Pollution Control Agency

Proposed Permanent Rules Relating to Underground Storage Tanks

7150.0010 APPLICABILITY.

[For text of subp 1, see M.R.]

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

A. ~~an underground storage tank~~ a UST system holding:

(1) hazardous wastes listed or identified under:

(a) chapter 7045 ~~or~~;

(b) Code of Federal Regulations, title 40, part 261~~,~~; or

(c) subtitle C of the Solid Waste Disposal Act, United States Code, title 42, section 6921 et seq.; or

(2) a mixture of such hazardous waste and other regulated substances;

B. a wastewater treatment tank system that is part of a wastewater treatment facility regulated under ~~United States Code, title 33, section 1317 or 1342~~ section 307(b) or 402 of the federal Clean Water Act;

[For text of items C to J, see M.R.]

K. a surface impoundment, pit, pond, or lagoon used for storing storm water, wastewater, or animal waste;

[For text of items L and M, see M.R.]

N. a storage tank situated in an underground area such as a basement, cellar, mineworking, drift, shaft, or tunnel if the storage tank is located upon or above the surface of the floor; and

O. an oil-water separator~~;~~.

~~P. underground storage tank systems containing radioactive material that are regulated under the Atomic Energy Act of 1954, United States Code, title 42, sections 2011 to 2296;~~

~~Q.~~ ~~an underground storage tank system that is part of an emergency generator system at nuclear power generation facilities regulated by the Nuclear Regulatory Commission under Code of Federal Regulations, title 10, part 50, Appendix A; and~~

~~R. airport hydrant fuel distribution systems.~~

Subp. 3. [Repealed, 32 SR 1751]

Subp. 4. [See repealer.]

Subp. 5. **Heating oil tanks.** Parts 7150.0010; 7150.0030; 7150.0090, subparts 1, 2, 4, ~~and~~ 6, and 7; 7150.0100, subparts 7~~,~~ and 9~~, and 10~~; ~~and~~ 7150.0205, subparts 1 to 4~~,~~; 7150.0250, subpart 2; and 7150.0345, subpart 2, apply to ~~an underground storage tank~~ a UST system of over 1,100 gallons capacity used exclusively for storing heating oil for consumptive use on the premises where stored.

Subp. 6. **Partially excluded tank systems.** Parts 7150.0010, 7150.0030, and 7150.0090, subpart 2, apply to items A to D. Parts 7150.0100, subpart 9, and 7150.0205, subparts 1, item B; 2; 3, item B; and 4, apply to items A, C, and D:

A. wastewater treatment tanks not regulated under section 307(b) or 402 of the federal Clean Water Act;

B. aboveground storage tanks associated with:

(1) airport hydrant fuel distribution systems regulated under part 7150.0451; and

(2) underground storage tanks with field-constructed tanks regulated under part 7150.0451;

C. UST systems containing radioactive material regulated under the federal Atomic Energy Act of 1954, United States Code, title 42, sections 2011 to 2296; and

D. a UST system that is part of an emergency-generator system at facilities that generate nuclear power and are licensed by the Nuclear Regulatory Commission and subject to Nuclear Regulatory Commission requirements regarding design and quality criteria under Code of Federal Regulations, title 10, part 50.

Subp. 7. **Other potentially harmful substances.** Part 7150.0100, subpart 9, applies to underground storage tanks storing other potentially harmful substances.

7150.0030 DEFINITIONS.

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

Subp. 2. **Agency.** "Agency" means the Minnesota Pollution Control Agency or, if a regulated substance is released or spilled, the Minnesota duty officer pursuant to Minnesota Statutes, section 115E.09.

Subp. 2a. **Agency-approved tester.** "Agency-approved tester" means a person approved by the commissioner to inspect and test components of a UST system according to part 7150.0216, subpart 6, item A.

Subp. 2b. **Airport hydrant fuel distribution system.** "Airport hydrant fuel distribution system," also called an airport hydrant system, means a UST system that fuels aircraft and operates under high pressure with large diameter piping that typically terminates into one or more hydrants or fill stands with fueling points.

Subp. 3. **Appurtenances.** "Appurtenances" means ~~devices~~ components of a UST system such as piping, fittings, flanges, valves, dispensers, and pumps used to distribute, meter, or control the flow of regulated substances to or from an underground storage tank.

Subp. 4. **Beneath the surface of the ground.** "Beneath the surface of the ground" means ~~beneath the ground~~ below the surface of the ground, concrete, or asphalt or otherwise covered with earthen materials.

Subp. 4a. **Business hours.** "Business hours" means a minimum of six hours each day, Monday through Friday, excluding holidays, during which business is conducted.

Subp. 5. **Cathodic protection.** "Cathodic protection" means using a technique to prevent corrosion of a metal surface by making that surface the cathode of an electrochemical cell. For example, a ~~tank~~ UST system can be cathodically protected through the application of either ~~galvanic~~ sacrificial anodes or impressed current.

Subp. 6. ~~**Cathodic protection**~~ **Cathodic-protection tester.** "~~Cathodic protection~~ Cathodic-protection tester" means a person who has demonstrated an understanding of the principles and measurements of all common types of ~~cathodic protection~~ cathodic-protection systems as applied to buried or submerged metal piping and ~~tank~~ UST systems~~,~~ by passing a test on cathodic protection ~~test~~ given by ~~the National Association of Corrosion Engineers~~ NACE International or the Steel Tank Institute. ~~Such persons~~ The person must also have education and experience in soil resistivity, stray current, structure-to-soil potential, and component electrical isolation measurements of buried metal piping and ~~tank~~ UST systems.

[For text of subp 7, see M.R.]

Subp. 8. [See repealer.]

Subp. 8a. **Class A operator.** "Class A operator" means an individual who has primary responsibility to operate and maintain the UST system.

Subp. 8b. **Class B operator.** "Class B operator" means an individual who has daily responsibility to operate and maintain the UST system.

Subp. 8c. **Class C operator.** "Class C operator" means an individual who has daily on-site presence and responsibility to handle emergencies and alarms pertaining to a spill or release from the UST system.

[For text of subps 9 and 10, see M.R.]

Subp. 11. **Connected piping.** "Connected piping" means underground piping including valves, elbows, joints, flanges, and flexible connectors attached to a ~~tank~~ UST system through which regulated substances flow. For the purpose of determining how much piping is connected to an individual ~~underground storage tank~~ UST system, the piping that joins two ~~underground storage tank~~ UST systems is allocated equally between them.

[For text of subp 12, see M.R.]

