

Minnesota Attorney General: Administrative Rules Proceedings

Copyright Notice:

This material may be protected by copyright law (U.S. Code, Title 17). Researchers are liable for any infringement. For more information, visit www.mnhs.org/copyright.

Version 3
August 20, 2018

RULE REVIEW CHECKLIST

File No. 1455
DATE RECEIVED 2/26/88
REVIEW DATE (3/6/88)
DUE DATE 3/11/88

APPROVED 3/7/88 JJZ
DISAPPROVED
WITHDRAWN

Docket No. 05.0009.0697
ADOPTED W/O HEARING X
EMERGENCY RULE

REVISOR APPROVED ✓
REVISOR DISAPPROVED
FIELD W/SEC.STATE
RETURNED TO AGENCY

✓ Rule as adopted (4 copies)
✓ Notice to Solicit Outside Information/Opinion
12/22/86 Date published in State Register
Comments
— Petition for Adoption of a Rule
✓ Board's Authorizing Resolution
✓ Proposed rule
✓ Revisor's Certificate — called 3/2 will send rest over it
✓ Notice of Intent to Adopt Rule
116.07(4) OK Statutory Authority
— Small Business Statement
— Expenditure of public money statement
✓ Signature
✓ Statement of Need and Reasonableness
✓ ~~Small Business Statement~~
— Fees - § 16A.128
✓ Affidavit of Mailing Notice of Intent to Adopt Rule
11/12/87 Date (30) 25 days before adoption
✓ Publication in State Register
11/16/87 Date (30) 25 days before adoption
✓ Resolution Adopting
✓ Findings of Fact, Conclusions & Order Adopting
2/23/88 Date
✓ Written requests, submissions or comments
✓ Declaration of attorney
Joseph Matarowski Name of SAAG representing agency
— Notice of Submission to Attorney General
— Affidavit of Mailing Notice to Attorney General

JAL

ATTORNEY GENERAL

March 15, 1988

JOSEPH G. MATERNOWSKI
Special Assistant
Attorney General

JULIE A. LEPPINK
Special Assistant
Attorney General

6-9422

In the Matter of the Adopted Rule Relating to
Hazardous Waste; Tanks

The above-referenced rule has been approved as to its legality by the Attorney General on March 7, 1988.

Enclosed is the agency's copy of the approved rule. This office has already filed two copies with the Secretary of State, who will forward one copy to the Revisor of Statutes. The fourth is being retained by this division of the Attorney General's Office for its records.

Also enclosed are any petitions, requests, submissions or comments received by the agency and any extra copies of documents which the agency submitted to the Attorney General.

In order for a permanent rule without a hearing to become effective, your agency must publish a notice of adoption in the State Register in accordance with Minn. Stat. § 14.27. An emergency rule becomes effective five working days after approval by the Attorney General; however, the agency must publish a notice in the State Register in accordance with Minn. Stat. § 14.34.

If you have any questions in this regard, please contact me.

MJC;nah
Enclosures

cc: Maryanne Hruby
Duane Harves

A.G. Copy

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.

STATE OF MINNESOTA
DEPARTMENT OF STATE
FILED
MAR - 8 1988
Joan Anderson Growe
Secretary of State
11:15 AM

APPROVED AS TO FORM AND LEGALITY
March 7 1988
HUBERT H. HUMPHREY, III
ATTORNEY GENERAL
BY
SPECIAL ASSISTANT ATTORNEY GENERAL

Pollution Control Agency

Outside Opinions Sought Concerning Amendments to Minn. Rules Ch. 7045 Governing the Management of Hazardous Waste

Notice is hereby given that the Minnesota Pollution Control Agency (MPCA) is seeking information and opinions from sources outside the MPCA regarding possible amendments to the rules governing hazardous waste. Information and comments are being sought to aid in preparation of draft amendments.

In response to amendments to the U.S. Environmental Protection Agency (EPA) hazardous waste program, the MPCA is considering amendments to rules governing hazardous waste in the following areas:

1. Regulations pertaining to the storage of hazardous waste in tanks. The regulations promulgated by EPA on July 14, 1986 impose specific conditions for the evaluation of tank integrity, design and installation of tanks, containment and detection of released waste, operating requirements, closure and post-closure care of tank systems.

2. Regulations applying to the export of hazardous waste. Amendments to the federal regulations promulgated August 8, 1986, include provisions relating to hazardous waste exporters' use of manifests, reporting and record keeping and the exporting transporters' responsibilities.

3. Amendments to the lists of hazardous wastes. Amendments to the federal regulations promulgated October 24, 1986 add four wastes to the lists of hazardous wastes. These wastes are generated during the production and formulation of ethylenebisdithiocarbamic acid (EBDC) and its salts.

4. Corrections and modifications to the lists of hazardous wastes. Amendments to the federal regulations promulgated August 6, 1986 correct 57 existing entries in the lists of hazardous waste and add Chemical Abstracts Service registry numbers to all listings.

The MPCA requests information and comments concerning the subject matter of the proposed amendments. Written or oral information or comments will be accepted until January 19, 1987. Written statements should be addressed to:

Carol Nankivel
Minnesota Pollution Control Agency
Solid and Hazardous Waste Division
520 Lafayette Road
St. Paul, Minnesota 55155

Oral statements will be received during regular business hours at 612/296-7260.

Department of Transportation

Petition of County of Hubbard for a Variance from State Aid Standards for Design Speed

Notice is hereby given that the County Board of the County of Hubbard has made a written request to the Commissioner of Transportation pursuant to Minnesota Rules § 8820.3300 for a variance from minimum standards for a resurfacing project on County State Aid Highway 11 from Trunk Highway 87 to Trunk Highway 34.

The request is for a variance from Minnesota Rules for State Aid Operations § 8820.9914 adopted pursuant to Minnesota Statutes Chapter 161 and 162, so as to permit design speeds of 33 MPH, 34 MPH and 36 MPH instead of the required speed of 40 MPH.

Any person may file a written objection to the variance request with the Commissioner of Transportation, Transportation Building, St. Paul, Minnesota 55155.

If a written objection is received within 20 days from the date of this notice in the *State Register*, the variance can be granted only after a contested case hearing has been held on the request.

Dated: 16 December 1986

Leonard W. Levine
Commissioner of Transportation

CERTIFICATE OF MINNESOTA POLLUTION CONTROL AGENCY'S AUTHORIZING RESOLUTION

I, Thomas J. Kalitowski, do hereby certify that I am the Commissioner of the Minnesota Pollution Control Agency, an agency duly authorized under the laws of the State of Minnesota, and that the following is a true, complete, and correct copy of a resolution adopted at a meeting of the Minnesota Pollution Control Agency duly and properly called and held on the 27th day of October, 1987, that a quorum was present at said meeting, that a majority of those present voted for the resolution, and that said resolution will be set forth in the minutes of said meeting and has not been rescinded or modified.

BE IT RESOLVED, that the Commissioner of the Minnesota Pollution Control Agency (MPCA) is hereby granted the authority to sign and to give notice of the MPCA's intent to adopt, without a public hearing, the attached amendments to the MPCA's hazardous waste rules governing the management, storage, treatment, and disposal of hazardous waste in tanks, Minn. Rules pts. 7001.0560, 7001.0580, 7001.0650, 7045.0020, 7045.0075, 7045.0120, 7045.0219, 7045.0292, 7045.0452, 7045.0478, 7045.0490, 7045.0498, 7045.0528, 7045.0556, 7045.0564, 7045.0584, 7045.0600, 7045.0608, 7045.0628, and 7045.0629, to all persons who have registered their names with the MPCA for that purpose and publish the notice and rule amendments in the State Register, and to perform any acts incidental thereto, including making any form changes in the rules that the Revisor of Statutes requires the MPCA to make in order to obtain the Revisor's certification as required by Minn. Stat. § 14.07, Subd. 2 (1986).

BE IT FURTHER RESOLVED, that in the event a public hearing becomes necessary, the Commissioner is hereby granted the authority and directed to call a hearing for the purpose of promulgating said rules as well as to perform any and all acts incidental thereto, including but not limited to signing an Order for and Notice of Hearing, as well as acting as the MPCA's representative at all hearings.

IN WITNESS WHEREOF, I have hereunto subscribed my name this 30th day of October, 1987.

Michael Robertson

Thomas J. Kalitowski
for Commissioner

Deputy

CERTIFICATE OF AGENCY'S AUTHORIZING RESOLUTION

I, Gerald L. Willet, do hereby certify that I am the Commissioner of the Minnesota Pollution Control Agency, an agency duly authorized under the laws of the State of Minnesota, and that the following is a true, complete, and correct copy of a resolution adopted at a meeting of the Minnesota Pollution Control Agency duly and properly called and held on the 23rd day of February 1988, that a quorum was present at said meeting, that a majority of those present voted for the resolution and that said resolution will be set forth in the minutes of said meeting and has not been rescinded or modified:

> BE IT RESOLVED, that the Commissioner of the Minnesota Pollution Control Agency (MPCA) is hereby granted the authority to sign and to give notice of the MPCA's intent to adopt, without a public hearing, the attached amendments to the MPCA's hazardous waste rules governing the management, storage, treatment, and disposal of hazardous waste in tanks, Minn. Rules pts. 7045.0020, subps. 23a and 59a, 7045.0075, subp. 6, 7045.0528, subps. 3, 4 and 9, and 7045.0628, subps. 3, 4 and 9, to all persons who have registered their names with the MPCA for that purpose and publish the notice and rule amendments in the State Register, and to perform any acts incidental thereto, including making any form changes in the rules that the Revisor of Statutes requires the MPCA to make in order to obtain the Revisor's certification as required by Minn. Stat. § 14.07, subd. 2 (1986).
>
> BE IT FURTHER RESOLVED, that in the event a public hearing becomes necessary, the Commissioner is hereby granted the authority and directed to call a hearing for the purpose of promulgating said rules as well as to perform any and all acts incidental thereto, including but not limited to signing an Order for and Notice of Hearing, as well as acting as the MPCA's representative at all hearings.

IN WITNESS WHEREOF, I have hereunto subscribed my name this 23rd day of Feb., 1988.

Gerald L. Willet

GERALD L. WILLET
Commissioner

Pollution Control Agency

Proposed Permanent Rules Relating to Hazardous Waste; Tanks

Rules as Proposed

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, ~~subpart 4~~ 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 ~~and~~, 7045.0490, and 7045.0528, subpart 9, including, if applicable, the specific information in parts 7045.0526, subpart 9; 7045.0528, subpart 6 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 ~~designated in items A and B~~, in writing, in addition to the information required by part 7001.0560:

~~A. A description of the design and operation procedures of the tank that demonstrate compliance with the requirements of part 7045.0528, subparts 2, 3, 7, and 8. This~~

description must include:

(1) references to design standards or other available information used or to be used in the design and construction of the tank;

(2) a description of the design specifications, including identification of construction materials and lining materials and any pertinent characteristics of these materials, such as corrosion or erosion resistance;

(3) a description of design specifications and operational procedures that demonstrate compliance with part 7045.0528, subpart 2, item C, for underground tanks;

(4) tank dimensions, capacity, and shell thickness;

(5) a diagram of piping, instrumentation, and process flow;

(6) a description of feed systems, safety cutoff and bypass systems, and pressure controls, such as vents;

(7) a description of waste types and volumes to be stored in each tank; and

(8) a description of operational procedures that demonstrate compliance with the requirements of parts 7045.0456 and 7045.0528, subparts 7 and 8, regarding the procedures for handling ignitable, reactive, or incompatible wastes.

B. A description of the system to be used to contain the tank and any spills or releases of hazardous waste from the tank, demonstrating compliance with part 7045.0528, subpart 5, and where applicable, subpart 9, including at a minimum the following:

(1) basic design parameters, dimensions, and construction materials;

(2) the manner in which the design promotes drainage or prevents contact between the tank and standing liquids;

(3) the capacity of the system in terms of number and volume of tanks to be held;

(4) provisions for preventing or managing run on;

~~(5) the manner in which accumulated liquids can be removed to prevent overflow and can be analyzed to determine proper management of the removed liquids; and~~

~~(6) for tanks holding hazardous wastes P020, P021, P022, P023, P026, P027, and P028 listed under part 7045.0135, subpart 2, a description of the system to detect leaks and spills and how precipitation and run on will be prevented from entering the detection system.~~

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 ~~director~~ 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 ~~director~~ commissioner may request any additional information on the proposed method which ~~he~~ 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 ~~7045.0628~~ 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 ~~3~~ 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, ~~subpart~~ 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 ~~director~~ 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 ~~director~~ 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 ~~and~~;

B. the owner or operator of a waste pile or surface impoundment ~~which~~ that is required by part 7045.0532, subpart 7 ~~7~~, or 7045.0534, subpart 7~~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; ~~and~~

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 ~~provides~~, 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. ~~Design~~ Assessment ~~of tanks~~ existing tank system's integrity. ~~Tanks must be designed as follows:~~

~~A. Tanks must have sufficient shell strength and, for closed tanks, pressure controls to ensure that they do not~~

collapse or rupture. The director shall review the design of the tanks, including the foundation, structural support, seams, and pressure controls. A minimum shell thickness must be maintained at all times to ensure sufficient shell strength. Factors to be considered in establishing minimum thickness include the width, height, and materials of construction of the tank, and the specific gravity of the waste which will be placed in the tank. In reviewing the design of the tank and establishing a minimum thickness, the director shall rely upon appropriate industrial design standards and other available information.

B. Tanks and their closures must be constructed of materials, or protected by a liner that will not undergo chemical reaction with the contained hazardous waste or other substances that the tank may foreseeably contact if such a reaction may impair the tank's ability to contain the waste. Gasketed closures must be fitted with gaskets of material that is sufficient to prevent leakage and that will not be deteriorated by the contents.

C. The owner or operator shall design and construct underground tanks to meet the general design requirements of items A and B for all tanks and must allow for the inspection of the interior and exterior of the tank according to subpart 4 or:

(1) provide for corrosion protection by use of protective coatings or cathodic protection;

(2) provide for the detection of any leakage through the use of sensing devices or other equivalent methods;

(3) perform hydrostatic testing on all tanks with the initial test being performed within three years of the July 16, 1984 and at least every three years thereafter; and

(4) keep a weekly inventory for each tank. Inventories must be based upon the actual daily measurement of tank liquid level. The written record must include a computation of gain or loss for the period. Inventory records must be maintained for at least three years at the facility. Upon discovery of loss of ten percent of the waste volume, the

~~owner-or-operator-shall-notify-the-director-and-implement-the procedures-outlined-in-the-owner's-or-operator's-contingency plan-for-that-occurrence.~~ 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. ~~General operating requirements~~ Design and installation of new tank systems or components. ~~Wastes and other materials that are incompatible with the material of the construction of the tank must not be placed in the tank, unless the tank is protected from accelerated corrosion, erosion, or abrasion through the use of an inner liner or coating which is compatible with the waste or material and which is free of leaks, cracks, holes, or other deterioration, or an alternate means of protection such as cathodic protection, or corrosion inhibitors.~~

~~The owner or operator must use appropriate controls and practices to prevent overfilling. These must include controls to prevent overfilling such as waste feed cutoff systems or bypass systems to a standby tank, and for uncovered tanks, maintenance of sufficient freeboard to prevent overtopping by wave or wind action or by precipitation.~~ 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. ~~Inspections~~ Containment and detection of releases. The following requirements apply to ~~inspections~~ the containment and detection of releases from tanks:

~~A.--The-owner-or-operator-shall-inspect:~~

~~(1)-overfilling-control-equipment,-including waste-feed-cut-off-systems-and-bypass-systems,-at-least-once each-operating-day-to-ensure-that-it-is-in-good-working-order;~~

~~(2)-data-gathered-from-monitoring-equipment, where-present,-at-least-once-each-operating-day-to-ensure-that the-tank-is-being-operated-according-to-its-design;~~

~~(3)-for-uncovered-tanks,-the-level-of-waste-in the-tank-at-least-once-each-operating-day-to-ensure-compliance with-subpart-3;~~

~~(4)-the-construction-materials-of-the-tank,-at least-weekly-to-detect-corrosion-or-erosion-and-leaking-of fixtures-and-seams;-and~~

~~(5)-the-area-immediately-surrounding-the-tank-and the-containment-system,-at-least-weekly-to-detect-obvious-signs of-leakage-and-deterioration-of-the-containment-system-caused-by corrosion,-erosion,-or-other-factors;~~

~~B.--As part of the inspection schedule required in part 7045.0452 and in addition to the specific requirements of item A, the owner or operator shall develop a schedule and procedure for assessing the condition of the tank. The schedule and procedure must be adequate to detect cracks, leaks, or corrosion or erosion which may lead to cracks, leaks, or wall thinning to less than the thickness required under subpart 2. Procedures for emptying a tank to allow entry and inspection of the interior must be established when necessary to detect corrosion or erosion of the tank sides and bottom. The frequency of these assessments must be based on the material of construction of the tank, type of corrosion or erosion protection used, rate of corrosion or erosion observed during previous inspections, and the characteristics of the waste being treated or stored.~~

~~C.--As part of the contingency plan required under parts 7045.0464 to 7045.0470, the owner or operator must specify:~~

~~(1) the procedures he or she intends to use to respond to tank spills or leakage, including procedures and timing for expeditious removal of leaked or spilled waste and repair of the tank. As required in part 7045.0452, subpart 5, item B, the owner or operator shall remedy any leak, crack, or wall thinning in violation of subpart 2, or equipment or process malfunction in violation of subpart 3, which he or she discovers during inspection, and~~

~~(2) for tanks holding wastes P020, P021, P022, P023, P026, P027, and P028 listed under part 7045.0135, subpart 2, the contingency plan must also include the procedures for responding to a spill or leak of these wastes from tanks into the containment system. These procedures shall include measures for immediate removal of the waste from the system and replacement or repair of the leaking tank.~~

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. ~~Containment~~ Requirements for tank systems. ~~Requirements for containment systems are as follows:~~

~~A. Storage or treatment tank areas must have a containment system that is capable of collecting and holding spills, leaks, and precipitation. The containment system must:~~

~~(1) have a base underlying the tanks which is free of cracks or gaps and is sufficiently impervious to contain leaks, spills, and accumulated precipitation until the collected~~

material is detected and removed;

(2) have a base which is sloped, or be otherwise designed and operated to drain and remove liquids resulting from leaks, spills, or precipitation, unless the tank is protected from contact with accumulated liquids;

(3) have sufficient capacity to contain ten percent of the volume of tanks, or the volume of the largest tank, whichever is greater, plus ten centimeters (four inches) of freeboard, and

(4) be constructed so that the interface between the dike or sidewall and the underlying base is sealed to contain leaks, spills, and accumulated liquids.

B. Run on into the containment system must be prevented, unless the agency waives this requirement in the permit after determining that the collection system has sufficient excess capacity in addition to that required in item A, subitem (3) to accommodate any run on which might enter the system.

C. Spilled or leaked waste and accumulated precipitation must be removed from the sump or collection area in as timely a manner as is necessary to prevent overflow of the collection system. If the collected material is a hazardous waste as defined in parts 7045.0100 to 7045.0141, it must be managed as a hazardous waste in accordance with all applicable requirements of parts 7045.0205 to 7045.1030. If the collected material is discharged through a point source to waters of the United States, it is subject to the requirements of the federal Water Pollution Control Act Amendments of 1972, United States Code, title 33, section 1342, as amended through June 30, 1983.

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. ~~Closure~~ General operating requirements. ~~At closure, all hazardous waste and hazardous residues must be removed from tanks, discharge control equipment, discharge confinement structures, and the containment system. Remaining~~

~~liners, bases, and soil containing or contaminated with hazardous waste or hazardous waste residues must be decontaminated or removed. At closure, as throughout the operating period, unless the owner or operator can demonstrate that the waste removed from his tank or containment system is not a hazardous waste, the owner or operator becomes a generator of hazardous waste and shall manage it in accordance with all applicable requirements of parts 7045.0205 to 7045.1030.~~

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. ~~7~~ 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 ~~dissolution of~~ 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 ~~covered tanks~~ 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. ~~8~~ 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 ~~an unwashed~~ 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, ~~subpart~~ 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 ~~9~~ 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 ~~9~~ 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 ~~provides~~ 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. ~~General-operating-requirements~~ Assessment of existing tank system's integrity. ~~Treatment-or-storage-of hazardous-waste-in-tanks-must-comply-with-part-7045.0562,~~

~~subpart 2.~~

~~Hazardous wastes or treatment reagents must not be placed in a tank if they could cause the tank, its closures, or its inner liner to rupture, leak, corrode, or otherwise fail before the end of its intended life.~~

~~Uncovered tanks must be operated to ensure at least 60 centimeters (two feet) of freeboard, unless the tank is equipped with a containment structure, a drainage control system, or a diversion structure with a capacity that equals or exceeds the volume of the top 60 centimeters (two feet) of the tank.~~

~~When hazardous waste is continuously fed into a tank, the tank must be equipped with a means to stop this inflow. These systems are intended to be used in the event of a leak or overflow from the tank due to a system failure.~~ 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. ~~Waste analysis and trial tests~~ Design and installation of new tank systems or components. ~~In addition to the waste analysis required by part 7045.0564, whenever a tank is to be used to chemically treat or store a hazardous waste which is substantially different from waste previously treated or stored in that tank, or chemically treat hazardous waste with a substantially different process than any previously used in that tank, the owner or operator shall, before treating or storing the different waste or using the different process:~~

~~A.--conduct-waste-analyses-and-trial-treatment-or storage-tests;-or~~

~~B.--obtain-written,-documented-information-on-similar storage-or-treatment-of-similar-waste-under-similar-operating conditions-to-show-that-this-proposed-treatment-or-storage-will meet-all-applicable-requirements-of-subpart-2.--As-required-by part-7045.0564,-the-waste-analysis-plan-must-include-analyses needed-to-comply-with-subparts-6-and-7.--As-required-by-part 7045.0584,-the-owner-or-operator-shall-place-the-results-from each-waste-analysis-and-trial-test,-or-the-documented information,-in-the-operating-record-of-the-facility.~~

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. ~~Inspection~~ Containment and detection of releases. ~~The owner or operator of a tank shall inspect, where possible:~~

~~A. discharge control equipment, at least once each operating day, to ensure that it is in good working order;~~

~~B. data gathered from monitoring equipment, 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 2;~~

~~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,-at least-weekly,-to-detect-erosion-or-obvious-signs-of-leakage.--As required-by-part-7045.0556,-subpart-5,-the-owner-or-operator shall-remedy-any-deterioration-or-malfunction-he-or-she-finds.~~

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. ~~Closure~~ Requirements for tank systems. ~~At closure, all hazardous waste and hazardous waste residues must~~

~~be removed from tanks, discharge control equipment, and discharge confinement structures. At closure, as throughout the operating period, unless the owner or operator can demonstrate that any waste removed from his tank is not a hazardous waste, the owner or operator becomes a generator of hazardous waste and shall manage it in accordance with all applicable requirements of parts 7045.0205 to 7045.0397 and 7045.0552 to 7045.0642.~~ 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. 6 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 ~~dissolution of~~ 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 ~~covered tanks~~ 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. ~~7~~ 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 ~~an unwashed~~ 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.

