Pollution Control Agency

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ADMINISTRATIVE
HEARINGS

Adopted Permanent Rules Relating to Aboveground Storage of Liquid Substances

7001.0020 SCOPE.

Except as otherwise specifically provided, parts 7001.0010 to 7001.0210 apply to the following:

[For text of items A to I, see M.R.]

J. An agency permit required for the construction or operation of a ~~liquid~~ substance storage facility which:

(1) is a major facility as defined in part ~~7001.4010~~ 7001.4205;

(2) stores:

(a) a substance as defined in part ~~7001.4010~~ 7001.4205;

(b) asphalt; or

(c) fuel oil number 6; and

(3) is not an excluded aboveground storage tank system under part 7151.1300, subpart 2.

Part 7001.0080 applies to the permits in this item except that the time period referenced in part 7001.0080 shall be five years instead of three years.

MAJOR FACILITY ~~LIQUID~~ SUBSTANCE STORAGE PERMITS

7001.4200 SCOPE.

Parts 7001.0010 to 7001.0210 and 7001.4200 to 7001.4250 govern the application procedures, issuance, and conditions of major facility ~~liquid~~ substance storage permits. Chapter 7000 shall be construed to supplement parts 7001.0010 to 7001.0210 and 7001.4200 to 7001.4250.

7001.4201 PURPOSE.

The purpose of parts 7001.4200 to 7001.4250 is to establish a major facility permit for aboveground storage of substances that reasonably ensures proper retention of those substances and detection of entry into any waters of the state in a manner that would be likely to pollute any waters of the state.

Safeguards established in the permit shall reflect:

A. the nature, toxicity, viscosity, and quantity of the substance being stored;

B. the potential for a storage tank system to fail;

C. the potential for the failure of a storage tank system to have an adverse impact on the waters of the state;

D. the hydrogeologic setting of the facility, including the thickness of and permeability of soils present between the tank system and groundwater;

E. factors that influence the quality and mobility of the stored substance and the potential for it to migrate to surface water or groundwater; and

F. any other factors necessary to prevent, control, or abate water pollution.

7001.4205 DEFINITIONS.

Subpart 1. **Scope.** The definitions in parts 7001.0010 and 7151.1200 apply to the terms used in parts 7001.4200 to 7001.4250 unless the terms are defined in this part.

Subp. 2. **Major facility.** "Major facility" means an assemblage of one or more aboveground storage tanks, including any indoor tanks, together with any associated secondary containment areas, appurtenances, and substance transfer areas, that are located ~~in a single area and used in part of a single business operation~~ at a single property or multiple contiguous properties and where the total ~~liquid~~ substance design storage capacity of all such tanks at the site is 1,000,000 gallons or greater.

Subp. 3. **Major facility permit.** "Major facility permit" means a permit issued by the agency to a major facility pursuant to this chapter. Any tank meeting the definition of

indoor tank is excluded from regulation under the terms and conditions of a major facility permit.

Subp. 4. **Substance.** "Substance" means any liquid material which is not gaseous or solid at ~~standard atmospheric~~ ambient temperature and pressure that ~~is capable of polluting the~~ would be likely to pollute any waters of the state.

7001.4210 INCORPORATIONS BY REFERENCE.

Subpart 1. **Scope.** For purposes of this chapter, the documents in subpart 2 are incorporated by reference. The documents are not subject to frequent change. They are available at:

A. the address shown in subpart 2; and

B. the agency library through the Minitex interlibrary loan system.

Subp. 2. **Referenced Standards.** The documents incorporated by reference in this chapter are as follows: American Petroleum Institute (API), 1220 L Street Northwest, Washington, DC 20005:

A. 650, Welded Steel Tanks for Oil Storage, Ninth Edition (1993);

B. 651, Cathodic Protection of Aboveground Petroleum Storage Tanks, First Edition (1991);

C. 652, Lining of Aboveground Petroleum Storage Tank Bottoms, First Edition (1991); and

D. 653, Tank Inspection, Repair, Alteration, and Reconstruction, Second Edition (1995).

7001.4215 PERMIT APPLICATION AND PUBLIC COMMENT.

Subpart 1. **Public notice and comment.** If the permit applicant requests or the agency determines that issuance, reissuance, or modification of a permit ~~involve~~ involves issues that generate or are likely to generate significant material adverse comment from the

public, based on previous adverse public comment on the proposed permit or related issues, the procedures in items A to C, prior to issuance, reissuance, or modification of the permit, apply.

A. The agency shall give notice:

(1) by posting the notice in the post office, public library, or other buildings used by the general public in the designated geographical area;

(2) by posting the notice at or near the entrance of the applicant's premises, if located near the facility or activity that is the subject of the permit application;

(3) by publishing the notice in one or more newspapers or periodicals of general circulation in the designated geographical area; or

(4) by publishing the notice in a manner constituting legal notice to the public.

B. The notice must identify:

(1) the name and location of the facility to be permitted;

(2) the name and address of the permittee;

(3) the name and address of the agency;

(4) the activity or activities proposed to be permitted;

(5) the name, address, and telephone number of a person from whom interested persons may obtain additional information, including copies of the permit draft, the application, all relevant supporting materials, and all other materials available to the agency that are relevant to the permit decision;

(6) a brief description of the comment procedures required by this part; and

(7) the time and place of any meeting or hearing that may be held, including a statement of procedures to request a meeting or hearing under item C, unless a meeting or hearing has already been scheduled.

C. The agency shall provide at least 30 days for public comment and shall give notice of any public informational meeting or contested case hearing at least 30 days in advance of the meeting or hearing. The provisions of part 7001.0110 apply to public comments received under this part.

7001.4220 PERMIT APPLICATION.

If the applicant is requesting the issuance, modification, revocation and reissuance, or reissuance of a major facility ~~liquid~~ substance storage permit, the applicant shall submit the following information to the commissioner:

A. the information required by part 7001.0050;

B. for each outdoor tank system:

(1) tank number;

(2) substance stored;

(3) design capacity in gallons;

(4) year of tank's installation;

(5) status of tank as active or out of service under part 7151.8200;

(6) tank construction material;

(7) method of tank fabrication ~~for~~ (field-erected ~~and~~ or shop-fabricated ~~tanks~~);

(8) tank wall construction;

(9) tank floor construction;

(10) ~~liquid~~ substance level gauging mechanism;

(11) overfill protection system on tank;

(12) corrosion protection system for the underside of each tank floor;

(13) leak detection system;

(14) aboveground and underground piping location, fabrication, and preventative safeguards;

(15) date of the most recent out-of-service inspection and the method used to evaluate the tank;

(16) the scheduled or estimated date of the next out-of-service inspection; and

(17) secondary containment area information including~~;~~:

(a) containment area number;

(b) tank number of each tank within the ~~tank~~ containment area;

(c) volume in gallons of the secondary containment area;

(d) construction materials including the dike walls and basin area; and

(e) the permeability factor of the materials used to construct the containment area:

C. for each indoor tank:

(1) tank number;

(2) substance stored;

(3) design capacity in gallons; and

(4) indoor containment method;

D. site geology information:

(1) average or estimated depth to groundwater;

(2) native soil classification, between surface and groundwater;

(3) the calculated or estimated vertical permeability of native soil, not including any containment liner;

(4) average or estimated depth to bedrock;

(5) bedrock type and formation name; and

(6) existing tank or pipe-related site contamination or any investigation indicating no contamination; and

E. any additional information ~~the commissioner determines~~ necessary to process the major facility permit application.