Subp. 12a. **Containment sump.** "Containment sump" means a single- or double-walled liquid-tight container that:

A. protects the environment by containing leaks and spills of regulated substances from piping, dispensers, pumps, and related components in the containment area; and

B. is located at the top of the tank, such as tank top or submersible turbine pump sumps; underneath the dispenser, such as underdispenser containment sumps; or at other points in the piping run, such as transition or intermediate sumps.

[For text of subps 13 to 15, see M.R.]

Subp. 16. **Excavation zone.** "Excavation zone" means the volume containing the ~~tank~~ UST system and backfill material bounded by the ground surface, walls, and floor of the pit and trenches into which the ~~underground storage tank~~ UST system is placed at the time of installation.

[For text of subps 17 and 18, see M.R.]

Subp. 18a. **Field-constructed tank.** "Field-constructed tank" means a tank that is built or assembled at the tank site, but does not include a tank with a lining.

[For text of subps 19 to 21, see M.R.]

Subp. 22. **Hazardous ~~material~~ substance.**

A. "Hazardous ~~material~~ substance" means:

~~A.~~ (1) a substance listed in Code of Federal Regulations, title 40, part 302, including petroleum constituents under subpart 36, item C, but not including:

~~(1)~~ (a) a hazardous waste listed or identified under chapter 7045 or Code of Federal Regulations, title 40, part 261, and subtitle C of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); or

~~(2)~~ (b) petroleum under subpart 36, item A, B, or D; or

~~(3) a substance that is not liquid at a temperature of 60 degrees Fahrenheit and pressure of 14.7 pounds per square inch absolute; or~~

~~B.~~ (2) any mixture of substances identified in ~~item A~~ subitem (1) and petroleum, unless the amount of the substance identified in ~~item A~~ subitem (1) is de minimis.

B. Substances identified in ~~items~~ item A ~~and B which~~ that also meet the definition of petroleum are considered hazardous ~~materials~~ substances.

Subp. 23. [See repealer.]

[For text of subps 24 and 25, see M.R.]

Subp. 25a. [See repealer.]

Subp. 25b. **Impressed current or impressed-current system.** "Impressed current" or "impressed-current system" means a method of corrosion protection that generates a

cathodic current from a power source, such as a rectifier that converts alternating current to direct current, where the cathodic current flows from the anodes through the soil to the UST system and returns to the power source through an insulated wire attached to the UST system.

Subp. 25c. **Leak.** "Leak" means discharge of a regulated substance or any other potentially harmful substance from a point in a UST system that is not intended to be a discharge or dispensing point. A leak that reaches the environment is a release.

Subp. 25d. **Leak detection.** "Leak detection" has the meaning given under subpart 42.

Subp. 25e. **Lessee.** "Lessee" means a person that leases a UST system. A lessee is also an operator if the lessee is in control of the daily operation of the UST system.

Subp. 25f. **Lining or internal lining.** "Lining" or "internal lining" means a coating of noncorrosive material bonded to the interior surface of a tank.

Subp. 25g. **Liquid tight.** "Liquid tight" means that liquid is not able to leak from a component of a UST system and that subsurface water is not able to infiltrate a tank, pipe, or secondary-containment area.

[For text of subp 26, see M.R.]

Subp. 27. **Motor fuel.** "Motor fuel" means ~~petroleum or a petroleum-based substance that is motor gasoline, aviation gasoline, No. 1 or 2 diesel fuel, biodiesel, or any grade of gasohol, and is typically used in the operation of a motor engine~~ a complex blend of hydrocarbons used to operate a motor engine, such as motor gasoline, aviation gasoline, No. 1 or No. 2 diesel fuel, or a blend containing one or more of these substances.

[For text of subps 28 and 29, see M.R.]

Subp. 29a. **Noncorrodible material.** "Noncorrodible material" means a synthetic or processed material that is certified for use in UST systems and compatible with the substance being stored in a UST system and the surrounding environment.

[For text of subp 30, see M.R.]

Subp. 31. **Operational life.** "Operational life" means the period beginning when installation of the ~~tank~~ UST system has begun until the time the ~~tank~~ UST system is permanently closed under part 7150.0410.

Subp. 32. **Operator.**

A. "Operator" means a person who:

(1) ~~a person in~~ has control of or ~~having~~ responsibility for the daily operation of the ~~underground storage tank~~ UST system ~~or a person who was in~~;

(2) had control of or ~~had~~ responsibility for the daily operation of the tank immediately before discontinuation of ~~its~~ the tank's use~~. Operator also means~~;

(3) ~~a person who~~ is responsible under Minnesota Statutes, section 115C.021, for a release from an underground storage tank containing petroleum~~,~~; or

(4) ~~a person who~~ is responsible under Minnesota Statutes, section 115B.03, for a release from an underground storage tank containing a hazardous ~~material~~ substance.

B. Operator does not include a person who operates a tank if the tank is not regulated by this chapter.

Subp. 32a. **Other potentially harmful substances.** "Other potentially harmful substances" means substances that are not regulated substances when used as intended by the manufacturer but that may cause harm to human health and the environment if released from a leaking UST system because of the volume and nature of the release. Other potentially harmful substances does not include:

A. petroleum substances under standard temperature and pressure; or

B. hazardous substances.

Subp. 32b. **Out of service.** "Out of service" means the status of a UST system from which a regulated substance is not or has not been introduced or dispensed, pending a decision or action to close the UST system or begin reusing the UST system.

[For text of subp 33, see M.R.]

Subp. 34. **Owner.**

A. "Owner" means a person who:

(1) holds title to, controls, or possesses an interest in an underground storage tank~~, and a person who~~;

(2) held title to, controlled, or possessed an interest in the tank immediately before discontinuation of ~~its~~ the tank's use~~. Owner also means a person who~~;

(3) is responsible under Minnesota Statutes, section 115C.021, for a release from an underground storage tank containing petroleum~~, or a person who~~; or

(4) is responsible under Minnesota Statutes, section 115B.03, for a release from an underground storage tank containing a hazardous ~~material~~ substance.

B. Owner does not include a person who:

(1) owns a tank if the tank is not regulated by this chapter ~~and does not include a person who~~; or

(2) 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 the tank.

Subp. 34a. **Permanent closure.** "Permanent closure" means permanently taking a UST system out of service by either closing it in place or removing it from the ground.

[For text of subp 35, see M.R.]

Subp. 36. **Petroleum.** "Petroleum" means one of the following substances:

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

D. petroleum-based substances that are comprised of a complex blend of hydrocarbons ~~derived from crude oil through processes of separation, conversion, upgrading, and finishing~~, such as motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, and used oils.

