.

B. This assessment must determine that the tank system is adequately designed and has sufficient structural strength and compatibility with the wastes to be stored or treated to ensure that it will not collapse, rupture, or fail. This assessment must consider the following:

(1) design standards, if available, according to

which the tank and ancillary equipment were constructed;

(2) hazardous characteristics of the waste that has been and will be handled;

(3) existing corrosion protection measures;

(4) documented age of the tank system, if available (otherwise, an estimate of the age); and

(5) results of a leak test, internal inspection, or other tank integrity examination. For nonenterable underground, inground, or onground tanks, the assessment must include a leak test that is capable of taking into account the effects of temperature variations, tank end deflection, vapor pockets, and high water table effects. For other than nonenterable underground, inground, or onground tanks and for ancillary equipment, this assessment must include either a leak test, as described above, or other integrity examination, that is certified by an independent, qualified, registered professional engineer, that addresses cracks, leaks, corrosion, and erosion. The certification must include the statements in parts 7001.0070 and 7001.0540.

C. Owners or operators of tank systems that were required to conduct this assessment by Code of Federal Regulations, title 40, section 264.191(a), must conduct and keep this assessment on file as required by that section. Owners or operators of all other existing tank systems must conduct this assessment within 18 months of the effective date of this part. Owners or operators of tank systems that store or treat materials that become hazardous wastes must conduct this assessment within 12 months after the date the waste becomes a hazardous waste.

D. If, as a result of the assessment conducted in accordance with item A, a tank system is found to be leaking or unfit for use, the owner or operator must comply with the requirements of subpart 8.

Subp. 3. **Design and installation of new tank systems or components.** New tank systems and components must be designed as follows:

A. Owners or operators of new tank systems or components must obtain and submit to the commissioner at time of submittal of Part B information, a written assessment, reviewed and certified by an independent, qualified registered professional engineer, attesting that the tank system has sufficient structural integrity and is acceptable for the storing and treating of hazardous waste. The certification must include the statements in parts 7001.0070 and 7001.0540. The assessment must show that the foundation, structural support, seams, connections, and pressure controls, if applicable, are adequately designed and that the tank system has sufficient structural strength, compatibility with the waste to be stored or treated, and corrosion protection to ensure that it will not collapse, rupture, or fail. This assessment must include the following information:

(1) design standards according to which tanks and/or the ancillary equipment are constructed;

(2) hazardous characteristics of the waste to be handled;

(3) for new tank systems or components in which the external shell of a metal tank or any external metal component of the tank system will be in contact with the soil or with water, a determination by a corrosion expert of the factors affecting the potential for corrosion, including soil moisture content, soil pH, soil sulfides level, soil resistivity, structure to soil potential, influence of nearby underground metal structures such as piping, existence of stray electric current, and existing corrosion-protection measures such as coating and cathodic protection. The determination must also address the type and degree of external corrosion protection that are needed to ensure the integrity of the tank system during the use of the tank system or component. This protection must consist of corrosion-resistant materials of construction such as special alloys or fiberglass reinforced plastic; corrosion-resistant coating, such as epoxy or fiberglass, with cathodic protection such as impressed current or sacrificial

anodes; or electrical isolation devices such as insulating joints, or flanges;

(4) for underground tank system components that are likely to be adversely affected by vehicular traffic, a determination of design or operational measures that will protect the tank system against potential damage; and

(5) design considerations to ensure that tank foundations will maintain the load of a full tank, tank systems will be anchored to prevent flotation or dislodgement where the tank system is placed in a saturated zone, and tank systems will withstand the effects of frost heave.

B. The owner or operator of a new tank system must ensure that proper handling procedures are adhered to in order to prevent damage to the system during installation. Before covering, enclosing, or placing a new tank system or component in use, an independent, qualified installation inspector or an independent, qualified, registered professional engineer, either of whom is trained and experienced in the proper installation of tank systems or components, must inspect the system for the presence of weld breaks, punctures, scrapes of protective coatings, cracks, corrosion, or other structural damage or inadequate construction or installation. All discrepancies must be remedied before the tank system is covered, enclosed, or placed in use.

C. New tank systems or components that are placed underground and that are backfilled must be provided with a backfill material that is a noncorrosive, porous, homogeneous substance and that is installed so that the backfill is placed completely around the tank and compacted to ensure that the tank and piping are fully and uniformly supported.

D. All new tanks and ancillary equipment must be tested for tightness before being covered, enclosed, or placed in use. If a tank system is found not to be tight, all repairs necessary to remedy the leaks in the system must be performed before the tank system is covered, enclosed, or placed into use.

E. Ancillary equipment must be supported and

protected against physical damage and excessive stress due to settlement, vibration, expansion, or contraction.

F. The owner or operator must provide the type and degree of corrosion protection recommended by an independent corrosion expert, based on the information provided under item A, subitem (3), or other corrosion protection if the commissioner believes other corrosion protection is necessary to ensure the integrity of the tank system during use of the tank system. The installation of a corrosion protection system that is field fabricated must be supervised by an independent corrosion expert to ensure proper installation.

G. The owner or operator must obtain and keep on file at the facility written statements by those persons required to certify the design of the tank system and supervise the installation of the tank system in accordance with the requirements of items A to F that attest that the tank system was properly designed and installed and that repairs under items B and D were performed. The certification must include the statements in parts 7001.0070 and 7001.0540.

Subp. 4. **Containment and detection of releases.** The following requirements apply to the containment and detection of releases from tanks:

A. In order to prevent the release of hazardous waste or hazardous constituents to the environment, secondary containment that meets the requirements of this part must be provided, except as provided in item H:

(1) for new tank systems or components, before they are put into service;

(2) for existing tank systems, within five years of the effective date of these rules, except as provided in subitem (3);

(3) for tank systems that are known to be more than 15 years old or that will reach 15 years of age before the time provided in subitem (2), by January 12, 1989;

(4) for tank systems that store or treat materials that become hazardous wastes, within two years of the

date the material becomes hazardous waste; and

(5) for all existing tanks used to store or treat EPA hazardous waste Nos. F020, F021, F022, F023, F026, F027, and F028, by January 12, 1989.

B. Secondary containment systems must be:

(1) designed, installed, and operated to prevent any migration of wastes or accumulated liquid out of the system to the soil, ground water, or surface water at any time during the use of the tank system; and

(2) capable of detecting and collecting releases and accumulated liquids until the collected material is removed.