Office of the Revisor of Statutes

Administrative Rules

TITLE: Proposed Permanent Rules Relating to Hazardous Waste; Tanks

AGENCY: Pollution Control Agency

MINNESOTA RULES: Chapters 7001 and 7045

The attached rules are approved for publication in the State Register

David S. Niss
Assistant Revisor

STATE OF MINNESOTA
MINNESOTA POLLUTION CONTROL AGENCY

In the Matter of the Proposed Amendments of Rules Governing the Management, Storage, Treatment and Disposal of Hazardous Waste, Minn. Rules Pts. 7001.0560, 7001.0580, 7001.0650, 7045.0020, 7045.0075, 7045.0120, 7045.0219, 7045.0292, 7045.0452, 7045.0478, 7045.0490, 7045.0498, 7045.0528, 7045.0556, 7045.0564, 7045.0584, 7045.0600, 7045.0608, 7045.0628, and 7045.0629

NOTICE OF INTENT TO ADOPT RULE AMENDMENTS WITHOUT A PUBLIC HEARING

Notice is hereby given that the Minnesota Pollution Control Agency (MPCA) intends to adopt the above-entitled rule amendments without a public hearing following the procedures set forth in the Administrative Procedure Act for adopting rules without a public hearing in Minn. Stat. §§ 14.22 to 14.28 (1986). The MPCA's authority to adopt the rule amendments is set forth in Minn. Stat. § 116.07, Subd. 4 (1986). 1

All persons have until 4:30 p.m. on December 16, 1987 to submit comments in support of or in opposition to the proposed rule amendments or any part or subpart of the rules. Comment is encouraged. Each comment should identify the portion of the proposed rule amendments addressed, the reason for the comment, and any change proposed. 2 3

Any person may make a written request for a public hearing on the rules within the comment period. If 25 or more persons submit a written request for a public hearing within the comment period, a public hearing will be held unless a sufficient number withdraw their requests in writing. Any person requesting a public hearing should state his or her name and address, and is encouraged to identify the portion of the proposed rule amendments addressed, the reason for the request, and any change proposed. If a public hearing is required, the MPCA will proceed pursuant to Minn. Stat. §§ 14.131 to 14.20 (1986). 4 6 7

Comments or written requests for a public hearing must be submitted to: 5

Carol Nankivel
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155

The proposed rule amendments may be modified if the modifications are supported by data and views submitted to the MPCA and do not result in a substantial change in the proposed rule amendments as noticed. 8

The proposed rule amendments, if adopted, will incorporate recent changes to the federal hazardous waste regulations regarding the design and operation of tanks used to treat, store, or accumulate hazardous wastes. The proposed rule amendments add more extensive requirements for tank assessment, secondary containment, inspection, and responses to leaks and spills.

One free copy of the proposed rule amendments is available upon request from Carol Nankivel at 612/296-7260 or at the address stated above.

A Statement of Need and Reasonableness that describes the need for and reasonableness of each provision of the proposed rule amendments and identifies the data and information relied upon to support the proposed rule amendments has been prepared and is available from Carol Nankivel upon request.

You are hereby advised, pursuant to Minn. Stat. § 14.115 (1986), "small business considerations in rulemaking," that the proposed rule amendments will have a minimal impact on small businesses. Most of the amendments are already provisions of the federal hazardous waste program. By adopting these provisions as State rules the MPCA is not increasing the level of regulation beyond the scope of the federal program. In addition, certain aspects of the proposed amendments are more stringent than the federal regulations. However, these more stringent requirements are justified in the Statement of Need and Reasonableness and will not present an unreasonable burden to small businesses.

If no hearing is required, upon adoption of the rule amendments, the rule amendments and the supporting documents will be submitted to the Attorney General for review as to legality and form to the extent form relates to legality. Any person may request notification of the date of submission to the Attorney General. Persons who wish to be advised of the submission of this material to the Attorney General, or who wish to receive a copy of the rule amendments as adopted, must submit a written request to Carol Nankivel at the address stated above.

Dated: November 12, 1987

for Barbara Lindsey Sims
Gerald L. Willet
Commissioner

15102 Minnetonka Ind. Rd.
Minnetonka, MN 55345
Attn: D. J. Berg

Advance Circuits Inc.
560 - 16th Avenue South
Hopkins, MN 55343
Attn: Farbrook Z. Meah

Advance Circuits, Inc.
1633 Terrace Drive
Roseville, MN 55113

Albert, Lee
Post Office Box 64355
St. Paul, MN 55164

Allied Oil Company
Post Office Box 9
5 West Broadway
St. Paul Park, MN 55071
Attn: Ron Shelton

American Chemical Service
420 South Colfax Avenue
Post Office Box 190
Griffith, IN 46319-0190
Attn: W. S. Wagoner Jr.

American Insurance Association
Doherty, Rumble & Butler
E-1500 First National Bank Bldg.
St. Paul, MN 55101
Jeffrey A. Redmon

Anchor Glass Container Corporation
4108 Valley Ind. Blvd. N.
P.O. Box 69
Shakopee, MN 55379-0069
Attn: B. K. Meierbachtol

Post Office Box 391
Ashland, KY 41114
Attn: Jay J. Hill

Ashland Petroleum, Co.
5 West Broadway
P.O. Box 9
St. Paul Park, MN 55071
George G. Wilson

Autobody Supply, Inc.
2845 Anthony Lane S.
Minneapolis, MN 55418
Attn: Patricia Dubbe

Badger Foundry Company
1058 East Mark Street
Post Office Box 1306
Winona, MN 55987
Attn: Barry J. Owen

Bay West Inc.
5 Empire Drive
St. Paul, MN 55103
Attn: Michael Jost/Stephen Gross

Becker Highway Freight
Route 5, Box 10B
Albert Lea, MN 56007
Attn: Joe Becker

Berg Oil, Inc.
Post Office Box 240
Eveleth, MN 55734
Attn: Conrad Berg

Big Dipper Enterprises, Inc.
1016 - 11th Avenue South
P.O. Box 626
Wahpeton, ND 58075
Attn: John Beardmore

10348 Morris Road
Bloomington, MN 55437
Attn: Herbert Lundeen

Braun Environmental Laboratories
6800 South County Road 18
Post Office Box 35108
Minneapolis, MN 55435-0108
Attn: Anne L. Ochs

Browning Ferris Industries of MN
9813 Flying Cloud Drive
Eden Prairie, MN 55344
Attn: Chuck Wegner

B/R Instrument Corporation
12861 Hamlet Avenue
Apple Valley, MN 55124
Attn: Ann D. Cole

Buckbee Mears St. Paul
245 East 6th Street
St. Paul, MN 55101
Attn: Don Whitehurst

Bureau of Engraving, Inc.
3311 Broadway, Northeast
Minneapolis, MN 55417
Attn: Jan Perlowski

Champion International
100 East Sartell Street
P.O. Box 338
Sartell, MN 56377
Attn: Dave Bonistall

ChemLawn Services Corp.
8275 North High Street
Columbus, OH 43085
Attn: Robert Styduhar

Circuit Chemistry Corp.
5129 Industrial Street
Maple Plain, MN 55359
Attn: Jim Czaja

5129 Industrial Street
Maple Plain, MN 55359
Attn: David Brickley

City of Bloomington
2215 West Old Shakopee Road
Bloomington, MN 55431
Attn: J. K. Nelson

City of Fridley
6431 University Avenue Northeast
Fridley, MN 55432
Attn: John Flora/Jim Robinson

City of Inver Grove Heights
8150 Barbara Avenue
Inver Grove Heights, MN 55075
Attn: John Sachi

City of Redwood Falls
404 East Wyoming
Redwood Falls, MN 56283
Attn: Neil Ruddy

City of Richfield
6700 Portland Avenue S.
Richfield, MN 55423
Attn: Recycling Coordinator

Commercial Pumping and Incineration
9948 Express Drive
Highland, IN 46322
Attn: Allice Erskine

Conklin Company, Inc.
551 Valley Park Drive
P.O. Box 155
Shakopee, MN 55379
Attn: Lawrence Bass

Control Data Corporation
8100 34th Ave S HQN07A
Post Office Box O
Minneapolis, MN 55440
Attn: Bob Kaiser

Continental Shelf Assoc.
4850 Fairlawn Court
Boulder, Colorado 80301
Attn: Kenneth Fucik

1101 Town Road
Post Office Box 511
Montevideo, MN 56265
Attn: David MacKenzie

DeZurik Corporation
250 Riverside Avenue
Sartell, MN 56377
Attn: Lee Walz

D. J. Berg - Consulting Services
P.O. Box 12082
New Brighton, MN 55112
Attn: D. J. Berg

Don Fisher Company
1830 - 3rd Avenue Southeast
Rochester, MN 55904
Attn: Larry Tarara

Dorsey and Whitney
2200 First Bank Place East
Minneapolis, Mn 55402
Attn: Becky Comstock

E. A. Hickok and Associates
545 Indian Mound
Wayzata, MN 55391
Attn: John Lichter

ESC Environmental, Inc.
4751 Mustang Circle
St. Paul, MN 55112
Attn: Greg St. Hilaire

Earth Energy Systems, Inc.
225 South Cordova Avenue
Le Center, MN 56057
Attn: Joe Appelhof

Eaton Corporation
15151 Highway 5
Eden Prairie, MN 55344
Attn: Marvin Miller

Economics Laboratory, Inc.
Osborn Building
St. Paul, MN 55102
Attn: Charles McDuff

Mr. Charles Bonneville
Aitkin County Zoning Office
Aitkin, Minnesota 56431

Mr. Bob Hutchison
Anoka County Community Health and
Social Services Department
County Courthouse
Anoka, Minnesota 55303

Mr. Del Hanson
Becker County Solid Waste Officer
Becker County Courthouse
Detroit Lakes, Minnesota 56501

Mr. William Patnaude
Planning and Zoning Office
Beltrami County Courthouse
Box 248
Bemidji, Minnesota 56601

Mr. Al Barthelemy
Benton County Zoning Office
County Courthouse
Foley, Minnesota 56329

Mr. Mike Christenson
Big Stone County Solid Waste Officer
County Engineering Office
437 North Minnesota Street
Ortonville, Minnesota 56278

Mr. Herb Wenkel
Blue Earth County Sanitarian
City Hall
202 E. Jackson Street
Mankato, Minnesota 56001

Mr. Charles Enter
Brown County Courthouse
Courthouse
New Ulm, Minnesota 56073

Mr. Bruce E. Benson
Carlton County Zoning Office
County Courthouse
Carlton, Minnesota 55718

Mr. Michael Lein and Ms. Virginia Harris
Carver County Courthouse
Chaska, Minnesota 55318

Attn: John R. Keenan
St. Paul, MN 55102
Electro Mold Corporation
616 Industrial Boulevard
Minneapolis, MN 55413
Attn: Dennis Shurson

Envirite Corporation
600 West Germantown Pike
Plymouth Meeting Executive Campus
Plymouth Meeting, PA 19462
Attn: B11 Howard

Envirite Corporation
16435 South Center Avenue
Harvey, IL 60426
Attn: Todd Dykton

Environmental Information Limited
7400 Metro Boulevard, #400
Minneapolis, MN 55435
Attn: Mr. Cary L. Perket

Environmental Transportation Services
Post Office Box 36118
Oklahoma City, OK 73136
Attn: Albert Orr

ESD/Retsel Inc.
1947 West County Road C
Post Office Box 64355
St. Paul, MN 55164
Attn: Lee Albert

Etchit, Inc.
643-13th Avenue South
Hopkins, MN 55343
Attn: Richard H. Dunn

Exide/General Battery Corp.
645 Penn Street, P.O. Box 14205
Reading, PA 19612-4205
Attn: Jeffrey Leed

Federal Hoffman, Inc.
900 Ehlen Drive
Anoka, MN 55303-7501
Attn: Luke Davich

Post Office Box 400
Winona, MN 55987
Attn: Charles D. Duthler

FMC Corp.
4800 East River Road
Minneapolis, MN 55421
Attn: W. Warren

FMC Corp.
Northern Ordinance Division
4800 East River Road
Minneapolis, MN 55421
Attn: Douglas Hildre

Ford Motor Company
15201 Century Drive, #608
Dearborn, MI 48120
Attn: C. H. Porter

General Mills, Inc.
Post Office Box 1113
Minneapolis, MN 55440
Attn: William Taylor

Georgia Tech Research Institute
Environmental Health and Safety Div.
Atlanta, GA 30332
Attn: John Nemeth

GNB, Incorporated
Post Office Box 64100
St. Paul, MN 55164-0100
Attn: E.C. Milton

Gopher Smelting
3385 Highway 149
Eagan, MN 55121
Attn: John Tapper

Governor's Waste Management Board
325 North Salisbury Street
Room 603, Albemarle Building
Raleigh, NC 27611
Attn: Dr. Linda Little

2357 Mound Road
Post Office Box 1208
Warren, MI 48090-0400
Attn: Terry Begnoche

Great Lakes Gas Transmission Co.
2100 Buhl Building (BB-16)
Detroit, MI 48226
Attn: J.V. Mehta, P.E.

Great Lakes Gas Transmission Co.
2100 Buhl Building
Detroit, MI 48226
Attn: Eugene Morabito

Gresen Mfg.
600 Hoover Street
Minneapolis, MN 55413
Attn: Dale C. Halverson

Ground Water Technology
555 Tollgate Road #C
Elgin, Illinois 60123
Attn: Norm Marek

H. B. Fuller Company
3530 Lexington Avenue North
Shoreview, MN 55126
Attn: Chong-Hue Brian Lim

Hall Estill
4100 Bank of Oklahoma
Tulsa, OK 74172
Attn: Deanna Abbott

Hanft, Fride, O'Brien, et al
1000 First Bank Place
Duluth, MN 55802
Attn: G. W. Harries

Hanson, David
1030 Angelo Drive
Minneapolis, MN 55422

Hennepin County Department
of Environment and Energy
822 South Third Street, #300
Minneapolis, MN 55415
Attn: Luther Nelson

of Environmental and Energy
822 South Third Street, #300
Minneapolis, MN 55415
Attn: Mark Banwart

Honeywell, Inc
Honeywell Plaza - 3175
Minneapolis, MN 55408
Attn: Ken Ford MN12-3175

Honeywell, Defense Systems Group
5700 Smetana Drive MN02-3100
Minnetonka, MN 55343
Attn: Jay Johnson

Honeywell Systems and Research Center
P.O. Box 1361
MN-65-3410
Minneapolis, MN 55440
Attn: Paul Klinge

Honeywell
Building 103
TCAAP MN 29-3610
New Brighton, MN 55112
Attn: Greg Bazany

IT Corporation
3570 North Lexington, #200
St. Paul, MN 55126
Attn: Michael J. Costello

Imperial, Inc.
1102 W. Sixth Avenue
Post Office Box 98
Shenandoah, IA 51601
Attn: Gene Currie

Indianhead Truck Line, Inc,
1947 W. County Road C.
Post Office Box 64355
St. Paul, MN 55164-0355
Attn: Lester Wilsey, Jr.

Industrial Health Engineering
7340 Washington Ave. S.
Eden Prairie, MN 55344
Attn: James Thill/Lewis Blair

1627 K Street NW, #700
Washington, D.C. 20006
Attn: Duane A. Siler

International Paper Company
6075 The Corners Parkway, #108
Norcross, GA 30092
Attn: Wilfred Cote

Interplastic Corporation
2015 Broadway Street, N.E.
Minneapolis, MN 55413
Attn: R.T. McCabe

Interstate Power Company
1000 Main Street
Box 769
Dubuque, IA 52001-0769
Attn: Harold Faherty

Interstate Power Company
129 North St. Paul Avenue, #246
Fulda, MN 56131
Attn: W. L. Fuerstenberg

Jones Oil Company
2930 North 33rd Street
P.O. Box 30225
Lincoln, NE 68503-0225
Attn: Rex A. Fischer

Josters
5501 Norman Center Drive
Minneapolis, Minnesota 55437
Attn: Joe Maccani

Kalman W. Abrams Metals, Inc.
2500 Elm Street, Southwest
Minneapolis, MN 55414
Attn: Greg Seiqphin

Kiscaden, Laura
5187 Jamaca Avenue North
Lake Elmo, Minnesota 55042

Kleer-Flo Company
15151 Technology Drive
Eden Prairie, MN 55344
Attn: Wallace Hilgren

Post Office Box 64990
St. Paul, MN 55164
Attn: Thomas Segar

Kolstad Company Inc.
2507 Walnut Street
Roseville, Minnesota 55113
Attn: Bob Burggren

Koppers Company, Inc.
901 Koppers Building
Pittsburgh, PA 15219
Attn: Jordan Dern

KTCA-TV
1640 Como Avenue
St. Paul, MN 55108
Attn: Isavel Gonzales

Land O'Lakes, Inc
Post Office Box 116
Minneapolis, MN 55440
Attn: Inez R. Lange

Larsen Oil Company, Inc.
507 Sherman Street
North Mankato, MN 56001
Attn: Dale Sweet

Larson Boats
702 West River Road
Little Falls, MN 56345
Attn: Allen Kuebelbeck

Leg. Comm. on Waste Management
Room 85 State Office Building
St. Paul, MN 55155
Attn: Kim Austrian

Leonard, Street, and Dienard
Suite 1500, 100 S 5th St
Minneapolis, MN 55402
Attn: Byron E. Starns, Esq.

MAK Oil Company
10020 Olive Street
Coon Rapids, MN 55433
Attn: Mike Knispel

P.O. Box 1238
Mankato, MN 56001
Attn: Bob Freyberg

McLaughlin Gormley King Company
8810 Tenth Avenue North
Minneapolis, MN 55427
Attn: David J. Clausen

MDI, Inc.
6202 Concord Boulevard
Inver Grove Heights, MN 55075
Attn: Merlin Clausen

Metropolitan Waste Control Commission
350 Metro Square Building
St. Paul, MN 55101
Attn: Rebecca Flood IO

Milwaukee Solvents and Chemicals Corp.
14765 West Bobolink Avenue
Post Office Box 444
Menomonee Falls, WI 53051
Attn: C. A. Douthitt

Minnegasco, Inc.
700 West Linden Avenue
Post Office Box 1165
Minneapolis, MN 55440-1165
Attn: Karen Studders Lampert

Minnegasco, Inc.
601 West 61st Street
Minneapolis, MN 55419
Attn: Paul Deneka

Minnesota Automobile Dealers Association
277 University Avenue
St. Paul, MN 55103
Attn: James Schutjer

Minnesota Chapter of the
Nat'l Solid Waste Management Assoc.
4649 Bloomington Avenue South
Minneapolis, MN 55407
Attn: Mary Ayde

717 Delaware Street
P.O. Box 9441
Minneapolis, MN 55440
Attn: Ronald D. Thompson

Minnesota Dept. of Natural Resources
Office of Planning, Box 10
500 Lafayette Road
St. Paul, MN 55101-4010 IO
Attn: Charlotte Cohn

Minnesota Dept. of Natural Resources
Bureau of Field Services
500 Lafayette Road IO
St. Paul, MN 55155-4016
Attn: Terrance Lahti

Minnesota Dept. of Transportation
3485 Hadley Avenue North
Oakdale, MN 55109
Attn: Gary Christiansen

Minnesota Dept of Transportation
2055 Lilac Drive
Golden Valley, MN 55422
Attn: Ray Viall

Minnesota Dept. of Transportation
Room 704, Transportation Building
St. Paul, MN 55155
Attn: Nancy Radle

Minnesota Dept. of Transportation
Room 704 Transportation Bldg.
John Ireland Boulevard
St. Paul, MN 55155
Attn: Cheryl Heide

Minnesota Dept. of Transportation
151 Livestock Exchange Building
100 Stockyards Road
So. St. Paul, MN 55075
Attn: Pete Marcotte

Minnesota Dept. of Transportation
151 Livestock Exchange Building
100 Stockyards Road
So. St. Paul, MN 55075
Attn: Frank Nieland

Chemical Association
1821 University Avenue, Room 253
St. Paul, MN 55104
Attn: Craig Sallstrom

Minnesota Power
30 West Superior Street
Duluth, MN 55802
Attn: Diane Carlton

Minnesota Service Station Association
2700 North Rice Street
St. Paul, MN 55113
Attn: Brian Ettesvold

Minnesota Solvents and
Chemicals Corporation
2340 Rose Place
Roseville, MN 55113
Attn: A. G. Hale

Minnesota Waste Management Board
7323 58th Avenue North
Crystal, MN 55428
Attn: David Cera

Moersfelder, Edward, Leonard, et al
100 South 5th Street, #1500
Minneapolis, MN 55402

Moss and Barnett
1200 Pillsbury Center
Minneapolis, MN 55402
Attn: Michael J. Ahern, Esq.

National Association of
Recycling Industries
330 Madison Avenue
New York, NY 10017
Attn: Paul Parker

National Association of
Solvent Recyclers
1333 New Hampshire Ave, NW, #1100
Washington, D.C. 20036
Attn: Barbara Barchard

National Solid Wastes
Management Association
1730 Rhode Island Avenue NW, # 1000
Washington, D.C. 20036
Attn: Dr. Suellen Pirages

NCR Comten, Inc.
2700 North Snelling Avenue
Roseville, MN 55113
Attn: David Moline

Nichols, Kaster, & Anderson
4644 IDS Tower
Mpls., MN 55402
Attn: Jeffrey P. Anderson

North American Water Office
1519A East Franklin Ave.
Minneapolis, MN 55404
Attn: George Crocker

Northern Natural Gas Co.
1400 Smith
P.O. Box 1188
Houston, TX 77001
Attn: Leo F. Nichols

414 Nicollet Mall
Minneapolis, MN 55401
Attn: Robert D. Clough

Northern States Power Company
414 Nicollet Mall
2nd Floor - ERAD
Minneapolis, MN 55401
Attn: William Libro

Larry Nowak
934th Tactical Airlift Group/DEEV
Mpls, St. Paul International Airport
Minneapolis, MN 55450-5000

Nyhlens Used Oil Service
Route 1, Box 210X
Paynesville, MN 56362
Attn: John Nyhlen

Oil Services, Inc.
Route 2, Box 276
Zimmerman, MN 55398
Attn: Don W. Anderson

Otter Tail Power Company
215 South Cascade
Fergus Falls, MN 56537
Attn: Terry Graumann

Outdoors Committee
Box 88
Longville, MN 56655
Attn: James (Ted) Shields

Parker Hannifin Corp.
Plews Division
Highway 212
Granite Falls, MN 56241
Attn: Larry G. McLane

Pope-Reid Associates, Inc.
245 East 6th Street, #813
St. Paul, MN 55101
Attn: R. J. Reid

Popham, Haik et al
3300 Piper Jaffray Tower
Mpls., MN 55402
Attn: James A. Payne

Glencoe, MN 55336
Attn: Merlin Groenke

PPG Industries, Inc.
260 Kappa Drive
Pittsburgh, PA 15238
Attn: Christine Babka

Prometheus Co.
127 South Park
Fairfax, MN 55332
Attn: Terry Johnston

Rexnord Chemical Products Inc.
7711 Computer Avenue
Minneapolis, MN 55435
Attn: Lawrence Benjamin

Richfield Energy Awareness Commission
7000 Portland Avenue
Richfield, MN 55423
Attn: S. M. Sanford

Round River Environmental Services
Route 2, Box 179
Fertile, MN 56540
Attn: Brian Hauge

RMT Inc.
1406 E. Washington Ave
Suite 124
Madison, WI 53703
Attn: Library

S. B. Foot Tanning, Red Wing, MN
P.O. Box 845
Dumas, TX 79029
Attn: David Guthe

Safety Kleen Corp.
777 Big Timber Road
Elgin, IL 60123
Attn: Sue Ryan

St. Cloud AVTI
1540 Northway Drive
St. Cloud, MN 56301
Attn: Mike Lehn

405 Maria Avenue
St. Paul, MN 55106
Attn: Lee Miller

St. Mary's Hospital
1216 - 2nd St. S.W.
Rochester, MN 55902
Attn: Alan Knutson

St. Mary's Hospital
1216 - 2nd St. S.W.
P.O. Box 911
Rochester, MN 55903-0911
Attn: C. M. Douglass

St. Paul Fire Department
100 E. Eleventh Street
St. Paul, MN 55101
Attn: Russ Polansky

Scott County
Environmental Health
Scott County Courthouse, Room A102
Shakopee, MN 55379
Attn: Peter Schmidt

Serco Labs
1931 W. Co. Rd. C2
St. Paul, MN 55113
Attn: Carol Kuehn

Sheldahl Inc.
P.O. Box 170
Northfield, MN 55057
Attn: David Miller

Sierra Club, North Star Chapter
1313 Fifth Street, Southeast, #323
Minneapolis, MN 55414-1524
Attn: Vicki Munson

Smith System Manufacturing Co.
1100 S. 10th St.
Princeton, MN 55371
Attn: John Tulp

6401 Industrial Drive
Box 5477
Hopkins, MN 55343
Attn: Quentin F. Casanova

Soo Line Railroad Company
P.O. Box 1182
Minneapolis, MN 55440
Attn: G. J. Lentzner

Soo Line Railroad Company
Suite #1000, Soo Line Building
P.O. Box 530
Minneapolis, MN 55440
Attn: Michael Mullins

Southern Minnesota Sugar Cooperative
Post Office Box 500
Renville, MN 56284
Attn: William DeBelly

Don Sparks
115-104 Larre
Coon Rapids, MN 55433

Special Resource Management Inc.
1131 Westrac Drive #201
Fargo, ND 58103
Attn: Anne T. Harri

Sperry Corporation
Semiconductor Operations
Post Office Box 64724, M.S. H2N26
St. Paul, MN 55164
Attn: Jean Krueger

Division of Minnesota Co.
4906 France Avenue North
Minneapolis, MN 55429
Attn: David Heegaard

Stone Container Corporation
2150 Parkdale Drive, Suite #400
Atlanta, Georgia 30345
Attn: Curtis Barton

STS Consultants Ltd.
2405 Annapolis Lane, #280
Minneapolis, MN 55441
Attn: Ross Ohman

Tape Mark Company
150 East Marie
West St. Paul, MN 55118
Attn: Doris Polson

Telex Communications, Inc.
9600 Aldrich Avenue South
Minneapolis, MN 55420
Attn: Paul Metcalf

Thermo King Corporation
314 West 90th Street
Bloomington, MN 55420
Attn: Lloyd E. West (E.C.O.)