Subp. 37. **Petroleum ~~underground storage tank~~ UST system.** "Petroleum ~~underground storage tank~~ UST system" means ~~an underground storage tank~~ a UST system that is used to contain petroleum or a mixture of petroleum with de minimis quantities of hazardous ~~materials~~ substances.

Subp. 38. **Pipe or piping.** "Pipe" or "piping" means a hollow cylinder or tubular conduit for conveying a regulated substance from one point to another within ~~an underground storage tank~~ a UST system that is made of nonearthen materials.

Subp. 38a. **Piping system.** "Piping system" means piping, secondary containment, leak-detection devices, tubing, flanges, gaskets, valves, fittings, flexible connectors, and other pipe appurtenances that mix, separate, distribute, meter, or control flow and any core components that allow the piping system to function as intended and in accordance with installation requirements. Piping system includes:

A. a pipe run, which is the portion of the pipe from the submersible pump to the furthest dispenser, or in the case of suction piping, from the top of the tank to the furthest dispenser, or in cases where piping enters a building, the first pipe joint inside the building. UST systems may have multiple pipe runs;

B. a pipe segment, which is the portion of pipe between components in a pipe run, such as from the pump to a dispenser or between two dispensers; and

C. a pipe section, which is the portion of a pipe segment that is limited to ten feet in length.

[For text of subp 39, see M.R.]

Subp. 39a. **Product.** "Product" means a regulated substance.

Subp. 40. **Regulated substance.** "Regulated substance" means a hazardous ~~material~~ substance or petroleum.

Subp. 41. **Release.** "Release" means a spilling, leaking, emitting, discharging, escaping, leaching, or disposing from ~~an underground storage tank~~ a UST system into the environment including spills associated with overfills and transfer operations as the regulated substance moves to or from ~~an underground storage tank~~ a UST system. ~~"~~Release~~"~~ does not include discharges or designed venting allowed under agency rules.

Subp. 42. **Release detection or leak detection.** "Release detection" or "leak detection" means determining whether a release of a regulated substance has occurred from the ~~underground storage tank~~ UST system:

A. into the environment; or

B. into the interstitial space between the ~~underground storage tank~~ UST system and its secondary barrier or between the UST system and its secondary containment ~~around it~~.

Subp. 43. **Repair.** "Repair" means ~~the correction or restoration to operating condition of an underground storage tank or appurtenance~~ to correct or restore a component of a UST system to the component's original design function or operating condition.

A. "Piping repair" includes ~~installation of~~ installing a single ~~run~~ section of up to ten feet of new piping to replace existing piping. ~~Piping repair involving installation of a single run of more than ten feet of new piping to replace existing piping constitutes replacement.~~

B. "Dispenser repair" includes ~~installation of~~ installing a new dispenser to replace an existing dispenser ~~so long as~~ if work is performed entirely on or above any shear valves and check valves. ~~Installation of a new dispenser to replace an existing dispenser constitutes replacement if the work is performed beneath any shear valves or check valves or on any flexible connectors or unburied risers.~~

C. "Tank repair" includes repairing a tank lining, patching or coating damaged areas, and repairing or replacing corrosion protection.

Subp. 43a. **Replace or replacement.** "Replace" or "replacement" means ~~the installation of~~ to install a new ~~underground storage tank or appurtenance~~ component for a UST system in substantially the same location as another ~~tank or appurtenance~~ component of a UST system in lieu of that ~~tank or appurtenance, not including installation of new piping in connection with certain repairs as described in subpart 43.~~ component. Replacement includes:

A. piping repair to install a single piping segment or an accumulation of piping segments of more than ten feet of new piping to replace existing piping;

B. installing a new dispenser if work is performed beneath any shear valve or check valve or on any flexible connector or unburied riser; and

C. installing a replacement submersible pump that involves removing the pump head from the riser.

Subp. 43b. **Retrofit tank.** "Retrofit tank" means a new tank installed in an existing host tank as an internal lining according to part 7150.0205, subpart 1.

[For text of subp 44, see M.R.]

Subp. 44a. [See repealer.]

Subp. 44b. **Sacrificial-anode system.** "Sacrificial-anode system" means a cathodic-protection system that uses zinc, magnesium, or other anodic metals buried near and connected to the metal surface that is being protected.

Subp. 44c. **Secondary containment or secondarily contained.** "Secondary containment" or "secondarily contained" means a release-prevention and release-detection system that is used for a UST system and that has an inner and outer barrier with an interstitial space that is monitored for leaks.

[For text of subp 45, see M.R.]

Subp. 45a. **Spill bucket.** "Spill bucket" means a containment structure designed to capture releases that may occur in the UST fill port when a regulated substance is transferred. "Spill containment," "spill container," and "spill catchment basin" have the same meaning as spill bucket.

[For text of subp 46, see M.R.]

Subp. 46a. **Sump.** "Sump" means an area belowground that is designed to provide access to components of a UST system such as pumps, valves, piping, and fittings. Sump includes a dirt sump, an uncontained sump, and a containment sump.

[For text of subps 47 and 48, see M.R.]

Subp. 49. [See repealer.]

Subp. 49a. **Unattended card-lock facility.** "Unattended card-lock facility" means a facility where dispensing a regulated substance during business hours is mechanically or electronically controlled without the constant on-site presence of a class A, B, or C operator.

Subp. 50. **Underground area.** "Underground area" means an underground room such as a basement, cellar, shaft, or vault providing enough space for physical inspection of the

entire exterior of the tank or the tank's secondary containment, situated on or above the surface of the floor.

Subp. 50a. **Underground storage tank or UST.** "Underground storage tank" or "UST" means any one or combination of tanks, vessels, enclosures, structures, or internal linings that is used to contain an accumulation of regulated substances or other potentially harmful substances when the combined volume, including the volume of connected pipes, is ten percent or more beneath the surface of the ground. An underground storage tank does not include any tank described in part 7150.0010, subpart 2.

Subp. 51. **Underground ~~storage tank or underground storage tank~~ storage-tank system or UST system.**

A. "Underground ~~storage tank" or "underground storage tank~~ storage-tank system" or "UST system" means ~~any one or combination of containers including tanks, vessels, enclosures, or structures and underground appurtenances connected to them that is used to contain or dispense an accumulation of regulated substances, and the volume of which, including the volume of underground pipes connected to them, is ten percent or more beneath the surface of the ground. This term~~ an underground storage tank and any underground piping or equipment connected to an underground storage tank that is used to:

(1) dispense a regulated substance or other potentially harmful substance;

(2) provide for safe operation of the tank, piping, or appurtenances; or

(3) detect and prevent a release to the environment.