7001.4230 RETENTION OF TANK AND SUBSTANCE TRANSMISSION LINE RECORDS.

If a ~~liquid~~ substance storage facility is required to obtain a major facility permit under this chapter, the permittee shall retain, if explicitly required by the terms and conditions of the permit, the following data on file at the facility for the retention times specified:

A. for each field-erected tank:

(1) external inspection results, for five years;

(2) internal inspection final reports, for the life of the tank;

(3) specifications for the tank floor coating, for the life of the coating;

(4) design specifications, including anode and rectifier placement, for the cathodic protection system, for the life of the system;

(5) record of results of all bimonthly rectifier reading results and annual cathodic protection surveys, for three years;

(6) specifications for the tank gauging system, for the life of the system;

(7) daily gauge readings, for three years;

(8) specifications for the overfill protection system, for the life of the system;

(9) record of results of annual testing or calibration of the gauging and overfill protection systems, for one year;

(10) records of leak testing, including date, method, operator, and results, for three years; and

(11) records of any major tank modifications or repairs, for the life of the tank;

B. for each underground substance transmission line:

(1) information addressing the line segment, including age, material, diameter, location shown on a scaled map, type of service, pressure rating, and any special conditions of service, for the life of the line;

(2) specifications for any leak safeguards, such as pipe coating or wrapping, cathodic protection, double walled, or leak detection system, for the life of the safeguard; and

(3) record of results of inspections and leak tests, including date, method, operator, and results, for three years; and

C. ~~facility-wide~~ for each secondary containment area: records of daily visual inspections, for one year.

Unless otherwise addressed in the terms and conditions of the permit, the major facility permittee shall retain all data specified in this part. The permittee shall, upon agency request, make the data available to the agency for viewing and copying.

7001.4240 REDUCTION OR INCREASE OF ~~LIQUID~~ SUBSTANCE STORAGE CAPACITY.

Subpart 1. **Major facilities which reduce ~~liquid~~ substance storage capacity.** Any major facility operating pursuant to a major facility permit under this part, which reduces ~~liquid~~ substance storage capacity so as to no longer meet the definition of a major facility under part 7001.4205, subpart 2, shall continue to comply with all terms and conditions of the major facility permit until the expiration of the permit.

Subp. 2. **Facilities which increase ~~liquid~~ substance storage capacity.** Any ~~liquid~~ substance storage facility which does not meet the definition of a major facility under part 7001.4205, subpart 2, on the effective date of this part, which proposes to increase ~~liquid~~ substance storage capacity so as to meet the definition of a major facility, shall apply for and obtain a major facility permit under this part prior to increasing storage of ~~liquid~~ substances at the facility.

7001.4250 NOTIFICATION REQUIREMENTS FOR FIELD-ERECTED TANKS.

The notification required for field-erected tanks is as described in items A to C.

A. Except as provided in item B, the permittee shall notify the commissioner, in writing, at least ~~30~~ 60 days prior to implementation of any of the following:

(1) construction or installation of any of the following:

(a) a new field-erected aboveground storage tank;

(b) a new underground substance transmission line appurtenant to an aboveground storage tank;

(c) a new floor in an existing field-erected aboveground storage tank;

(d) a secondary containment system for a field-erected aboveground storage tank;

(e) a cathodic protection system for a field-erected aboveground storage tank or for an underground line;

(f) an internal coating for a field-erected aboveground storage tank; or

(g) a release detection system for a field-erected aboveground storage tank.

(2) relocation of a field-erected aboveground storage tank;

(3) return to service of a closed field-erected aboveground storage tank;

(4) deviations from American Petroleum Institute standards 650, 651, 652, and 653, if applicable;

(5) change of substance stored in tank; or

(6) deviation from schedules contained in the permit.

B. The permittee need not notify the commissioner of any construction or installation of a type listed in item A which is specifically required by the permit or excluded by the terms and conditions of the permit.

C. The permittee shall obtain the commissioner's written approval prior to placing any new field-erected tank or underground transmission line into service, returning to service any field-erected tank closed at the time of issuance of the permit, or deviating from schedules contained in the permit. The commissioner shall respond, in writing, within 30 days of receipt of the permittee's written request.

7001.4300 VARIANCES.

Any person who applies for a variance from any requirement of parts 7001.4200 to 7001.4250 shall comply with part 7000.7000. An application for a variance must be acted on by the agency pursuant to part 7000.7000 and Minnesota Statutes, section 116.07, subdivision 5. However, no variance may be granted that would result in noncompliance with applicable federal rules and regulations for aboveground storage tanks.

GENERAL

7151.1100 PURPOSE.

The purpose of this chapter is to provide for the protection of the public health and the environment by establishing uniform performance standards and technical requirements for aboveground storage of liquid substances which may cause pollution of the waters of the state.

7151.1200 DEFINITIONS.

Subpart 1. **Scope.** For the purposes of this chapter, the following terms have the meanings given them. Terms that are not specifically defined have the meanings given them in Minnesota Statutes, section 115.01, 115C.02, or 116.46.

Subp. 2. **Aboveground storage tank system or tank system.** "Aboveground storage tank system" or "tank system" means any one or a combination of containers, vessels, and enclosures, including structures and appurtenances connected to them, that is used to contain or dispense substances, and that is not an underground storage tank under Minnesota Statutes, section 116.46, subdivision 8.

Subp. 3. **Agency.** "Agency" means the Minnesota Pollution Control Agency.

Subp. 4. **Appurtenances.** "Appurtenances" means any aboveground or underground lines connected to an aboveground storage tank that are two inches or greater inside diameter, together with any associated valves and manifolds, to the point where the piping is located indoors.

Subp. 5. **Capacity.** "Capacity" means the maximum volume of ~~liquid~~ a substance in gallons that may be contained by an aboveground storage tank pursuant to the tank's design.

Subp. 6. **Cathodic protection.** "Cathodic protection" means the technique to prevent corrosion of a metal surface by making that surface the cathode of an electrochemical cell through the application of either galvanic anodes or impressed current.

Subp. 7. **Cathodic protection tester.** "Cathodic protection tester" means a person who demonstrates an understanding of the principles and measurements of cathodic protection systems as applied to metal piping and tanks. At a minimum, such persons shall have education and experience in soil resistivity, stray current, structure-to-soil potential, and component electrical isolation measurements of metal piping and tanks.

Subp. 8. **Class 2 surface water.** "Class 2 surface water," as defined in part 7050.0200, means all waters of the state that are or may be used for fishing, fish culture, bathing, or any other recreational purpose, and for which quality control is or may be necessary to protect aquatic or terrestrial life, or the public health, safety, or welfare.

Subp. 9. **Compatible.** "Compatible" means the ability of two or more substances or materials in a tank system to maintain their respective physical and chemical properties upon contact with one another.

Subp. 10. **Corrosion expert.** "Corrosion expert" means a person who, by reason of thorough 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 application of corrosion control on metal piping systems and metal tanks. The person shall be accredited, certified by the National Association of Corrosion Engineers, or a registered professional engineer who has certification or licensing that includes education and experience in corrosion control of metal piping systems and metal tanks.

Subp. 11. **Dike.** "Dike" means an embankment, ridge, or wall ~~capable of preventing the movement of stored substances out of a secondary containment area following a release from a tank~~ which is impermeable to stored substances and which forms the perimeter of the secondary containment area.

Subp. 12. **Discharge into a secondary containment area.** "Discharge into a secondary containment area" means a spill, leak, or discharge of a substance from a tank or its appurtenances into a structure specifically designed and constructed to prevent a spill, leak, or discharge from spreading vertically or horizontally and contaminating the land or water outside the containment area.

Subp. ~~12.~~ 13. **Double-walled tank.** "Double-walled tank" means an aboveground storage tank designed and built with an outer and inner shell and an interstitial space between the shells that allows for monitoring.

Subp. ~~13.~~ 14. **Electrical equipment.** "Electrical equipment" means equipment such as transformers which contain dielectric fluid necessary for operation.

Subp. ~~14.~~ 15. **Farm.** "Farm" means a tract of land devoted to the production of crops or raising of animals.

Subp. ~~15.~~ 16. **Field-erected tank.** "Field-erected tank" means an aboveground storage tank that is constructed by final assembly on site at a facility.

Subp. ~~16.~~ 17. **Hazardous material.** "Hazardous material" means any substance listed as a hazardous material or hazardous substance in Code of Federal Regulations, title 49, section 172.101.

Subp. ~~17.~~ 18. **Heating and cooling equipment.** "Heating and cooling equipment" means equipment intended or installed for the purpose of heating, cooling, and/or conditioning air, water, and/or fluid by mechanical means for environmental, process, or other purposes.

Subp. ~~18.~~ 19. **Hydraulic lift tank.** "Hydraulic lift tank" means an aboveground storage tank holding hydraulic fluid for a closed-loop mechanical system that uses compressed air or hydraulic fluid to operate lifts, elevators, and other similar devices.