TWA
Environmental Safety I-135 MCI
PO Box 20126
Kansas City, MO 64195
Attn: Ed Olson

Unisys
P.O. Box 64525
Mail Station U1N14
St. Paul, MN 55164-0525
Attn: Greg Weisjahn

Unisys Corp, Semiconductor Operations
P.O. Box 64724 M.S. H2N26
St. Paul, MN 55164
Attn: Jean Krueger

Union Carbide Corp-Linde Division
120 S. Riverside Plaza
Chicago, IL 60606
Attn: Michael A. Mikovich

Highway 10
Elk River, MN 55330
Attn: Jim Eggen

University of Minnesota
MNTAP, Boynton Health Service
W-163
Minneapolis, MN 55455
Attn: Donna Peterson

Valley Truck Service
Box 123
Bayport, Minnesota 55003
Attn: Ronald Nelson

Van Hoven Company, Inc.
505 Hardman Avenue
P.O. Box 56
South St. Paul, MN 55075
Attn: E. G. Van Hoven Jr.

Victory Envelope Inc.
1501 Park Road
Post Office Box 159
Chanhassen, MN 55317
Attn: Lori Storms

Warden Oil Co. Inc.
187 Humboldt Avenue North
Minneapolis, MN 55405
Attn: Earl Jackelen

Washington County Public Health
14900 - 61st North
Post Office Box 6
Stillwater, MN 55082
Attn: Fred Anderson

Washington County Community Health
2000 Industrial Boulevard
Stillwater, MN 55082
Attn: Michael Ayers

Waste Management-Blaine
Post Office Box 9
Circle Pines, MN 55014
Attn: Ron Pfeifer

10000 Maple St. NE
P.O. Box 9
Circle Pines, MN 55434
Attn: James Gencavski

Waste Management of MN, Inc.
14730 Sunfish Lake Boulevard
Post Office Box 67
Anoka, MN 55303
Attn: Terry Miller

Waste Oil Service
1625 South 17 Street
Fargo, ND 58103
Attn: F.A. Cordahl

Waste Research and Reclamation
Route 7, Highway 93 South
Eau Claire, WI 54701
Attn: Gene Jameson

Watkins, Inc.
150 Liberty Street
Winona, MN 55987
Attn: L. M. Ferdinandsen

Watt/Peterson, Inc.
15020-27th Avenue North
Plymouth, MN 55441
Attn: Paul Pyzdrowski

WCI Freezer Division
701 33rd Avenue North
St. Cloud, MN 56301
Attn: Richard B. Clute

Wilbur-Ellis Co.
Agriculture Services Corp. Office
191 West Shaw Avenue, #107
Fresno, CA 93704-2876
Attn: Stewart Allen

Worum Chemical Company
2130 Energy Park Drive
St. Paul, MN 55108
Attn: Ruth O'Connell