B. UST system does not include any ~~tank or~~ tanks, pipes, or appurtenances connected to a tank described in part 7150.0010, subpart 2.

Subp. 51a. **Unusual operating condition.** "Unusual operating condition" means:

A. a condition, equipment deficiency, or occurrence that:

(1) results in a release of a regulated substance;

(2) indicates the possibility of a leak from a UST system;

(3) creates a reasonable expectation that a leak from a UST system is probable; or

(4) may cause an undetected leak;

B. an unexplained presence of water in the tank; or

C. liquid in the interstitial space of secondary-containment systems.

[For text of subps 52 and 53, see M.R.]

7150.0090 NOTIFICATION AND CERTIFICATION.

Subpart 1. **Prenotification.** At least ten days before beginning any of the following activities, owners and operators must notify the ~~commissioner~~ agency in the manner prescribed by the commissioner of their intent to perform the activity:

A. installation ~~or~~, replacement, or repair of ~~an underground storage tank~~ a UST system, including tanks, piping, ~~or dispensers~~ linings, containment sumps, and corrosion protection systems, but excluding dispensers and exposed components below grade that can be visually inspected;

[For text of items B and C, see M.R.]

D. inspection of a lining on an internally lined tank.

Subp. 2. **Notification of installation, replacement, or change in status.** ~~An owner or operator~~ Owners and operators who ~~brings an underground storage tank~~ bring a UST system~~, including tanks, piping, or dispensers,~~ or components such as tanks, retrofit tanks, piping, or dispensers into use or ~~makes~~ make a change in status must, within 30 days of bringing ~~such tank~~ the UST system into use or making a change in status, submit to the

agency, in the manner prescribed by the commissioner, a notice of the existence of ~~such tank~~ the UST system or type of change in status, including the information required by Minnesota Statutes, section 116.48, subdivisions 1 and 3.

Subp. 3. **Certification by owners and operators.** Owners and operators of new and replacement ~~underground storage tank~~ UST systems, including tanks, retrofit tanks, piping, and dispensers, must sign and certify in the notification form compliance with the following requirements:

[For text of item A, see M.R.]

B. financial responsibility under Code of Federal Regulations, title 40, part 280, subpart H; ~~and~~

C. release detection according to parts 7150.0300 to 7150.0340~~.~~; and

D. corrosion protection according to part 7150.0215.

Subp. 4. **Certification by installers.** Owners and operators of new and replacement ~~underground storage tank~~ UST systems, including tanks, retrofit tanks, piping, or dispensers, must ensure that the installer signs and certifies in the notification form that:

A. all work was performed as specified by the manufacturer's instructions;

B. all work was performed according to the applicable codes of practice in ~~part~~ parts 7150.0205 and 7150.0500;

[For text of items C and D, see M.R.]

[For text of subps 5 and 6, see M.R.]

Subp. 7. **Notification of tank purchase.** A person who purchases property that the purchaser knows contains ~~an underground storage tank~~ a UST system must notify the ~~commissioner~~ agency within 30 days after closing the transaction, pursuant to subpart 2. The notification ~~shall~~ must include the change in ownership and verify that all operators,

including lessees, have read this chapter and have sufficient knowledge in the operation and maintenance of ~~underground storage tank~~ UST systems.

Subp. 8. **Notification of compatibility.** Owners and operators of a UST system must notify the agency at least 30 days before storing a regulated substance containing more than ten percent ethanol, more than 20 percent biodiesel, or any other regulated substance identified by the commissioner as a substance that could degrade components of a UST system. Owners and operators must demonstrate to the commissioner that the components of the UST system are compatible with the product being stored in accordance with part 7150.0100, subpart 9.

Subp. 9. **Notification of other regulated substances.** The commissioner must notify owners and operators in writing or electronically if the commissioner identifies any other regulated substances that require notice of compatibility under subpart 8.

7150.0100 PERFORMANCE STANDARDS FOR ~~UNDERGROUND STORAGE TANK~~ UST SYSTEMS.

[For text of subps 1 to 6, see M.R.]

Subp. 7. **Installation.** Owners and operators must ensure that the person installing UST systems or components has been certified under chapter 7105. All ~~underground storage tank~~ UST systems must be properly installed according to the manufacturer's instructions and one of the following codes of practice developed by a nationally recognized association or independent testing laboratory. The codes are incorporated by reference under part 7150.0500:

~~A. American Petroleum Institute, Installation of Underground Petroleum Storage Systems, API 1615 (1996);~~

~~B. Petroleum Equipment Institute, Recommended Practices for Installation of Underground Liquid Storage Systems, RP100 (2005);~~

~~C. American Society of Mechanical Engineers, Process Piping, B31.3 (2005); or~~

~~D. American Society of Mechanical Engineers, Pipeline Transportation Systems for Liquid Hydrocarbons and Other Liquids, B31.4 (2006).~~

A. American Petroleum Institute, Installation of Underground Petroleum Storage Systems, API RP 1615;

B. National Fire Protection Association:

(1) Flammable and Combustible Liquids Code, NFPA 30; and

(2) Code for Motor Fuel Dispensing Facilities and Repair Garages, NFPA 30A; and

C. Petroleum Equipment Institute:

(1) Recommended Practices for the Installation of Marina Fueling Systems, PEI/RP1000-14; and

(2) Recommended Practices for Installation of Underground Liquid Storage Systems, PEI/RP100-11.

Subp. 8. [Repealed, 32 SR 1751]

Subp. 9. **Compatibility.**

A. Owners and operators must use ~~underground storage tank~~ UST systems~~, spill catchment basins, submersible pump sumps, and dispenser sumps~~ made of ~~or lined with~~ materials that are compatible with the substance stored in the ~~underground storage tank~~ UST system. ~~Owners and operators storing alcohol blends may use the following guidance to comply with the requirements of this part: American Petroleum Institute, Storing and Handling Ethanol and Gasoline-Ethanol Blends at Distribution Terminals and Service Stations, API 1626 (1985). The document is incorporated by reference under part 7150.0500.~~ Owners and operators storing a regulated substance containing more than ten percent ethanol,

more than 20 percent biodiesel, or any other substance identified by the commissioner that could degrade components of a UST system must also comply with item B, if applicable, and item C or D.

B. Owners and operators must provide secondary containment for tanks retrofitted after the effective date of this part according to part 7150.0205, subpart 1.

C. Owners and operators must demonstrate compatibility of the UST system by showing:

(1) the equipment or component used in the UST system is certified or listed by an independent testing laboratory for use with the regulated substance; or

(2) the equipment's or component's manufacturer has issued a written affirmative statement of compatibility, specifying the range of biofuel blends the equipment or component is compatible with.