Subp. ~~19.~~ 20. **Impermeable.** "Impermeable" means the ability to prevent a substance or combination of compatible substances from penetrating through a secondary containment area for a minimum of 72 hours.

Subp. ~~20.~~ 21. **Indoor tank.** "Indoor tank" means an aboveground storage tank located inside a building or other type of enclosed structure, resting on or elevated above an impermeable floor surface, from which a release would:

A. be entirely contained within a secondary containment structure;

B. not escape from the building through any doorways, floor drains, or other means; or

C. be directed by any drainage system of the building either to a permitted on-site wastewater treatment facility or to a permitted municipal wastewater treatment facility.

Subp. ~~21.~~ 22. **Major facility.** "Major facility" means an assemblage of one or more aboveground storage tanks, including any indoor tanks, together with any associated secondary containment areas, appurtenances, and substance transfer areas, that are located ~~in a single area and used in part of a single business operation~~ at a single property or multiple contiguous properties and where the total ~~liquid~~ substance design storage capacity of all such tanks at the site is 1,000,000 gallons or greater.

Subp. ~~22.~~ 23. **Major facility permit.** "Major facility permit" means a permit issued by the agency to a major facility under part 7001.4200. Any tank meeting the definition of

indoor tank is excluded from regulation under the terms and conditions of a major facility permit.

Subp. ~~23.~~ 24. **Operator.** "Operator" means a person in control of or having responsibility for the daily operation of an aboveground storage tank or tank system, or a person who was in control of or had responsibility for the daily operation of a tank or tank system immediately before discontinuation of its use.

Operator also means a person who is responsible under Minnesota Statutes, section 115C.021, for a release from an aboveground storage tank containing petroleum or a person who is responsible under Minnesota Statutes, section 115B.03, for a release from an aboveground storage tank containing a hazardous material.

Subp. ~~24.~~ 25. **Other regulated substances.** "Other regulated substances" means any substance, including a food-based product intended for human or animal consumption, which is capable of polluting the waters of the state and is not:

A. a petroleum substance under standard temperature and pressure; or

B. a hazardous material.

Subp. ~~25.~~ 26. **Owner.** "Owner" means a person who holds title to, controls, or owns an interest in an aboveground storage tank or tank system, or a person who held title to, controlled, or possessed an interest in the tank or tank system immediately before discontinuation of its use.

Owner also means a person who is responsible under Minnesota Statutes, section 115C.021, for a release from an aboveground storage tank containing petroleum or a person who is responsible under Minnesota Statutes, section 115B.03, for a release from an aboveground storage tank containing a hazardous material.

Owner does not include a person who holds an interest in a tank solely for financial security, unless through foreclosure or other related actions the holder of a security interest has taken possession of and operated the tank.

Subp. ~~26.~~ 27. **Person.** "Person" means an individual, partnership, association, corporation, or other legal entity, including the United States government, an interstate commission or other body, the state, or any agency, board, bureau, office, department, or political subdivision of the state, but does not include the Minnesota Pollution Control Agency.

Subp. ~~27.~~ 28. **Piping or lines.** "Piping" or "lines" means a hollow cylinder or tubular conduit, that is two inches or greater inside diameter, that is constructed for conveying a substance from one point to another within an aboveground storage tank system.

Subp. ~~28.~~ 29. **Release.** "Release" means a spill, leak, or discharge of a substance from a tank or its appurtenances to the environment, including a spill, leak, or discharge into ~~a secondary containment area, into~~ the ground underneath a tank~~,~~ or into a substance transfer area. For purposes of this chapter, release does not include intentional venting or fugitive air emissions from a tank allowed under agency rules.

Subp. ~~29.~~ 30. **Safeguard.** "Safeguard" means a device, system, or combination of devices or systems designed to detect or prevent the escape or movement of a substance from the place of storage under such conditions that might cause pollution of the waters of the state.

Subp. ~~30.~~ 31. **Secondary containment.** "Secondary containment" means a safeguard specifically designed to ~~prevent~~ be impermeable to stored substances and which will contain a release from an aboveground storage tank or tank system and prevent the release from spreading vertically or horizontally and contaminating the land or water outside the containment area.

Subp. ~~31.~~ 32. **Shop-fabricated tank.** "Shop-fabricated tank" means an aboveground storage tank that is constructed at a tank manufacturer's plant and transported to a facility for installation.

Subp. ~~32.~~ 33. **Substance.** "Substance" means any material which is liquid at ambient

pressures and temperatures ~~and which is capable of polluting~~ that would be likely to pollute any waters of the state.

Subp. ~~33.~~ 34. **Substance transfer area.** "Substance transfer area" means the area where a truck or rail car makes its connection to or from an aboveground storage tank system for the purpose of unloading or receiving a substance.

Subp. ~~34.~~ 35. **Tank or aboveground storage tank.** "Tank" or "aboveground storage tank" means a container, vessel, or enclosure designed to contain substances and is constructed of materials such as concrete, steel, plastic, or fiberglass reinforced plastic, provides structural support, and is located aboveground. A tank includes bladders, rail cars, and trucks.

~~Subp. 35. **Tank service project.** "Tank service project" means the installation, erection, repair, withdrawal from service, or removal of an aboveground storage tank. Each tank service project addresses discrete tank work and is separated in time and space from another tank service project.~~

Subp. 36. **Tote tank.** "Tote tank" means an aboveground storage tank that:

A. is not filled or refilled at the site of substance use;

B. is 1,100 gallons or less in capacity; and

C. is located at the site of use for less than 180 days.

Subp. 37. **Type A substances.** "Type A substances" means gasoline, aviation gas, naphtha, denatured ethanol, and hazardous materials, or mixtures or blends containing such substances.

Subp. 38. **Type B substances.** "Type B substances" means crude oil, diesel, kerosene, jet fuel, fuel oil numbers 1 to 4, waste oils, or mixtures or blends of such substances with Type C substances.

Subp. 39. **Type C substances.** "Type C substances" means asphalt cement, roofing flux, fuel oil numbers 5 and 6, and other regulated substances.

Subp. 40. **Underground storage tank.** "Underground storage tank" means any one or combination of containers including tanks, vessels, enclosures, or structures and appurtenances connected to them that is used to contain or dispense regulated substances pursuant to chapter 7150, and the volume of which, including the volume of piping connected to them, is ten percent or more beneath the surface of the ground.

Subp. 41. **Underground piping or underground lines.** "Underground piping" or "underground lines" means a hollow cylinder or tubular conduit, that is two inches or greater inside diameter, that is constructed for conveying a substance from one point to another within an aboveground storage tank system. The volume of piping must be ten percent or more beneath the surface of the ground.

7151.1300 APPLICABILITY.

Subpart 1. **Scope.** ~~Except as otherwise provided in subpart 2, this chapter applies to any owner or operator of an aboveground storage tank system which is not required to obtain a permit under chapter 7001. Any major facility must obtain a major facility liquid substance storage permit under part 7001.4200.~~ This chapter applies to owners or operators of aboveground storage tank systems except for:

A. major facilities required to obtain a permit under chapter 7001; and

B. aboveground storage tank systems exempt under subpart 2.

Subp. 2. **Exclusions.** The following aboveground storage tank systems are excluded from the requirements of this chapter:

A. wastewater treatment equipment including a wastewater clarifier ~~or other type of~~, wastewater treatment basin ~~located at a permitted municipal or industrial wastewater treatment facility~~, and tanks which are regulated under the National Pollutant Discharge Elimination System, the Sewage Disposal System, or other pretreatment permits;

B. equipment or machinery containing substances for operational purposes such as integral hydraulic lift tanks, lubricating oil reservoirs for pumps and motors, electrical equipment, and heating and cooling equipment;

C. an indoor tank;

D. a tote tank;

E. an aboveground storage tank containing hazardous wastes which are subject to a treatment or storage permit issued pursuant to chapter 7001;

F. an aboveground storage tank containing agricultural chemicals regulated under Minnesota Statutes, chapter 18B, 18C, or 18D;

G. a vehicle, such as a tank truck or railroad tank car, designed and used to transport substances from one location to another unless:

(1) the vehicle contains substances and remains in the same location more than 30 consecutive days; or

(2) the vehicle dispenses substances and is refilled while in the same location;

H. a surface impoundment, pit, pond, or lagoon;

I. an aboveground storage tank constructed of stainless steel containing other regulated substances;

J. an aboveground storage tank containing drinking water, filtered surface water, demineralized water, noncontact cooling water, or water stored for fire or emergency purposes and other waters which meet the standards defined in chapter 7050 or 7052;

K. an aboveground storage storage tank located on a farm;

L. an aboveground storage tank located on residential property of 1,100 gallons or less capacity used for storing motor fuel for noncommercial purposes;

M. an aboveground storage tank of 1,100 gallons or less capacity used for storing heating oil for consumption on the premises where stored; ~~and~~

N. any aboveground storage tank of 1,100 gallons or less capacity, not otherwise exempt under items A to M, unless that tank is greater than 500 gallons capacity and is located within 500 feet of a Class 2 surface water~~.~~;

O. stormwater collection systems; and

P. septic tanks.

7151.2100 INCORPORATIONS BY REFERENCE.

Subpart 1. **Scope.** For purposes of this chapter, the documents in subpart 2 are incorporated by reference. The documents are not subject to frequent change. They are available at:

A. the addresses shown in subpart 2; and

B. the agency library through the Minitex interlibrary loan system.

Subp. 2. **Referenced standards.** The documents incorporated by reference in this chapter are listed in this subpart.

~~A. American National Standards Institute (ANSI), 1430 Broadway, New York, New York 10018:~~

~~(1) B31.3, Process Piping (1996);~~

~~(2) B31.4, Liquid Transportation Systems for Hydrocarbons, Liquid Petroleum Gas, Anhydrous Ammonia, and Alcohols (1992);~~

~~(3) B16, Standards for Valves; and~~

~~(4) B36, Pipe Material Standards.~~

~~B.~~ A. American Petroleum Institute (API), 1220 L Street Northwest, Washington, DC 20005:

(1) 570, Piping Inspection Code: Inspection, Repair, Alteration, and Rerating of In-Service Piping Systems (1997);

~~(1)~~ (2) 620, Design and Construction of Large, Welded, Low-Pressure Storage Tanks, Ninth Edition (1996);

~~(2)~~ (3) 650, Welded Steel Tanks for Oil Storage, Ninth Edition (1993);

~~(3)~~ (4) 651, Cathodic Protection of Aboveground Petroleum Storage Tanks, First Edition (1991);

~~(4)~~ (5) 652, Lining of Aboveground Petroleum Storage Tank Bottoms, First Edition (1991);

~~(5)~~ (6) 653, Tank Inspection, Repair, Alteration, and Reconstruction, Second Edition (1995);

~~(6)~~ (7) 1631, Recommended Practice for the Interior Lining of Existing Steel Underground Storage Tanks, Third Edition (1992);

~~(7)~~ (8) 1632, Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems, Third Edition (1996); and

~~(8)~~ (9) 2015, Safe Entry and Cleaning of Petroleum Storage Tanks, Planning and Managing Tank Entry from Decommissioning Through Recommissioning, Fifth Edition (1994).

~~C.~~ B. American Society for Testing and Materials (ASTM), 100 Barr Harbor Drive, West Conshohocken, Pennsylvania 19429-2959:

(1) D1785-96, Specifications for Poly (Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120 (1997); and

~~(2) ES40-94, Alternative Procedures for the Assessment of Buried Steel Tanks Prior to the Addition of Cathodic Protection (1997); and~~

~~(3)~~ (2) Applicable Standard Practices and Test Methods for Evaluating Soil Permeability Analysis and Sampling.

~~D.~~ C. Code of Federal Regulations, Government Printing Office, P.O. Box 371954, Pittsburgh, PA 15250-7954: title 49, part 172.101, Transportation (1997).

~~E.~~ D. National Association of Corrosion Engineers (NACE), Publication Department, P.O. Box 218340, Houston, Texas 77218:

(1) RP-01-69, Control of External Corrosion on Underground or Submerged Metallic Piping Systems (1996); and

(2) RP-02-85, Corrosion Control of Underground Storage Tank Systems by Cathodic Protection (1995).

~~F.~~ E. National Leak Prevention Association (NLPA), 7685 Fields Ertel Road, Cincinnati, OH 45241: ~~(1)~~ 631, Spill Prevention, Minimum 10-year Life Extension of Existing Steel Underground Storage Tanks by Lining Without the Addition of Cathodic Protection, Second ~~Addition (1988);~~ Edition and Appendices (1991).

~~(2) 632, Internal Inspection of Steel Tanks for Upgrading With Cathodic Protection Without Internal Lining (1989).~~

~~G.~~ F. Steel Tank Institute, 570 Oakwood Road, Lake Zurich, IL 60047:

(1) #F941-97, Standard for Fireguard® Thermally Insulated Aboveground Storage Tanks (1997);

(2) R942-97, Lightweight Double-Wall Steel Aboveground Storage Tanks (1997);

(3) #F921-97, Standard for Aboveground Tanks with Integral Secondary Containment (1997);

(4) #F911-93, Standard for Diked Aboveground Steel Tanks (1993);

(5) R931-93, Double Wall AST Installation and Testing Instructions (1993);

(6) R892-91, Recommended Practice for Corrosion Protection of Underground Piping Networks Associated with Liquid Storage and Dispensing Systems (1991); and

(7) R893-89, Recommended Practice for External Corrosion Protection of Shop Fabricated Aboveground Tank Floors (1989).

~~H.~~ G. Underwriters Laboratory, Inc. (UL), 333 Pfingsten Road, Northbrook, Illinois 60062:

(1) 109, Tube Fittings for Flammable and Combustible Fluids, Refrigeration Service and Marine Use (1993);

(2) 142, Steel Aboveground Tanks for Flammable and Combustible Liquids (1993);

(3) 567, Pipe Connectors for Petroleum Products and LP-Gas (1996);

(4) 971, Nonmetallic Underground Pipe for Flammable Liquids (1995); and

(5) 2085, ~~Insulated~~ Protected Aboveground Tanks for Flammable and Combustible Liquids (1994).

7151.3100 TANK SERVICE ~~PROJECTS~~ PROVIDERS.

~~Subpart 1. **Notification.** An owner or operator of an aboveground storage tank system shall notify the agency before beginning a tank service project.~~

~~Subp. 2. **Tank service providers.**~~ Owners and operators shall ensure that tank service providers utilize methods in accordance with guidance specified in applicable industry standards. After the effective date of ~~this part~~ aboveground storage tank contractor rules adopted pursuant to Minnesota Statutes, section 116.491, owners and operators shall ensure that tank service providers are certified.

7151.4100 TEMPORARY STORAGE.

Subpart 1. **Scope.** This part applies to storage of a substance in an aboveground storage tank at a site for a period of more than 30 days but less than one year. Temporary storage tanks regulated under this part are exempt from all other requirements except as provided in subpart 4.

Subp. 2. **Labeling.** The exterior of a temporary storage tank shall be clearly labeled with the words "Temporary Storage" and the date storage began at the site.

Subp. 3. **Sign.** Tank owners and operators shall provide for a sign at the site of temporary storage tanks pursuant to part 7151.5300, subpart 3.

Subp. 4. **Containment.** Parts 7151.6400 and 7151.7300 apply to the construction and maintenance of secondary containment areas.

STANDARDS FOR NEW ABOVEGROUND STORAGE TANKS

7151.5100 REQUIREMENT.

Subpart 1. **Application and definition.** Except as otherwise provided in subparts 2 and 3, parts 7151.5100 to 7151.5700 apply to the design and installation of all aboveground storage tanks or tank systems installed on or after the effective date of this chapter. ~~For the purposes of parts 7151.5100 to 7151.5700, a new tank or tank system is one installed on or after the effective date of this chapter.~~

Subp. 2. **Small tanks near surface water.** Owners and operators of new tanks ~~less than~~ 1,100 gallons or less but greater than 500 gallons, located within 500 feet of a Class 2 surface water, need not comply with ~~part~~ parts 7151.5500, 7151.5600, ~~or~~ and 7151.5700.