ADHESIVE & SEALANT COUNCIL
SUITE 515
1500 NORTH WILSON BLVD
ARLINGTON VA 22209 1

AM INSURANCE ASSOC
ATTN FRED McGARVEY
300 S RIVERSIDE PLAZA
#2060 SOUTH
CHICAGO IL 60606 1

AM LUNG ASSN RAMSEY COUNTY
ATTN NANCY ZINK
614 PORTLAND AVE
ST PAUL MN 55102 1

AMERICAN CRYSTAL SUGAR
ATTN W W BARR MGR ENV CONTR
101 N THIRD ST
MOORHEAD MN 56560 1

AMOCO PIPELINE CO
ATTN LARRY NEWMAN 1
P O BOX 3548
OAK BROOK, IL 60522-3548

ANOKA CO COMM HEALTH & SOC SERV DEPT
ATTN GERTRUDE M JAMES
COURTHOUSE 4TH FL
ANOKA MN 55303 1

API INC
ATTN TERRY WOLD
2366 ROSE PLACE
ST PAUL MN 55113 1

ARMOUR & COMPANY
ATTN ROBERT J SHERMAN
CONAGRA CENTER
ONE CENTRAL PARK PLAZA
OMAHA NE 68102-1679 1

ASHLAND PETROLEUM COMPANY
ATTN RICHARD HETLAND
P O BOX 9
ST PAUL PARK MN 55071 1

ASHLAND PETROLEUM CO
ATTN A C MEKO LAW DEPT
P O BOX 391
ASHLAND KY 41114 1

ASSOC OF MN COUNTIES
525 PARK STREET
SUITE 404
ST. PAUL, MN 55103

BADGER SAFE ENERGY ALLI
BOX 239
ELLSWORTH WI 54011 1

BARR ENGINEERING CO
7803 GLENROY RD
SUITE 100
MINNEAPOLIS MN 55435 1

BENDIX
ENVIR & PROCESS INST DIV
P O DRAWER 831
LEWISBURG W VA 24901 1

BRUCE E BENSON
ZONING OFFICER
COURTHOUSE
CARLTON MN 55718 1

BIO-CLEAN INC
LANCE CROMBIE
201 W BURNSVILLE PKWY
#130G
BURNSVILLE MN 55337 1

BLACK & VEATCH
ATTN JILL WRIGHT
SUITE 1240 TOWER 600 RENCEN
DETROIT MI 48243 1

BLANDIN PAPER COMPANY
ATTN W J LICKE
115 FIRST STREET S W
GRAND RAPIDS MN 55744 1

BLANDIN WOOD PRODUCTS CO
ATTN CURT R FIRMAN
WAFERBOARD PLANT SITE BOX N
GRAND RAPIDS MN 55744 1

BOISE CASCADE CORPORATION
ATTN MR RUSS SUMMER
ENVIRONMENTAL ENGINEER
INT'L FALLS MN 56649 1

BOLTON & MENK INC
ATTN THOMAS A ROUSHAR
515 N FRONT ST
MANKATO MN 56001 1

BROEKER HARTFELDT HEDGES & GRANT ATTORNEY AT LAW
ATTN JOHN M BROEKER
2850 METRO DRIVE SUITE 800
MINNEAPOLIS MN 55420 1

CITY OF BROOKLYN CENTER
ATTN PATTY PAGE
6301 SHINGLE CREEK PKWY
BROOKLYN CE MN 55430 1

BILL BUDD
4270 JEFFERSON STREET
EXCELSIOR MN 55331 1

BUREAU OF NAT'L AFFAIRS
ATTN MARK WOLSKI
1729 HAGUE AVENUE
ST PAUL MN 55104 1

CRS INC
DAVID BORDSON, MANAGER
10800 Lyndale Ave. #165
Bloomington, MN 55420

BURLINGTON NORTHERN RLRD CO
9401 INDIAN CREEK PKWY
P O BOX 29136
OVERLAND PARK, KS 66201 1

BURLINGTON NORTHERN
LAW DEPARTMENT
176 EAST FIFTH STREET
ST PAUL MN 55101 1

CALC
ATTN PAM BARBOUR
122 W FRANKLIN AVE RM 302
MINNEAPOLIS MN 55404 1

CENEX
ATTN RALPH SCHLETTY
BOX 43089
ST PAUL MN 55164 1

DAVID CERA
2010 JERSEY AVE SO
ST LOUIS PARK MN 55426 2

CHAMPION INT'L CORP
RICHARD W WIGGER
V P ENV AFFAIRS
ONE CHAMPION PLAZA
STAMFORD CN 06921 2

CHEMLAWN CORPORATION
MARK W BELICZKY E P
MGR REG & LEG AFFAIRS
8275 NORTH HIGH ST
COLUMBUS OH 43085 2

CITIZENS FOR BETTER ENVIR
SUITE #201
1515 E LAKE ST
MINNEAPOLIS MN 55407 2

COLOR-AD PACKAGING INC
ATTN MICHAEL S KECKEISEN
3600 ALABAMA AVE
MINNEAPOLIS MN 55416 2

COMM HEALTH SERV BRD
ATTN BRUCE T ROWE
325 LAKE AVENUE S SUITE 604
DULUTH MN 55802 2

CONSULTING ENGINEERS DIV
SUITE 200
7200 HEMLOCK LANE N
MAPLE GROVE MN 55369 2

COOPERATIVE POWER ASSOC
ATTN WILLIAM KAUL
14615 LONE OAK ROAD
EDEN PRAIRIE MN 55344 2

COOPERATIVE POWER ASSOC
ATTN SCOTT SCHULER
14615 LONE OAK ROAD
EDEN PRAIRIE MN 55344 2

CORNELIUS CO
JERRY DIRKS
1 CORNELIUS PLACE
HIGHWAY 10 W
ANOKA MN 55303 2

DONALD B CRASSWELLER
LAW OFFICES
1000 ALWORTH BUILDING
DULUTH MN 55802 2

D H G & G ATTORNEYS AT LAW
ATTN JOHN HERMAN
TEN SOUTH FIFTH ST
SUITE 930
MINNEAPOLIS MN 55401 2

MARK DAHL
500 MISSION RD
BLOOMINGTON MN 55420 2

DAIRYLAND POWER COOP
ATTN THOMAS A STEELE
P O BOX 817
2615 EAST AVENUE S
LA CROSSE WI 54601 2

DAKOTA COUNTY ATTORNEY
ROBERT F CAROLAN
1560 HIGHWAY 55
HASTINGS MN 55033 2

DAKOTA COUNTY ENV'L HEALTH
RON SPONG
SUITE 101 33 E WENTWORTH
WEST ST PAUL MN 55118 2

DAMES & MOORE
ATTN LAWRENCE ANNEN
SUITE 101 1846 HOFFMAN
MADISON, WI 53704

DAMES & MOORE
ATTN GEORGE NICHOLAS
1550 NW HWY
PARK RIDGE IL 60068 2

DAVID BRASLAU ASSOCIATES
1313 5TH STREET S E #322
MINNEAPOLIS MN 55414 2

TOM LEHMAN
SUITE #388
HALL OF THE STATES
444 NORTH CAPITOL STREET
WASHINGTON D C 20001 2

DORSEY & WHITNEY LIBRARY
2200 FIRST BANK PLACE E
MINNEAPOLIS MN 55402 2

DORSEY & WHITNEY
ATTN BECKY A COMSTOCK
2200 FIRST BANK PLACE EAST
MINNEAPOLIS MN 55402 2

DORSEY & WHITNEY
ATTN JOYCE MARTIN
2200 FIRST BANK PLACE EAST
MINNEAPOLIS MN 55402 2

DORSEY LAW FIRM
ATTN MARK KASTOR
2200 FIRST BANK PLACE E
MINNEAPOLIS MN 55402 2

DULUTH MISSABE & IRON
RANGE RAILWAY CO
210 MISSABE BLDG
DULUTH MN 55802 2

E I DU PONT DE NEMOURS CO
ATTN MARILYN MOONEY
LEGAL DEPT (D7082)
1007 MARKET STREET
WILMINGTON DE 19898 2

ENVIR ENG & POLLUTION
CONTROL/3M 21-2W-06
DAVID M BENFORADO P E
P O BOX 33331
ST PAUL MN 55133 2

ENVIRONMENTAL ENGINEERING
& POLLUTION CONTROL/3M
ATTN THOMAS ZOSEL
P O BOX 33331
ST PAUL MN 55133 3

ENVIRONMENTAL TASK FORCE
1012 FOURTEENTH ST N W
15TH FLOOR
WASHINGTON D C 20005 3

EPA REGION V
OFFICE OF PUBLIC AFFAIRS
230 S DEARBORN ST
CHICAGO IL 60604 3

EPA REGION V
ATTN DAVE ULLRICH
230 S DEARBORN ST
CHICAGO IL 60604 3

LEALLAN ESTREM
407 DEWEY
ST PAUL MN 55104 3

EWALD CONSULTING GROUP
245 E 6TH STREET
SUITE 248
ST PAUL MN 55101 3

DOUG EWALD
15025 HIGHLAND TRAIL
MINNETONKA MN 55345 3

ERN-NORTH CENTRAL INC
ATTN SUSAN HOGLUND
SUITE 200 835 STERLING AVE
PALATINE IL 60067 3

FINANCE & COMMERCE
THE DAILY BUSINESS NEWS
615 SOUTH 7TH STREET
MINNEAPOLIS MN 55415 3

FMC CORP
NORTHERN ORDINANCE DIV
DOUGLAS HILDRE
4800 E RIVER ROAD
MINNEAPOLIS MN 55421 3

CONRAD M FREDIN
ATTORNEY AT LAW
515 PROVIDENCE BLDG
DULUTH MN 55802 3

FRUNDT FRUNDT & JOHNSON
117 WEST 5TH STREET
BLUE EARTH MN 56013 3

FRIENDS OF THE BOUNDARY
WATER WILDERNESS
ATTN KEVIN PROESCHOLDT
1313 FIFTH ST S E #327
MINNEAPOLIS MN 55414 3

GENERAL MILLS INC
ATTN DONALD J THIMSEN
P O BOX 1113
MINNEAPOLIS MN 55440 3

GEO A HORMEL & CO
ATTN KEVIN C JONES
BOX 800
AUSTIN MN 55912 3

GNB INC
EVERETT MILTON
P O BOX 64100
ST PAUL MN 55164-0100 3

D E GRAMMER
4410 E 4TH AVE
HIBBING MN 55746 3

GRACO INC
DEAN HOWARTH
P O BOX 1441
MINNEAPOLIS MN 55440 3

HAMLINE U LAW SCHOOL
PUBLIC INTEREST CLINIC
ATTN BARBARA JOHNSON
ST PAUL MN 55104 3

HAMLINE U SCHOOL OF LAW
PUBLIC INTEREST AD
ADVOCACY CLINIC
ST PAUL MN 55104 3

HARDRIVES
BOB DANGERS
7200 HEMLOCK LANE
MINNEAPOLIS MN 55369 3

ELLSWORTH HARPOLE
727 15TH AVE S E #30
MINNEAPOLIS MN 55414 3

J WILLIAM HAUN P E
SUITE 343
13911 RUDGEDALE DR
MINNETONKA MN 55343 3

HEALTH & SOCIAL SERVICES
ATTN ROBERT HUTCHISON
COURTHOUSE 4TH FLOOR
ANOKA MN 55303 3

MICHAEL HENNEN
4608 ALDRICH AVE S
MINNEAPOLIS MN 55409 3

DYKE WILLIAMS
HENNEPIN PARKS
3800 CTY RD 24
MAPLE PLAIN MN 55359 3

HDR TECHSERV INC
ATTN JAY JOHNSON
300 PARKDALE 1 BLDG
5401 GAMBLE DRIVE
MINNEAPOLIS MN 55416-1518 3

HESSIAN MCKASY & SODERBERG
ATTN HAROLD J SODERBERG
4700 IDS CENTER
MINNEAPOLIS MN 55402 3

PATTY HOOKER
594 E IDAHO AVENUE
ST PAUL MN 55101 3

PAUL J HUBER LTD
1821 UNIVERSITY AVE
ST PAUL MN 55104 4

IBM CORPORATION
ATTN J P HARMON
DEPT 713/BLDG 658-D
ROCHESTER MN 55901 4

INDEPENDENT BUS ASSOC
OF MN
ATTN CATHY CARSBERG
9062 LYNDALE AVE S
BLOOMINGTON MN 55420 4

INDUST HEALTH ENG ASSOC INC
ATTN KNOWLTON J CAPLAN
7340 WASHINGTON AVE S
EDEN PRAIRIE MN 55344 4

INDUSTRIAL FABRICATORS CO
P O BOX 1561
JACKSON TN 38301 4

INTERNATIONAL ECO SOCIETY
ATTN R J F KRAMER
1471 BARCLAY STREET
ST PAUL MN 55106 4

INTERNATIONAL RESEARCH
& EVALUATION
ATTN DR R DANFORD
21098 IRE/CONTROL CENTER
EAGAN MN 55121 4

INTERSTATE POWER CO
PRESIDENT
1000 MAIN ST
DUBUQUE IA 52001 4

IOWA DEPT ENVIRON QUALITY
ATTN STEVEN N WILLIAMS
HENRY A WALLACE BLDG
DES MOINES IA 50319 4

Izaak Walton League MN Div
Paul Toren
805 Park Ave.
Mahtomedi, MN 55115

JEROME FOODS
ATTN BOB SCHWARTZ
34 N SEVENTH ST
BARRON WI 54812 4

JONES HAUGH & SMITH INC
515 SOUTH WASHINGTON
ALBERT LEA MN 56007 4

KFIL RADIO
ATTN ERNIE HAIN
P O BOX 377
PRESTON MN 55965 4

KIMBERLY-CLARK CORP
ATTN LYNN A BRANBERG
401 N LAKE STREET
NEENAH WI 54956 4

KOPPERS COMPANY INC
ATTN JORDAN M DERN
1201 KOPPERS BLDG
PITTSBURGH PA 15219 4

KSTP AM RADIO
ATTN J B ECKERT
2792 MAPLEWOOD DRIVE
MAPLEWOOD, MN 55109

AL KURKI
2904 W 3RD ST
DULUTH MN 55806 4

L L K O D LAW OFFICES
ATTN JOHN E DRAWZ
2000 FIRST NAT BANK PL W
MINNEAPOLIS MN 55402 4

LAKE MINNETONKA CONS DIST
402 E LAKE ST
WAYZATA MN 55391 4

LAKE SUPERIOR
INDUSTRIAL BUREAU
1408 ALWORTH BLDG
DULUTH MN 55802 4

LAND O LAKES
ATTN JAMES A BOSCH
4001 LEXINGTON AVE N
ARDEN HILLS MN 55112 4

LEAGUE OF MINNESOTA CITIES
ATTN DON SLATER
183 UNIVERSITY AVE EAST
ST PAUL MN 55101 4

STEVEN LEBEAU
2804 39 AVENUE SOUTH
MINNEAPOLIS, MN 55406

LIBRARY MINISTRY OF ENV
PARLIAMENT BLDG
VICTORIA BRITISH CO
V8V1X4 CANADA 4

ROBERT LOCKYEAR
14900 61ST ST N
STILLWATER MN 55082 4

RACHEL LORD
2323 TALMAGE AVE S E
MINNEAPOLIS MN 55414 4

M & M PROTECT CONSULTANTS
ATTN WM R HOYT
1500 NORTH STAR CENTER
MINNEAPOLIS MN 55402 4

MAC ARTHUR CO
2400 WYCLIFF STREET
ST PAUL MN 55114 4

MINNESOTA MEDICAL ASSOC
ATTN: ROBERT EELKEMA
SUITE 400
2221 UNIVERSITY AVE SE
MPLS, MN 55414

MAYO CLINIC FOUNDATION
DAVID N FASS
HEMATOLOGY RESEARCH
ROCHESTER MN 55901 5

NANCY CARLSON
MEEB/REEC
UNIVERSITY OF MN, MORRIS
PE ANNEX RM 32
MORRIS, MN 56267

MIDLAND GLASS COMPANY
DONALD F HENNEN
PLANT MANAGER
P O BOX 69
SHAKOPEE MN 55379 5

CITY OF MILTONA
ATTN KEVIN LEE CLERK
MILTONA MN 56354 5

MINNEAPOLIS TRIBUNE
ATTN BOB FRANKLIN
425 PORTLAND AVE
MINNEAPOLIS MN 55488 5

MINNEGASCO
PAUL DENEKA
700 W LINDEN AVE
P O BOX 1165
MPLS MN 55440-1165 5

MINNEGASCO
GEORGE MASTOR
LEGAL DIVISION
201 SOUTH 7TH STREET
MINNEAPOLIS MN 55402 5

MINNEGASCO
STEVEN HOLMSTOEN
700 W LINDEN AVE
P O BOX 1165
MPLS MN 55440-1165 5

MINNESOTA FARMERS UNION
ATTN JULIE BLEYHL
DIRECTOR OF LEG SERV
317 YORK AVE
ST PAUL MN 55101 5

THE MINNESOTA PROJECT
ATTN LONI KEMP
2222 ELM STREET S E
MINNEAPOLIS MN 55414 5

MINNKOTA POWER COOP INC
ATTN LOREN L JOHNSON
BOX 1318
GRAND FORKS ND 58201 5

MN AGRI GROWTH COUNCIL
8030 CEDAR AVE S
SUITE 213
BLOOMINGTON MN 55420 5

MN ASSOC HEALTH CARE FAC
ATTN RICK CARTER
2850 METRO DRIVE SUITE 429
MINNEAPOLIS MN 55420 5

MN AUDUBON COUNCIL
1313 5th STREET SE
SUITE 321
MINNEAPOLIS, MN 55414

MN CHAPTER OF ABC
ATTN DAVID JENNINGS
6989 WASHINGTON AVE S #200
MINNEAPOLIS MN 55435 5

MN ENV QUALITY BOARD
GREG LARSON
550 CEDAR STREET
ST PAUL MN 55101 5

MN MOTOR TRANSPORT ASSOC
ATTN JAMES N DENN
1821 UNIVERSITY RM 134N
ST PAUL MN 55104 5

MN MULTI HOUSING ASSOC
ATTN JOHN G HORNER
4740 PARK GLEN ROAD
MINNEAPOLIS MN 55416 5

MN NEWSPAPER ASSOC
12 S 6TH STREET SUITE 1120
MINNEAPOLIS MN 55402 5

MN RETAIL MERCHANTS ASSOC
FRANCIS M FITZGERALD II
180 METRO SQUARE BLDG
ST PAUL MN 55101 5

MOBIL OIL
ATTN PETE GATES
P O BOX 66568
AMF O'HARE IL 60666 5

MOSS & BARNETT LAW OFFICES
MICHAEL J AHERN
1200 PILLSBURY CTR
200 S 6TH ST
MINNEAPOLIS MN 55402 5

MOTORCYCLE INDUSTRY COUNCIL
1235 JEFFERSON DAVIS HWY
SUITE 1410
ARLINGTON VA 22202 5

MPIRG
ATTN JAMES MILLER
2412 UNIVERSITY AVE S E
MINNEAPOLIS MN 55414 5

MPIRG
ATTN KENNETH PETERSON
2412 UNIVERSITY AVE S E
MINNEAPOLIS MN 55414 5

NAT'L SOLID WASTE MGMT ASSN
MARY AYDE
4649 BLOOMINGTON AVE S
MINNEAPOLIS MN 55407 5

NAT'L RENDERERS ASSOC INC
ATTN WILLIAM H PROKOP
2250 EAST DEVON AVE
DES PLAINES IL 60018 5

NCASI
ATTN REID MINER
CENTRAL LAKE ST REG CE
WESTERN MICHIGAN UNIV
KALAMAZOO MI 49008 5

NE IMPROVEMENT COUNT
KAREN VARIAN
722 36½ AVE N E
MINNEAPOLIS MN 55418 5

STEWART NICHOLSON
13150 HARRIET AVE S #378
BURNSVILLE MN 55337 5

DNR/MEEB
CAROL LANGER
1201 E HIGHWAY #2
GRAND RAPIDS, MN 55744

NORTH STAR STEEL CO
ATTN R A GARVEY
1678 RED ROCK RD
P O BOX 43189
ST PAUL MN 55164 6

NSP LAW DEPT
ATTN JOSEPH D BIZZANO JR
414 NICOLLET MALL
MINNEAPOLIS MN 55401 6

NORTHERN STATES POWER CO
ATTN G V WELK MGR
REG COMPL & SERV
414 NICOLLET MALL
MINNEAPOLIS MN 55401 6

OFFICE OF ADMIN HEARI CO
ATTN SAM RUHLE
400 SUMMIT BANK BLDG
30 S FOURTH AVE
MINNEAPOLIS MN 55415 6

OGLEBAY NORTON CO
HENRY CHISHOLM
P O BOX 6508
CLEVELAND OHIO 44101 6

OLMSTED CITIZENS FOR A
BETTER COMMUNITY
P O BOX 504
ROCHESTER MN 55903 6

OLSON GUNN & SERAN LTD
ATTN WAYNE H OLSON
315 PEAVEY BLDG
730 SECOND AVE S
MINNEAPOLIS MN 55402 6

PAUL WEIR CO
820 DAVIS
P O BOX 1499
EVANSTON IL 60201-1499 6

PERRY GRUBB ASSOC INC
ATTN CHARLES R SINGER
771 HARDING ST N E
MINNEAPOLIS MN 55413 6

PHILLIPS LEGIS SERVICES
459 RICE ST
ST PAUL MN 55103 6

PICKANDS MATHER & CO
ATTN THOMAS W HAYES
SUITE 811-200 W SUPERIOR ST
DULUTH MN 55802 6

PICKANDS MATHER & CO
ATTN CHUCK HOFFMAN
SUITE 811-200 W SUPERIOR ST
DULUTH MN 55802 6

PICKANDS MATHER & CO
ATTN T J MANTHEY
1100 SUPERIOR AVE N E
CLEVELAND OH 44114 6

THE PILLSBURY COMPANY
ATTN MAHLON SCHNEIDER
MS 3726
THE PILLSBURY CENTER
MPLS MN 55402 6

THOMAS M POLT
ATTORNEY AT LAW
MCCARTHY BLDG
EYOTA MN 55934 6

POPHAM HAIK LAW FIRM
ROBERT S BURK
3300 PIPER JAFFRAY TOWER
222 S 9TH STREET
MINNEAPOLIS MN 55402 6

POPHAM HAIK LAW FIRM
ATTN G ROBERT JOHNSON
3300 PIPER JAFFRAY TOWER
222 S 9TH STREET
MINNEAPOLIS MN 55402 6

POPHAM HAIK LAW FIRM
ATTN LA RAYE OSBORNE
3300 PIPER JAFFRAY TOWER
222 S 9TH STREET
MINNEAPOLIS MN 55402 6

POTLATCH CORPORATION
ATTN ARCHIE D CHELSETH
BOX 510
CLOQUET MN 55720 6

PRECISION ENV SERV
ATTN JOHN GLEASON
8009 RANCHERS ROAD N E
FRIDLEY MN 55432 6

PUBLIC AFFAIRS INFORMATION
STATE REGULATORY DIV
1900 14TH STREET
SACRAMENTO CA 95814 6

PULP & PAPER
ATTN PAULA IRONS
500 HOWARD ST
SAN FRANCISCO CA 94105 6

R C CONSULTANTS OF ANOKA
JAMES D WOLVERTON P E
10666 UNIVERSITY AVE N W
COON RAPIDS MN 55433 6

RAMSEY CO ENVIR HEALTH
ATTN DOUGLAS WOOD
1910 W CO RD B
ROSEVILLE MN 55113 6

SHAILIA REGEHR
R R 1 BOX 419
STEWARTVILLE MN 55976 6

REGION NINE DEVELP COMM
ATTN LYNNETTE RENNEKE WIEST
410 S 5TH ST P O BOX 3367
MANKATO MN 56001 6

NEWS EDITOR
REGISTER-MIRROR
P O BOX 3253
MINNEAPOLIS MN 55403 6

RELIANCE UNIVERSAL INC
ATTN PAUL H WALKER
ROBTSON RESEARCH & DVLP CE
4730 CRITTENDEN DR
LOUISVILLE KY 40209 6

RICE COUNTY PLANNING OFF
610 N W 20TH ST
P O BOX 40
FARIBAULT MN 55021 6

HEDIA RIEKE
2100 28TH AVE S
MINNEAPOLIS MN 55406 6

CHAMBER OF COMMERCE
TOM CASEY
220 S BROADWAY #100
ROCHESTER MN 55904-6503 7

ROCHESTER PUBLIC UTILITIES
ATTN JOSEPH HENSEL
506 FIRST AVE N E
BOX 6057
ROCHESTER MN 55901 7

ROOSEVELT JR HIGH
MARK GUGISBERG
650 N E MAIN ST
BLAINE MN 55434 7

RUTH SAARI
3901 49TH ST W #305
MINNEAPOLIS MN 55424 7

SID SANFORD
7000 PORTLAND AVE
RICHFIELD MN 55423 7

SARGENT & LUNDY ENGINEERS
55 EAST MONROE ST
CHICAGO IL 60603 7

A B SCHAEFER JR
14900 61ST ST N
STILLWATER MN 55082 7

JANE SCHOEWE
7700 PENN AVE S #2
RICHFIELD MN 55423-3650 7

FORREST W SEYMOUR
2870 HUMBOLDT AVE S #2
MINNEAPOLIS MN 55408 7

SHELDAHL
ATTN DAVID MILLER
N HWY 3
NORTHFIELD MN 55057 7

SHELL ENGINEERING & ASSOC
1804 VANDIVER DR
P O BOX 548
COLUMBIA MO 65205 7

THE SHERWIN-WILLIAMS CO
ATTN D A COHAGAN
101 PROSPECT AVE N W
CLEVELAND OH 44115 7

SIERRA CLUB-PROJ ENV
NELSON FRENCH
SUITE 323
1313 5TH ST S E
MINNEAPOLIS MN 55414 7

BETTY SIMS
2149 GOODRICH AVE
ST PAUL MN 55105 7

ST PAUL FIRE DEPT
RUSS POLANSKY
100 E ELEVENTH ST
ST PAUL MN 55101 7

STEARNS COUNTY PLAN DEPT
ATTN KENNETH HOPKE
BOX 604
ST CLOUD MN 56301 7

EDWIN E STERLING
3920 39TH AVE S
MINNEAPOLIS MN 55406 7

TECH SALES CO
ATTN DAN ENGSTRAND
311 W 44TH ST
MINNEAPOLIS MN 55409 7

TENNECO INC
ATTN B J WHITLEY CEP
1100 MILAM BLDG
HOUSTON TX 77001 7

THERMO-KING
R SCHOENBORN CORP LIB
314 W 90TH ST
MINNEAPOLIS MN 55420 7

TWIN CITY ASSN OF METAL
FINISHERS PHILLIP KLEIN
300 HANOVER BLDG
480 CEDAR ST
ST PAUL MN 55101 7

U OF M
CINDY A McCOMAS
ROOM W-163 BOYNTON
410 CHURCH ST S E
MINNEAPOLIS MN 55455 7

U OF M PHYSICAL PLANT DEPT
ATTN ROBERT SILVAGNI
200 SHOPS BLDG
319 15TH AVE S E
MINNEAPOLIS MN 55455 7

U OF M
ATTN ROBERT SNYDER
248 CLASSROOM OFFICE BLDG
1994 BUFORD AVE
ST PAUL MN 55108 7

UNION CARBIDE CORP
ATTN M WILKINS
39 OLD RIDGEBURY RD E2289
DANBURY CT 06817 7

UNITED POWER ASSOC
ATTN REYNOLD S RAHKO
PROJECTS COORD DIV
ELK RIVER MN 55330 7

UNITED POWER ASSOC
ATTN DAN MCCONNON
ENV & LAND DIV
ELK RIVER MN 55330 7

VAN HOVEN CO INC
ATTN ED VAN HOVEN JR
BOX 56
SO ST PAUL MN 55075 7

RON WALLACE
1790 DAYTON AVE
ST PAUL MN 55104

KEITH H LANGMO
618 WEST CRESCENT LANE
LITCHFIELD MN 55355 8

WASHINGTON CO ADMIN
CHARLES SWANSON
14900 61ST ST N
STILLWATER MN 55082 8

ARNOLD ONSTAD
204 SECOND ST S E
SPRING GROVE MN 55974 8

WASHINGTON COUNTY COMMUNITY
HEALTH SERVICES
ATTN TOM DELLENBACH
PO BOX 6
STILLWATER, MN 55082

RUTH ERICSON
80 EDISON BLVD
SILVER BAY MN 55614 8

B J WHITLEY JR
1100 MILAM BLDG
P O BOX 2511
HOUSTON TX 77001 8

EDWARD F FAIRBANKS
ROUTE 3 BOX 867
BEMIDJI MN 56601 8

WILLIAM MITCHELL COLLEGE
OF LAW
ATTN PROF MARCIA GELPE
875 SUMMIT AVE
ST PAUL MN 55102 8

RUSSELL W DOMINO
23 WEST RD
CIRCLE PINES MN 55014 8

CITY OF WINONA
ATTN ROBERT J BOLLANT
4TH & LAFAYETTE ST
WINONA MN 55987 8

WESTINGHOUSE ELECTRIC CORP
WALTER R. NORKUS
10 S. RIVERSIDE PLAZA
CHICAGO, IL 60606

WINTHROP WEINSTINE &
SEXTON
1800 CONWED TOWER
444 CEDAR ST
ST PAUL MN 55101 8

DANIEL D FOLEY M D
427 SOUTH O'DAY CIRCLE
MAPLEWOOD MN 55119 8

JANET C GREEN
10550 OLD N SHORE RD
DULUTH MN 55804 8

DUANE A DAHLBERG PH D
421 HORN AVENUE S
MOORHEAD MN 56560 8

DEPT OF AGRICULTURE
AGRONOMY SERVICES
ATTN GARY BRAUN
90 W PLATO BLVD
ST PAUL MN 55107

BRD OF ARCH ENG LAND SURV
AND LANDSCAPE ARCHITECTURE
ATTN LOWELL E TORSETH
500 METRO SQUARE
ST PAUL MN 55101

ATTORNEY GENERAL'S OFFICE
ANTITRUST DIVISION
2ND FLOOR FORD BLDG
117 UNIVERSITY AVE
ST PAUL MN 55155

MN DEPT ECONOMIC SECURITY
ATTN F JAMES RYBAK PHD
690 AM CE 150 E KELLOGG
ST PAUL MN 55101

DEPT OF EDUCATION
ATTN FREDRICK M CHRISTIANSEN
RM 911 CAPITOL SQ BLDG
ST PAUL MN 55101

DEPT OF ENERGY & ECON DVLPMT
ATTN DAVID SPEER
900 AMERICAN CENTER BLDG
150 E KELLOGG BLVD
ST PAUL MN 55101

DEPT OF ENERGY & ECON DVLPMT
ATTN CHARLES SCHAFFER
900 AMERICAN CENTER BLDG
150 E KELLOGG BLVD
ST PAUL MN 55101

MN DEPT OF HEALTH
ATTN JAMES WITKOWSKI
717 DELAWARE ST SE
MPLS MN 55440

MN DNR
SAFETY DIR
BOX 16
500 LAFAYETTE RD
ST PAUL MN

LEGISLATIVE COMM ON
WASTE MANAGEMENT
ATTN KIM AUSTRIAN
ROOM 85

LEGISLATIVE COMM TO
REVIEW ADMIN RULES
ATTN MARYANNE V HRUBY
ROOM 55
STATE OFFICE BLDG

MEEB CENTRAL OFFICE
ATTN RAY QUINN
BOX 5 500 LAFAYETTE RD
ST PAUL MN 55146

METROPOLITAN COUNCIL
ATTN JOHN T HOEFT
300 METRO SQ BLDG
7TH ST & ROBERT ST
ST PAUL MN 55101

MN DOT DIRECTOR, ENV SERV
704 TRANSPORTATION BLDG
JOHN IRELAND BLVD
ST PAUL MN 55155

MWCC
ATTN HELEN BOYER
350 METRO SQUARE BLDG
ST PAUL MN 55101

STATE PLANNING AGENCY
ATTN JACK DITMORE
ENV DIV 100 CAPITOL SQ BLDG
550 CEDAR ST
ST PAUL MN 55101

PRESS/MN GOVT REPORT
ATTN JEAN DAWSON
RM B12 CAPITOL BLDG
ST PAUL MN 55155

SENATE COUNCIL OFFICE
ATTN MARK J HANSON
RM 480
STATE OFFICE BLDG
ST PAUL MN 55155

SENATOR STUMPF'S OFFICE
ATTN STEPHANIE SCHWARTZ
ROOM 306
STATE CAPITOL
ST PAUL MN 55155

WATER RESOURCES BOARD
FIRST FLOOR
500 LAFAYETTE ROAD
ST PAUL MN 55146

MPCA HEARING NOTIFICATION MAILING LIST INTER OFFICE

ANGIO MEDICS
ATTN RICK BENNETT
2905 N W BLVD
MINNEAPOLIS MN 55441

ENV HYDROLOGY & ENG
3416 UNIVERSITY AVE S E
MINNEAPOLIS MN 55414 SHW

DR BOB KOOB
1219 4TH AVE S
MOORHEAD MN 56560 SHW

MARY AYEDE
1201 N BIRCHLAKE BLVD
WHITE BEAR LK MN 55110 SHW

CHAIRMAN OF FAIRMONT AREA
CHAMBER OF COMMERCE
99 DOWNTOWN PLAZA
FAIRMONT MN 56031 SHW

LEGGETTE BRASHEARS & GRAHAM INC
NORTHPARK CORPORATE CENTER
1210 W COUNTY ROAD E SUITE A121
ST PAUL MN 55112 SHW

AL BALDUS
CENEX
BOX 43089
ST PAUL MN 55164 SHW

E C MILTON MGR
GNB BATTERIES INC
FAC ENGRNG METALS DIV
803 BERRY STREET
ST PAUL MN 55114 SHW

Remove 8-4-87 aw

DAVID E HANSING PE
BRUCE A LIESCH ASSOC
3020 HARBOR LANE
MINNEAPOLIS, MN 55441

BRAUN ENVIRONMENTAL
ATTN: ANN OCHS
6800 S COUNTY RD 18
P. O. BOX 35108
MPLS., MN 55435-0108

BETSY KIMBALL
LEGAL ASSISTANT
GOODWIN, PROCTER & HOAR
28 STATE STREET
BOSTON MA 02109 SHW

ROBERT LOCKYEAR
PLANNING COORDINATOR
14900 61ST ST N
STILLWATER MN 55082 SHW

DONALD BURGER
501 22ND AVE N E
MINNEAPOLIS MN 55418 SHW

HARSTAD & RAINBOW
PATRICIA LEONARD-MAYER
1036 NORWEST MIDLAND BLDG
MINNEAPOLIS MN 55401 SHW

BARBARA LUKERMAN
2211 FOLWELL ST
ST PAUL MN 55103 SHW

CHEMFIX INC
ATTN H HUDSON BUZBEE
1675 AIRLINE HWY
P O BOX 1572
KENNER LA 70063 SHW

HAYES CONTRACTORS
PATSY ANDERSON
1010 CURRIE AVE N
MINNEAPOLIS MN 55403 SHW

DAVID MARQUETTE
MARSH & McLENNAN
1500 NORTHSTAR CENTER
MINNEAPOLIS MN 55402 SHW

EDITOR
HAZARDOUS MATERIALS
P O BOX 535
CAMBRIDGE MA 02238 SHW

McCOY & ASSOCIATES
ATTN MARILYN ELLISON
13131 W CEDAR DRIVE
LAKEWOOD, CO 80228

C J SCHULTZ LEGAL ASST
DEWITT SUNDBY HUGGETT
SCHUMACHER & MORGAN
6515 GRAND TETON PLAZA #120
MADISON WI 53719 SHW

JIM JASKA
HONEYWELL INC-DEFENSE
SYS DIV MN 11-1734
600 2ND ST NE
HOPKINS MN 55343 SHW

MIDWESTERN GAS TRANS CO
ATTN MICHAEL CATT
P O BOX 2511
HOUSTON TX 77001 SHW

RICHARD O'HARA
DNR
P O BOX 7921
MADISON WI 53707 SHW

ERIKA SITZ
IZAAK WALTON LEAGUE
6521 154TH LANE N W
RAMSEY MN 55303 SHW

VIRGINIA GREENMAN
MN HOSPITAL ASSOC
2221 UNIVERSITY AVE SE
MINNEAPOLIS MN 55414 SHW

ECRDC
119 SOUTH LAKE STREET
MORA MN 55051 SHW

RUTH JOHNSON
129 RIVERVIEW BLVD
INT'L FALLS MN 56649 SHW

Medical Disposal systems
Attn: John R. Meyers
206 N River Ridge Circle
MPLS., MN 55337

DON PATERICK
MN TAXPAYERS ASSOC
480 CEDAR AVE
ST PAUL MN 55101 SHW

GAIL SUCHMAN
MPIRG
2412 UNIVERSITY AVE SE
MINNEAPOLIS MN 55414 SHW

JOHN KEARNEY
N AMER WATER OFFICE
1519 A EAST FRANKLIN AVE
MINNEAPOLIS MN 55404 SHW

PORTAGE SANITARY LANDFILL
AUTHORITY
CRANE LAKE MN 55725 SHW

DOUG PROEHL
R F D 2
WINTHROP MN 55396 SHW

PHIL DUFF
RED WING REP EAGLE
P O BOX 15
RED WING MN 55066 SHW

TOM REES
22300 PENN AVENUE
LAKEVILLE MN 55044 SHW

CITY OF RICHFIELD
PAULA OKERSTROM
6700 PORTLAND AVE S
RICHFIELD MN 55423 SHW

SALLY EVERT
CHAIRMAN WASHINGTON CO
BOARD OF COMMISSIONERS
14900 61ST ST NO
STILLWATER MN 55082 SHW

UNIVERSITY OF MN
ATTN LASZLO FULOP
DIR OF PHYSICAL PLANNING
503 MORRILL HALL
MINNEAPOLIS MN 55455 SHW

GREGORY WERSAL
7841 WAYZATA BLVD
MINNEAPOLIS MN 55426 SHW

WINONA DAILY NEWS
ATTN DON STUART
401 N FRANKLIN
WINONA MN 55987 SHW

WRIGHT CHEMICAL CO
ATTN PATRICK REILLY
10740 RIVERVIEW PLACE
COON RAPIDS MN 55433 SHW

STS CONSULTANTS, LTD
ROSS L. OHMAN, ESQ. C.E.
3650 ANNAPOLIS LANE
PLYMOUTH, MN 55441

STATE OF MINNESOTA
MINNESOTA POLLUTION CONTROL AGENCY

In the Matter of the Proposed Amendments of Rules Governing the Management, Storage, Treatment, and Disposal of Hazardous Waste, Minn. Rules Pts. 7001.0560, 7001.0580, 7001.0650, 7045.0020, 7045.0075, 7045.0120, 7045.0219, 7045.0292, 7045.0452, 7045.0478, 7045.0490, 7045.0498, 7045.0528, 7045.0556, 7045.0564, 7045.0584, 7045.0600, 7045.0608, 7045.0628, and 7045.0629

STATEMENT OF NEED AND REASONABLENESS

I. INTRODUCTION

The subject of this proceeding is the amendment of the rules of the Minnesota Pollution Control Agency (hereinafter "Agency") governing the management, treatment, storage, and disposal of hazardous waste. The amendments will incorporate provisions promulgated by the U.S. Environmental Protection Agency (hereinafter "EPA") under authority of the Resource Conservation and Recovery Act (hereinafter "RCRA") and provisions of the Hazardous and Solid Waste Amendments of 1984 (hereinafter "HSWA").

The EPA promulgated regulations governing hazardous waste treatment, storage, and accumulation tanks in the July 14, 1986 Federal Register (51 FR 25422-25486). The July 14, 1986 federal regulations are hereinafter referred to as the tank regulations. The proposed amendments to Minnesota's hazardous waste rules incorporate the regulations resulting from the July 14, 1986 publication.

These rule amendments are proposed pursuant to the Agency's authority under Minn. Stat. § 116.07, subd. 4 (1986).

This Statement of Need and Reasonableness is divided into seven parts. Following this introduction, Part II contains the Agency's explanation of the need for the proposed amendments. Part III discusses the reasonableness of the

proposed amendments. Part IV documents how the Agency has considered the methods of reducing the impact of the proposed amendments on small businesses as required by Minn. Stat. § 14.115 (1986). Part V documents the economic factors the Agency considered in drafting the amendments as required by Minn. Stat. § 116.07, subd. 6 (1986). Part VI sets forth the Agency's conclusion regarding the amendments. Part VII contains a list of the exhibits relied on by the Agency to support the proposed amendments. The exhibits are available for review at the Agency's offices at 520 Lafayette Road, St. Paul, Minnesota 55155.

II. NEED FOR THE PROPOSED AMENDMENTS TO THE HAZARDOUS WASTE RULES

Minn. Stat. ch. 14 (1986) requires an agency proposing to adopt or amend a rule to make an affirmative presentation of facts establishing the need for and reasonableness of the proposed rule or amendments. In general terms, this means that an agency must set forth the reasons for its proposal, and the reasons must not be arbitrary or capricious. However, to the extent that need and reasonableness are separate, need has come to mean that a problem exists which requires administrative attention and reasonableness means that the solution proposed by an agency is appropriate.

Need is a broad test that does not easily lend itself to evaluation of each proposed revision. In the broad sense, the need for amendments to the Agency's rules governing the management, treatment, storage, and disposal of hazardous waste has two bases: 1) the need for consistency with the federal hazardous waste regulations, and 2) the need for rules which provide protection of human health and the environment without unduly restricting normal commerce.

In 1976, Congress adopted RCRA to regulate the management of hazardous waste. 42 U.S.C. §§ 6901 et seq. In adopting RCRA, Congress provided for

eventual State control of the hazardous waste program and set up the mechanism for the EPA to grant authority to states to operate the program. In states that receive authorization, the State environmental agency administers the State program in lieu of the federal program. To receive and maintain authorization, the State program must be "equivalent" to the federal program and consistent with federal or State programs applicable in other states. EPA has defined equivalent to mean that the state requirements are at least as stringent as federal requirements. In terms of consistency, EPA's goal is to achieve an integrated national program which requires that final State programs do not conflict with each other or with the federal program.

Pursuant to RCRA, EPA granted Agency final authorization for its hazardous waste program, effective February 11, 1985. See 50 FR 3756 (January 28, 1985). A state with final authorization administers its hazardous waste program in lieu of the EPA program for those regulations which were promulgated pursuant to RCRA as adopted in 1976 and as amended in 1980.

However, the authorization did not extend to those federal requirements promulgated by the EPA pursuant to HSWA. A state must obtain authorization specifically under HSWA. Before the Agency can apply for authorization under HSWA, any rule amendments intended to maintain equivalency to the federal program must be in effect in Minnesota. The existing federal regulations establish specific time frames for the adoption of State rules intended to maintain equivalency to the federal rules.

Although a state program may be more stringent than the federal requirements and states are not required to adopt less stringent federal standards, the Agency believes that, as a general matter, it is desirable to maintain consistency with the federal program. Much of the hazardous waste generated in

Minnesota must be sent to other states for treatment or disposal because Minnesota has no commercial disposal facilities and only very limited commercial treatment facilities. This means that many generators must be knowledgeable about requirements of both the State and federal hazardous waste programs. The need to comply with multiple sets of rules makes compliance difficult. Therefore, to the extent it can be accomplished without posing a threat to human health and the environment, amendment of Minnesota's hazardous waste rules to incorporate EPA's amendments is desirable. Where, however, the Agency believes a more stringent requirement is needed to adequately protect public health and welfare given the available scientific evidence and technological factors, the Agency has proposed a more stringent standard. The reasonableness of these more stringent requirements is demonstrated below.

III. REASONABLENESS OF THE PROPOSED AMENDMENTS TO THE HAZARDOUS WASTE RULES

The Agency is required by Minn. Stat. ch. 14 (1986) to make an affirmative presentation of facts establishing the reasonableness of the proposed rules or amendments. Reasonableness is the opposite of arbitrariness and capriciousness. It means that there is a rational basis for the Agency's action. The reasonableness of each of the proposed amendments is discussed below.

A. Minn. Rules Pt. 7001.0560 (General Information Requirements for Part B of Application).

Existing Minn. Rules pt. 7001.0560 establishes the requirements for information a hazardous waste permit applicant must submit in its Part B permit application. The Agency proposes to make two sets of changes to Minn. Rules pt. 7001.0560, one to Item E and one to Item L of the rule.