D. Owners and operators may demonstrate compatibility other than as specified in item C if they:

(1) provide information to the commissioner demonstrating the alternative option is no less protective of human health and the environment than the options in item C to ensure that the UST system is not degrading and will not degrade; and

(2) obtain the commissioner's prior written approval of the alternative option.

E. When considering an alternative option under item D, the commissioner must consider the type of substance and concentration of the substance that can be safely stored as part of the alternative option. If the commissioner approves the alternative option, owners and operators must comply with any conditions imposed by the commissioner to ensure human health and the environment are protected.

Subp. 10. [See repealer.]

Subp. 11. **Spill and overfill release prevention.**

A. Owners and operators must ensure that releases due to spilling or overfilling do not occur. The owner or operator must ensure that the volume available in the tank is greater than the volume of product to be transferred to the tank before the transfer is made and that the transfer operation is monitored constantly to prevent overfilling and spilling. One of the following codes of practice developed by a nationally recognized association or independent testing laboratory must be used to comply with this subpart. The codes are incorporated by reference under part 7150.0500:

~~(1) National Fire Protection Association, Flammable and Combustible Liquids Code, NFPA 30 (2003);~~

~~(2) National Fire Protection Association, Standard for Tank Vehicles for Flammable and Combustible Liquids, NFPA 385 (2007); or~~

~~(3) American Petroleum Institute, Bulk Liquid Stock Control at Retail Outlets, API 1621 (1987).~~

(1) American Petroleum Institute, Bulk Liquid Stock Control at Retail Outlets, API RP 1621;

(2) American Petroleum Institute, Loading and Unloading of MC 306/DOT 406 Cargo Tank Motor Vehicles, API RP 1007; and

(3) National Fire Protection Association, Standard for Tank Vehicles for Flammable and Combustible Liquids, NFPA 385.

B. ~~The owner and operator~~ Owners and operators must report, investigate, and clean up any spills and overfills according to Minnesota Statutes, section 115.061.

Subp. 12. [See repealer.]

Subp. 12a. **Containment sumps and spill buckets.** Owners and operators must ensure that containment sumps used for interstitial monitoring and spill buckets are liquid tight to prevent releases of regulated substances to the environment.

Subp. 13. **Shear valves.** Owners and operators must ensure all shear valves ~~shall be~~ are securely anchored and installed according to manufacturer recommendations and industry standards. Shear valves installed or repaired after the effective date of this part must be of a double-poppet design that prevents release of fuel from both sides of the shear valve if the shear valve breaks at the shear point.

Subp. 14. **Drop tubes.** Owners and operators must ensure that all underground storage tanks ~~shall~~ have a drop tube that extends to within six inches of the tank bottom.

7150.0205 DESIGN AND CONSTRUCTION.

Subpart 1. **Tanks.** ~~Each tank must be properly designed and constructed and any part underground that routinely contains product must be protected from corrosion using one of the following methods, except that all hazardous materials tanks and all tanks, other than heating oil tanks, installed or replaced after December 22, 2007, must comply with item D. The corrosion protection methods must be in accordance with one of the codes of practice in subpart 2 developed by a nationally recognized association or independent testing laboratory.~~

A. Tanks that do not meet the requirements of this subpart must be permanently closed according to part 7150.0410.

~~A. The tank is constructed of fiberglass-reinforced plastic.~~

~~B. The tank is constructed of steel and cathodically protected in the following manner:~~

~~(1) the tank is coated with a suitable dielectric material;~~

~~(2) field-installed cathodic protection systems are designed by a corrosion expert;~~

~~(3) impressed current systems are designed to allow determination of current operating status as required in part 7150.0215, subpart 3, item A; and~~

~~(4) cathodic protection systems are operated and maintained according to part 7150.0215.~~

~~C. The tank is constructed of a steel and fiberglass-reinforced plastic composite.~~

~~D. The tank is secondarily contained.~~

~~(1) Secondary containment tanks shall use one of the following designs:~~

~~(a) the tank is of double-walled fiberglass-reinforced plastic construction;~~

~~(b) the tank is of double-walled steel construction, with cathodic protection of the outer wall meeting the requirements of item B;~~

~~(c) the tank is of double-walled steel construction with a fiberglass-reinforced plastic jacket; or~~

~~(d) the tank is of single-walled steel construction with a fiberglass-reinforced plastic jacket, which is designed to contain and detect a leak through the steel wall.~~

~~(2) All secondary containment tanks shall be capable of containing a release from the inner wall of the tank and shall be designed with release detection according to part 7150.0330, subpart 6.~~

~~(3) If a tank is replaced in accordance with this item, all piping appurtenant to the tank shall comply with subpart 3, item D.~~

~~E. The tank is internally lined.~~

~~(1) A tank with an internal lining as the sole method of corrosion protection shall be internally inspected and evaluated within ten years after lining, and every five years thereafter, and found to be structurally sound with the lining still performing according to original design specifications, as follows:~~

~~(a) internal inspections and evaluations shall be conducted in accordance with American Petroleum Institute, Interior Lining and Periodic Inspection of Underground Storage Tanks, API 1631 (2001), incorporated by reference under part 7150.0500;~~

~~(b) lining inspectors shall be approved by the manufacturer of the lining, if an approval process exists, or shall be qualified by reason of training and experience in the application and inspection of type of internal lining to be inspected;~~

~~(c) the owner, operator, or lining inspector shall notify the commissioner at least ten days prior to performing an inspection according to part 7150.0090, subpart 1;~~

~~(d) inspections shall include thorough cleaning of the lining; visual inspection of the lining for cracking, blistering, perforation, disbonding, and excessive wear; ultrasonic thickness testing (steel tanks only); holiday (spark) testing for lining continuity; lining thickness measurement; lining hardness testing; and representative photographs of internal surfaces;~~

~~(e) inspections shall be primarily by manned entry. Video camera observation alone is not allowed;~~

~~(f) minor abnormal conditions of the lining, such as short cracks or localized disbonding, may be repaired, so long as the conditions do not constitute more than five percent of the lining surface area and the repairs will return the lining to substantially the original design specifications;~~

~~(g) if a repair to the tank or to the internal lining as allowed under unit (f) is performed, the tank must pass a tightness test at a 0.1 gallon per hour leak rate using~~

~~equipment for automatic tank gauging or another test method, prior to or within 30 days after returning the tank to service;~~

~~(h) a written inspection report shall be produced that describes the results of all tests and evaluations required by unit (d), and the results of tightness testing under unit (g). The report shall identify any abnormal conditions found during the inspection and the measures taken to correct the conditions. The inspector shall certify in the report that, in the professional judgment of the inspector, the tank is structurally sound, the lining is performing according to original design specifications, and the tank and lining will maintain their integrity for at least five years under the anticipated conditions of use; and~~