Subp. 3. **Tanks storing other regulated substances.** Owners and operators of new tanks storing other regulated substances need not comply with parts 7151.5400, subparts 4 and 5, 7151.5500, 7151.5600, and 7151.5700.

7151.5200 TANK AND PIPING STANDARDS.

Subpart 1. **Tank and piping design standards.** New tanks and the related appurtenances must be designed and constructed in accordance with the applicable standards under part 7151.2100, subpart 2.

Subp. 2. **Underground storage tanks.** Tanks designed and constructed for service as underground storage tanks must not be used for aboveground storage.

Subp. 3. **Used aboveground storage tanks.**

A. Except as provided in item C, an aboveground storage tank that has been removed from a site must not be reinstalled at a second site for the purpose of ~~liquid~~ substance storage unless:

(1) the tank is determined to be sound by one of the following leak test methods:

(a) tracer gas test;

(b) vacuum test;

(c) air pressure test; or

(d) hydrostatic test; and

(2) the area of secondary containment at the new location which is directly under the tank is designed and constructed to provide for the detection of a release of a stored substance before the release permeates through the containment. Methods of leak detection include:

(a) visual monitoring of elevated tanks as specified in part 7151.7200, subpart 4;

(b) interstitial monitoring between the tank's inner and outer shell or the tank's shell and the containment area; ~~and~~ or

(c) vapor monitoring in the soil directly under the tank bottom or perimeter and above the water table.

B. Except as provided in item C, a tank that has been lifted or moved within a site must not be reinstalled for the purpose of ~~liquid~~ substance storage unless:

(1) the tank is determined to be structurally sound through:

(a) thorough internal and external cleaning, degassing, and inspection; or

(b) a leak test is conducted pursuant to item A, subitem (1); and

(2) the area of secondary containment which is directly under a tank is designed and constructed to provide for the detection of a release of a stored substance ~~before the release permeates through the containment~~.

C. The following are exempt from the requirements of this subpart:

(1) portable tanks which are mounted on wheel carriages ~~or~~, which have legs cast into the construction, or which are mounted on forklift skids; and

(2) double-walled tanks.

7151.5300 LABELING.

Subpart 1. **Tanks.** Tanks must be clearly labeled indicating the substance stored and the tank's capacity. If there is more than one tank at a site, each tank must be labeled with a unique tank number.

Subp. 2. **Lines.** Lines used for loading and unloading a substance from a tank must be labeled so that the person controlling the substance transfer can readily identify which line is connected to which tank.

Subp. 3. **Sign.** A tank facility that does not have a person on site 24 hours a day must have a sign with the name, address, and telephone number of the facility owner, operator, or local emergency response. The sign must be posted in a conspicuous place and legible from outside any secondary containment area.

7151.5400 SECONDARY CONTAINMENT.

Subpart 1. **Requirement.** All tanks regulated by this chapter must have secondary containment. If tanks containing more than one type of substance are stored within one secondary containment area, the substances must be compatible with each other.

Subp. 2. **Volume.** A secondary containment area must be able to contain at least 100 percent of the design capacity of the largest tank in the secondary containment area plus displacement from additional tanks within the containment area, with an additional ten percent capacity where secondary containment areas are exposed to precipitation.

Subp. 3. **Materials.** A secondary containment area must be constructed with materials that are impermeable to and compatible with the substance being stored and that will prevent a release to the environment. Materials for secondary containment include:

A. compacted clay as defined in subpart 5;

B. geosynthetic clay liner;

C. ~~treated~~ concrete for Type B and Type C substances. Concrete for Type A substances must be treated with a material that is impermeable to the substance being stored;

D. synthetic membrane;

E. the outer shell of a double-walled tank;

F. the lower bottom of a double-bottomed tank; ~~or~~

G. fabricated steel;

H. fiberglass; or

~~G.~~ I. any other approved ~~materials pursuant to part 7151.9300~~ material having an impermeability equivalent to the stored substance's primary container, pursuant to the alternative design or operating practice procedure of part 7151.9400.

Owners and operators shall install and maintain secondary containment areas constructed of synthetic or manufactured materials according to the manufacturer's recommendations.

Subp. 4. **Design.** The area of secondary containment which is directly under a tank must be designed and constructed to provide for the detection of a release of a substance ~~before the release permeates through the containment~~. Methods of leak detection are as follows:

A. visual monitoring of ~~elevated tanks;~~:

(1) elevated tanks;

(2) tanks on continuous concrete slabs for Type B and Type C substances;

(3) tanks on a continuous concrete slab treated with material that is impermeable to the substance being stored for Type A substances;

(4) tanks on containment constructed of fabricated steel; or

(5) tanks on containment constructed of fiberglass;

B. interstitial monitoring between the tank's inner and outer shell or the tank's shell and the containment area; ~~and~~ or

C. vapor monitoring in the soil directly under the tank bottom or perimeter and above the water table.

Subp. 5. **Clay.** A secondary containment area constructed of clay must:

A. be used as an integral part of a geosynthetic clay liner; or

B. meet the following standards:

(1) consist of a minimum of 12 inches of compacted imported clay or native clay soil;

(2) be protected with cover material to prevent drying and erosion;

(3) be designed, inspected, and certified by a registered professional engineer to prevent a release from the primary tank from extending outside the containment; and

(4) show, through postinstallation testing, that the compacted clay has a permeability rate to water equal to or less than 1×10^{-7} centimeters per second.

7151.5500 SUBSTANCE TRANSFER AREAS.

Subpart 1. **General.** Except as otherwise provided in subpart 2, owners or operators shall provide substance transfer safeguards. The safeguards, such as spill boxes, remote fill boxes, or containment areas must effectively contain a release at the connection point, as well as at the vehicle, during transfer of the substance to and from the tank.

Subp. 2. **Exclusions**. A substance transfer area safeguard is not required for:

A. a tank that is filled with a hand-held nozzle;

B. a transfer of the substance through a continuous pipeline between tanks at one site; or

C. a barge transfer facility regulated under United States Coast Guard regulations, Code of Federal Regulations, title 33, parts 126, 154, and 156.

7151.5600 CORROSION PROTECTION.

Subpart 1. **Tanks.** The floor of a steel aboveground storage tank must be protected from corrosion using one of the following methods:

A. the tank is elevated so that the underside of the tank floor is not in contact with any surface other than the tank supports;

B. the tank rests on a continuous~~, impermeable concrete pad that is constructed with grooves which slope away from the center of the tank floor~~ concrete slab that is designed to prevent water from accumulating under the tank floor;

C. the tank is double walled;

D. the tank is double floored with a vacuum pulled on the interstitial space;

E. the tank floor is:

(1) cathodically protected; and

(2) internally lined in accordance with American Petroleum Institute Standard 652;

F. the tank floor is:

(1) cathodically protected; and

(2) internally inspected in accordance with American Petroleum Institute Standard 653; or

G. the tank floor is:

(1) internally lined in accordance with American Petroleum Institute Standard 652; and

(2) internally inspected in accordance with American Petroleum Institute Standard 653.

Subp. 2. **Lines.** A steel line must be protected from external corrosion using one of the following methods:

A. the line is not in contact with soil;

B. the line is cathodically protected; or

C. the line is double walled.

Subp. 3. **Design criteria.** Cathodic protection of new field-erected steel tanks and lines must meet the following design criteria:

A. the cathodic protection system must be designed by a corrosion expert in accordance with American Petroleum Institute Standards 651 and 1632, as applicable; and

B. underground lines and the underside of the floor of a shop-fabricated steel tank must be coated with dielectric material in accordance with Steel Tank Institute Recommended Practice R893-89.

7151.5700 OVERFILL PROTECTION.

Subpart 1. **Requirement.** A tank which is filled by transfers of more than ~~25~~ 55 gallons at one time must have one of the following systems for overfill protection:

A. a high-level alarm, set at no greater than 95 percent of the tank's capacity, that is visible or audible to the person controlling the substance transfer;

B. a system that automatically shuts off the flow of substance into the tank, set at no greater than 95 percent of the tank's capacity;

C. a permanently mounted ~~site~~ sight glass or gauge, visible to the person controlling the substance transfer, that accurately shows the level of substance in the tank; or

D. a person who manually gauges substance level with a level stick during substance transfer and controls the substance transfer or is in contact with a person who controls the substance transfer.