C. To meet the requirements of item B, secondary containment systems must be:

(1) constructed of or lined with materials that are compatible with the waste to be placed in the tank system and must have sufficient strength and thickness to prevent failure owing to pressure gradients, including static head and external hydrological forces; physical contact with the waste to which it is exposed; climatic conditions; and the stress of daily operation, including stresses from nearby vehicular traffic;

(2) placed on a foundation or base capable of providing support to the secondary containment system, resistance to pressure gradients above and below the system, and capable of preventing failure due to settlement, compression, or uplift;

(3) provided with a leak-detection system that is designed and operated so that it will detect the failure of either the primary or secondary containment structure or the presence of any release of hazardous waste or accumulated liquid in the secondary containment system within 24 hours, or at the earliest practicable time if the owner or operator can demonstrate to the commissioner that existing detection technologies or site conditions will not allow detection of a release within 24 hours; and

(4) sloped or otherwise designed or operated to

drain and remove liquids resulting from leaks, spills, or precipitation. Spilled or leaked waste and accumulated precipitation must be removed from the secondary containment system within 24 hours, or in as timely a manner as is possible to prevent harm to human health and the environment, if the owner or operator can demonstrate to the commissioner that removal of the released waste or accumulated precipitation cannot be accomplished within 24 hours.

D. Unless a petition is granted under part 7045.0075, subpart 7, secondary containment for tanks must include one or more of the following devices:

(1) a liner external to the tank;

(2) a vault;

(3) a double-walled tank; or

(4) an equivalent device as approved by the commissioner under part 7045.0075, subpart 6.

E. In addition to the requirements of items B, C, and D, an external liner system of secondary containment systems must be:

(1) designed or operated to contain 100 percent of the capacity of the largest tank within its boundary;

(2) designed and operated to prevent run-on or infiltration of precipitation into the secondary containment system unless the collection system has sufficient excess capacity to contain run-on or infiltration. The additional capacity must be sufficient to contain precipitation from a 25-year, 24-hour rainfall event;

(3) free of cracks or gaps; and

(4) designed and installed to surround the tank completely and to cover all surrounding earth likely to come into contact with the waste if the waste is released from the tank; that is, capable of preventing lateral as well as vertical migration of the waste.

F. In addition to the requirements of items B, C, and D, a vault system must be:

(1) designed or operated to contain 100 percent

of the capacity of the largest tank within its boundary;

(2) designed or operated to prevent run-on or infiltration of precipitation into the secondary containment system unless the collection system has sufficient excess capacity to contain run-on or infiltration. Such additional capacity must be sufficient to contain precipitation from a 25-year, 24-hour rainfall event;

(3) constructed with chemical-resistant water stops in place at all joints, if any;

(4) provided with an impermeable interior coating or lining that is compatible with the stored waste and that will prevent migration of waste into the concrete;

(5) provided with a means to protect against the formation and ignition of vapors within the vault, if the waste being stored or treated meets the definition of ignitable waste under part 7045.0131, or reactive waste under part 7045.0131 and may form an ignitable or explosive vapor; and

(6) provided with an exterior moisture barrier or be otherwise designed or operated to prevent migration of moisture into the vault if the vault is subject to hydraulic pressure.

G. In addition to the requirements of items B, C, and D, double-walled tanks must be:

(1) designed as an integral structure, that is, an inner tank completely enveloped within an outer shell, so that any release from the inner tank is contained by the outer shell;

(2) protected, if constructed of metal, from both corrosion of the primary tank interior and of the external surface of the outer shell; and

(3) provided with a built-in continuous leak detection system capable of detecting a release within 24 hours, or at the earliest practicable time, if the owner or operator can demonstrate to the commissioner, and the commissioner concludes, that the existing detection technology or site conditions would not allow detection of a release within 24

hours.

H. Ancillary equipment must be provided with secondary containment, such as trench, jacketing, or double-walled piping, that meets the requirements of items B and C, except for:

(1) aboveground piping, exclusive of flanges, joints, valves, and other connections, that are visually inspected for leaks on a daily basis;

(2) welded flanges, welded joints, and welded connections, that are visually inspected for leaks on a daily basis;

(3) sealless or magnetic coupling pumps that are visually inspected for leaks on a daily basis; and

(4) pressurized aboveground piping systems with automatic shut-off devices, such as excess flow check valves, flow metering shutdown devices, and loss of pressure actuated shut-off devices, that are visually inspected for leaks on a daily basis.

Subp. 5. **Requirements for tank systems.** All tank systems, until such time as secondary containment that meets the requirements of this part is provided, must comply with the following:

A. For nonenterable underground, inground, and onground tanks, a leak test that meets the requirements of subpart 2, item B, subitem (5), or other tank integrity method, as approved or required by the commissioner, must be conducted at least annually.

B. For other than nonenterable underground, inground, and onground tanks, the owner or operator must either conduct a leak test as in item A, or develop a schedule and procedure for an assessment of the overall condition of the tank system by an independent, qualified, registered professional engineer. The schedule and procedure must be adequate to detect obvious cracks, leaks, and corrosion or erosion that may lead to cracks and leaks. The owner or operator must remove the stored waste from the tank, if necessary, to allow the condition of all

internal tank surfaces to be assessed. The frequency of these assessments must be based on the material of construction of the tank and its ancillary equipment, the age of the system, the type of corrosion or erosion protection used, the rate of corrosion or erosion observed during the previous inspection, and the characteristics of the waste being stored or treated.

C. For underground, inground, and onground tanks, a test to detect tank wall thinning and to determine that the minimum tank wall thickness is maintained. The frequency of the inspections will be determined by the commissioner based on consideration of waste type, tank construction and materials, age of facility, and facility management practices.

D. For ancillary equipment, a leak test or other integrity assessment as approved by the commissioner, must be conducted at least annually.

E. The owner or operator must maintain on file at the facility a record of the results of the assessments conducted in accordance with items A to D.

F. If a tank system or component is found to be leaking or unfit for use as a result of the leak test or assessment in items A to D, the owner or operator must comply with the requirements of subpart 8.

Subp. 6. **General operating requirements.**

A. Hazardous wastes or treatment reagents must not be placed in a tank system if they could cause the tank, its ancillary equipment, or the containment system to rupture, leak, corrode, or otherwise fail.

B. The owner or operator must use appropriate controls and practices to prevent spills and overflows from tank or containment systems. These include:

(1) spill prevention controls such as check valves and dry disconnect couplings;

(2) overfill prevention controls such as level sensing devices, high level alarms, automatic feed cutoff, or bypass to a standby tank; and

(3) maintenance of sufficient freeboard in

uncovered tanks to prevent overtopping by wave or wind action or by precipitation.