~~(i) the inspection report under unit (h) shall be submitted to the commissioner within 60 days of the internal inspection.~~

~~(2) A tank with an internal lining as the sole method of corrosion protection shall be permanently closed and site assessment completed according to parts 7150.0410 and 7150.0420 if at any time the lining is found to have failed. Lining failure is defined as any abnormal conditions other than minor abnormal conditions described in subitem (1), unit (f). The lining may not be replaced, nor may such a tank be upgraded with cathodic protection or another corrosion protection method to meet the requirements of this subpart.~~

~~F. The tank construction and corrosion protection are determined by the commissioner to be designed to prevent the release or threatened release of a stored, regulated substance in a manner that is no less protective of human health and the environment than items A to E. The commissioner's determination under this item must be obtained in writing and the owners and operators must keep the determination for the life of the tank.~~

B. Owners and operators must ensure that any underground part of a tank that routinely contains product is properly designed, constructed, and protected from corrosion using one of the methods under this item. The tank must be:

(1) constructed of fiber-reinforced plastic, including:

(a) a costructural retrofit tank, with cathodic protection on corrodible structural supports; or

(b) a self-structural retrofit tank;

(2) constructed of steel and cathodically protected according to this subitem. All cathodic-protection systems under this subitem must be operated and maintained according to part 7150.0215. The tank must:

(a) be coated with a suitable dielectric material and a factory-installed sacrificial-anode system;

(b) have a field-installed cathodic-protection system designed and certified by a corrosion expert; or

(c) have an impressed-current system designed and certified by a corrosion expert that allows determination of current operating status as required under part 7150.0215, subpart 3;

(3) constructed of steel with a noncorrodible jacket of a design and thickness so that additional corrosion protection is not required;

(4) internally lined, provided that the tank is lined on or before December 22, 2007, according to part 7150.0215, subpart 4; or

(5) constructed and protected from corrosion using a method that prevents the release or threatened release of a stored, regulated substance and is no less protective of human health and the environment than the methods under subitems (1) to (4), as determined by the commissioner. The commissioner's determination under this subitem must be obtained in writing, and the owners and operators must keep the determination for the life of the tank.

C. Except for heating-oil tanks, owners and operators must:

(1) secondarily contain all hazardous-substance tanks;

(2) secondarily contain all tanks containing regulated substances, including retrofit tanks, installed or replaced after December 22, 2007; and

(3) ensure that:

(a) the secondary containment is capable of containing a release from the inner wall of a tank and designed with release detection according to part 7150.0330, subpart 6; and

(b) if a tank is replaced or retrofitted in accordance with this item, all piping appurtenant to the tank is secondarily contained and complies with subpart 3.

Subp. 2. **Codes of practice for tanks.** ~~Codes of practice for subpart 1 are described in items A to E.~~ The codes of practice in this subpart must be used to comply with subpart 1, as applicable. The codes are incorporated by reference under part 7150.0500.

~~A. The following codes of practice apply to subpart 1, item A:~~

~~(1) Underwriters Laboratories, Standard for Glass-Fiber-Reinforced Plastic Underground Storage Tanks for Petroleum Products, Alcohols, and Alcohol-Gasoline Mixtures, UL 1316 (2006); or~~

~~(2) Underwriters' Laboratories of Canada, Standard for Reinforced Plastic Underground Tanks for Flammable and Combustible Liquids, ULC-S615-98 (1998).~~

~~B. The following codes of practice apply to subpart 1, item B:~~

~~(1) Steel Tank Institute, Specification and Manual for External Corrosion Protection of Underground Steel Storage Tanks, STI-P3 (2006);~~

~~(2) Underwriters Laboratories, Standard for Safety for External Corrosion Protection Systems for Steel Underground Storage Tanks, UL 1746 (2007);~~

~~(3) Underwriters' Laboratories of Canada, External Corrosion Protection Systems for Steel Underground Tanks for Flammable and Combustible Liquids, CAN/ULC-S603.1-03 (2003);~~

~~(4) Underwriters' Laboratories of Canada, Standard for Steel Underground Tanks for Flammable and Combustible Liquids, CAN/ULC-S603-00 (2000);~~

~~(5) Underwriters' Laboratories of Canada, Isolating Bushings for Steel Underground Tanks Protected with External Corrosion Protection Systems, ULC-S631-05 (2005);~~

~~(6) National Association of Corrosion Engineers, Corrosion Control of Underground Storage Tank Systems by Cathodic Protection, RP0285-2002 (2002); or~~

~~(7) Underwriters Laboratories, Standard for Steel Underground Tanks for Flammable and Combustible Liquids, UL 58 (1996).~~

~~C. The following codes of practice apply to subpart 1, item C:~~

~~(1) Underwriters Laboratories, Standard for Safety for External Corrosion Protection Systems for Steel Underground Storage Tanks, UL 1746 (2007); or~~

~~(2) Steel Tank Institute, ACT-100 Specification for External Corrosion Protection of Composite Steel Underground Storage Tanks, STI F894 (2006).~~

~~D. The following codes of practice apply to subpart 1, item D:~~

~~(1) Underwriters Laboratories, Standard for Steel Underground Tanks for Flammable and Combustible Liquids, UL 58 (1996);~~

~~(2) Underwriters Laboratories, Standard for Safety for External Corrosion Protection Systems for Steel Underground Storage Tanks, UL 1746 (2007);~~

~~(3) Steel Tank Institute, Recommended Practice for Interstitial Tightness Testing of Existing Underground Double Wall Steel Tanks, RP012 (2006); and~~

~~(4) Steel Tank Institute, Standard for Dual Wall Underground Steel Storage Tanks, STI F841 (2006).~~

~~E. The following code of practice applies to subpart 1, item E: American Petroleum Institute, Interior Lining and Periodic Inspection of Underground Storage Tanks, API 1631 (2001).~~

A. American Petroleum Institute, Interior Lining and Periodic Inspection of Underground Storage Tanks, API STD 1631.

B. NACE International, Corrosion Control of Underground Storage Tank Systems by Cathodic Protection, SP0285-2011.

C. Steel Tank Institute, Recommended Practice for Interstitial Tightness Testing of Existing Underground Double Wall Steel Tanks, R012.

D. Steel Tank Institute, ACT-100® Specification for External Corrosion Protection of FRP Composite Steel USTs, F894.

E. Steel Tank Institute, Specification and Manual for External Corrosion Protection of Underground Steel Storage Tanks, STI-P3®.