Subp. 2. **Double-walled tanks.** Double-walled tanks which are not otherwise located within an agency-approved secondary containment area must have one of the following systems for overfill prevention:

A. a high-level alarm, set at no greater than 95 percent of the tank's capacity, that is visible or audible to the person controlling the substance transfer; or

B. a system that automatically shuts off the flow of substance into the tank, set at no greater than 95 percent of the tank's capacity.

Subp. 3. **Volumetric conversion.** If any level stick, ~~site~~ sight glass, or gauge does not read in volumetric measurements and requires conversion, a clearly labeled conversion chart indicating maximum working capacity of the tank must be mounted on the tank or the tank's delivery manifold and visible to the person controlling the substance transfer.

STANDARDS FOR EXISTING ABOVEGROUND STORAGE TANKS

7151.6100 REQUIREMENT.

Subpart 1. **Application.** Parts 7151.6100 to 7151.6700 apply to all aboveground storage tanks or tank systems installed prior to the effective date of this chapter except as otherwise provided in subparts 2 and 3. For the purpose of parts 7151.6100 to 7151.6700, an existing tank or tank system is one installed prior to the effective date of this chapter.

Subp. 2. **Small tanks near surface water.** Owners and operators of tanks ~~less than~~ 1,100 gallons or less, but greater than 500 gallons and located within 500 feet of a Class 2 surface water, need not comply with ~~part~~ parts 7151.6500, 7151.6600, ~~or~~ and 7151.6700.

Subp. 3. **Tanks storing other regulated substances.** Owners and operators of tanks storing other regulated substances need not comply with parts 7151.6400, subparts 4 and 5, 7151.6500, 7151.6600, and 7151.6700.

7151.6200 TANK AND PIPING STANDARDS.

Subpart 1. **Tank and piping standards.** Owners and operators of aboveground storage tank systems shall ensure that existing systems used to store regulated substances will not structurally fail or corrode.

Tank owners and operators shall conduct, pursuant to part 7151.7200, subpart 6, an internal inspection on all field-erected steel tanks within ten years of the effective date of this chapter.

Subp. 2. **Underground storage tanks.** Tanks designed and constructed for service as underground storage tanks must not be used for aboveground storage.

7151.6300 LABELING.

All existing aboveground storage tank systems must meet the labeling requirements of part 7151.5300.

7151.6400 SECONDARY CONTAINMENT.

Subpart 1. **Requirement.** Owners and operators must provide secondary containment for the storage of all substances in tanks. If more than one type of substance is stored within a single secondary containment area, the substances shall be compatible with each other and with the secondary containment area.

A. Secondary containment areas for existing aboveground storage tanks must have a continuous dike surrounding the tanks which will prevent releases from contaminating surface waters.

Subp. 2. **Volume.** All secondary containment systems for existing aboveground storage tanks must meet the volume requirements of part 7151.5400, subpart 2.

Subp. 3. **Materials.** All secondary containment systems for existing aboveground storage tanks must meet the materials requirements of part 7151.5400, subpart 3 or 5.

Subp. 4. **Design.**

A. If the tank is lifted or moved within a site, the secondary containment system must meet the design requirements of part 7151.5400, subpart 4.

B. If the tank is moved from a site and reinstalled on a second site, the tank must meet the standards for new aboveground storage tanks in part 7151.5100.

Subp. 5. **Soils.** A secondary containment area constructed of soils must:

A. be used as an integral part of a geosynthetic clay liner; or

B. show, through testing, a permeability rate to water equal to or less than the following:

Substance Classification	Groundwater or Bedrock < 10 Feet from Grade or Class 2 Surface Water within 100 Feet of Aboveground Storage Tank	Groundwater and Bedrock ≥ 10 Feet from Grade and Class 2 Surface Water not within 100 Feet of Aboveground Storage Tank
Type A	Minimum of three feet of soil at 1×10^{-5} cm/sec	Minimum of three feet of soil at 1×10^{-4} cm/sec
Type B	Minimum of three feet of soil at 1×10^{-4} cm/sec	Minimum of three feet of soil at 1×10^{-3} cm/sec
Type C	Minimum of three feet of soil at 1×10^{-3} cm/sec	No minimum permeability standard

Subp. 6. **Containment area evaluation.** Owners and operators shall perform postinstallation permeability testing on containment areas constructed of native soils, amended soils, or imported clay liners requiring a minimum permeability standard under subpart 5. A qualified soil technician or testing company shall evaluate the top three feet of soil, below any cover material, for vertical soil permeability. Evaluation must:

A. comport with approved ASTM standard field or lab sampling techniques;

B. utilize at least three samples collected per containment area or one sample per tank, whichever is greater; and

C. utilize at least one sample collected from the lowest point in the containment area with the remaining samples triangulated across the entire basin.

Subp. 7. **Timing of compliance.**

A. Owners and operators shall comply with subpart 1, item A, effective November 1, 1998.

B. Owners and operators shall comply with subparts 2 to 6, effective November 1, 2003.

7151.6500 SUBSTANCE TRANSFER AREAS.

Subpart 1. **General**. Owners and operators shall provide, for all tank systems, substance transfer safeguards such as spill boxes, remote fill boxes, or containment areas. The safeguards must effectively contain a release at the connection point, as well as at the vehicle, during transfer of the substance to and from the tank.

Subp. 2. **Exclusions.** A substance transfer area is not required for:

A. a tank that is filled with a hand-held nozzle;

B. a transfer of the substance through a continuous pipeline between tanks at one site; or

C. a barge transfer facility regulated under United States Coast Guard regulations, Code of Federal Regulations, title 33, parts 126, 154, and 156.

Subp. ~~2.~~ 3. **Timing of compliance.** Owners and operators shall comply with subpart 1 after one year following the effective date of this chapter.

7151.6600 CORROSION PROTECTION.

Subpart 1. **General.** Owners and operators shall apply corrosion protection to all steel tanks and tank systems except as otherwise provided in subpart 5.

Subp. 2. **Tanks.** The floor of an existing steel aboveground storage tank must be protected from external corrosion using one or more of the following methods:

A. the tank is elevated so that the underside of the tank's floor is not in contact with any surface other than the supports;

B. the tank rests on a continuous concrete ~~pad that is constructed with grooves which slope away from the center of the tank floor~~ slab that is designed to prevent water from accumulating under the tank floor;

C. the tank is double walled;

D. the tank is double floored with:

(1) a vacuum pulled on the interstitial space; or

(2) an installed cathodic protection system;

E. the tank floor is:

(1) cathodically protected; and

(2) internally lined in accordance with American Petroleum Institute Standard 652;

F. the tank floor is:

(1) cathodically protected; and

(2) internally inspected in accordance with American Petroleum Institute Standard 653 prior to the effective date of this part, and thereafter as indicated by the results of the inspection; or

G. the tank floor is:

(1) internally lined in accordance with American Petroleum Institute Standard 652; and

(2) internally inspected in accordance with American Petroleum Institute Standard 653.

Subp. 3. **Lines.** An existing steel line must be protected from external corrosion using one or more of the following methods:

A. the line is not in contact with soil;

B. the underground line is: cathodically protected; or

~~(1) cathodically protected; and~~

~~(2) tested for leaks unless the line is less than one year old on the effective date of this chapter; or~~

C. the underground line is double walled.

Subp. 4. **Design criteria.** Cathodic protection of existing steel tanks and lines must be designed by a corrosion expert in accordance with American Petroleum Institute Standards 651 and 1632, as applicable.

Subp. 5. **Exclusions.** Tanks or tank systems within a secondary containment area which comply with the requirements of part 7151.5400, subparts 1, 2, 3, items B to ~~G~~ I, and 4, are excluded from the requirements of this part.

Subp. 6. **Timing of compliance.** Owners and operators shall comply with this part effective November 1, 2003.

7151.6700 OVERFILL PROTECTION.

Subpart 1. **General**. Except as otherwise provided in subpart 2, owners and operators shall provide overfill protection, as provided in part 7151.5700, for all tank systems.