C. The owner or operator must comply with the requirements of subpart 8 if a leak or spill occurs in the tank system.

Subp. 7. **Inspections.** The following requirements apply to inspections:

A. The owner or operator must develop and follow a schedule and procedure for inspecting overfill controls.

B. The owner or operator must inspect at least once each operating day:

(1) aboveground portions of the tank system, if any, to detect corrosion or releases of waste;

(2) data gathered from monitoring and leak detection equipment, such as pressure or temperature gauges and monitoring wells, to ensure that the tank system is being operated according to its design; and

(3) the construction materials and the area immediately surrounding the externally accessible portion of the tank system, including the secondary containment system, such as dikes, to detect erosion or signs of releases of hazardous waste such as wet spots and dead vegetation.

C. The owner or operator must inspect cathodic protection systems, if present, according to the following schedule to ensure that they are functioning properly:

(1) the proper operation of the cathodic protection system must be confirmed within six months after initial installation and annually thereafter; and

(2) all sources of impressed current must be inspected and/or tested, as appropriate, at least bimonthly.

D. The owner or operator must document in the operating record of the facility an inspection of those items in items A to C.

Subp. 8. **Response to leaks or spills and disposition of leaking or unfit-for-use tank systems.** The owner or operator of a tank system or secondary containment system from which there

has been a leak or spill, or which is unfit for use, must satisfy the following requirements:

A. The owner or operator must immediately stop the flow of hazardous waste into the tank system or secondary containment system and inspect the system to determine the cause of the release.

B. Removal of waste from tank system or secondary containment system:

(1) If the release was from the tank system, the owner or operator must, within 24 hours after detection of the leak, or if the owner or operator demonstrates that it is not possible, at the earliest practicable time, remove as much of the waste as is necessary to prevent further release of hazardous waste to the environment and to allow inspection and repair of the tank system to be performed.

(2) If the material released was to a secondary containment system, all released materials must be removed within 24 hours or in as timely a manner as is possible to prevent harm to human health and the environment.

C. The owner or operator must immediately conduct a visual inspection of the release and, based upon that inspection:

(1) prevent further migration of the leak or spill to soils or surface water; and

(2) remove and properly dispose of any visible contamination of the soil or surface water.

D. Notification and reports.

(1) Any release to the environment must be reported to the commissioner within 24 hours of its detection.

(2) Within 30 days of detection of a release to the environment, a report containing the following information must be submitted to the commissioner. The report must include the likely route of migration of the release; the characteristics of the surrounding soil, including soil composition, geology, hydrogeology, and climate; and the results of any monitoring or sampling conducted in connection with the release, if available. If sampling or monitoring data relating

to the release are not available within 30 days, these data must be submitted to the commissioner as soon as they become available. The report must also address the proximity to downgradient drinking water, surface water, and populated areas and a description of response actions taken or planned.

(3) A leak or spill of hazardous waste that is less than or equal to a quantity of one pound and immediately contained and cleaned up is exempt from the requirements of subitem (2).

E. Provision of secondary containment, repair, or closure.

(1) Unless the owner or operator satisfies the requirements of subitems (2) to (4), the tank system must be closed in accordance with subpart 9.

(2) If the cause of the release was a spill that has not damaged the integrity of the system, the owner or operator may return the system to service as soon as the released waste is removed and repairs, if necessary, are made.

(3) If the cause of the release was a leak from the primary tank system into the secondary containment system, the system must be repaired before returning the tank system to service.

(4) If the source of the release was a leak to the environment from a component of a tank system without secondary containment, the owner or operator must provide the component of the system from which the leak occurred with secondary containment that satisfies the requirements of subparts 4 and 5 before it can be returned to service, unless the source of the leak is an aboveground portion of a tank system that can be inspected visually. If the source is an aboveground component that can be inspected visually, the component must be repaired and may be returned to service without secondary containment as long as the requirements of item F are satisfied. If a component is replaced to comply with the requirements of this subitem, that component must satisfy the requirements for new tank systems or components in subparts

3 to 5. Additionally, if a leak has occurred in any portion of a tank system component that is not readily accessible for visual inspection, such as the bottom of an inground or onground tank, the entire component must be provided with secondary containment in accordance with subparts 4 and 5 before being returned to use.

F. If the owner or operator has repaired a tank system in accordance with item E and the repair has been extensive, such as installation of an internal liner or repair of a ruptured primary containment or secondary containment vessel, the tank system must not be returned to service unless the owner or operator has obtained a certification by an independent, qualified, registered professional engineer that the repaired system is capable of handling hazardous wastes without release. This certification must be submitted to the commissioner before returning the tank system to use and must include the statements in parts 7001.0070 and 7001.0540.

Subp. 9. **Closure and post-closure care.** The requirements for closure and post-closure care of tank systems are as follows:

A. At closure of a tank system, the owner or operator must remove or decontaminate all waste residues, contaminated containment system components, such as liners, contaminated soils, and structures and equipment contaminated with waste, and manage them as hazardous waste unless it can be demonstrated that they are not a hazardous waste. The closure plan, closure activities, cost estimates for closure, and financial responsibility for tank systems must meet all of the requirements of parts 7045.0486 to 7045.0524.

B. If the owner or operator demonstrates that not all contaminated soils can be practicably removed or decontaminated as required in item A, then the owner or operator must close the tank system and perform post-closure care in accordance with the closure and post-closure care requirements of part 7045.0538, subpart 7. In addition, for the purposes of closure, post-closure, and financial responsibility, the tank system is then considered to be a landfill, and the owner or operator must

meet all of the requirements of parts 7045.0486 to 7045.0524.

C. If an owner or operator has a tank system that does not have secondary containment that meets the requirements of subpart 4, items B to F, and has not been granted a petition under part 7045.0075, subpart 6 or 7, then:

(1) the closure plan for the tank system must include both a plan for complying with item A and a contingent plan for complying with item B;

(2) a contingent post-closure plan for complying with item B must be prepared and submitted as part of the permit application;

(3) the cost estimates calculated for closure and post-closure care must reflect the costs of complying with the contingent closure plan and the contingent post-closure plan, if those costs are greater than the costs of complying with the closure plan prepared for the expected closure under item A;

(4) financial assurance must be based on the cost estimates in subitem (3); and

(5) for the purposes of the contingent closure and post-closure plans, the tank system is considered to be a landfill, and the contingent plans must meet all of the closure, post-closure, and financial responsibility requirements of parts 7045.0486 to 7045.0524.