1. Proposed changes to Item E. Among other information, existing Minn. Rules pt. 7001.0560, Item E specifically requires the permit applicant to

submit information set forth in existing Minn. Rules pt. 7045.0528, subp. 4 (inspections). However, as described in greater detail in section M of this Statement, the Agency is proposing to renumber the inspection provisions of Minn. Rules pt. 7045.0528, subp. 4 to Minn. Rules pt. 7045.0528, subp. 7 and also is proposing to add additional inspection requirements under Minn. Rules pt. 7045.0528, subps. 5. The Agency therefore proposes to amend Minn. Rules pt. 7001.0560, Item E to correctly correspond to the inspection requirements which will be set forth in Minn. Rules pt. 7045.0528 if the proposed amendments to that part are adopted. Thus, the proposed amendments to Minn. Rules pt. 7001.0560, Item E delete the existing reference to Minn. Rules pt. 7045.0528, subpart 4 and add references to Minn. Rules pt. 7045.0528, subps. 5 and 7. These changes correspond to changes made in 40 Code of Federal Regulations (C.F.R.) § 270.14. The changes are reasonable because they reflect the amendments that are proposed for the inspection requirements of Minn. Rules pt. 7045.0528.

2. Proposed changes to Item L. Among other information, existing Minn. Rules pt. 7001.0560, Item L requires the permit applicant to submit information set forth in existing Minn. Rules pt. 7045.0528, subp. 6 (closure). However, as described in greater detail in section M of this Statement, the Agency is proposing to renumber the closure requirements of Minn. Rules pt. 7045.0528, subp. 6 to Minn. Rules pt. 7045.0528, subp. 9. In addition, the Agency is proposing to amend these requirements to also require post-closure information for tanks. (The existing rule already requires post-closure information for some facilities, but not for tanks.) The Agency therefore proposes to amend Minn. Rules pt. 7001.0560, Item L to correctly correspond to the closure and post-closure requirements which will be set forth in Minn. Rules pt. 7045.0528,

subp. 9 if the proposed amdendments to that rule are adopted by the Agency. Thus, the proposed amendments to Minn. Rules pt. 7001.0560, Item L delete references to Minn. Rules pt. 7045.0528, subp. 6 and add references to Minn. Rules pt. 7045.0528, subp. 9. These changes correspond to 40 C.F.R. § 270.14. The changes are reasonable because they reflect the changes that are proposed for the closure requirements of Minn. Rules pt. 7045.0528.

B. Minn. Rules Pt. 7001.0580 (Part B Information Requirements for Storage or Treatment Tanks).

Existing Minn. Rules pt. 7001.0580 sets forth the specific information that a person applying for a hazardous waste permit for tanks must submit to the Agency. The Agency is proposing to amend Minn. Rules pt. 7001.0580 by deleting existing provisions A and B and by adding new provisions A through J. The proposed amendments directly correspond to the federal requirements for Part B applications specified in 40 C.F.R. § 270.16. The amendments are needed to ensure that the Agency receives sufficient information to allow it to evaluate whether the permit applicant will be able to comply with the permitted tank standards of Minn. Rules pt. 7045.0528. Each of the amendments are briefly described below.

1. Items A to G, I and J. The information in Items A to G, I and J correspond to the technical requirements of proposed amendments to Minn. Rules pt. 7045.0528. Specifically, the proposed amendments to Items A to G, I and J require the applicant to submit information demonstrating that it will comply with the requirements of Minn. Rules pt. 7045.0528. Items A to G of the proposed amendments require design and installation information for the tank system, as well as an assessment of the structural integrity and suitability of the tank for handling hazardous waste. Item I of the proposed amendments

requires a description of the controls and practices to prevent spills and overflows. Item J requires information regarding compliance with standards for ignitable, reactive, or incompatible wastes. It is reasonable for the Agency to require the permit applicant to submit this information as part of its application since, without that information, the Agency cannot adequately evaluate the permit application.

2. Item H. Item H refers to two other amendments which the Agency proposes, Minn. Rules pt. 7045.0075, subps. 6 and 7 (petition procedures.) These other amendments set forth a procedure through which a person may petition the Agency for exemption from the secondary containment tank standards. To obtain this exemption, the petitioner will have to demonstrate that an alternate design or management practice is suitable or that there exists no risk to the environment from a potential release from the tank. (Subparts 6 and 7 are discussed in greater detail in section E of this Statement.) The Agency proposes to amend Item H of proposed Minn. Rules pt. 7001.0580 to refer to these petition procedures. This cross-reference is reasonable to ensure that the Agency receives information relevant to the drafting of a permit which may allow for tank design and management practices other than the secondary containment requirements established by the hazardous waste rules.

C. Minn. Rules Pt. 7001.0650 (Interim Status).

Existing Minn. Rules pt. 7001.0650, subp. 4 establishes prohibitions for the owner or operator of an interim status facility. Item D of subpart 4 prohibits persons from altering "a hazardous waste facility in a manner that amounts to reconstruction of the facility."

Proposed amendments to Minn. Rules pt. 7045.0628 require interim status facilities to be upgraded within specific time frames to meet the secondary containment requirements. These upgrades are not intended to result in the loss of interim status and are intended to proceed even before a permit is issued. However, without a clarification to Minn. Rules pt. 7001.0560, a person might believe that an upgrade required by Minn. Rules pt. 7045.0628 constitutes a "reconstruction of a facility" as is prohibited by existing Minn. Rules pt. 7001.0650. To avoid confusion on this subject, the Agency proposes to amend Minn. Rules pt. 7001.0650 by adding a sentence that explains that, when an owner or operator changes an interim status tank facility for the sole purpose of complying with the secondary containment requirements set forth in Minn. Rules pt. 7045.0628, subps. 4 and 5, the tank changes do not amount to reconstruction of the facility. This provision is a reasonable clarifying amendment and corresponds to 40 C.F.R. § 270.72.

D. Minn. Rules Pt. 7045.0020 (Definitions).

The Agency is proposing to amend Minn. Rules pt. 7045.0020 to add 15 definitions of terms used throughout the proposed amendments. The definitions that have been added include, aboveground tank, ancillary equipment, component, corrosion expert, existing tank system or existing component, inground tank, installation inspector, leak detection system, new tank system or new tank component, onground tank, sump, tank system, underground tank, unfit-for-use tank system, and zone of engineering control. All of the defined terms are taken verbatim from 40 C.F.R. § 260.10 of the federal regulations. It is reasonable to provide the same definitions as the federal regulations since the

proposed state rules are based on the federal regulations and are intended to be equivalent to those regulations.

E. Minn. Rules Pt. 7045.0075 (Petitions).

Existing Minn. Rules pt. 7045.0075, subps. 1 through 5 establish requirements for persons who wish to petition the Agency or the Agency Commissioner for alternatives to compliance with specific aspects of the rules. The Agency proposes to add two new subparts, 6 and 7, to establish petitioning procedures for obtaining exceptions to the secondary containment requirements for tank systems. The amendments correspond to the provisions of 40 C.F.R. §§ 264.193(g) for permitted facilities and 265.193(g) for interim status facilities.

The federal regulations allow a person to "obtain a variance" from the secondary containment requirements for tank systems. Specifically, the federal regulations provide two options for obtaining variances from the secondary containment requirements of 40 C.F.R. §§ 264.193 and 265.193. A person may demonstrate that an alternate design or operating practice will provide an equivalent level of protection of human health and the environment, or a person may demonstrate that, in the event of a release, no substantial present or potential hazard will be posed to human health and the environment. The federal regulations identify the EPA Regional Administrator as the person who will decide whether a variance should be granted.

Upon authorization of the State program, this authority can be delegated to either the Agency Commissioner or the Agency. The proposed amendments to Minn. Rules pt. 7045.0075, subps. 6 and 7 would establish the procedural mechanism through which the State can exercise this authority. Under the proposed

amendments, the Agency Commissioner would have the the authority to grant petitions for alternative design or operating practices and the Agency itself would have the authority to grant petitions based on demonstrations of no substantial hazard. (The proposed amendments use the word "petition" instead of variance for consistency with other provisions of Minn. Rules pt. 7045.0075 and to distinguish the petition procedure from the variance procedure set forth in Minn. Rules pt. 7045.0060.)

Under the existing State rules, subparts 1 through 5 of Minn. Rules pt. 7045.0075 address various other types of petitions. The authority for granting these other petitions is also divided between the Agency Commissioner and the Agency. In those cases where the decision to approve or disapprove the petition is based on a technical evaluation of specific criteria, the Agency Commissioner has been identified as the deciding authority. Where a petition requires an evaluation of a broad range of issues and Agency policy, the rules currently specify the Agency as the deciding authority. The petition requirements set forth in proposed subpart 6 address the question of whether an alternate design or operating practice will work as well as the design or practices specified in the proposed rules. Because this is a technical decision, it is reasonable to specify the Agency Commissioner as the deciding authority. Petitions to be submitted under proposed subpart 7, which will be based on a showing of no substantial hazard, will be more complex and will require qualitative determinations and policy decisions. It is therefore reasonable and consistent with the current application of the petition rule to specify the Agency as the deciding authority for such issues.

Subpart 6 of the proposed amendments establishes the requirements for petitions for alternate design or operating practices to be used in lieu of the

secondary containment requirements proposed to be established in Minn. Rules pts. 7045.0528, subp. 4 and 7045.0628, subp. 4. Those subparts will require secondary containment for all permitted tank facilities and also for all interim status facilities and tanks used by generators to accumulate hazardous waste. It is reasonable to provide owners and operators the option of petitioning for alternative design or operating practices for all of these tank systems in order to accommodate equally effective existing technologies and also in recognition that secondary containment mechanisms may yet be developed to provide an acceptable level of protection.

The substantive requirements described in proposed Minn. Rules pt. 7045.0075, subp. 6, Item A are the same as those provided in the federal regulations. Item A of subpart 6 establishes the factors the Agency Commissioner must consider in evaluating the petition to determine if the proposal will provide equivalent protection. The factors to be considered relate to the waste to be contained in the tank system, the design and operating practices of the tank system, the hydrogeologic setting of the tank system, and any factors that would affect the extent of possible contamination of surface and ground water. These factors affect the effectiveness of an alternate design or operating practices and as such represent a reasonable level of information on which the Agency Commissioner will base a decision.

Item B of proposed subpart 6 establishes the requirements that are to be followed for the submittal of a petition for alternate design and operating practices for a permitted facility. The substantive requirements are the same as those provided in the federal regulations. It is reasonable to establish the submittal requirements so that petitioners will know the necessary steps and the timetable for their submittal. Providing such information in the rule ensures

an acceptable level of information and adequate time to review and evaluate the petition. Petitions submitted for permitted facilities are further subject to requirements for issuance or modification of the facility permit.

Item C of proposed subpart 6 establishes the requirements that are to be followed for submittal of a petition for alternate design and operating practices for interim status facilities and tanks used by generators to accumulate hazardous waste. As discussed above, the proposed amendments reasonably establish the needed information and procedure for submitting a petition. However, because interim status facilities and generators' accumulation tanks are not subject to the public notification requirements that are applicable for permitted facilities, the proposed rules establish a public notification process to be followed for such petitions. The proposed public notification process is similar to the requirements for permitted facilities and involves public notification through newspapers, the establishment of a comment period, the option of a public informational meeting, and the establishment of time frames for specific activities. These provide a reasonable opportunity for public involvement and generally correspond to the federal requirements for public notification. However, the proposed amendments do not specify a maximum time period for the Agency Commissioner to decide whether to grant or deny a petition. The federal regulations require that the EPA Regional Administrator reach a decision within 90 days of receipt of the petition demonstration. During this 90-day period, the demonstration must be reviewed, a notice published and 30-day comment period provided, if necessary, a hearing scheduled with a 30-day advance notice, public input reviewed, and a final decision rendered. The Agency believes that this time period is insufficient given the

number of activities needing to be completed within the specified time. Thus, the proposed amendments provide for all components of the public notification process, but do not specify a time period during which they must be conducted. This provides a reasonable level of flexibility without diminishing the effect or intent of the public notification requirements.

Items D and E establish the requirements that must be met by the owner or operator of a tank system that has received approval for alternate design or operating practices in the event of a release of hazardous waste from the tank. These requirements reference the tank standards addressing spills and also require the removal or decontamination of contaminated soil. Item D specifies the requirements for responses to releases that have not migrated beyond the zone of engineering control and item E specifies the acceptable response for releases that have migrated beyond the zone of engineering control. These requirements are the same as the federal requirements, require compliance with the applicable tank standards of Minn. Rules pts. 7045.0528 or 7045.0628, and address the protection of surface water and ground water from contamination. As such, these requirements represent a reasonable level of responsiveness to releases from tanks.

Subpart 7 of the proposed amendments to this part establish the requirements for petitions for demonstrations that show no substantial present or potential hazard to human health and the environment will result if the requirements of Minn. Rules pts. 7045.0528, subp. 4 and 7045.0628, subp. 4 are not met. It is reasonable to provide tank owners and operators with the option of demonstrating that, under specific circumstances, no hazard will result from a release from a tank without secondary containment. Such a showing may conceivably be made for very small tanks, or tanks that do not contain liquid waste. However, the

factors to be considered in granting such a petition will include technical as well as policy decisions. Therefore, it is reasonable to specify in the rules that such decisions be made by the Agency. The factors to be considered and the procedure for submitting a petition are the same as the federal regulations and are discussed above as they relate to subpart 6.

F. Minn. Rules Pt. 7045.0120 (Exempt Wastes).

Minn. Rules pt. 7045.0120 provides exemptions to the hazardous waste rules for specific types of wastes under specific circumstances. The proposed amendments add an exemption under item Q for certain secondary materials. The proposed rules exempt secondary materials that are reclaimed and returned to the original processes in which they were generated if they are only stored in tanks, reclamation does not involve controlled flame combustion, the materials are not held in tanks for more than one year, and the reclaimed material is not used as fuel or in a manner constituting disposal. All the conditions on the exempted wastes are the same as the federal requirements of 40 C.F.R. § 261.4.

It is reasonable to provide this exclusion for wastes subject to such closed loop recycling because under the specified conditions, such wastes are never actually handled as hazardous wastes but are always part of a reclamation process. The concerns usually associated with improper hazardous waste management are not relevant to the specified closed loop recycling systems and therefore the provisions of the hazardous waste rules are not reasonably applicable.

A complete discussion of the reasons for EPA's exclusion is provided on pages 25441 to 25443 of Exhibit 1 and is incorporated here as the basis of the reasonableness of the proposed amendment to Minn. Rules pt. 7045.0120.

G. Minn. Rules Pt. 7045.0219 (Special Requirements for Small Quantity Generators of Hazardous Waste).

Existing Minn. Rules pt. 7045.0219 establishes the requirements for small quantity generators of hazardous waste. Under the federal program, a small quantity generator is a generator of between 100 and 1,000 kilograms of hazardous waste a month. However, existing Minn. Rules pt. 7045.0219 regulates any generator of less than 1,000 kilograms per month as a small quantity generator and does not provide an exception for generators of less than 100 kilograms of hazardous waste.

The Agency proposes to amend Minn. Rules pt. 7045.0219, subp. 5, item A, subitem 7. That subitem currently references Minn. Rules pts. 7045.0626 and 7045.0628 as the management requirements for small quantity generators who accumulate hazardous waste in containers or tanks. To provide equivalency with the federal regulations, the Agency is proposing to amend Minn. Rules pt. 7045.0628 to establish a more stringent level of regulation for tanks. The proposed amendments to Minn. Rules pt. 7045.0628 correspond to the federal regulations which apply to interim status tank facilities and full-scale generators who accumulate wastes in tanks. See 40 C.F.R §§ 265.190 - 265.200. These federal regulations do not apply to small quantity generators. Because the Agency does not intend to require Minnesota small quantity generators to comply with these more restrictive requirements, the Agency proposes to delete the reference to Minn. Rules pt. 7045.0628 currently contained in subitem 7 of Minn. Rules pt. 7045.0219, subp. 5, item A.

The federal regulations do, however, contain a less restrictive set of requirements for small quantity generators who accumulate wastes in tanks. See 40 C.F.R § 265.201. The Agency is proposing to add a new part, Minn. Rules pt.

7045.0629 to incorporate these federal regulations. With one exception, the new part also incorporates the existing requirements in Minn. Rules pt. 7045.0628 (which currently do apply to small quantity generators). The substantive provisions of proposed new part Minn. Rules pt. 7045.0629 are discussed in section T of this Statement. Assuming the amendments to Minn. Rules pt. 7045.0629 are adopted, it is reasonable for the Agency to amend Minn. Rules pt. 7045.0219 to reference that rule.

H. Minn. Rules Pt. 7045.0292 (Accumulation of Hazardous Waste).

Subpart 1, Item B of existing Minn. Rules pt. 7045.0292 requires full-scale generators accumulating waste without a permit during a 90-day accumulation period to comply with certain requirements. The Agency proposes a number of amendments to this rule.

First, existing Minn. Rules pt. 7045.0292, subpart 1, Item B exempts generators from the requirements of Minn. Rules pt. 7045.0628, subpart 3. The Agency proposes to replace the reference to "subpart 3" with a reference to "subpart 12." This is because the Agency is proposing to revise Minn. Rules pt. 7045.0628 and these revisions include the renumbering of subpart 3 as subpart 12. Thus, the proposed deletion of subpart 3 and addition of subpart 12 is a numbering revision only.

Existing Minn. Rules pt. 7045.0292, subpart 1, Item B refers to Minn. Rules pt. 7045.0628. The Agency is proposing to amend Minn. Rules pt. 7045.0628 to add new interim status tank standards. (See discussion under section S, below.) Thus, if the proposed amendments to Minn. Rules pt. 7045.0628 are adopted by the Agency, a full-scale generator will have to meet these new requirements pursuant to Minn. Rules pt. 7045.0292. Requiring a full-scale generator to meet

these new standards is consistent with the federal regulations, which already require full-scale generators to meet those standards. See 40 C.F.R. § 262.34.

However, the federal regulations do not require full-scale generators to comply with certain closure requirements set forth in subpart 9 of proposed Minn. Rules pt. 7045.0628. The Agency also intends to exempt full-scale generators from these requirements. Accordingly, the Agency proposes to amend Minn. Rules pt. 7045.0292 to make it clear that full-scale generators are excepted from the requirements of Minn. Rules pt. 7045.0628, subpart 9, Item C.

I. Minn. Rules Pt. 7045.0452 (General Facility Standards).

Existing Minn. Rules pt. 7045.0452 establishes the general facility standards for all permitted hazardous waste facilities. Subpart 5 establishes general inspection requirements. The proposed amendments to Minn. Rules pt. 7045.0452, subp. 5 will add two additional references to new inspection requirements being imposed by the proposed amendments to Minn. Rules pt. 7045.0528, subps. 5 and 7. The additional inspection requirements relate to the inspection of tank systems that have secondary containment as well as tank systems that have not been upgraded to include secondary containment. It is reasonable to amend Minn. Rules pt. 7045.0452 to reference the correct rule citations for inspection requirements so that owners and operators are informed of what is required of them. These amendments correspond to 40 C.F.R. § 264.15.

J. Minn. Rules Pt. 7045.0478 (Operating Record).

Existing Minn. Rules pt. 7045.0478 establishes the requirements for maintaining information in the facility operating record. The proposed amendments to Minn. Rules pt. 7045.0528 will add a number of new monitoring and

testing activities. The proposed amendments to Minn. Rules pt. 7045.0478, subp. 3 add necessary cross-references to those added requirements. It is reasonable to provide accurate cross-references to ensure that operating records contain the information the rules require an owner or operator to prepare. These changes correspond to 40 C.F.R. § 264.73.

K. Minn. Rules Pt. 7045.0490 (Post-closure).

Minn. Rules pt. 7045.0490 establishes the requirements for post-closure care of permitted hazardous waste facilities. The proposed amendment to subpart 1 of this part will add the requirement that tank systems that are required to close as a landfill must comply with the post-closure care requirements. This proposed amendment corresponds to 40 C.F.R. § 264.110.

Proposed Minn. Rules pt. 7045.0528, subp. 9 requires the owners or operators of tank systems to close the facility as a landfill if all contaminated material cannot be completely removed at closure. It is reasonable to require post-closure care of such a facility to ensure that adequate measures are taken to prevent the release of wastes after closure. For further discussion of the requirements set forth in proposed Minn. Rules pt. 7045.0528, subp. 9, see discussion under section M of this Statement.

L. Minn. Rules Pt. 7045.0498 (Financial Requirements).

Minn. Rules pt. 7045.0498 establishes the requirements for facility owners or operators to provide financial assurance for acceptable closure and post-closure care of the facility. The proposed amendment to Minn. Rules pt. 7045.0498, subp. 1 adds a requirement that owners and operators of tank systems that must be closed as landfills must provide financial assurance for

post-closure care. Minn. Rules pt. 7045.0528, subp. 9 requires that tank systems be closed as landfills if contaminated soil at the facility cannot be removed or decontaminated at closure. In order to ensure that funds will be available to maintain proper post-closure care, it is reasonable to require that the owners or operators of tank systems that must be closed as landfills meet the financial assurance requirements applicable to landfills. This requirement corresponds to the federal requirement for financial assurance in 40 C.F.R. § 264.140. For further discussion of the requirements set forth in proposed Minn. Rules pt. 7045.0528, subp. 9, see discussion under section M of this Statement.

M. Minn. Rules Pt. 7045.0528 (Tanks).

Minn. Rules pt. 7045.0528 establishes the requirements for permitted tank facilities. Except as will be noted, the proposed amendments generally correspond to the federal regulations in 40 C.F.R. §§ 264.190 to 264.199. The current State rules, which corresponded to the previous federal regulations, have been largely deleted from this part.

Subpart 1 establishes the scope of the proposed tank standards. The proposed amendments regulate the same universe of tanks as the current State rules. This universe includes all permitted tank systems used to treat or store hazardous waste. However, two exceptions from the secondary containment requirements are provided in the proposed amendments. Both of these exceptions directly correspond to 40 C.F.R. § 264.190 (a) and (b). The secondary containment exception provided in subpart 1, item A applies to tanks that do not contain free liquids and are inside a building with an impermeable floor. All other requirements of this part will remain applicable to these tank systems,

including testing, inspections, and initial design standards. This exception is reasonable because of the low potential for releases to the environment from such a tank system, and the fact that the building itself will function as a secondary containment system.

The secondary containment exception provided in subpart 1, item B applies to tanks and sumps that are already part of a secondary containment system. It is reasonable to provide this exception to avoid the redundancy and unnecessary burden of requiring secondary containment of structures that only function as secondary containment systems. EPA provides a more extensive discussion of this exception on page 25441 of Exhibit 1.

Subpart 2 establishes criteria for assessment of an existing tank system's integrity. The proposed amendments recognize the fact that they will apply to an existing universe of regulated tanks and that a number of existing tanks will not immediately meet the design standards or secondary containment requirements. Subpart 2 requires that an existing tank that does not have secondary containment be assessed to determine that it is not leaking or unfit for use. This assessment must be reviewed and certified by an independent, qualified, registered, professional engineer and must provide a determination that the existing tank is adequately designed and in acceptable condition to contain the waste. The assessment must consider a number of factors relative to the design and condition of the tank, including actual testing. In addition to the minimum requirements of the federal regulations, certain aspects of the testing requirements of the proposed amendments are more stringent and exceed the corresponding federal requirements of 40 C.F.R. § 264.191.

The federal regulations require that the assessment for nonenterable underground tanks must include a specific type of leak test. For all other types of tanks, the assessment may include a leak test or may be any other suitable integrity examination. The federal requirement for a leak test for nonenterable underground tanks is reasonable because of the concern that the underground portion of such tanks, which is most subject to corrosion, cannot be visually inspected. However, the Agency believes that the same concern exists for any portion of a tank that cannot be visually inspected. Therefore, it is reasonable to extend the requirement for a leak test to also apply to inground and onground tanks that cannot be entered. Inground and onground tanks are tanks which have the bottom or sides covered by the ground. Definitions of inground and onground tanks are provided in Minn. Rules pt. 7045.0020.

The federal regulations provided 12 months from the effective date of the rules for the owners and operators of existing tanks to conduct this assessment. Because the effective date of the rules was six months after the publication of the rules, owners and operators actually had 18 months to conduct the assessment. Tanks which are subject to the HSWA portions of the federal regulations must be assessed by January 12, 1988. All underground tanks that cannot be entered for inspection are subject to the HSWA schedule for assessment. However, tanks which are not subject to HSWA are not required to conduct this assessment until the deadline established by State rule. These would be inground and onground tanks that cannot be entered for inspection. The proposed amendments specify that the assessment must be conducted as required under the federal regulations for those tanks that are subject to the federal time frames (HSWA tanks). The proposed amendments require that all other tanks must be assessed within 18 months of the effective date of the State rule. This

corresponds to the time period that was provided under the federal program and is a reasonable time to conduct the required assessment. Owners and operators have been aware that an assessment will eventually be required since the federal regulations were published on July 14, 1986 and have therefore had reasonable time to respond to the requirement.