Subp. 2. **Exclusions.** Tanks or tank systems within a secondary containment area which are constructed to a 1×10^{-7} centimeters per second permeability standard and meet the requirements of part 7151.5400 or 7151.6400, subparts 1 to 4, are excluded from the requirements of this part.

Subp. 3. **Timing of compliance.** Effective November 1, 2003, overfill protection shall be implemented pursuant to part 7151.5700.

OPERATION AND MAINTENANCE OF ABOVEGROUND STORAGE TANKS

7151.7100 REQUIREMENT.

Subpart 1. **Application.** Parts 7151.7100 to ~~7151.7600~~ 7151.7500 apply to all aboveground storage tank systems in use on or after the effective date of this chapter except as otherwise provided in subpart 2.

Subp. 2. **Exclusions.** The following aboveground storage tanks are excluded from the requirements of parts 7151.7100 to ~~7151.7600~~ 7151.7500:

A. tanks ~~less than~~ 1,100 gallons or less but greater than 500 gallons and located within 500 feet of Class 2 surface water; and

B. tanks storing other regulated substances.

7151.7200 MONITORING.

Subpart 1. **Transfer.** At least one person must be present during substance loading or unloading of a tank to visually monitor and terminate the transfer. The person monitoring the substance transfer shall take immediate action to stop the flow of the substance being transferred when the capacity of the tank has been reached or in the event of an equipment failure or emergency. Tank owners and operators shall recover all contaminated soils and any substance released during transfer.

Subp. 2. **Weekly monitoring.** Owners or operators of tanks shall conduct visual monitoring as described in items A to C to verify that no releases have occurred from the tank system.

A. If the secondary containment area complies with the standard established in part 7151.5400, the owner or operator shall visually monitor an aboveground storage tank site at least weekly.

B. If the secondary containment area ~~complies~~ does not comply with the standard established in part ~~7151.6400~~ 7151.5400, the owner or operator shall visually monitor an aboveground storage tank site at least every 72 hours.

C. Owners and operators of double-walled tanks need not conduct ~~visual~~ weekly monitoring of the ~~tank~~ containment area around the double-walled tanks.

Subp. 3. **Monthly monitoring.** The owner or operator shall visually inspect tank systems at least monthly, including:

A. walking through the site to identify cracks or other defects in the secondary containment area and any substance transfer area;

B. a visual examination of the exterior surfaces of tanks, piping, valves, pumps, and other equipment for cracks, corrosion, releases, and maintenance deficiencies; and

C. identification of poor maintenance, operating practices, or malfunctioning equipment.

Subp. 4. **Leak detection.** The owner or operator shall monitor tank systems for leaks ~~at least monthly~~ as described in items A to ~~D~~ C. Any suspected releases shall be investigated and resolved.

A. If a tank is designed pursuant to part 7151.5400, subpart 4, leak detection must be conducted at least monthly as follows:

(1) visual monitoring of ~~elevated tanks;~~:

(a) elevated tanks;

(b) tanks on continuous concrete slabs for Type B and Type C substances;

(c) tanks on a continuous concrete slab treated with material that is impermeable to the substance being stored for Type A substances;

(d) tanks on containment constructed of fabricated steel; or

(e) tanks on containment constructed of fiberglass;

(2) interstitial monitoring between the tank's inner and outer shell or the tank's shell and the containment area; or

(3) vapor monitoring in the soil directly under the tank bottom or perimeter and above the water table.

B. If a tank is not designed pursuant to part 7151.5400, subpart 4, leak detection must be conducted at least monthly using one or more of the following:

(1) monthly reconciliation of ~~daily~~ substance measurements taken pursuant to the interval established in subpart 2, with dispenser meter readings, shipments, deliveries, and internal transfers; any difference of 2.0 percent or more of monthly throughput shall be investigated and resolved; or

(2) statistical inventory reconciliation as approved by the agency.

~~C. Owners and operators need not conduct leak detection on elevated tanks.~~

~~D.~~ C. All underground lines must be tested for leaks at least annually using one or more of the following methods:

(1) tracer gas;

(2) hydrostatic; ~~or~~

(3) lockdown pressure~~.~~;

(4) double-walled piping with a sump sensor connected to an audible alarm; or

(5) other approved methods pursuant to part 7151.9400.

Subp. 5. **Annual equipment check.** Owners and operators shall maintain in functioning condition all equipment used for release detection, monitoring, or warning. Owners and operators shall check such equipment for proper function or calibration at least yearly or in accordance with manufacturer's guidance.

Subp. 6. **Tank inspection.** All field-erected steel tanks must be internally and externally inspected by a certified tank inspector pursuant to American Petroleum Institute standard 653.

Subp. 7. **Corrosion protection monitoring.**

A. A qualified cathodic protection tester shall inspect all cathodic protection systems on steel tanks and piping as follows:

(1) all cathodic protection systems must be tested pursuant to the National Association of Corrosion Engineers RP-02-85 code of practice within six months of installation and at least every three years thereafter; and

(2) impressed current systems must be inspected for proper function every 60 days.

B. A lined tank which does not have external cathodic protection must be internally inspected within ten years after lining, and every ten years after that. The liner must be structurally sound with the lining performing pursuant to original design specifications.

C. If corrosion protection monitoring conducted in conformance with this part indicates inadequate corrosion protection, corrective measures must be taken within 180 days to ensure that the measured surface potential conforms to the requirements of this part.

7151.7300 MAINTENANCE.

Subpart 1. **Tank.**

A. Owners and operators shall minimize rust on the tank exterior so as to not jeopardize the integrity of the tank system.

B. Owners and operators shall dispose of water that is drawn from the bottom of a tank according to applicable state and federal laws.

Subp. 2. **Containment safeguards.** Tank owners and operators shall maintain the integrity of containment safeguards as follows:

A. the secondary containment and substance transfer areas must be maintained free of cracks, open seams, open drains, siphons, and vegetation other than grass;

B. precipitation must be removed as often as practical to ensure proper containment volume; and

C. tank owners and operators shall reduce the storage volume within the tank or tank system to accommodate decreased secondary containment volume if accumulation of precipitation reduces the volume of the containment basin below 100 percent.

Subp. 3. **Stormwater discharge.** Stormwater that collects within the secondary containment area or substance transfer area must be discharged in compliance with all applicable state and federal laws.

Subp. 4. **Schedules.** Safeguard systems must be installed and maintained pursuant to applicable manufacturer's schedules and applicable standards.

7151.7400 RECORDS.

Subpart 1. **Application.** Owners and operators of tanks shall retain information, reports, and records according to this part. Upon agency request, tank owners and operators shall make such data available to the agency for viewing and copying.

Subp. 2. **Tank system design.**

A. Except as specified in item C, the owner and operator shall retain, for the life of the tank system, the following records which are available as of the effective date of this chapter:

(1) maintenance and repair documentation;

(2) third-party certifications of tank system equipment; and

(3) as-built drawings.

B. As-built drawings must be maintained by the owner or operator of all field-erected tank installations conducted after the effective date of this chapter. The drawings shall be certified by a professional engineer and illustrate:

(1) the tank foundation;

(2) the tank bottom design; and

(3) the volume and design of the secondary containment basin, including the dike walls and the area directly under the tank.

C. Owners and operators shall retain for three years all documentation addressing service check and equipment calibrations.

Subp. 3. **Containment area evaluation.** Owners and operators of tanks shall retain, for the life of the tank system, the following written records of all sampling and testing methods used to evaluate permeability of soil containment areas:

A. classification of soils used in containment area construction;

B. soil descriptions and logs of each sample location;

C. a table of individual permeability tests; and

D. hydraulic conductivity of the soil expressed as centimeters per second for each sample location and for each containment area.

Subp. 4. **Monitoring.**

A. Owners and operators of tanks shall retain, for at least three years from the date of the activity, the written records of all periodic monitoring activities. The person performing the monitoring activity shall document the following information:

(1) the name of the person doing the monitoring;

(2) the monitoring method or methods used;

(3) the date of the monitoring; and

(4) the results of the monitoring.