Subp. 10. **Special requirements for ignitable or reactive waste.** Ignitable or reactive waste must not be placed in a tank unless:

A. the waste is treated, rendered, or mixed before or immediately after placement in the tank so that the resulting waste, mixture, or dissolved material no longer meets the definition of ignitable or reactive waste under part 7045.0131, subparts 2 and 5, and compliance with part 7045.0456, subpart 2 is maintained;

B. the waste is stored or treated in such a way that it is protected from any materials or conditions which may cause the waste to ignite or react; or

C. the tank is used solely for emergencies.

The owner or operator of a facility that treats or stores ignitable or reactive waste in a tank shall comply with the requirements for the maintenance of protective distances between the waste management area and any public ways, streets, alleys, or an adjoining property line that can be built upon, as required in the National Fire Protection Association's buffer zone requirements for tanks contained in Tables 2-1 to 2-6 of the Flammable and Combustible Liquids Code in the National Fire Codes, 1981 issued by the National Fire Protection Association (Quincy, Massachusetts, 1981). As required by part 7045.0458, the waste analysis plan must include analyses needed to comply with these special requirements for ignitable or reactive waste. Additional requirements for ignitable and reactive wastes are contained in part 7045.0456, subpart 1. Part 7045.0456, subpart 3 also requires waste analysis, trial tests, or other documentation to ensure compliance with part 7045.0456, subpart 2. As required by part 7045.0478, the owner or operator shall place the results of each waste analysis and trial test, and any documented information, in the operating record of the facility.

Subp. 11. **Special requirements for incompatible wastes.** Incompatible wastes or incompatible wastes and materials, must not be placed in the same tank, unless compliance with part 7045.0456, subpart 2 is maintained.

Hazardous waste must not be placed in a tank system that has not been decontaminated and which previously held an incompatible waste or material, unless compliance with part 7045.0456, subpart 2 is maintained. As required by part 7045.0458, the waste analysis plan must include analyses needed to comply with these special requirements for incompatible wastes. Part 7045.0456, subpart 3 also requires waste analyses, trial tests, or other documentation to ensure compliance with part 7045.0456, subpart 2. As required by part 7045.0478, the owner or operator shall place the results of each waste analysis and trial test, and any documented information, in the operating record of the facility.

Subp. 9. [See Repealer.]

7045.0556 GENERAL FACILITY STANDARDS.

Subpart 1. to 4. [Unchanged.]

Subp. 5. **General inspection requirements.** The following are the general inspection requirements:

A. The owner or operator shall inspect the facility for malfunctions and deterioration, operator errors, and discharges which may be causing or may lead to the release of hazardous waste constituents to the environment or a threat to human health. The owner or operator shall conduct these inspections often enough to identify problems in time to correct them before they harm human health or the environment.

B. The owner or operator shall develop and follow a written schedule for inspecting monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment that are important to preventing, detecting, or responding to environmental or human health hazards. The owner or operator shall keep this schedule at the facility. The schedule must identify the types of problems which are to be looked for during the inspection.

C. The frequency of inspection may vary for the items on the schedule. However, it must be based on the rate of possible deterioration of the equipment and the probability of an environmental or human health incident if the deterioration or malfunction or any operator error goes undetected between inspections. Areas subject to spills, such as loading and unloading areas, must be inspected daily when in use. The inspection schedule must include the items and frequencies called for in parts 7045.0626, subpart 5; 7045.0628, subparts 4, 5, and 7; 7045.0630, subpart 5; 7045.0640, subpart 4; and 7045.0642, subpart 4.

D. The owner or operator shall remedy any deterioration or malfunction of equipment or structures which the inspection reveals on a schedule which ensures that the problem does not lead to an environmental or human health hazard. Where a hazard is imminent or has already occurred,

remedial action must be taken immediately.

E. The owner or operator shall record inspections in an inspection log or summary. He or she shall keep these records for at least three years from the date of inspection. These records must include the date and time of the inspection, the name of the inspector, a notation of the observations made, and the date and nature of any repairs or other remedial actions.

Subp. 6. and 7. [Unchanged.]

7045.0564 WASTE ANALYSIS REQUIREMENTS.

Subpart 1. [Unchanged.]

Subp. 2. **Waste analysis plan.** The owner or operator shall develop and follow a written waste analysis plan which describes the procedures the owner or operator will carry out to comply with subpart 1. The owner or operator shall keep this plan at the facility. The plan must specify:

A. to E. [Unchanged.]

F. Where applicable, the methods which will be used to meet the additional waste analysis requirements for specific waste management methods as specified in parts 7045.0628, subpart 12; 7045.0630, subpart 4; 7045.0632, subpart 3; 7045.0634, subpart 3; 7045.0638, subpart 7; 7045.0640, subpart 2; and 7045.0642, subpart 3.

G. [Unchanged.]

7045.0584 OPERATING RECORD.

Subpart 1. and 2. [Unchanged.]

Subp. 3. **Record information.** The following information must be recorded, as it becomes available, and maintained in the operating record until closure of the facility:

A. to D. [Unchanged.]

E. Records and results of waste analysis and trial tests performed as specified in parts 7045.0564; 7045.0628, subpart 12; 7045.0630, subpart 4; 7045.0632, subpart 3; 7045.0634, subpart 3; 7045.0638, subpart 7; 7045.0640, subpart 2; and 7045.0642, subpart 3.

F. and G. [Unchanged.]

H. Monitoring, testing, or analytical data where required by parts 7045.0590, subparts 1, 6, and 7; 7045.0592, subparts 1 and 7; 7045.0628, subparts 2, 4, 5, and 7; 7045.0634, subparts 4 and 6, item D, subitem (1); 7045.0636; and 7045.0640, subpart 4. As required by parts 7045.0590, subparts 6 and 7; and 7045.0592, subpart 7, monitoring data at disposal facilities must be kept throughout the post-closure period.

I. [Unchanged.]

7045.0600 POST-CLOSURE.

Subpart 1. **Scope.** This part and parts 7045.0602 to 7045.0606 apply to the owners and operators of all hazardous waste disposal facilities, including tank systems that are required under part 7045.0628, subpart 9, to meet the requirements for landfills, except as provided otherwise in part 7045.0552.

Subp. 2. and 3. [Unchanged.]