F. Steel Tank Institute, Standard for Dual Wall Underground Steel Storage Tanks, F841.

G. Steel Tank Institute, ACT-100-U® Specification for External Corrosion Protection of Composite Steel Underground Storage Tanks, F961.

H. Steel Tank Institute, Specification for Permatank®, F922.

I. Underwriters' Laboratories of Canada, External Corrosion Protection Systems for Steel Underground Tanks for Flammable and Combustible Liquids, CAN/ULC-S603.1-11.

J. Underwriters' Laboratories of Canada, Standard for Steel Underground Tanks for Flammable and Combustible Liquids, CAN/ULC-S603-14.

K. Underwriters' Laboratories of Canada, Standard for Isolating Bushings for Steel Underground Tanks Protected with External Corrosion Protection Systems, ULC-S631-05.

L. Underwriters' Laboratories of Canada, Standard for Fibre Reinforced Plastic Underground Tanks for Flammable and Combustible Liquids, CAN/ULC-S615-14.

M. Underwriters Laboratories, Outline of Investigation for Underground Fuel Tank Internal Retrofit Systems, UL 1856.

N. Underwriters Laboratories, Glass-Fiber-Reinforced Plastic Underground Storage Tanks for Petroleum Products, Alcohols, and Alcohol-Gasoline Mixtures, UL 1316.

O. Underwriters Laboratories, Standard for External Corrosion Protection Systems for Steel Underground Storage Tanks, UL 1746.

P. Underwriters Laboratories, Standard for Steel Underground Tanks for Flammable and Combustible Liquids, UL 58.

Subp. 3. **Piping.** ~~The piping that routinely contains regulated substances and is in contact with the ground must be properly designed, constructed, and protected from corrosion using one of the following methods, except that all hazardous materials piping and all piping, other than heating oil piping, installed or replaced after December 22, 2007, other than piping that conveys regulated substances under safe suction meeting the design requirements of part 7150.0300, subpart 6, item B, subitem (2), shall comply with item D. The corrosion protection methods in items A to D must be in accordance with one of the codes of practice~~

~~in subpart 4 developed by a nationally recognized association or independent testing laboratory.~~

~~A. The piping is constructed of fiberglass-reinforced plastic.~~

~~B. The piping is constructed of steel and cathodically protected in the following manner:~~

~~(1) the piping is coated with a suitable dielectric material;~~

~~(2) field-installed cathodic protection systems are designed by a corrosion expert;~~

~~(3) impressed current systems are designed to allow determination of current operating status as required in part 7150.0215, subpart 3, item A; and~~

~~(4) cathodic protection systems are operated and maintained according to part 7150.0215.~~

~~C. The piping is constructed of a steel and fiberglass-reinforced plastic composite.~~

~~D. The piping is secondarily contained.~~

~~(1) Secondary containment piping shall use one of the following designs:~~

~~(a) the piping is of double-walled fiberglass-reinforced plastic construction;~~

~~(b) the piping is of double-walled steel construction, with cathodic protection of the outer wall meeting the requirements of item B;~~

~~(c) the piping is of double-walled steel construction with a fiberglass-reinforced plastic jacket;~~

~~(d) the piping is of single-walled steel construction with a fiberglass-reinforced plastic jacket, which is designed to contain and detect a leak through the steel wall; or~~

~~(e) the piping is of double-walled nonmetallic flexible construction.~~

~~(2) All secondary containment piping shall be capable of containing a release from the inner wall of the piping and shall be designed with release detection according to part 7150.0340, subpart 4.~~

~~E. The piping is of single-walled nonmetallic flexible construction.~~

~~F. The piping construction and corrosion protection are determined by the commissioner to be designed to prevent the release or threatened release of a stored regulated substance in a manner that is no less protective of human health and the environment than the requirements of items A to D. The commissioner's determination under this item must be obtained in writing and the tank owners and operators must keep the determination for the life of the tank.~~

A. Piping that does not meet the requirements of this subpart must be permanently closed according to part 7150.0410.

B. Owners and operators must ensure that piping that routinely contains product is properly designed, constructed, and protected from corrosion using one of the methods under this item. The piping must be:

(1) constructed of a noncorrodible material;

(2) constructed of steel and cathodically protected according to this subitem. All cathodic-protection systems under this subitem must be operated and maintained according to part 7150.0215. The piping must:

(a) be coated with a suitable dielectric material and a sacrificial-anode system designed and installed according to industry standards or under the control of a corrosion expert;

(b) have a field-installed cathodic-protection system designed and certified by a corrosion expert; or

(c) have an impressed-current system designed by a corrosion expert that allows determination of current operating status as required under part 7150.0215, subpart 3; or

(3) constructed and protected from corrosion using a method that prevents release or threatened release of a stored, regulated substance and is no less protective of human health and the environment than the methods under subitems (1) and (2), as determined by the commissioner. The commissioner's determination under this subitem must be obtained in writing, and the owners and operators must keep the determination for the life of the tank.

C. Except for heating-oil piping and piping that conveys product under suction and meets the design requirements of part 7150.0300, subpart 6, item B, subitem (2), owners and operators must:

(1) secondarily contain hazardous substance piping;

(2) secondarily contain all piping containing regulated substances installed or replaced after December 22, 2007; and

(3) ensure that:

(a) the secondary containment is capable of containing a release from the inner wall of the piping and is designed with release detection according to part 7150.0340, subpart 4; and

(b) all secondarily contained piping installed after December 22, 2007, has secondary containment meeting the requirements of subparts 6 and 7 at each end of the piping segment, except for:

i. secondarily contained piping entering a building, provided that the building will contain a release until it can be detected and remedied; or

ii. transition joints approved for direct burial by the manufacturer when connecting secondarily contained piping to a single-wall pipe.

Subp. 4. **Codes of practice for piping.** ~~Codes of practice for subpart 3 are described in items A and B~~ The codes of practice under this subpart must be used to comply with subpart 3, as applicable. The codes are incorporated by reference under part 7150.0500.