Subpart 3 establishes requirements for the design and installation of new tank systems or components. This subpart requires that an assessment be conducted for all new tank systems that will attest to the design and operation of the facility so that no releases will occur. All the requirements of this subpart directly correspond to the equivalent federal requirements of 40 C.F.R. § 264.192. These requirements are reasonable to ensure that tanks are correctly designed and installed and that corrosion protection systems are provided as necessary.

Corrosion protection is not currently required by the State rules although it is provided as an option for tanks that cannot be entered for inspection. However, a functioning corrosion protection system will provide a high level of protection to tanks that would be otherwise subject to corrosion and eventual failure and is reasonable to ensure the continued fitness of a tank system. Because an extensive technology exists for the application of corrosion protection, no specific procedure is specified in the proposed amendments. The type and degree of corrosion protection needed must be determined on a case-by-case basis. This will provide a reasonable level of flexibility in determining the most suitable system.

Subpart 4 establishes the requirements for the containment and detection of releases. The State rules for permitted tanks have always required that a liner

or containment system be provided. The proposed amendments establish much more extensive criteria for the design of secondary containment systems, including the requirement for interstitial monitoring. Interstitial monitoring to detect releases from the tank into the secondary containment systems is not currently required in the State rules. It is a reasonable requirement to ensure that leaks will be detected and the necessary repairs made. Without a system to detect leaks into the secondary containment system, the failure of a primary tank could go undetected and the secondary containment system would then indefinitely function as the primary tank.

The proposed amendments specify three types of secondary containment and establish criteria for the design and construction of each type. The rules provide a fourth option for secondary containment which would be an equivalent device as approved by the Agency Commissioner through the petition process established in proposed Minn. Rules pt. 7045.0075, subp. 6. The proposed technical requirements set out in proposed Subpart 4 directly correspond to 40 C.F.R. § 264.193 and have not been altered or expanded in the proposed amendments.

Certain aspects of the schedule for the phase-in period for the installation of secondary containment for existing tanks has been made more stringent in the proposed amendments than in the corresponding federal regulations. 40 C.F.R. § 264.193 (a) establishes specific time frames for providing secondary containment. The proposed amendments provide the same time frame as the federal regulations for new tank systems and tank systems that contain dioxin wastes. These schedules provide a reasonable balance between the need for secondary containment and the recognition that the owners or operators of existing tank systems need time to accomplish the requirements being newly imposed by the proposed amendments.

However, for existing tank systems or tank systems that contain a waste that at a future time becomes regulated as a hazardous waste, the Agency proposes more restrictive requirements. See Subpart 4, item A, subitems 2, 3 and 4. With regard to existing tanks, the proposed amendments provide an accelerated schedule for compliance with the secondary containment requirements. The federal regulations base the phase-in period on the age of the tank and require that secondary containment be provided by the time the tank is 15 years old, or within two years if the age of the tank already exceeds 15 years. The Agency believes that this is a cumbersome mechanism for phasing-in the secondary containment requirements and does not provide a reasonably rapid response to the need for secondary containment to address the concern regarding releases. Permitted tanks in Minnesota are currently required to have secondary containment so that, in most cases, the proposed amendments will actually only require that tanks be upgraded to meet the more extensive criteria and include interstitial monitoring.

The Agency believes that a maximum of five years is a reasonable time period for phasing-in the requirements to upgrade the existing secondary containment system. Five years corresponds to the term of a hazardous waste facility permit. Tank systems that have been recently permitted will be allowed to continue to operate until the permit is reissued to include the upgrading necessary to meet the new tank standards. Owners and operators of tank systems that have been permitted for several years will have the option of upgrading the system at the time the permit is reissued or doing the necessary upgrading after five years and requesting the permit be modified to reflect those changes.

For existing tanks that treat or store a material that becomes a hazardous waste in the future, the Agency proposes that the owner or operator shall have

two years from the date the material becomes a hazardous waste to install secondary containment. See Subpart 4, item A, subitem 4. This is more restrictive than the parallel federal provision which allows two years or up to the time the tank is 15 years of age, whichever is later. For the same reasons stated above, the Agency believes this would establish too long a time frame for installation of secondary containment. Further, the Agency believes that two years after the material becomes a hazardous waste is an adequate period of time since additional time to prepare for the installation of secondary containment is provided by the rulemaking procedure through which the material would become a hazardous waste. Thus, owners and operators of these tanks would have more than two years -- and the opportunity to influence the rulemaking procedure -- thus, allowing them reasonable time to prepare to install secondary containment.

Subpart 5 establishes leak testing requirements for tank systems that do not have secondary containment. These requirements generally correspond to the requirements in 40 C.F.R. § 264.193 (i), although two aspects of the proposed amendments are more stringent. Item A of subpart 5 requires annual leak testing that meets the requirements for initial tank testing in subpart 2, item A, for nonenterable underground, inground, or onground tanks. The requirement to conduct leak testing on inground and onground tanks is not part of the federal requirements. However, as previously discussed for subpart 2 of this part, the Agency believes this is a reasonable extension of the proposed amendments to address the concern regarding surfaces of the tank that cannot be visually inspected. The proposed requirements for enterable tanks are the same as the federal requirements and consist of two options for determining tank suitability. The owner or operator may either conduct an actual leak test or

may develop a schedule and procedure for assessing the condition of the tank. It is reasonable to provide for alternatives to the annual leak test to accommodate different types of tanks and varying conditions. Not all tanks will present the same level of concern. In some cases, annual leak testing will not be justified and in other cases, more frequent testing may be necessary. The proposed amendments provide a number of factors to be considered by the tank owner or operator in developing the type of alternate assessment and the schedule for conducting such assessments.

Item C of subpart 5 requires that all tanks be tested to evaluate tank wall thinning. The State rules currently require that a minimum tank wall thickness be maintained. The Agency continues to believe that this is a reasonable requirement to avoid catastrophic tank failure. The existing rules do not, however, include an requirements for evaulating the wall thickness. Since tank walls could be thinned to the point that they would not adequately support the pressure of the tank system and since a leak test might not reveal this weakness, the Agency proposes to add a requirement that a thinning evaluation be performed in conjunction with the leak test or alternate tank evaluation. The proposed rules do not establish a specific schedule and procedure for tank wall thinning testing. As discussed above, it is reasonable to allow such decisions to be reached through consideration of a number of factors that will vary for each tank system.

The requirements of items D to F directly correspond to the federal requirements of 40 C.F.R. § 264.193(i)(3) to (5). Item D requires that ancillary equipment also be tested annually for leaks. This is reasonable because ancillary piping, pumps, and valves are frequently the source of spills and releases to the environment. The concern associated with such equipment is

further discussed on page 25429 of Exhibit 1. EPA states that releases from ancillary equipment is a significant cause of releases from aboveground tank systems. It is therefore reasonable to require that this component of the tank system be tested on a regular basis.

Item E requires that the owner or operator maintain a file recording the results of all the assessments required under items A to D. This is reasonable in order to determine compliance with the requirement to conduct the tests and to verify that the tank system actually met the standards and passed the leak test.

For tanks which are assessed and found to be leaking or unfit-for-use, Item F references subpart 8, which requires the owner or operator to take certain actions to remedy the situation. This is a reasonable consequence of a determination that the tank system does not meet the established tank standards.

Subpart 6 establishes the general operating requirements for permitted tank systems. These requirements directly correspond to 40 C.F.R. § 264.194. The proposed amendments specify basic operational procedures to prevent releases from the tank system. These include the requirement to consider the type of waste being placed in the tank as it relates to the possible failure of the tank system and the management of the tank to prevent spills and overflows resulting from tank operation. It is reasonable to include these requirements to provide a standard for the operation of the tank as well as the standards for the design and installation of the tank. The proposed rule also states that the requirements applicable to leaking or unfit-for-use tanks are also applicable for leaks or spills resulting from the operation of the tank. This is a reasonable reference to the applicable standards for responding to releases.

Subpart 7 establishes the inspection requirements for tank systems. These requirements directly correspond to the federal inspection requirements of 40 C.F.R. § 264.195. The proposed rules provide different schedules for different inspection activities. Item A does not specify a frequency for the inspection of overfill controls, instead, the owner or operator is required to establish a schedule. It is reasonable to allow this degree of flexibility for this aspect of the inspection program to enable owners and operators to adopt a procedure to accurately meet the site specific needs. The State rules currently require that overflow controls be inspected once each operating day. However, the Agency proposes to amend this frequency in recognition of the fact that it may be appropriate to increase or decrease the inspection frequency depending on the type of system and the potential for releases from the overflow system. A frequent inspection schedule is appropriate for tanks that are routinely emptied or filled. However, in many cases, there is very little filling activity and little or no risk of overflow. In such cases, there is very little potential for overflow or adverse consequences of a failure in the overflow control system.

Item B requires daily inspection of the visible portions of the tank system and the area surrounding the tank system and also daily inspection of monitoring equipment. This is a reasonable requirement because it reflects the magnitude of the concern associated with a major release from the tank system.

Item C addresses the frequency of inspection required for cathodic protection systems. The time frames in the proposed rules are based on the recommendations of the National Association of Corrosion Engineers. This recommendation is further discussed on page 25453 of Exhibit 1. These are

reasonable inspection requirements because they are based on a consensus of a number of experts on the subject of corrosion protection and will not represent a burden to the regulated community.

Subpart 8 establishes the requirements for responding to leaks or spills and also for disposing of tanks that must no longer be used. Unfit-for-use tanks may either be leaking or may have been determined to be corroded or damaged to the extent that failure is expected. With one exception, these requirements directly correspond to the federal requirements of 40 C.F.R. § 264.196.

Item A specifies that the owner or operator of a leaking or unfit-for-use tank must immediately stop the flow of waste into the tank and inspect to determine the cause of the release. 40 C.F.R. § 264.196 also requires that a tank "be removed from service immediately." When this phrase was proposed in a draft rule, the Agency received comments stating that it implied that leaking or unfit-for-use tanks had to be physically removed, even to the extent of digging up underground tanks. Because this was not the Agency's intent and because the proposed rule language adequately serves the intended purpose of stopping the use of the tank, this phrase was deleted from the proposed rules. The proposed language requires the owner or operator to discontinue use of the tank and is reasonable to reduce the impact of a release or expected release from the tank. The Agency believes that the proposed language is equivalent to the federal rule.

Item B specifies that released wastes must be removed within 24 hours or, if that is not possible, at the earliest practicable time. It is reasonable to provide an alternative to the 24-hour time period to allow some flexibility for different types of tank systems. More time may be reasonable if the leak is stopped and the waste is acceptably contained.

Item C requires the owner or operator to conduct a visual inspection of the release and to take the necessary steps to prevent further migration of the leak and to remove and properly dispose of contaminated material. These are reasonable responses to a release of hazardous waste to ensure that the adverse effects of the release are minimized.

Item D requires that the Agency Commissioner be notified of releases and that a report be submitted within 30 days describing the effect of the release. One exception to the report requirement is provided for releases less than or equal to one pound that are immediately contained and cleaned up. While it is reasonable to require that the Agency Commissioner be fully informed of significant releases from a hazardous waste facility, it is not necessary to provide a full report on minor releases that will not have any consequences on human health or the environment. This requirement is slightly different than the federal rule, which exempts persons responsible for minor spills from both the requirement to report the spill and to file a full report describing the spill. The Agency believes it is reasonable to exempt minor spills from the full reporting requirements, but believes that useful information is provided by a report of the spill event. Moreover, Minn. Stat. § 115.061 already requires reports of spill events which may affect waters of the State, regardless of the size of the spill. Accordingly, the Agency believes it is not very burdensome and is reasonable to require that all spills, regardless of size, be reported.

Item E establishes the conditions for closing, repairing, or providing secondary containment for leaking or unfit-for-use tanks. The proposed rules allow leaking or unfit-for-use tanks to be either repaired or closed. The requirements for repairing the tank vary depending on the source of the leak. If the leak was the result of a spill that did not damage the tank system, there

may be very little to repair and it is reasonable to allow such tank systems to be returned to service without further certification. However, if the release resulted from a part of the tank system that was not provided with secondary containment, and that part cannot be visually inspected for future leaks, then secondary containment must be provided before the tank can be returned to service. It is reasonable to require secondary containment for repaired tank system components that cannot be visually inspected because of the risk of a reoccurrence. Also, it will be relatively easy to install secondary containment while the tank is empty and undergoing repairs so that the burden associated with the installation of secondary containment will be minimized.

The proposed rules allow a tank to be returned to service without installing secondary containment if the source of the leak is an aboveground component that can be visually inspected. Because the proposed rules also require that the repaired aboveground component be certified as capable of handling hazardbus wastes, the Agency believes that it is reasonable to allow the tank to be put back in service after a leak has occurred. The required certification, in conjunction with the requirement to inspect such components daily, will provide adequate assurance that the risk of further releases is minimized.

The proposed rule further requires that the certification of tank system capabilities be submitted to the Agency Commissioner before returning the tank system to use. This is more stringent than the corresponding federal requirement that only requires the submittal of the certification within seven days of returning the tank system to use. During the initial drafting of the proposed rules, the Agency received comments suggesting that the Agency reserve the option of inspecting and verifying any repairs. By requiring the

certification prior to returning the tank to use, the Agency can respond to concerns more readily and correct any problems with less disruption and expense for the owner or operator. It is therefore reasonable to allow this more stringent requirement in the proposed rules.

Subpart 9 establishes the requirements for closure and post-closure care of tank facilities. These requirements directly correspond to 40 C.F.R. § 264.197 and no more stringent requirements are included in the proposed rules. The proposed rules require that all contaminated material at a tank facility be either removed or decontaminated. This is a reasonable requirement because tanks are not permitted for use as disposal facilities, only for the treatment or storage of hazardous wastes. Because there is no intention of allowing tank facilities to be closed with wastes remaining, it is reasonable to specify this in the rules.

However, both the EPA and the Agency recognizes the fact that in some circumstances it will not be possible to totally remove or decontaminate all material at a tank facility. In such cases, the facility is reasonably regulated as a landfill and the proposed rules require compliance with all the requirements for closure, post-closure care, and financial assurance applicable to a landfill.

Item C requires the owner or operator of a tank system that does not have secondary containment to provide information relative to the possibility that the tank system will have to be closed as a landfill. It is reasonable to require such advance planning because of the risk of extensive contamination that could result from failure of a tank system without secondary containment. The proposed rules require a closure plan for closing the facility and removing or decontaminating the wastes and also contingent plans for closure and

post-closure care if the facility must be closed as a landfill. The required cost estimates must address the cost of complying with the most expensive possibility for closure. This is reasonable to ensure that sufficient funds will be available to close the facility as a landfill if necessary.

Subpart 10 establishes the requirements for ignitable or reactive wastes. This subpart remains essentially the same as the current State rules and directly corresponds to the requirements of 40 C.F.R. § 264.198. The proposed rules only provide clarification of already existing requirements. The proposed rules change the term "dissolution" to "dissolved" and specify exactly which buffer zone requirements of the National Fire Protection Association are applicable. It is reasonable to provide these clarifications because there has apparently been some confusion regarding their meaning as originally phrased.

Subpart 11 establishes the requirements for tanks that may contain incompatible wastes. This subpart is only proposed to be amended to change the prohibition on placing waste in "an unwashed" tank to a prohibition on placing waste in a tank "system that has not been decontaminated." This change provides further assurance that a tank system will not contain residues of an incompatible waste. Washing of a tank may not remove all waste residues, so it is reasonable to require whatever measures may be necessary to ensure that incompatible wastes are not mixed.

The Agency proposes to repeal subpart 9 of the existing rules. This subpart addresses the management of dioxin wastes in tanks and requires additional management for dioxin wastes beyond the requirements for other types of hazardous wastes. However, the appropriate requirements for dioxin wastes are incorporated throughout the more stringent proposed rules so that the separate provisions will no longer be necessary to address the hazards presented by dioxin wastes.

N. Minn. Rules Pt. 7045.0556 (General Facility Standards).

Minn. Rules pt. 7045.0556 establishes the general facility standards for all interim status hazardous waste facilities. The proposed amendment to subpart 5 corresponds to the requirement of 40 C.F.R. § 265.15 and relates to the general inspection requirements. The proposed amendment adds two references to the new inspection requirements being imposed by the proposed amendments to Minn. Rules pt. 7045.0628, subps. 5 and 7. The additional inspection requirements relate to the inspection of interim status tank systems that have secondary containment as well as tank systems that have not been upgraded to include secondary containment. It is reasonable to amend this rule to provide the correct cross-references to inspection requirements so that the regulated community is informed of what is required of them.

O. Minn. Rules Pt. 7045.0564 (Waste Analysis Requirements).

Minn. Rules pt. 7045.0564 establishes the requirements for waste analyses applicable to the owners and operators of interim status hazardous waste facilities. The proposed amendment to subpart 2, item F changes a cross-reference to the interim status tank standards. The waste analysis requirements of the interim status tank standards were previously contained in subpart 3 but have been moved to subpart 12 in the proposed amendments. It is reasonable to make this change to provide the correct cross-reference to the waste analysis requirements. This proposed amendment corresponds to 40 C.F.R. § 265.13.

P. Minn. Rules Pt. 7045.0584 (Operating Record).

Minn. Rules pt. 7045.0584 establishes the requirements for maintaining information in the operating record of the interim status facility. The

proposed amendments to Minn. Rules pt. 7045.0628 add a number of new monitoring and testing activities. The proposed amendments to Minn. Rules pt. 7045.0584, subp. 3, items E and H provide the necessary cross-references to these additional requirements. It is reasonable to provide this information so that the regulated community will know what information is required in the operating record. This proposed amendment corresponds to 40 C.F.R § 265.73.

Q. Minn. Rules Pt. 7045.0600 (Post-closure).

Minn. Rules pt. 7045.0600 establishes the requirements for post-closure care of interim status hazardous waste facilities. The proposed amendment to subpart 1 of this part will add the requirement that tank systems that are required to close as a landfill must comply with the post-closure care requirements. This proposed amendment corresponds to 40 C.F.R. § 265.110.

Proposed Minn. Rules pt. 7045.0628, subp. 9 requires the owners or operators of interim status tank systems to close the facility as a landfill if all contaminated material cannot be completely removed at closure. It is reasonable to require post-closure care of such a facility to ensure that adequate measures are taken to prevent the release of wastes after closure.

R. Minn. Rules Pt. 7045.0608 (Financial Requirements).

Minn. Rules pt. 7045.0608 establishes the requirements for interim status facility owners and operators to provide financial assurance for acceptable closure and post-closure care of the facility. The proposed amendment to Minn. Rules pt. 7045.0608, subp. 1 adds a requirement that owners and operators of tank systems that must be closed as landfills must provide financial assurance for post-closure care. Proposed Minn. Rules pt. 7045.0628, subp. 9 requires

that tank systems be closed as landfills if contaminated soil at the facility cannot be removed or decontaminated at closure. In order to ensure that funds will be available to maintain proper post-closure care, it is reasonable to require that the owners or operators of tank systems that must be closed as landfills meet the financial assurance requirements applicable to landfills. This requirement corresponds to the federal requirement for financial assurance in 40 C.F.R. § 265.140.

S. Minn. Rules Pt. 7045.0628 (Tanks - Interim Status).

Minn. Rules pt. 7045.0628 establishes the requirements for tank facilities that are not permitted and are regulated under interim status. This part is also referenced under Minn. Rules pt. 7045.0292 as the applicable standards for generators who accumulate hazardous waste in tanks. The Agency does not propose to change the applicability section of the proposed rules. However, two exceptions to the secondary containment requirements are being proposed in subpart 1. These are the same exceptions provided in 40 C.F.R. § 265.190 which also correspond to the provisions of Minn. Rules pt. 7045.0528, subp. 1. A discussion of the reasonableness of these provisions is provided in section M of this Statement.

Subpart 2 establishes the requirement for the assessment of an existing tank system to determine whether it can adequately contain hazardous wastes. This part directly corresponds to 40 C.F.R. § 265.191. A discussion of the provisions of this part is provided in section M of this Statement.

Subpart 3 establishes the requirements for the design and installation of new tank systems or tank system components. This subpart corresponds to 40 C.F.R. § 265.192. A discussion of the reasonableness of these requirements is provided in section M of this Statement.

Subpart 4 establishes the requirements for the design and installation of secondary containment systems. The requirements of this subpart, with certain exceptions, correspond to 40 C.F.R. § 265.193. The reasonableness of the proposed rule, and the differences between the proposed rule and the federal regulations are discussed in section M of this Statement.

Subpart 5 establishes the testing requirements for tank systems that do not have secondary containment. The requirements of this part generally correspond to 40 C.F.R. § 265.193. A discussion of the more stringent aspects of this subpart and the reasonableness of the proposed requirements is provided in section M of this Statement.

Subpart 6 establishes the requirements for the operation of tank systems. These requirements correspond to the requirements of 40 C.F.R. § 265.194. The reasonableness of these requirements is discussed in section M of this Statement.

Subpart 7 establishes the inspection requirements for owners and operators of tank systems. These requirements correspond to the requirements of 40 C.F.R. § 265.195. The reasonableness of these requirements is discussed in section M of this Statement.

Subpart 8 establishes the requirements for responding to leaks or spills and for the disposition of unfit-for-use tanks. The reasonableness of these requirements and the differences between the proposed rules and the federal regulations are discussed in section M of this Statement.

Subpart 9 establishes the requirements for the closure and post-closure care of the tank systems. The requirements of this part correspond to 40 C.F.R. § 265.197. The reasonableness of the requirements of this subpart are discussed in section M of this Statement.

Subpart 10 establishes the requirements for the management of ignitable and reactive wastes in tank systems. These requirements correspond to the requirements of 40 C.F.R. § 265.198 and are essentially the same as the existing State rules. A discussion of the reasonableness of the minor changes is provided in section M of this Statement.

Subpart 11 establishes the requirements for the management of incompatible wastes in tanks. Only one minor change has been made to this subpart to correspond to 40 C.F.R. § 265.199. A discussion of this change is provided in section M of this Statement.

Subpart 12 establishes the requirements for waste analysis and trial tests to be conducted when different wastes are to be managed in a tank system. These requirements directly correspond to the requirements of 40 C.F.R. § 265.200 and are essentially the same as part 7045.0628, subpart 3 of the existing State rules. However, these requirements have been rephrased to be the same as the federal regulations. These requirements do not have an equivalent counterpart in Minn. Rules pt. 7045.0528. It is reasonable to require waste analysis and trial tests for interim status tank systems because such facilities have not been subjected to the Agency's review through the permit process and the information required under Minn. Rules Ch. 7001 has not been provided to the Agency. Additional regulation to ensure that wastes are not mixed is reasonable because of the potential that such mixing could result in a reaction which would damage the tank system.

The requirements of this subpart only apply to interim status tank facilities and not to generators who accumulate waste in tanks. Generators are not subject to this requirement because they are unlikely to be receiving the wide range of waste that could be received at an interim status facility

treating or storing wastes from off site. EPA provides further justification for this provision on page 25458 of Exhibit 1.

T. Minn. Rules Pt. 7045.0629 (Requirements for Small Quantity Generators that Accumulate Hazardous Waste in Tanks).

Minn. Rules pt. 7045.0629 establishes the requirements for small quantity generators who accumulate hazardous waste in tanks. Minn. Rules pt. 7045.0219 defines small quantity generators as generators of less than 1,000 kilograms of hazardous waste per month. Small quantity generators are allowed to accumulate hazardous waste for more than the 90 days provided in Minn. Rules pt. 7045.0292 for full scale generators. A small quantity generator may accumulate up to 3,000 kilograms of hazardous waste for 180 days. If the waste must be shipped to a facility that is more than 200 miles away, the accumulation period is extended to 270 days. Generators of less than 100 kilograms of hazardous waste per month are allowed to accumulate waste indefinitely until 1,000 kilograms are accumulated, at which time the other small quantity generator time frames become applicable.

The requirements of this part correspond to the federal requirements in 40 C.F.R. § 265.201 and are essentially the same as the existing State rules applicable to small quantity generators who accumulate hazardous waste in tanks. However, there is one difference from the existing rules and this relates to the requirement to conduct waste analyses and trial tests when a different waste is placed in the tank. Small quantity generators are currently required to comply with all requirements of existing Minn. Rules pt. 7045.0628. However, full scale generators, who are currently also required to comply with existing Minn. Rules pt. 7045.0628, are excepted from the waste analysis and trial test

requirements. When Minn. Rules pt. 7045.0219 was amended on April 27, 1987, the requirement to conduct waste analyses was inadvertently included in the rule cross-references. However, the Agency believes it is not reasonable to require compliance with this provision of the tank rules and is at this time correcting the previous error. All other aspects of the requirements for small quantity generators remain unchanged from the current level of regulation.