7045.0608 FINANCIAL REQUIREMENTS.

Subpart 1. **Scope.** The requirements of parts 7045.0610, 7045.0612, and 7045.0620 to 7045.0624 apply to owners and operators of hazardous waste facilities except as provided otherwise in this part or in part 7045.0552.

The requirements of parts 7045.0614 to 7045.0618 apply only to owners and operators of disposal facilities and tank systems that are required under part 7045.0628, subpart 9, to meet the requirements for landfills.

The state and the federal government are exempt from the requirements of parts 7045.0608 to 7045.0624.

Subp. 2. [Unchanged.]

7045.0628 TANKS.

Subpart 1. **Scope.** This part applies to owners and operators of facilities that use tanks to treat or store hazardous waste, except as items A and B and part 7045.0552 provide otherwise.

A. Tanks that are used to store or treat hazardous

waste containing no free liquids and that are located inside a building with an impermeable floor are exempt from the requirements of subparts 4 and 5. To demonstrate the absence or presence of free liquids in the stored or treated waste, EPA Method 9095 (Paint Filter Liquids Test) as described in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods" (EPA Publication No. SW-846) must be used.

B. Tanks, including sumps, as defined in part 7045.0020 that serve as part of a secondary containment system to collect or contain releases of hazardous wastes are exempted from the requirements in subparts 4 and 5.

Subp. 2. **Assessment of existing tank system's integrity.** The following requirements apply to existing tank systems:

A. For each existing tank system that does not have secondary containment meeting the requirements of subparts 4 and 5, the owner or operator must determine whether the tank system is leaking or is unfit for use. Except as provided in item C, the owner or operator must obtain and keep on file at the facility a written assessment reviewed and certified by an independent, qualified, registered professional engineer that attests to the tank system's integrity. The certification must include the statements in parts 7001.0070 and 7001.0540.

B. This assessment must determine that the tank system is adequately designed and has sufficient structural strength and compatibility with the waste to be stored or treated to ensure that it will not collapse, rupture, or fail. This assessment must consider the following:

(1) design standards, if available, according to which the tank and ancillary equipment were constructed;

(2) hazardous characteristics of the waste that has been or will be handled;

(3) existing corrosion protection measures;

(4) documented age of the tank system, if available, otherwise, an estimate of the age; and

(5) results of a leak test, internal inspection, or other tank integrity examination. For nonenterable

underground, inground, or onground tanks, this assessment must consist of a leak test that is capable of taking into account the effects of temperature variations, tank end deflection, vapor pockets, and high water table effects. For other than nonenterable underground, inground, or onground tanks and for ancillary equipment, this assessment must be either a leak test, as described above, or an internal inspection and/or other tank integrity examination certified by an independent, qualified, registered professional engineer, that addresses cracks, leaks, corrosion, and erosion. The certification must include the statements in parts 7001.0070 and 7001.0540.

C. Owners or operators of tank systems that were required to conduct this assessment by Code of Federal Regulations, title 40, section 265.191(a), must conduct and keep this assessment on file as required by that section. Owners or operators of all other existing tank systems must conduct this assessment within 18 months of the effective date of this part. Owners or operators of tank systems that store or treat materials that become hazardous wastes must conduct this assessment within 12 months after the date that the waste becomes a hazardous waste.

D. If, as a result of the assessment conducted in accordance with item A, a tank system is found to be leaking or unfit for use, the owner or operator must comply with the requirements of subpart 8.

Subp. 3. **Design and installation of new tank systems or components.**

A. Owners or operators of new tank systems or components must ensure that the foundation, structural support, seams, connections, and pressure controls, if applicable, are adequately designed and that the tank system has sufficient structural strength, compatibility with the waste to be stored or treated, and corrosion protection so that it will not collapse, rupture, or fail. The owner or operator must obtain a written assessment reviewed and certified by an independent, qualified, registered professional engineer, attesting that the

system has sufficient structural integrity and is acceptable for the storing and treating of hazardous waste. The certification must include the statements in parts 7001.0070 and 7001.0540. This assessment must include the following information:

(1) design standards according to which the tank and ancillary equipment is or will be constructed;

(2) hazardous characteristics of the waste to be handled;

(3) for new tank systems or components in which the external shell of a metal tank or any external metal component of the tank system is or will be in contact with the soil or with water, a determination by a corrosion expert of the factors affecting the potential for corrosion, including soil moisture content, soil pH, soil sulfides level, soil resistivity, structure to soil potential, influence of nearby underground metal structures such as piping, stray electric current, and existing corrosion-protection measures such as coating and cathodic protection. The determination must also address the type and degree of external corrosion protection that are needed to ensure the integrity of the tank system during the use of the tank system or component. This protection must consist of corrosion-resistant materials of construction such as special alloys or fiberglass-reinforced plastic; corrosion-resistant coating, such as epoxy or fiberglass, with cathodic protection such as impressed current or sacrificial anodes; and electrical isolation devices such as insulating joints or flanges;

(4) for underground tank system components that are likely to be affected by vehicular traffic, a determination of design or operational measures that will protect the tank system against potential damage; and

(5) design considerations to ensure that tank foundations will maintain the load of a full tank, tank systems will be anchored to prevent flotation or dislodgement where the tank system is placed in a saturated zone, and tank systems will withstand the effects of frost heave.

B. The owner or operator of a new tank system must ensure that proper handling procedures are adhered to in order to prevent damage to the system during installation. Before covering, enclosing, or placing a new tank system or component in use, an independent, qualified installation inspector or an independent, qualified, registered professional engineer, either of whom is trained and experienced in the proper installation of tank systems, must inspect the system or component for the presence of weld breaks, punctures, scrapes of protective coatings, cracks, corrosion, and other structural damage or inadequate construction or installation. All discrepancies must be remedied before the tank system is covered, enclosed, or placed in use.

C. New tank systems or components and piping that are placed underground and that are backfilled must be provided with a backfill material that is a noncorrosive, porous, homogeneous substance and that is carefully installed so that the backfill is placed completely around the tank and compacted to ensure that the tank and piping are fully and uniformly supported.

D. All new tanks and ancillary equipment must be tested for tightness before being covered, enclosed, or placed in use. If a tank system is found not to be tight, all repairs necessary to remedy the leaks in the system must be performed before the tank system is covered, enclosed, or placed in use.

E. Ancillary equipment must be supported and protected against physical damage and excessive stress due to settlement, vibration, expansion, or contraction.

F. The owner or operator must provide the type and degree of corrosion protection necessary, based on the information provided under item A, subitem (3), to ensure the integrity of the tank system during use of the tank system. The installation of a corrosion-protection system that is field fabricated must be supervised by an independent corrosion expert to ensure proper installation.