B. Owners and operators shall retain, for the life of the tank, documentation of corrosion protection and internal tank inspections and a written summary of the results.

C. Owners and operators shall retain, for three years after the tank has been taken out of service, records demonstrating compliance with out-of-service tank requirements under parts ~~7151.8000~~ 7151.8100 to 7151.8500. Records must be retained in one of the following ways:

(1) by the owners and operators who took the aboveground storage tank system out of service;

(2) by the current owners and operators of the site; or

(3) by mailing the records to the agency if they cannot be retained at the closed facility.

D. Upon agency request, owners and operators of tanks shall make data available to the agency for viewing and copying.

Subp. 5. **Tank inspection.** Owners and operators of tanks shall retain, for the life of the tank system, the written records of all internal and external tank inspections.

7151.7500 RELEASES AND DISCHARGES TO A SECONDARY CONTAINMENT AREA.

Subpart 1. **Release investigation.** An owner or operator shall immediately investigate a suspected release or discharge to a secondary containment area.

Subp. 2. **Assessment of secondary containment area following release.** The owner or operator shall assess for damage any secondary containment area where there was a release of a stored substance from an aboveground storage tank into a secondary containment area. The owner or operator shall repair the secondary containment area pursuant to part 7151.5400 or 7151.6400, as applicable, prior to continued substance storage.

Subp. 3. **Reporting.** An owner or operator shall notify the agency immediately of discharges to a secondary containment area, including those associated with substance transfer areas, in conformance with the requirements of Minnesota Statutes, section 115.061.

WITHDRAWAL FROM SERVICE OF ABOVEGROUND STORAGE TANK SYSTEMS

7151.8100 REQUIREMENT.

Parts 7151.8100 to 7151.8500 address procedures for aboveground storage tank system's out-of-service status, reactivation, and contamination analysis.

7151.8200 OUT-OF-SERVICE ABOVEGROUND STORAGE TANK SYSTEMS.

Subpart 1. **Application.** ~~Except as otherwise provided in subpart 3,~~ If a substance is not introduced to or removed from an aboveground storage tank system for one year or more, the owner or operator shall:

A. maintain the operation and maintenance requirements of parts 7151.7100 to ~~7151.7600~~ 7151.7500; or

B. declare the tank system as inactive and taken out of service or removed.

Subp. 2. **Out of service.** The owner or operator of an aboveground storage tank system taken out of service shall:

A. remove all substances from the aboveground storage tank, connected piping, and appurtenances;

B. secure the aboveground storage tank to prevent unauthorized entrance or tampering, by:

(1) securely bolting and locking all manways and valves; and

(2) capping or plugging fill lines, gauge openings, or pump lines;

C. thoroughly clean the interior of the tank and all associated piping of all sludge, solids, and residuals;

D. dispose tank bottom sludges in accordance with applicable state or federal requirements;

E. render the tank sufficiently free of vapors to avoid formation of an explosive atmosphere and vent the tank; and

F. clearly label the exterior of an out-of-service tank with the words "Out of Service," and the date the tank was taken out of service.

7151.8300 REACTIVATING OUT-OF-SERVICE ABOVEGROUND STORAGE TANK SYSTEMS.

The owner or operator shall, prior to placing an inactive aboveground storage tank system back into service, thoroughly inspect and test the aboveground storage tank system pursuant to part 7151.5200, subpart 3.

7151.8400 CONTAMINATION DETERMINATION.

Subpart 1. **Application.** Except as otherwise provided in subpart 2, owners and operators shall sample for contamination when removing a tank and determine, through laboratory analysis, the extent of contamination. In selecting sample types, sample locations, and measurement methods, owners and operators shall consider:

A. the method of closure;

B. the nature of the stored substance;

C. the type of secondary containment;

D. the depth to groundwater;

E. areas having the greatest potential for contamination; and

F. other factors necessary for identifying the presence of a release.

Subp. 2. **Exclusions.** The following aboveground storage tank systems are excluded from the requirements of this part:

A. a tank storing other regulated substances; ~~and~~

B. a tank, which has been removed, that exclusively contained number 6 grade fuel oil; and

C. a tank with containment under the tank floor meeting part 7151.5400, subpart 3, item C, D, E, G, H, or I where:

(1) there is no evidence of a release through visual evidence, odor, operating history; and

(2) there is no compromise of the integrity of the containment.

7151.8500 CONTAMINATION DETERMINATION FOR PREVIOUSLY CLOSED ABOVEGROUND STORAGE TANK SYSTEMS.

If ~~the commissioner determines~~ a release from an aboveground storage tank system taken out of service before the effective date of this chapter poses a current or potential threat to human health or the environment, the commissioner shall direct the owner and operator to assess the extent of the contamination and close the aboveground storage tank system pursuant to this part.

MISCELLANEOUS

7151.9100 INADEQUATE SAFEGUARDS.

The owner or operator shall immediately remove a substance from an aboveground storage tank failing to meet the requirements of this chapter. The owner or operator shall refrain from further use of the aboveground storage tank until the tank or tank system complies with all applicable requirements of this chapter.

7151.9200 PROCEDURAL RULES AND APPEALS.

A request for a hearing, an appeal, or other procedural matter not specifically provided for in this chapter is governed by rules of procedure, chapter 7000; the rules of the Office of Administrative Hearings, chapter 1400; and other applicable laws.

7151.9300 VARIANCES.

Any person who applies for a variance from any requirement of this chapter shall comply with part 7000.7000. An application for a variance must be acted on by the agency pursuant to part 7000.7000 and Minnesota Statutes, section 116.07, subdivision 5. However, no variance may be granted that would result in noncompliance with applicable federal rules and regulations for aboveground storage tanks.

7151.9400 ALTERNATIVE DESIGN OR OPERATING PRACTICE.

Subpart 1. **General.** An owner or operator may submit a petition to the commissioner

for approval to use an alternative design or operating practice in lieu of the requirements of this chapter.

Subp. 2. **Petition.**

A. Each petition for approval to use an alternative design or operating practice must include:

(1) the petitioner's name and address;

(2) a statement of the petitioner's interest in the proposed action;

(3) a full description of the proposed method, including all procedural steps and equipment used in the method;

(4) comparative results obtained from using the proposed method with those obtained from using the relevant or corresponding methods in this chapter;

(5) an assessment of any factors which may interfere with, or limit the use of, the proposed method; and

(6) a description of the quality control procedures necessary to ensure the efficacy of the proposed method.

B. After receiving a petition for approval to use an alternative design or operating practice, the commissioner shall request any additional information on the proposed method which the commissioner reasonably requires to evaluate the method.

Subp. 3. **Procedure for petition review.** The commissioner's determination to approve or deny an alternative design or operating practice petition shall be based on a demonstration by the petitioner that the alternative design or operating practice, together with location characteristics, will prevent migration of stored ~~liquid~~ substances into surface water and groundwater as effectively as the requirements of this chapter and will not endanger human health or the environment.

A. In approving or denying the petition, the commissioner shall consider:

(1) the nature, toxicity, viscosity, and quantity of the product;

(2) the technical feasibility of the proposed alternative design and operating practice;

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

(4) factors that would influence the quality and mobility of the stored ~~liquid~~ substance and the potential for it to migrate to surface water or groundwater; and

(5) any other factor necessary to determine equivalent protection.

Subp. 4. **Compliance.** The owner or operator shall comply with the approval of petition for alternative design or operating practice and all terms and conditions imposed on the approval of petition for alternative design or operating practice.

7151.9500 RELEASE REPORTING.

Nothing in this chapter shall relieve an owner or operator from compliance with any state, federal, or local duty to report.

7151.9600 ~~PREEMPTION~~ OTHER REGULATIONS.

Subpart 1. **General.** This chapter shall be in addition to the standards imposed by any other regulations applying to aboveground storage tanks ~~and shall supersede any conflicting provisions~~.

Subp. 2. **Permit preemption.** This chapter supersedes all terms and conditions of permits issued to tank owners and operators pursuant to chapter 7100.

REPEALER. Minnesota Rules, parts 7100.0010; 7100.0020; 7100.0030; 7100.0040; 7100.0050; 7100.0060; 7100.0070; 7100.0080; and 7100.0090, are repealed.