IV. SMALL BUSINESS CONSIDERATIONS IN RULEMAKING

Minn. Stat. § 14.115, subd. 2 (1986) requires the Agency, when proposing amendments to existing rules which may affect small businesses, to consider the impact of the rule amendment on small business. The objective of Minn. Stat. Ch. 116 (1986) is to protect the public health and welfare and the environment from the adverse effects which will result when hazardous waste is mismanaged. Application of less stringent standards to the hazardous wastes generated or managed by small businesses would be contrary to the Agency's mandate since small businesses' hazardous wastes can cause the same environmental harm as that of larger businesses.

The volume of hazardous waste generated by a business is not directly proportional to the size of the business. Many large businesses generate very small quantities of hazardous waste and conversely, a small business may generate a very large volume of hazardous waste. Therefore, it is not fair or reasonable to impose regulations based on the size of the business because this may have little relation to the potential for mismanagement or the extent of the adverse effects on human health and the environment if the waste is mismanaged.

Those aspects of the amendments that are based on federal regulations promulgated under HSWA are already in effect in Minnesota. Incorporation of

these provisions into the State rules will not impose any additional requirements on small businesses that are not currently being imposed by the federal regulations in effect in Minnesota and elsewhere in the nation.

The portions of the amendments that are based on federal regulations promulgated under RCRA, while not yet in effect in Minnesota, must eventually be incorporated into the State rules and must be equivalent to the federal level of regulation. Again, incorporation of these requirements into the State rules will not impose any additional requirements on small businesses that would not be imposed under the federal program.

The portions of the amendments that exceed the level of regulation in the federal program are the only areas where there is the option of minimizing the impact on small businesses. The amendments provide additional regulation in three areas; the phase-in period for secondary containment, the requirement to conduct leak testing for nonenterable inground and onground tanks, and the requirement to conduct periodic tests to determine that a minimum tank wall thickness is maintained. These requirements are applicable to permitted and interim status tank facilities and also to full-scale generators of hazardous waste. Agency staff are not aware of any permitted or interim status tank facilities owned or operated by a small business. However, some small businesses may be generators of hazardous waste. The State rules recognize two classes of generators, full-scale and small quantity generators. The amendments provide a lower level of regulation for small quantity generators. Specifically, small quantity generators who accumulate waste in tanks are not subject to any of the newly imposed federal requirements. The current level of regulation is being maintained. Small businesses that are small quantity generators that accumulate waste in tanks will not be affected by the

amendments. Small businesses that are full-scale hazardous waste generators that accumulate waste in tanks will be affected by the three more stringent areas of regulation mentioned above. However, Agency staff believes that these additional regulations are justifiable and do not present an unreasonable burden to small businesses that may be subject to these requirements.

V. CONSIDERATION OF ECONOMIC FACTORS

In exercising its powers, the Agency is required by Minn. Stat. § 116.07, subd. 6 (1986) to give due consideration to economic factors. The statute provides:

> In exercising all its powers the Pollution Control Agency shall give due consideration to the establishment, maintenance, operation, and expansion of business, commerce, trade, industry, traffic, and other economic factors and other material matters affecting the feasibility and practicability of any proposed action, including, but not limited to, the burden on a municipality of any tax which may result therefrom, and shall take or provide for such action as may be reasonable, feasible, and practical under the circumstances.

In proposing the requirements of these amendments governing hazardous waste tanks, the Agency has given due consideration to available information as to any economic impacts the proposed amendments would have. The amendments will have some economic impacts for owners and operators of hazardous waste tank systems. The amendments will impact the owners and operators of hazardous waste tank systems by requiring upgrading of existing tank systems and more extensive monitoring of the tank system during operation. The amendments are based partially on federal regulations promulgated under HSWA which are already in effect in Minnesota and also on federal regulations promulgated under RCRA. Incorporation of these provisions into the State rules will not impose any additional requirements on the owners and operators of hazardous waste that are

not currently being imposed by the federal regulations in effect in Minnesota or that would be imposed if Minnesota's rules were not equivalent.

Three requirements of the proposed amendments will exceed the level of regulation of the federal program. These additional requirements will have an economic impact on the affected members of the regulated community. However, this impact is not believed to be significant and will be discussed in more detail in 1) to 3) below.

1) Phase-in Period. The federal regulations require the installation of secondary containment for existing tanks by the time the tank is 15 years old. Because the State rules have always required secondary containment for permitted tank systems, the phase-in period will only be applicable to interim status facilities and full-scale generators who accumulate waste in tanks. The amendments also require the installation of secondary containment by the time a tank is 15 years old, but further specify a maximum time of five years from the effective date of the rules before secondary containment must be installed. The effect of this difference will be to accelerate the response time for interim status facilities and generator's accumulation tanks that are less than ten years old. Although the installation of secondary containment is inevitable under the federal program, it is required sooner under the proposed amendments and therefore will result in a more immediate expenditure for owners and operators of interim status facilities or generators with accumulation tanks that are less than ten years old.

2) Leak Testing for Inground and Onground Tanks. The federal regulations require leak testing for underground tanks that cannot be entered for inspection. For all other types of tanks, the federal regulations provide the

option of either conducting leak testing or some other method of determining the fitness of the tank to contain hazardous waste.

The amendments extend the requirement for leak testing to also include nonenterable inground or onground tanks. Although the cost of leak testing will vary depending on a number of factors such as travel distance, size of the tank, and ease of access, a leak test can be conducted for approximately $500.00. The amendments require a leak test be conducted within 18 months of the effective date of the rules and annually thereafter until secondary containment is installed. This would represent a maximum of four leak tests amounting to $2,000.00 for the affected tank owner or operator.

3) Tank Wall Thinning Testing. The amendments require testing to evaluate tank wall thinning for tanks that have not had secondary containment installed. For permitted facilities the frequency of these tests will be determined in the permit. For interim status tanks and tanks used by generators to accumulate hazardous wastes, the amendments specify that the initial test must be conducted within 18 months of the effective date of the rules and every two years thereafter.

Testing to determine tank wall thinning is usually conducted by use of ultrasonic evaluation of the tank walls. The cost of ultrasonic testing will vary depending on the size and construction material of the tank and the travel distance to conduct the test. Ultrasonic testing will cost from $30.00 to $40.00 per hour.

The Agency believes that the additional expense that will be incurred as a result of the adoption of more stringent State requirements are justified by the

additional environmental protection these requirements will ensure. In no case will the additional State requirements result in immediate expenditure or represent a burdensome expense to the affected owners and operators of hazardous waste tanks.

VI. CONCLUSION

The Agency has, in this document and its exhibits, made its presentation of facts establishing the need for and reasonableness of the proposed amendments to Minnesota's hazardous waste rules. This document constitutes the Agency's Statement of Need and Reasonableness for the proposed amendments to the hazardous waste rules.

VII. LIST OF EXHIBITS

The Agency is relying on the following documents to support these amendments.

Agency Ex. No.	Title
1	Federal Register, Vol. 51, No. 134, Pages 25422-25486, July 14, 1986.
2	Federal Register, Vol. 50, No. 123, Pages 26444-26504, June 26, 1985.
3	Federal Register, Vol. 51, No. 158, Pages 29430-29431, August 15, 1986.

Date: October 16, 1987

for Barbara Lindsay Sims
Thomas J. Kalitowski
Commissioner

STATE OF MINNESOTA
POLLUTON CONTROL AGENCY

In the Matter of the Proposed Rules Governing the Management, Storage, Treatment, and Disposal of Hazardous Waste, Minn. Rules Pts. 7001.0560, 7001.0580, 7001.0650, 7045.0020, 7045.0075, 7045.0120, 7045.0219, 7045.0292, 7045.0452, 7045,0478, 7045.0490, 7045.0498, 7045.0528, 7045.0556, 7045.0564, 7045.0584, 7045.0600, 7045.0608, 7045.0628, and 7045.0629

AFFIDAVIT OF MAILING THE NOTICE OF INTENT TO ADOPT RULE WITHOUT A PUBLIC HEARING AND CERTIFICATE OF MAILING LIST

STATE OF MINNESOTA)
) ss.
County of Ramsey)

Carol Nankivel, being duly sworn says:

I hereby certify that the list of persons and associations who have requested, pursuant to Minn. Stat. §§ 14.14, subd. 1a and 14.22 (1986) that their names be placed on the Minnesota Pollution Control Agency's rulemaking mailing list is accurate, complete, and current as of this 12th day of November, 1987.

That on the 12th day of November, 1987, at the City of St. Paul, County of Ramsey, State of Minnesota, I mailed the attached Notice of Intent to Adopt Rules Without a Public Hearing by depositing in the State of Minnesota Central Mail System or in the United States mail for first class mailing at said City of St. Paul, a copy thereof, with postage prepaid, to all persons and associations on the aforementioned mailing list.

Carol Nankivel

Subscribed and sworn to before me
this 12 day of Nov, 1987.

Mary Ann Hammer
Notary Public

MARY ANN HAMMER
NOTARY PUBLIC-MINNESOTA
RAMSEY COUNTY
MY COMMISSION EXPIRES DECEMBER 10, 1991

MINNESOTA DEPARTMENT OF ADMINISTRATION, DOCUMENTS DIVISION

Title
Haz. Waste Amendments
- Tanks

State Register

117 University Avenue (Editorial Office: 504 Rice Street)
St. Paul, Minnesota 55155
Editor (612) 296-4273 Billing/Circulation Manager (612) 296-0931

STATE REGISTER PRINTING ORDER

INSTRUCTIONS:

1. Submit TWO COPIES of everything to be published, typed double spaced, with one-inch margins all around.
2. Use typewriter only, so that all cabron copies are legible.
3. Use a separate form for each sequence number used.
4. Do not write in shaded areas. Complete all other applicable areas, including the department/division number and the sequence number.
5. Your agency's STATE REGISTER Liaison Officer must sign this form.
6. Retain the last copy for your records.
7. Check the inside front cover of the STATE REGISTER for submission deadlines.

CHECK ALL THAT APPLY:

[X] REQUEST FOR PUBLICATION (Attach information to be printed)

Desired Date of Publication December 22, 1986

[ ] REQUEST FOR ANNUAL SUBSCRIPTION

[ ] REQUEST FOR OVERRUN (Request must be made prior to printing)

Date of Issue / /
Number of Copies

SHIP TO:

NAME
DEPARTMENT/DIVISION
ADDRESS
TELEPHONE

[ ] REQUEST FOR SINGLE COPIES Date of Issue / / Number of Copies

[ ] REQUEST FOR OTHER PUBLICATIONS

NA68	INVOICE NO.	DEPT./DIV. NO.	SEQ. NO.	SUFF	FY	OBJ	AMOUNT	CC1	CC2	CC3
	STR 03122	32300	14990		87					

CC4	GC5	OCC DATE	REC INDEX ITEM FUND	REC CLASS	REC CC5
			160991384	348	829176

DEPARTMENT	DIVISION	BILLING ADDRESS
MPCA	Solid and Hazardous Waste	520 Lafayette Road St. Paul, MN 55155

DEPARTMENT AUTHORIZED SIGNATURE - LIAISON OFFICER PHONE AND DATE TRANSACTION NUMBER (FOR NA68 ONLY)

12/5/86

DESCRIPTION (FOR SUBMITTING AGENCY'S USE)

Notice to Solicit Outside Opinion - Tanks, Exports, and Lists

DESCRIPTION PRICE

SR-00001-03 (7/86)

STATE OF MINNESOTA
POLLUTION CONTROL AGENCY

In the Matter of Revisions
to the Hazardous Waste Rules

NOTICE OF INTENT TO SOLICIT
OUTSIDE OPINIONS CONCERNING
AMENDMENTS TO MINN RULES
CH. 7045 GOVERNING THE
MANAGEMENT OF HAZARDOUS WASTE

Notice is hereby given that the Minnesota Pollution Control Agency (MPCA) is seeking information and opinions from sources outside the MPCA regarding possible amendments to the rules governing hazardous waste. Information and comments are being sought to aid in preparation of draft amendments.

In response to amendments to the U.S. Environmental Protection Agency (EPA) hazardous waste program, the MPCA is considering amendments to rules governing hazardous waste in the following areas:

1. Regulations pertaining to the storage of hazardous waste in tanks. The regulations promulgated by EPA on July 14, 1986 impose specific conditions for the evaluation of tank integrity, design and installation of tanks, containment and detection of released waste, operating requirements, closure and post-closure care of tank systems.

2. Regulations applying to the export of hazardous waste. Amendments to the federal regulations promulgated August 8, 1986, include provisions relating to hazardous waste exporters' use of manifests, reporting and record keeping and the exporting transporters' responsibilities.

3. Amendments to the lists of hazardous wastes. Amendments to the federal regulations promulgated October 24, 1986 add four wastes to the lists of

hazardous wastes. These wastes are generated during the production and formulation of ethylenebisdithiocarbamic acid (EBDC) and its salts.

4. Corrections and modifications to the lists of hazardous wastes. Amendments to the federal regulations promulgated August 6, 1986 correct 57 existing entries in the lists of hazardous waste and add Chemical Abstracts Service registry numbers to all listings.

The MPCA requests information and comments concerning the subject matter of the proposed amendments. Written or oral information or comments will be accepted until January 19, 1987. Written statements should be addressed to:

Carol Nankivel
Minnesota Pollution Control Agency
Solid and Hazardous Waste Division
520 Lafayette Road
St. Paul, Minnesota 55155

Oral statements will be received during regular business hours at 612/296-7260.

D. ~~$150~~ $240 for an emission facility that must apply best available control technology as required under Code of Federal Regulations, title 40, section 51.24;

E. ~~$250~~ $400 for evaluation of air emissions containing pollutants for which no ambient air quality standard has been established under part 7005.0080 (state ambient air quality standards) and which have the potential to be injurious to human health;

F. ~~$150~~ $240 for dispersion modeling review; and

G. ~~$150~~ $240 for each performance test review.

Subp. 5. **Annual fees.** All persons required to obtain an air emission facility permit shall pay the following applicable annual fee:

A. ~~$650~~ $1,040 for a major emission facility; or

B. ~~$150~~ $240 for an emission facility other than a major emission facility.

The agency shall not charge an annual fee for an emission facility with potential emissions of a single pollutant of more than 25 tons per year but less than 50 tons per year unless the facility also discharges lead to the ambient air.

Subp. 6. [Unchanged.]

Pollution Control Agency

Proposed Permanent Rules Relating to Hazardous Waste; Tanks

Notice of Intent to Adopt Rule Amendments Without a Public Hearing

Notice is hereby given that the Minnesota Pollution Control Agency (MPCA) intends to adopt the above-entitled rule amendments without a public hearing following the procedures set forth in the Administrative Procedure Act for adopting rules without a public hearing in *Minnesota Statutes* §§ 14.22 to 14.28 (1986). The MPCA's authority to adopt the rule amendments is set forth in *Minnesota Statutes* § 116.07, Subd. 4 (1986).

All persons have until 4:30 p.m. on December 16, 1987 to submit comments in support of or in opposition to the proposed rule amendments or any part or subpart of the rules. Comment is encouraged. Each comment should identify the portion of the proposed rule amendments addressed, the reason for the comment, and any change proposed.

Any person may make a written request for a public hearing on the rules within the comment period. If 25 or more persons submit a written request for a public hearing within the comment period, a public hearing will be held unless a sufficient number withdraw their requests in writing. Any person requesting a public hearing should state his or her name and address, and is encouraged to identify the portion of the proposed rule amendments addressed, the reason for the request, and any change proposed. If a public hearing is required, the MPCA will proceed pursuant to *Minnesota Statutes* §§ 14.131 to 14.20 (1986).

Comments or written requests for a public hearing must be submitted to:

Carol Nankivel
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155

The proposed rule amendments may be modified if the modifications are supported by data and views submitted to the MPCA and do not result in a substantial change in the proposed rule amendments as noticed.

The proposed rule amendments, if adopted, will incorporate recent changes to the federal hazardous waste regulations regarding the design and operation of tanks used to treat, store, or accumulate hazardous wastes. The proposed rule amendments add more extensive requirements for tank assessment, secondary containment, inspection, and responses to leaks and spills.

The proposed rule amendments follow this notice. One free copy of the proposed rule amendments is available upon request from Carol Nankivel at 612/296-7260 or at the address stated above.

A Statement of Need and Reasonableness that describes the need for and reasonableness of each provision of the proposed rule amendments and identifies the data and information relied upon to support the proposed rule amendments has been prepared and is available from Carol Nankivel upon request.

You are hereby advised, pursuant to *Minnesota Statutes* § 14.115 (1986), "small business considerations in rulemaking," that the proposed rule amendments will have a minimal impact on small businesses. Most of the amendments are already provisions of the federal hazardous waste program. By adopting these provisions as State rules the MPCA is not increasing the level of regulation beyond the scope of the federal program. In addition, certain aspects of the proposed amendments are more stringent than the federal

regulations. However, these more stringent requirements are justified in the Statement of Need and Reasonableness and will not present an unreasonable burden to small businesses.

If no hearing is required, upon adoption of the rule amendments, the rule amendments and the supporting documents will be submitted to the Attorney General for review as to legality and form to the extent form relates to legality. Any person may request notification of the date of submission to the Attorney General. Persons who wish to be advised of the submission of this material to the Attorney General, or who wish to receive a copy of the rule amendments as adopted, must submit a written request to Carol Nankivel at the address stated above.

Gerald L. Willet
Commissioner

Rules as Proposed

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, ~~subpart~~ 4 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 ~~and~~, 7045.0490, and 7045.0528, subpart 9, including, if applicable, the specific information in parts 7045.0526, subpart 9; 7045.0528, subpart ~~6~~ 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 ~~designated in items A and B~~, in writing, in addition to the information required by part 7001.0560:

~~A. A description of the design and operation procedures of the tank that demonstrate compliance with the requirements of part 7045.0528, subparts 2, 3, 7, and 8. This description must include:~~

~~(1) references to design standards or other available information used, or to be used, in the design and construction of the tank;~~

~~(2) a description of the design specifications, including identification of construction materials and lining materials and any pertinent characteristics of these materials, such as corrosion or erosion resistance;~~

~~(3) a description of design specifications and operational procedures that demonstrate compliance with part 7045.0528, subpart 2, item C, for underground tanks;~~

~~(4) tank dimensions, capacity, and shell thickness;~~

~~(5) a diagram of piping, instrumentation, and process flow;~~

~~(6) a description of feed systems, safety cutoff and bypass systems, and pressure controls, such as vents;~~

~~(7) a description of waste types and volumes to be stored in each tank; and~~

~~(8) a description of operational procedures that demonstrate compliance with the requirements of parts 7045.0456 and 7045.0528, subparts 7 and 8, regarding the procedures for handling ignitable, reactive, or incompatible wastes.~~

~~B. A description of the system to be used to contain the tank and any spills or releases of hazardous waste from the tank, demonstrating compliance with part 7045.0528, subpart 5, and where applicable, subpart 9, including at a minimum the following:~~

~~(1) basic design parameters, dimensions, and construction materials;~~

KEY: PROPOSED RULES SECTION — Underlining indicates additions to existing rule language. ~~Strike outs~~ indicate deletions from existing rule language. If a proposed rule is totally new, it is designated "all new material." ADOPTED RULES SECTION — Underlining indicates additions to proposed rule language. ~~Strike outs~~ indicate deletions from proposed rule language.

~~(2) the manner in which the design promotes drainage or prevents contact between the tank and standing liquids;~~

~~(3) the capacity of the system in terms of number and volume of tanks to be held;~~

~~(4) provisions for preventing or managing run-on;~~

~~(5) the manner in which accumulated liquids can be removed to prevent overflow and can be analyzed to determine proper management of the removed liquids; and~~

~~(6) for tanks holding hazardous wastes F020, F021, F022, F023, F026, F027, and F028 listed under part 7045.0135, subpart 2, a description of the system to detect leaks and spills and how precipitation and run-on will be prevented from entering the detection system.~~

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.

KEY: PROPOSED RULES SECTION — Underlining indicates additions to existing rule language. ~~Strike outs~~ indicate deletions from existing rule language. If a proposed rule is totally new, it is designated "all new material." ADOPTED RULES SECTION — Underlining indicates additions to proposed rule language. ~~Strike outs~~ indicate deletions from proposed rule language.

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 ~~director~~ 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 ~~director~~ commissioner may request any additional information on the proposed method which ~~he~~ 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.

KEY: PROPOSED RULES SECTION — Underlining indicates additions to existing rule language. ~~Strike outs~~ indicate deletions from existing rule language. If a proposed rule is totally new, it is designated "all new material." ADOPTED RULES SECTION — Underlining indicates additions to proposed rule language. ~~Strike outs~~ indicate deletions from proposed rule language.

(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.]

KEY: PROPOSED RULES SECTION — Underlining indicates additions to existing rule language. ~~Strike outs~~ indicate deletions from existing rule language. If a proposed rule is totally new, it is designated "all new material." ADOPTED RULES SECTION — Underlining indicates additions to proposed rule language. ~~Strike outs~~ indicate deletions from proposed rule language.

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 ~~7045.0628~~ 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 ~~3~~ 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, ~~subpart~~ 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 ~~director~~ 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 ~~director~~ 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 ~~and~~;

B. the owner or operator of a waste pile or surface impoundment ~~which~~ 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; ~~and~~

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 ~~provides~~, 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. **~~Design~~ Assessment of ~~tanks~~ existing tank system's integrity.** ~~Tanks must be designed as follows:~~

~~A. Tanks must have sufficient shell strength and, for closed tanks, pressure controls to ensure that they do not collapse or rupture. The director shall review the design of the tanks, including the foundation, structural support, seams, and pressure controls. A minimum shell thickness must be maintained at all times to ensure sufficient shell strength. Factors to be considered in establishing minimum thickness include the width, height, and materials of construction of the tank, and the specific gravity of the waste which will be placed in the tank. In reviewing the design of the tank and establishing a minimum thickness, the director shall rely upon appropriate industrial design standards and other available information.~~

~~B. Tanks and their closures must be constructed of materials, or protected by a liner that will not undergo chemical reaction with the contained hazardous waste or other substances that the tank may foreseeably contact if such a reaction may impair the tank's ability to contain the waste. Gasketed closures must be fitted with gaskets of material that is sufficient to prevent leakage and that will not be deteriorated by the contents.~~

~~C. The owner or operator shall design and construct underground tanks to meet the general design requirements of items A and B for all tanks and must allow for the inspection of the interior and exterior of the tank according to subpart 4 or:~~

~~(1) provide for corrosion protection by use of protective coatings or cathodic protection;~~

~~(2) provide for the detection of any leakage through the use of sensing devices or other equivalent methods;~~

~~(3) perform hydrostatic testing on all tanks with the initial test being performed within three years of the July 16, 1984 and at least every three years thereafter; and~~

~~(4) keep a weekly inventory for each tank. Inventories must be based upon the actual daily measurement of tank liquid level. The written record must include a computation of gain or loss for the period. Inventory records must be maintained for at least three years at the facility. Upon discovery of loss of ten percent of the waste volume, the owner or operator shall notify the director and implement the procedures outlined in the owner's or operator's contingency plan for that occurrence.~~ The following requirements apply to existing tank systems:

KEY: PROPOSED RULES SECTION — Underlining indicates additions to existing rule language. ~~Strike outs~~ indicate deletions from existing rule language. If a proposed rule is totally new, it is designated "all new material." ADOPTED RULES SECTION — Underlining indicates additions to proposed rule language. ~~Strike outs~~ indicate deletions from proposed rule language.