G. The owner or operator must obtain and keep on file at the facility written statements by those persons required to

certify the design of the tank system and supervise the installation of the tank system in accordance with the requirements of items B to F to attest that the tank system was properly designed and installed and that repairs under items B and D were performed. The certification must include the statements in parts 7001.0070 and 7001.0540.

Subp. 4. **Containment and detection of releases.**

A. In order to prevent the release of hazardous waste or hazardous constituents to the environment, secondary containment that meets the requirements of this part must be provided, except as provided in item H:

(1) for new tank systems or components, before being put into service;

(2) for existing tank systems, within five years of the effective date of these rules except as provided in subitem (3);

(3) for existing tank systems that are known to be more than 15 years old or that will reach 15 years of age before the time provided in subitem (2), by January 12, 1989;

(4) for tank systems that store or treat material that becomes a hazardous waste, within two years of the date the material becomes a hazardous waste; and

(5) for existing tanks used to store or treat EPA Hazardous Waste Nos. F020, F021, F022, F023, F026, F027, and F028, by January 12, 1989.

B. Secondary containment systems must be:

(1) designed, installed, and operated to prevent any migration of wastes or accumulated liquid out of the system to the soil, ground water, or surface water at any time during the use of the tank system; and

(2) capable of detecting and collecting releases and accumulated liquids until the collected material is removed.

C. To meet the requirements of item B, secondary containment systems must be at a minimum:

(1) constructed of or lined with materials that are compatible with the waste to be placed in the tank system

and must have sufficient strength and thickness to prevent failure due to pressure gradients, including static head and external hydrological forces; physical contact with the waste to which they are exposed; climatic conditions; the stress of installation; and the stress of daily operation, including stresses from nearby vehicular traffic;

(2) placed on a foundation or base capable of providing support to the secondary containment system and resistance to pressure gradients above and below the system and capable of preventing failure due to settlement, compression, or uplift;

(3) provided with a leak detection system that is designed and operated so that it will detect the failure of either the primary and secondary containment structure or any release of hazardous waste or accumulated liquid in the secondary containment system within 24 hours, or at the earliest practicable time if the existing detection technology or site conditions will not allow detection of a release within 24 hours; and

(4) sloped or otherwise designed or operated to drain and remove liquids resulting from leaks, spills, or precipitation. Spilled or leaked waste and accumulated precipitation must be removed from the secondary containment system within 24 hours, or in as timely a manner as is possible to prevent harm to human health or the environment, if removal of the released waste or accumulated precipitation cannot be accomplished within 24 hours.

D. Unless a petition is granted under part 7045.0075, subpart 7, secondary containment for tanks must include one or more of the following devices:

(1) a liner external to the tank;

(2) a vault;

(3) a double-walled tank; or

(4) an equivalent device as approved by the commissioner under part 7045.0075, subpart 6.

E. In addition to the requirements of items B, C, and

D, the external liner system of secondary containment systems must be:

(1) designed or operated to contain 100 percent of the capacity of the largest tank within its boundary;

(2) designed or operated to prevent run-on or infiltration of precipitation into the secondary containment system unless the collection system has sufficient excess capacity to contain run-on or infiltration. Such additional capacity must be sufficient to contain precipitation from a 25-year, 24-hour rainfall event;

(3) free of cracks or gaps; and

(4) designed and installed to completely surround the tank and to cover all surrounding earth likely to come into contact with the waste if released from the tank; that is, capable of preventing lateral as well as vertical migration of the waste.

F. In addition to the requirements of items B, C, and D, a vault system must be:

(1) designed or operated to contain 100 percent of the capacity of the largest tank within its boundary;

(2) designed or operated to prevent run-on or infiltration of precipitation into the secondary containment system unless the collection system has sufficient excess capacity to contain run-on or infiltration. The additional capacity must be sufficient to contain precipitation from a 25-year, 24-hour rainfall event;

(3) constructed with chemical-resistant water stops in place at all joints, if any;

(4) provided with an impermeable interior coating or lining that is compatible with the stored waste and that will prevent migration of waste into the concrete;

(5) provided with a means to protect against the formation of and ignition of vapors within the vault, if the waste being stored or treated meets the definition of ignitable waste under part 7045.0131, or reactive waste under part 7045.0131 and may form an ignitable or explosive vapor; and

(6) provided with an exterior moisture barrier or be otherwise designed or operated to prevent migration of moisture into the vault if the vault is subject to hydraulic pressure.

G. In addition to the requirements of items B, C, and D, double-walled tanks must be:

(1) designed as an integral structure, such as an inner tank within an outer shell so that any release from the inner tank is contained by the outer shell;

(2) protected, if constructed of metal, from both corrosion of the primary tank interior and the external surface of the outer shell; and

(3) provided with a built-in, continuous leak-detection system capable of detecting a release within 24 hours or at the earliest practicable time, if the owner or operator can demonstrate to the commissioner, and the commissioner concurs, that the existing leak-detection technology or site conditions will not allow detection of a release within 24 hours.

H. Ancillary equipment must be provided with full secondary containment, such as trench, jacketing, or double-walled piping, that meets the requirements of items B and C, except for:

(1) aboveground piping, exclusive of flanges, joints, valves, and other connections, that are visually inspected on a daily basis;

(2) welded flanges, welded joints, and welded connections, that are visually inspected on a daily basis;

(3) sealless or magnetic coupling pumps, that are visually inspected on a daily basis; and

(4) pressurized aboveground piping systems with automatic shut-off devices, such as excess flow check valves, flow metering shutdown devices, and loss of pressure actuated shut-off devices, that are visually inspected on a daily basis.

Subp. 5. **Requirements for tank systems.** All tank systems, until such time as secondary containment meeting the

requirements of this section is provided, must comply with the following:

A. For nonenterable underground, inground, and onground tanks, a leak test that meets the requirements of subpart 2, item B, subitem (5), must be conducted at least annually.

B. For other than nonenterable underground, inground, and onground tanks and for all ancillary equipment, an annual leak test, as described in item A, or an internal inspection or other tank integrity examination by an independent, qualified, registered professional engineer, that addresses cracks, leaks, corrosion, and erosion must be conducted at least annually. The owner or operator must remove the stored waste from the tank, if necessary, to allow the condition of all internal tank surfaces to be assessed.

C. For underground, inground, and onground tanks, a test to detect tank wall thinning and to determine that the minimum tank wall thickness is maintained. This test must be conducted within 18 months of the effective date of this part and every two years thereafter until secondary containment meeting the requirements of subparts 4 and 5 is installed.

D. The owner or operator must maintain on file at the facility a record of the results of the assessments conducted in accordance with items A to D.

E. If the tank system or component is found to be leaking or unfit for use as a result of the leak test or assessment in items A to D, the owner or operator must comply with the requirements of subpart 8.

Subp. 6. **General operating requirements.** Treatment or storage of hazardous waste in tanks must comply with the following:

A. Hazardous wastes or treatment reagents must not be placed in a tank system if they could cause the tank, its ancillary equipment, or the secondary containment system to rupture, leak, corrode, or otherwise fail.

B. The owner or operator must use appropriate

controls and practices to prevent spills and overflows from tank or secondary containment systems. These include:

(1) spill prevention controls such as check valves or dry disconnect couplings;

(2) overfill prevention controls such as level sensing devices, high level alarms, automatic feed cutoff, or bypass to a standby tank; and

(3) maintenance of sufficient freeboard in uncovered tanks to prevent overtopping by wave or wind action or by precipitation.

C. The owner or operator must comply with subpart 8 if a leak or spill occurs in the tank system.

Subp. 7. **Inspections.**

A. The owner or operator must inspect, where present, at least once each operating day:

(1) overfill or spill control equipment such as waste-feed cutoff systems, bypass systems, and drainage systems to ensure that it is in good working order;

(2) the aboveground portions of the tank system, if any, to detect corrosion or releases of waste;

(3) data gathered from monitoring equipment and leak-detection equipment, such as pressure and temperature gauges or monitoring wells, to ensure that the tank system is being operated according to its design; and

(4) the construction materials and the area immediately surrounding the externally accessible portion of the tank system, including secondary containment structures such as dikes, to detect erosion or signs of releases of hazardous waste such as wet spots or dead vegetation.

B. The owner or operator must inspect cathodic protection systems, if present, according to the following schedule, to ensure that they are functioning properly:

(1) The proper operation of the cathodic protection system must be confirmed within six months after initial installation, and annually thereafter.

(2) All sources of impressed current must be

inspected and/or tested, as appropriate, at least bimonthly.

C. The owner or operator must document in the operating record of the facility an inspection of those items in items A and B.

Subp. 8. **Responses to leaks or spills and disposition of unfit-for-use tank systems.** A tank system or secondary containment system from which there has been a leak or spill, or which is unfit for use, must be removed from service immediately, and the owner or operator must satisfy the following requirements:

A. The owner or operator must immediately stop the flow of hazardous waste into the tank system or secondary containment system and inspect the system to determine the cause of the release.

B. Removal of waste from tank system or secondary containment system.

(1) If the release was from the tank system, the owner or operator must, within 24 hours after detection of the leak or, if the owner or operator demonstrates that that is not possible, at the earliest practicable time, remove as much of the waste as is necessary to prevent further release of hazardous waste to the environment and to allow inspection and repair of the tank system to be performed.

(2) If the release was to a secondary containment system, all released materials must be removed within 24 hours or in as timely a manner as is possible to prevent harm to human health and the environment.

C. The owner or operator must immediately conduct a visual inspection of the release and, based upon that inspection:

(1) prevent further migration of the leak or spill to soils or surface water; and

(2) remove, and properly dispose of, any visible contamination of the soil or surface water.

D. Notifications, reports.

(1) Any release to the environment must be reported to the commissioner within 24 hours of detection.

(2) Within 30 days of detection of a release to the environment, a report containing the following information must be submitted to the commissioner. The report must address the likely route of migration of the release; characteristics of the surrounding soil, including soil composition, geology, hydrogeology, and climate; and the results of any monitoring or sampling conducted in connection with the release, if available. If sampling or monitoring data relating to the release are not available within 30 days, these data must be submitted to the commissioner as soon as they become available. The report must also address the proximity to downgradient drinking water, surface water, and population areas; and a description of response actions taken or planned.

(3) A leak or spill of hazardous waste that is less than or equal to a quantity of one pound and immediately contained and cleaned up is exempted from the requirements of subitem (2).

E. Provision of secondary containment, repair, or closure.

(1) Unless the owner or operator satisfies the requirements of subitems (2) to (4), the tank system must be closed in accordance with subpart 9.

(2) If the cause of the release was a spill that has not damaged the integrity of the system, the owner or operator may return the system to service as soon as the released waste is removed and repairs, if necessary, are made.

(3) If the cause of the release was a leak from the primary tank system into the secondary containment system, the system must be repaired before returning the tank system to service.

(4) If the source of the release was a leak to the environment from a component of a tank system without secondary containment, the owner or operator must provide the component of the system from which the leak occurred with secondary containment that satisfies the requirements of subparts 4 and 5 before it can be returned to service, unless

the source of the leak is an aboveground portion of a tank system. If the source is an aboveground component that can be inspected visually, the component must be repaired and may be returned to service without secondary containment as long as the requirements of item F are satisfied. If a component is replaced to comply with the requirements of this subitem, that component must satisfy the requirements for new tank systems or components in subparts 3 to 5. Additionally, if a leak has occurred in any portion of a tank system component that is not readily accessible for visual inspection, such as the bottom of an inground or onground tank, the entire component must be provided with secondary containment in accordance with subparts 4 and 5 before being returned to use.

F. Certification of major repairs. If the owner or operator has repaired a tank system in accordance with item E and the repair has been extensive, such as installation of an internal liner or repair of a ruptured primary containment or secondary containment vessel, the tank system must not be returned to service unless the owner or operator has obtained a certification by an independent, qualified, registered professional engineer that the repaired system is capable of handling hazardous wastes without release. This certification must be submitted to the commissioner within seven days after returning the tank system to use and must include the statements in parts 7001.0070 and 7001.0540.

Subp. 9. **Closure and post-closure care.** The requirements for closure and post-closure care of tank systems are as follows:

A. At closure of a tank system, the owner or operator must remove or decontaminate all waste residues, contaminated containment system components such as liners, contaminated soils, and structures and equipment contaminated with waste, and manage them as hazardous waste unless it can be demonstrated that they are not a hazardous waste. The closure plan, closure activities, cost estimates for closure, and financial responsibility for tank systems must meet the requirements of parts 7045.0594 to 7045.0624.