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. **~~General operating requirements~~ Design and installation of new tank systems or components.** ~~Wastes and other materials that are incompatible with the material of the construction of the tank must not be placed in the tank, unless the tank is protected from accelerated corrosion, erosion, or abrasion through the use of an inner liner or coating which is compatible with the waste or material and which is free of leaks, cracks, holes, or other deterioration; or an alternate means of protection such as cathodic protection, or corrosion inhibitors.~~

~~The owner or operator must use appropriate controls and practices to prevent overfilling. These must include controls to prevent overfilling such as waste feed cutoff systems or bypass systems to a standby tank, and for uncovered tanks, maintenance of sufficient freeboard to prevent overtopping by wave or wind action or by precipitation.~~ 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. ~~Inspections~~ **Containment and detection of releases.** The following requirements apply to ~~inspections~~ the containment and detection of releases from tanks:

~~A. The owner or operator shall inspect:~~

~~(1) overfilling control equipment, including waste feed cut off systems and bypass systems, at least once each operating day to ensure that it is in good working order;~~

~~(2) data gathered from monitoring equipment, where present, at least once each operating day to ensure that the tank is being operated according to its design;~~

~~(3) for uncovered tanks, the level of waste in the tank at least once each operating day to ensure compliance with subpart 3;~~

~~(4) the construction materials of the tank, at least weekly to detect corrosion or erosion and leaking of fixtures and seams; and~~

~~(5) the area immediately surrounding the tank and the containment system, at least weekly to detect obvious signs of leakage and deterioration of the containment system caused by corrosion, erosion, or other factors.~~

~~B. As part of the inspection schedule required in part 7045.0452 and in addition to the specific requirements of item A, the owner or operator shall develop a schedule and procedure for assessing the condition of the tank. The schedule and procedure must be adequate to detect cracks, leaks, or corrosion or erosion which may lead to cracks, leaks, or wall thinning to less than the thickness required under subpart 2. Procedures for emptying a tank to allow entry and inspection of the interior must be established~~

KEY: PROPOSED RULES SECTION — Underlining indicates additions to existing rule language. ~~Strike outs~~ indicate deletions from existing rule language. If a proposed rule is totally new, it is designated "all new material." ADOPTED RULES SECTION — Underlining indicates additions to proposed rule language. ~~Strike outs~~ indicate deletions from proposed rule language.

~~when necessary to detect corrosion or erosion of the tank sides and bottom. The frequency of these assessments must be based on the material of construction of the tank, type of corrosion or erosion protection used, rate of corrosion or erosion observed during previous inspections, and the characteristics of the waste being treated or stored.~~

~~C. As part of the contingency plan required under parts 7045.0464 to 7045.0470, the owner or operator must specify:~~

~~(1) the procedures he or she intends to use to respond to tank spills or leakage, including procedures and timing for expeditious removal of leaked or spilled waste and repair of the tank. As required in part 7045.0452, subpart 5, item D, the owner or operator shall remedy any leak, crack, or wall thinning in violation of subpart 2, or equipment or process malfunction in violation of subpart 3, which he or she discovers during inspection; and~~

~~(2) for tanks holding wastes F020, F021, F022, F023, F026, F027, and F028 listed under part 7045.0135, subpart 2, the contingency plan must also include the procedures for responding to a spill or leak of these wastes from tanks into the containment system. These procedures shall include measures for immediate removal of the waste from the system and replacement or repair of the leaking tank.~~

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. ~~Containment~~ **Requirements for tank systems.** ~~Requirements for containment systems are as follows:~~

~~A. Storage or treatment tank areas must have a containment system that is capable of collecting and holding spills, leaks, and precipitation. The containment system must:~~

~~(1) have a base underlying the tanks which is free of cracks or gaps and is sufficiently impervious to contain leaks, spills, and accumulated precipitation until the collected material is detected and removed;~~

~~(2) have a base which is sloped, or be otherwise designed and operated to drain and remove liquids resulting from leaks,~~

KEY: PROPOSED RULES SECTION — Underlining indicates additions to existing rule language. ~~Strike outs~~ indicate deletions from existing rule language. If a proposed rule is totally new, it is designated "all new material." ADOPTED RULES SECTION — Underlining indicates additions to proposed rule language. ~~Strike outs~~ indicate deletions from proposed rule language.

~~spills, or precipitation, unless the tank is protected from contact with accumulated liquids;~~

~~(3) have sufficient capacity to contain ten percent of the volume of tanks, or the volume of the largest tank, whichever is greater, plus ten centimeters (four inches) of freeboard; and~~

~~(4) be constructed so that the interface between the dike or sidewall and the underlying base is sealed to contain leaks, spills, and accumulated liquids.~~

~~B. Run-on into the containment system must be prevented, unless the agency waives this requirement in the permit after determining that the collection system has sufficient excess capacity in addition to that required in item A, subitem (3) to accommodate any run-on which might enter the system.~~

~~C. Spilled or leaked waste and accumulated precipitation must be removed from the sump or collection area in as timely a manner as is necessary to prevent overflow of the collection system. If the collected material is a hazardous waste as defined in parts 7045.0100 to 7045.0141, it must be managed as a hazardous waste in accordance with all applicable requirements of parts 7045.0205 to 7045.1030. If the collected material is discharged through a point source to waters of the United States, it is subject as amended through June 30, 1983.~~ 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. ~~Closure~~ **General operating requirements.** ~~At closure, all hazardous waste and hazardous residues must be removed from tanks, discharge control equipment, discharge confinement structures, and the containment system. Remaining liners, bases, closure, as throughout the operating period, unless the owner or operator can demonstrate that the waste removed from his tank it in accordance with all applicable requirements of parts 7045.0205 to 7045.1030.~~

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.

KEY: PROPOSED RULES SECTION — Underlining indicates additions to existing rule language. ~~Strike outs~~ indicate deletions from existing rule language. If a proposed rule is totally new, it is designated "all new material." ADOPTED RULES SECTION — Underlining indicates additions to proposed rule language. ~~Strike outs~~ indicate deletions from proposed rule language.

(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. ~~7~~ 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 ~~dissolution of~~ 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 ~~covered tanks~~ 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. ~~8~~ 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 ~~an unwashed~~ 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, ~~subpart~~ 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.]

KEY: PROPOSED RULES SECTION — Underlining indicates additions to existing rule language. ~~Strike outs~~ indicate deletions from existing rule language. If a proposed rule is totally new, it is designated "all new material." ADOPTED RULES SECTION — Underlining indicates additions to proposed rule language. ~~Strike outs~~ indicate deletions from proposed rule language.

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 ~~3~~ 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 ~~3~~ 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 ~~provides~~ 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. ~~**General operating requirements**~~ **Assessment of existing tank system's integrity.** ~~Treatment or storage of hazardous waste in tanks must comply with part 7045.0562, subpart 2.~~

~~Hazardous wastes or treatment reagents must not be placed in a tank if they could cause the tank, its closures, or its inner liner to rupture, leak, corrode, or otherwise fail before the end of its intended life.~~

~~Uncovered tanks must be operated to ensure at least 60 centimeters (two feet) of freeboard, unless the tank is equipped with a containment structure, a drainage control system, or a diversion structure with a capacity that equals or exceeds the volume of the top 60 centimeters (two feet) of the tank.~~

~~When hazardous waste is continuously fed into a tank, the tank must be equipped with a means to stop this inflow. These systems are intended to be used in the event of a leak or overflow from the tank due to a system failure.~~ 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. ~~**Waste analysis and trial tests**~~ **Design and installation of new tank systems or components.** ~~In addition to the waste analysis required by part 7045.0564, whenever a tank is to be used to chemically treat or store a hazardous waste which is substantially different from waste previously treated or stored in that tank, or chemically treat hazardous waste with a substantially different process than any previously used in that tank, the owner or operator shall, before treating or storing the different waste or using the different process:~~

~~A. conduct waste analyses and trial treatment or storage tests; or~~

~~B. obtain written, documented information on similar storage or treatment of similar waste under similar operating conditions to show that this proposed treatment or storage will meet all applicable requirements of subpart 2. As required by part 7045.0564, the waste analysis plan must include analyses needed to comply with subparts 6 and 7. As required by part 7045.0584, the owner or operator shall place the results from each waste analysis and trial test, or the documented information, in the operating record of the facility.~~

A. Owners or operators of new tank systems or components must ensure that the foundation, structural support, seams,

KEY: PROPOSED RULES SECTION — Underlining indicates additions to existing rule language. ~~Strike outs~~ indicate deletions from existing rule language. If a proposed rule is totally new, it is designated "all new material." ADOPTED RULES SECTION — Underlining indicates additions to proposed rule language. ~~Strike outs~~ indicate deletions from proposed rule language.

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. ~~Inspection~~ **Containment and detection of releases.** ~~The owner or operator of a tank shall inspect, where possible:~~

~~A. discharge control equipment, at least once each operating day, to ensure that it is in good working order;~~

~~B. data gathered from monitoring equipment, 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 2;~~

~~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, at least weekly, to detect erosion or obvious signs of leakage. As required by part 7045.0556, subpart 5, the owner or operator shall remedy any~~

~~deterioration or malfunction he or she finds.~~

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;

KEY: PROPOSED RULES SECTION — Underlining indicates additions to existing rule language. ~~Strike outs~~ indicate deletions from existing rule language. If a proposed rule is totally new, it is designated "all new material." ADOPTED RULES SECTION — Underlining indicates additions to proposed rule language. ~~Strike outs~~ indicate deletions from proposed rule language.

(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. ~~Closure~~ **Requirements for tank systems.** ~~At closure, all hazardous waste and hazardous waste residues must be removed from tanks, discharge control equipment, and discharge confinement structures. At closure, as throughout the operating period, unless the owner or operator can demonstrate that any waste removed from his tank is not a hazardous waste, the owner or operator becomes a generator of hazardous waste and shall manage it in accordance with all applicable requirements of parts 7045.0205 to 7045.0397 and 7045.0552 to 7045.0642.~~ 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:

KEY: PROPOSED RULES SECTION — Underlining indicates additions to existing rule language. ~~Strike outs~~ indicate deletions from existing rule language. If a proposed rule is totally new, it is designated "all new material." ADOPTED RULES SECTION — Underlining indicates additions to proposed rule language. ~~Strike outs~~ indicate deletions from proposed rule language.

(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. ~~6~~ 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 ~~dissolution of~~ 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 ~~covered tanks~~ 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. ~~7~~ 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 ~~an unwashed~~ 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.

KEY: PROPOSED RULES SECTION — Underlining indicates additions to existing rule language. ~~Strike outs~~ indicate deletions from existing rule language. If a proposed rule is totally new, it is designated "all new material." ADOPTED RULES SECTION — Underlining indicates additions to proposed rule language. ~~Strike outs~~ indicate deletions from proposed rule language.

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.

Department of Human Services

Withdrawal of Proposed Permanent Rules Relating to Veteran's Home Discharge Provisions and Fees

The proposed rule published in the *State Register* on August 3, 1987 (CITE 12 S.R. 191) is hereby officially withdrawn.

Questions about withdrawal of this rule may be addressed to Thomas Eberhart at 296-8974.

CERTIFICATE OF RESOLUTION ADOPTING RULES

I, Gerald L. Willet, do hereby certify that I am the Commissioner of the Minnesota Pollution Control Agency, an agency duly authorized under the laws of the State of Minnesota, and that the following is a true, complete, and correct copy of a resolution adopted at a meeting of the Minnesota Pollution Control Agency duly and properly called and held on the 23rd day of February 1988, that a quorum was present at said meeting, that a majority of those present voted for the resolution and that said resolution will be set forth in the minutes of said meeting and has not been rescinded or modified:

> BE IT RESOLVED, that the Minnesota Pollution Control Agency (MPCA) hereby approves and adopts the attached amendments to the MPCA's hazardous waste rules governing tanks, Minn. Rules pts. 7001.0560, 7001.0580, 7001.0650, 7045.0020, 7045.0075, 7045.0120, 7045.0219, 7045.0292, 7045.0452, 7045.0487, 7045.0490, 7045.0498, 7045.0528, 7045.0556, 7045.0564, 7045.0584, 7045.0600, 7045.0608, 7045.0628, and 7045.0629, pursuant to the authority vested in the MPCA by Minn. § 116.07, subd. 4 (1986).
>
> BE IT FURTHER RESOLVED, that prior to publishing the rules as adopted in the State Register, the Commissioner is authorized to make any form changes in the rules that the Revisor of Statutes requires the MPCA to make in order to obtain the Revisor's Certification as required by Minn. Stat. § 14.07, subd. 2, (1986).
>
> BE IT FURTHER RESOLVED, that the MPCA adopts the Findings of Fact, Conclusions, and Order Adopting Rule Amendments and that the Commissioner is hereby authorized to sign the above-mentioned document on behalf of the MPCA and to perform the necessary acts to provide that the rule amendments shall have the force and effect of law.

IN WITNESS WHEREOF, I have hereunto subscribed my name this 23rd. day of Feb, 1988.

Gerald L. Willet

GERALD L. WILLET
Commissioner

STATE OF MINNESOTA
POLLUTION CONTROL AGENCY

In the Matter of the Proposed
Amendments of Rules Governing the
Management, Storage, Treatment,
and Disposal of Hazardous Waste,
Minn. Rules Pts. 7001.0560,
7001.0580, 7001.0650, 7045.0020,
7045.0075, 7045.0120, 7045.0219,
7045.0292, 7045.0452, 7045.0487,
7045.0490, 7045.0498, 7045.0528,
7045.0556, 7045.0564, 7045.0584,
7045.0600, 7045.0608, 7045.0628,
and 7045.0629

FINDINGS OF FACT,
CONCLUSIONS, AND
ORDER ADOPTING RULES

The above-entitled matter came on for decision before the Minnesota Pollution Control Agency (MPCA) on the twenty-third day of February 1988. After affording all interested persons the opportunity to present written and oral data, statements and arguments to the MPCA, in accordance with statutory requirements regarding the adoption of noncontroversial rules, after considering the Statement of Need and Reasonableness, after considering all of the evidence adduced upon the records, files and proceedings herein, the MPCA, being fully advised in the premises, hereby adopts the following Findings of Fact, Conclusions, and Order:

FINDINGS OF FACT

1. Notice of the MPCA's intent to adopt the above-entitled rule amendments without a public hearing was published in the State Register on November 16, 1987, and was sent by mail to all persons on the list maintained by the MPCA pursuant to Minn. Stat. §§ 14.14, subd. 1a. and 14.22 (1986) on November 12, 1987.

2. The Statement of Need and Reasonableness was prepared prior to mailing and publication of the notice and was made available to the public.

3. All persons were given the opportunity to submit comments on the proposed rule amendments for 30 days after notice of proposed rulemaking. The 30 day comment period, as set out in the notice, expired on December 16, 1987.

4. No requests for public hearing were received during the comment period.

5. No requests for notice of submission to the Attorney General were received by the MPCA.

6. During the comment period, the MPCA received two sets of written comments: one in the form of an MPCA staff memorandum to the file, dated December 16, 1987, and one in a transmittal from the U.S. Environmental Protection Agency (EPA) - Region V, dated December 16, 1987.

The MPCA desires to adopt some of the rule revisions suggested in the comments but intends to initiate a separate rulemaking proceeding to adopt these revisions because the revisions may constitute "substantial change" within the meaning of Minn. Rules pt. 2010.1000 (1987), Attorney General Rules relating to review of rules.

7. The MPCA adopts the Statement of Need and Reasonableness, in its entirety, as the factual basis for the proposed amendments to the rules. The MPCA hereby incorporates the Statement of Need and Reasonableness into these findings.

8. The above-captioned rule amendments are needed and reasonable.

CONCLUSIONS

1. The MPCA duly acquired and has jurisdiction over this proceeding.

2. The MPCA published and served due, timely, and adequate notice of the intent to adopt amendments to the rules without a public hearing.

3. All relevant legal and procedural requirements of statute and rule have been complied with.

ORDER

NOW, THEREFORE, IT IS ORDERED, that the attached amendments to Minn. Rules pts. 7001.0560, 7001.0580, 7001.0650, 7045.0020, 7045.0075, 7045.0120, 7045.0219, 7045.0292, 7045.0452, 7045.0487, 7045.0490, 7045.0498, 7045.0528, 7045.0556, 7045.0564, 7045.0584, 7045.0600, 7045.0608, 7045.0628, and 7045.0629, governing the management, treatment and storage of hazardous wastes in tanks, are adopted pursuant to the authority vested in the MPCA by Minn. Stat. § 116.07, subd. 4 (1986).

Dated: February 23, 1988

Gerald L. Willet

Gerald L. Willet
Commissioner

STATE OF MINNESOTA
POLLUTION CONTROL AGENCY

In the Matter of the Proposed Amendments of Rules Governing the Management, Storage, Treatment, and Disposal of Hazardous Waste, Minn. Rules Pts. 7001.0560, 7001.0580, 7001.0650, 7045.0020, 7045.0075, 7045.0120, 7045.0219, 7045.0292, 7045.0452, 7045.0487, 7045.0490, 7045.0498, 7045.0528, 7045.0556, 7045.0564, 7045.0584, 7045.0600, 7045.0608, 7045.0628, and 7045.0629

FINDINGS OF FACT, CONCLUSIONS, AND ORDER ADOPTING RULES

The above-entitled matter came on for decision before the Minnesota Pollution Control Agency (MPCA) on the twenty-third day of February 1988. After affording all interested persons the opportunity to present written and oral data, statements and arguments to the MPCA, in accordance with statutory requirements regarding the adoption of noncontroversial rules, after considering the Statement of Need and Reasonableness, after considering all of the evidence adduced upon the records, files and proceedings herein, the MPCA, being fully advised in the premises, hereby adopts the following Findings of Fact, Conclusions, and Order:

FINDINGS OF FACT

1. Notice of the MPCA's intent to adopt the above-entitled rule amendments without a public hearing was published in the State Register on November 16, 1987, and was sent by mail to all persons on the list maintained by the MPCA pursuant to Minn. Stat. §§ 14.14, subd. 1a. and 14.22 (1986) on November 12, 1987.

2. The Statement of Need and Reasonableness was prepared prior to mailing and publication of the notice and was made available to the public.

3. All persons were given the opportunity to submit comments on the proposed rule amendments for 30 days after notice of proposed rulemaking. The 30 day comment period, as set out in the notice, expired on December 16, 1987.

4. No requests for public hearing were received during the comment period.

5. No requests for notice of submission to the Attorney General were received by the MPCA.

6. During the comment period, the MPCA received two sets of written comments: one in the form of an MPCA staff memorandum to the file, dated December 16, 1987, and one in a transmittal from the U.S. Environmental Protection Agency (EPA) - Region V, dated December 16, 1987.

The MPCA desires to adopt some of the rule revisions suggested in the comments but intends to initiate a separate rulemaking proceeding to adopt these revisions because the revisions may constitute "substantial change" within the meaning of Minn. Rules pt. 2010.1000 (1987), Attorney General Rules relating to review of rules.

7. The MPCA adopts the Statement of Need and Reasonableness, in its entirety, as the factual basis for the proposed amendments to the rules. The MPCA hereby incorporates the Statement of Need and Reasonableness into these findings.

8. The above-captioned rule amendments are needed and reasonable.

CONCLUSIONS

1. The MPCA duly acquired and has jurisdiction over this proceeding.

2. The MPCA published and served due, timely, and adequate notice of the intent to adopt amendments to the rules without a public hearing.

3. All relevant legal and procedural requirements of statute and rule have been complied with.

ORDER

NOW, THEREFORE, IT IS ORDERED, that the attached amendments to Minn. Rules pts. 7001.0560, 7001.0580, 7001.0650, 7045.0020, 7045.0075, 7045.0120, 7045.0219, 7045.0292, 7045.0452, 7045.0487, 7045.0490, 7045.0498, 7045.0528, 7045.0556, 7045.0564, 7045.0584, 7045.0600, 7045.0608, 7045.0628, and 7045.0629, governing the management, treatment and storage of hazardous wastes in tanks, are adopted pursuant to the authority vested in the MPCA by Minn. Stat. § 116.07, subd. 4 (1986).

Dated: February 23, 1988

Gerald L. Willet

Gerald L. Willet
Commissioner

STATE OF MINNESOTA
POLLUTION CONTROL AGENCY

In the Matter of the Proposed Rules
Governing the Management, Storage, Treatment and Disposal of
Hazardous Waste, Minn. Rules Parts 7001.0560, 7001.0580,
7001.0650, 7045.0020, 7045.0075, 7045.0120, 7045.0219, 7045.0292,
7045.0452, 7045.0478, 7045.0490, 7045.0498, 7045.0528, 7045.0556,
7045.0564, 7045.0584, 7045.0600, 7045.0608, 7045.0628 and
7045.0629.

DECLARATION OF COUNSEL

I, Joseph G. Maternowski, Special Assistant Attorney General, do hereby declare that I have examined the above-captioned rules and the supporting rulemaking record, and that, based on my examination, the Administrative Procedure Act and Minnesota Rules ch. 2010 have been followed. For Attorney General billing purposes, the four-digit docket client code is .0697.

Joseph G. Maternowski
Special Assistant
Attorney General

HUBERT H. HUMPHREY, III
ATTORNEY GENERAL

STATE OF MINNESOTA
OFFICE OF THE ATTORNEY GENERAL
ST. PAUL 55155

ADDRESS REPLY TO:
SUITE 200
520 LAFAYETTE ROAD
ST. PAUL, MN 55155
TELEPHONE: (612) 297-1075

February 26, 1988

RECEIVED
FEB 26 1988
ATTORNEY GENERAL'S OFFICE
515 TRANSPORTATION BLDG.
ST. PAUL, MN 55155

Ms. Christie Eller
Assistant Attorney General
Office of the Attorney General
515 Transportation Building
St. Paul, MN 55155

Re: In the Matter of Proposed Rules Governing the Management, Storage, Treatment and Disposal of Hazardous Waste, Minn. Rules Parts 7001.0560, 7001.0580, 7001,0650, 7045.0020, 7045.0075, 7045.0120, 7045.0219, 7045.0292, 7045.0452, 7045.0478, 7045.0490, 7045.0498, 7045.0528, 7045.0556, 7045.0564, 7045.0584, 7045.0600, 7045.0608, 7045.0628 and 7045.0629.

Dear Ms. Eller:

On February 23, 1988, the Minnesota Pollution Control Agency adopted the above-captioned rules governing the management, storage, treatment and disposal of hazardous waste in tanks. Enclosed for your review are the following:

1. Rules as adopted (original and three copies).

2. Findings of Fact, Conclusions, and Order Adopting Rules (two copies).

3. Certificate of Resolution Adopting Rules.

4. Notice of Intent to Solicit Outside Opinion (11 S.R. 1117, December 22, 1986. 1988).

5. Certificate of Authorizing Resolution.

6. Notice of Intent to Adopt Rules Without a Public Hearing and Rules as proposed (12 S.R. 1038, November 16, 1987).

7. Comments received during comment period.

8. Notice of Intent to Adopt Rules Without a Public Hearing, as mailed.

9. Affidavit of Mailing the Notice of Intent to Adopt Rule Without a Public Hearing and Certificate of Mailing List.

10. Rules as proposed.

11. Statement of Need and Reasonableness.

12. Declaration of Counsel.

No comments were received pursuant to the Notice of Intent to Solicit Outside Opinion and there were no requests for Notice of Submission or Rule Adopted without Public Hearing to the Attorney General. The U.S. Environmental Protection Agency (EPA) submitted telefaxed comments during the comment period. EPA mailed these same comments to the MPCA, but they arrived after the comment period. Both sets of comments have been included in this submission.

Very truly yours,

Joseph G. Maternowski
Special Assistant
Attorney General

Environmental Protection
Division

JGM:jl

Enc.

Office of the Revisor of Statutes
Administrative Rules

David S. Niss
Assistant Revisor
297-2948

700 State Office Building
100 Constitution Avenue
St. Paul, MN 55155-1297

November 17, 1987

RECEIVED
NOV 18 1987
MPCA, SOLID & HAZ.
WASTE DIVISION

Carol Nankivel
Pollution Control Agency
520 Lafayette Road
Saint Paul, Minnesota 55155

RE: AR1174 Hazardous Waste; Tanks

Dear Ms. Nankivel:

Enclosed is a stripped copy of your proposed rules as published in the State Register. The copy shows the text of the rules as you proposed them with the stricken text deleted and the underscoring removed.

If your proposed emergency rules or proposed rules adopted without public hearing are adopted without modification, please submit the required number of copies of this document to the Attorney General for final approval. If these rules are to be modified, please use this copy to indicate the modifications you wish to make. Our office will then input the changes, approve the document as to form, and provide you with copies to submit to the Attorney General.

If your proposed rules are adopted after public hearing without modification, please submit one copy of this document to our office for final approval as to form. If these rules are to be modified, please use this copy to indicate the modifications you wish to make. Our office will input the changes, approve the document as to form, and provide you with copies.

Very truly yours,

David S. Niss
mb

David S. Niss

DSN/mm
Encl.