B. If the owner or operator demonstrates that not all contaminated soils can be practicably removed or decontaminated as required in item A, then the owner or operator must close the tank system and perform post-closure care in accordance with the closure and post-closure care requirements that apply to landfills in part 7045.0638. In addition, for the purposes of closure, post-closure, and financial responsibility, such a tank system is then considered to be a landfill, and the owner or operator must meet the requirements for landfills in parts 7045.0594 to 7045.0624.

C. If an owner or operator has a tank system which does not have secondary containment that meets the requirements of subpart 4, items B to F, and which is not exempt from the secondary containment requirements in accordance with part 7045.0075, subparts 6 and 7, then:

(1) the closure plan for the tank system must include both a plan for complying with item A and a contingent plan for complying with item B;

(2) a contingent post-closure plan for complying with item B must be prepared and submitted as part of the permit application;

(3) the cost estimates calculated for closure and post-closure care must reflect the costs of complying with the contingent closure plan and the contingent post-closure plan, if these costs are greater than the costs of complying with the closure plan prepared for the expected closure under item A;

(4) financial assurance must be based on the cost estimates in subitem (3); and

(5) for the purposes of the contingent closure and post-closure plans, the tank system is considered to be a landfill, and the contingent plans must meet the closure, post-closure, and financial responsibility requirements of parts 7045.0594 to 7045.0624.

Subp. 10. **Special requirements for ignitable or reactive waste.** Ignitable or reactive waste must not be placed in a tank unless:

A. the waste is treated, rendered, or mixed before or immediately after placement in the tank so that the resulting waste, mixture, or dissolved material no longer meets the definition of ignitable or reactive waste under part 7045.0131, subpart 2 or 5, and compliance with part 7045.0562, subpart 2 is maintained; or

B. the waste is stored or treated in such a way that it is protected from any material or conditions which may cause the waste to ignite or react; or the tank is used solely for emergencies.

The owner or operator of a facility which treats or stores ignitable or reactive waste in a tank shall comply with the requirements for the maintenance of protective distances between the waste management area and any public ways, streets, alleys, or an adjoining property line that can be built upon, as required in the National Fire Protection Association's buffer zone requirements for tanks, contained in Tables 2-1 through 2-6 of the Flammable and Combustible Code, in the National Fire Codes, 1981 issued by the National Fire Protection Association (Quincy, Massachusetts, 1981).

Subp. 11. **Special requirement for incompatible wastes.** Incompatible wastes, or incompatible wastes and materials must not be placed in the same tank, unless compliance with part 7045.0562, subpart 2, is maintained.

Hazardous waste must not be placed in a tank system that has not been decontaminated and which previously held an incompatible waste or material, unless compliance with part 7045.0562, subpart 2, is maintained.

Subp. 12. **Waste analysis and trial tests.** In addition to performing the waste analysis required by part 7045.0564, the owner or operator must, whenever a tank system is to be used to treat chemically or to store a hazardous waste that is substantially different from waste previously treated or stored in that tank system, or treat chemically a hazardous waste with a substantially different process than any previously used in that tank system:

A. conduct waste analyses and trial treatment or storage tests, bench-scale or pilot-plant scale tests; or

B. obtain written, documented information on similar waste under similar operating conditions to show that the proposed treatment or storage will meet the requirements of subpart 6, item A.

7045.0629 REQUIREMENTS FOR SMALL QUANTITY GENERATORS THAT ACCUMULATE HAZARDOUS WASTE IN TANKS.

Subpart 1. **Scope.** The requirements of this part apply to small quantity generators that accumulate hazardous waste in tanks, and do not accumulate over 3,000 kilograms on site at any time as provided in part 7045.0219.

Subp. 2. **General operating requirements.** Small quantity generators must comply with the following general operating requirements:

A. Treatment or storage of hazardous waste in tanks must comply with part 7045.0562, subpart 2.

B. Hazardous wastes or treatment reagents must not be placed in a tank if they could cause the tank or its inner liner to rupture, leak, corrode, or otherwise fail.

C. Uncovered tanks must be operated to ensure at least 60 centimeters of freeboard, unless the tank is equipped with a containment structure such as a dike or trench, a drainage control system, or a diversion structure such as a standby tank with a capacity that equals or exceeds the volume of the top 60 centimeters of the tank.

D. Where hazardous waste is continuously fed into a tank, the tank must be equipped with a means to stop this inflow such as a waste feed cutoff system or bypass system to a standby tank.

Subp. 3. **Inspections.** Small quantity generators must inspect, where present:

A. discharge control equipment, such as waste feed cutoff systems, bypass systems, and drainage systems, at least once each operating day, to ensure that it is in good working

order;

B. data gathered from monitoring equipment such as pressure and temperature gauges, at least once each operating day, to ensure that the tank is being operated according to its design;

C. the level of waste in the tank at least once each operating day to ensure compliance with subpart 3, item C;

D. the construction materials of the tank at least weekly to detect corrosion or leaking of fixtures or seams; and

E. the construction materials of, and the area immediately surrounding, discharge confinement structures such as dikes at least weekly to detect erosion or obvious signs of leakage such as wet spots or dead vegetation.

Subp. 4. **Closure.** Small quantity generators must, upon closure of the facility, remove all hazardous waste from tanks, discharge control equipment, and discharge confinement structures.

Subp. 5. **Ignitable and reactive wastes.** Small quantity generators must comply with the following special requirements for ignitable or reactive waste:

A. Ignitable or reactive waste must not be placed in a tank, unless the waste is treated, rendered, or mixed before or immediately after placement in a tank so that the resulting waste, mixture, or dissolution of material no longer meets the definition of ignitable or reactive waste under parts 7045.0131, subpart 2 or 5, and 7045.0562, subpart 2 is complied with, or the waste is stored or treated in such a way that it is protected from any material or conditions that may cause the waste to ignite or react, or the tank is used solely for emergencies.

B. The owner or operator of a facility which treats or stores ignitable or reactive waste in covered tanks must comply with the buffer zone requirements for tanks contained in Tables 2-1 to 2-6 of the National Fire Protection Association's Flammable and Combustible Liquids Code, (1977 or 1981).

Subp. 6. **Incompatible wastes.** Small quantity generators

must comply with the following special requirements for incompatible wastes:

A. Incompatible wastes, or incompatible wastes and materials, must not be placed in the same tank, unless part 7045.0562, subpart 2 is complied with.

B. Hazardous waste must not be placed in an unwashed tank which previously held an incompatible waste or material unless part 7045.0562, subpart 2 is complied with.

REPEALER. Minnesota Rules, part 7045.0528, subpart 9, is repealed.