~~A. The following codes of practice apply to subpart 3, item A:~~

~~(1) Underwriters Laboratories, Emergency Breakaway Fittings, Swivel Connectors and Pipe-Connection Fittings for Petroleum Products and LP-Gas, UL 567 (2004);~~

~~(2) Underwriters' Laboratories of Canada, Standard for Flexible Underground Hose Connectors for Flammable and Combustible Liquids, CAN/ULC-S633-99 (1999); or~~

~~(3) Underwriters' Laboratories of Canada, Guide for Glass-Fiber-Reinforced Plastic Pipe and Fittings for Flammable Liquids, ULC Subject C107C-M1984 (1984).~~

~~B. The following codes of practice apply to subpart 3, item B:~~

~~(1) National Fire Protection Association, Flammable and Combustible Liquids Code, NFPA 30 (2003);~~

~~(2) American Petroleum Institute, Installation of Underground Petroleum Storage Systems, API 1615 (1996);~~

~~(3) American Petroleum Institute, Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems, API 1632 (1996); or~~

~~(4) National Association of Corrosion Engineers, Control of External Corrosion on Underground or Submerged Metallic Piping Systems, SP0169-2007 (2007).~~

A. American Petroleum Institute, Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems, API RP 1632.

B. NACE International, Control of External Corrosion on Underground or Submerged Metallic Piping Systems, SP0169-2013.

C. NACE International, Corrosion Control of Underground Storage Tank Systems by Cathodic Protection, SP0285-2011.

D. Steel Tank Institute, Recommended Practice for Corrosion Protection of Underground Piping Networks Associated with Liquid Storage and Dispensing Systems, R892.

E. Underwriters' Laboratories of Canada, Standard for Nonmetallic Underground Piping for Flammable and Combustible Liquids, CAN/ULC S660-08.

F. Underwriters Laboratories, Standard for Nonmetallic Underground Piping for Flammable Liquids, UL 971.

G. Underwriters Laboratories, Outline of Investigation for Metallic Underground Fuel Pipe, UL 971A.

Subp. 5. ~~**Spill and overfill prevention**~~ **Spill-prevention and overfill-prevention equipment.**

A. Except as provided in item B, to prevent spilling and overfilling associated with product transfer to the ~~underground storage tank~~ UST system, owners and operators must use ~~the following spill and overfill prevention equipment~~:

(1) ~~spill prevention~~ spill-prevention equipment that ~~will prevent~~ prevents release of product to the environment when the transfer hose is detached from the fill pipe~~.~~; for example, a spill ~~catchment basin~~ bucket; and

(2) ~~overfill prevention~~ one of the following types of overfill-prevention equipment ~~that will~~:

(a) equipment that automatically ~~shut~~ shuts off flow into the tank when the tank is no more than 95 percent full~~; or~~. Any flow-restricting overfill device in a vent line must be entirely removed when an automatic shutoff device is used to prevent releases from the tank;

(b) ~~alert~~ equipment that alerts the transfer operator when the tank is no more than 90 percent full by restricting the flow into the tank or triggering a high-level alarm audible to the transfer operator~~.~~, provided that:

i. all tank openings are liquid tight when used in conjunction with flow-restricting devices in vent lines and high-level alarms;

ii. flow-restricting devices used in vent lines are not installed on UST systems after the effective date of this part;

iii. flow-restricting devices in vent lines are not allowed on suction systems with air eliminators;

iv. flow-restricting devices used in vent lines are not used in conjunction with overfill devices installed in the drop tube; and

v. flow-restricting devices in vent lines are not used in conjunction with coaxial stage 1 vapor-recovery systems; and

(c) vent-restriction devices in vent lines or auto-shutoff devices must not be used on tanks equipped with remote fill pipes or on UST systems where product is delivered under pressure.

B. Owners and operators are not required to use the ~~spill and overfill prevention~~ spill-prevention and overfill-prevention equipment specified in item A if:

[For text of subitem (1), see M.R.]

(2) the ~~underground storage tank~~ UST system is filled by transfers of no more than 25 gallons at one time.

The commissioner's determination under subitem (1) must be obtained in writing, and the tank owners and operators must keep the determination for the life of the tank.

C. Before placing a UST system into service, the owners and operators must:

(1) test spill buckets for liquid tightness according to part 7150.0216, subparts 1 and 4; and

(2) test overfill devices for proper function according to part 7150.0216, subparts 1 and 5.

Subp. 6. **Submersible ~~pumps~~ pump sumps.**

A. After December 22, 2007, owners and operators must provide any new or replacement submersible pump~~, including replacement pump head, shall be provided~~ with secondary containment around and beneath the pump head. Secondary containment ~~shall~~ must be:

(1) designed to contain a ~~release~~ leak from the pump head and any ~~connectors, fittings, and valves beneath the pump head~~ appurtenance or leak-detection device until the release can be detected and removed;

(2) designed with liquid-tight sides, bottom, ~~cover,~~ and points of penetration;

(3) constructed of fiberglass-reinforced plastic or other synthetic material of comparable thickness and durability; ~~and~~

(4) compatible with the stored substance~~.~~; and

(5) tested liquid tight before backfilling the secondary containment and placing the UST system into service according to part 7150.0216, subparts 1 and 4.

B. Any submersible pump installed before December 22, 2007, and not in a secondarily contained sump used for interstitial monitoring must be accessible for visual inspection and must not be covered by soil, water, or other obstacles that prevent visual inspections.

C. The following ~~code~~ codes of practice ~~may~~ are incorporated by reference under part 7150.0500 and must be used to meet the requirements of this subpart, as applicable:

(1) Underwriters' Laboratories of Canada, Under-Dispenser Sumps, ~~ULC/ORD-C107.21-1992 (1992). The code is incorporated by reference under part 7150.0500.~~ ULC/ORD-C107.21; and

(2) Underwriters Laboratories, Outline of Investigation for Containment Sumps, Fittings and Accessories for Fuels, UL 2447.

Subp. 7. **~~Dispensers~~ Dispenser sumps.**

A. ~~After December 22, 2007, any new dispenser, and any replacement dispenser where work is performed beneath any shear valves or check valves or on any flexible connectors or unburied risers, shall be provided with secondary containment beneath the dispenser. Secondary containment shall be:~~ Owners and operators must install secondary containment under a dispenser if:

(1) ~~designed to contain a release from the dispenser and any connectors, fittings, and valves beneath the dispenser until the release can be detected and removed~~ the dispenser is part of a new UST system;

(2) ~~designed with liquid-tight sides, bottom, and points of penetration~~ new or replacement piping is connected to the dispenser;

(3) ~~constructed of fiberglass-reinforced plastic or other synthetic material of comparable thickness and durability; and~~ a dispenser is replaced with work performed below the shear valves; or

(4) ~~compatible with the stored substance~~ the concrete or base material under the dispenser is replaced, repaired, or modified.

B. Secondary containment must be:

(1) designed to contain a leak from the dispenser and any components of a UST system in or under the dispenser until the leak can be detected and remedied;

(2) designed with liquid-tight sides, bottom, and points of penetration;

(3) constructed of fiberglass-reinforced plastic or other synthetic material of comparable thickness and durability;

(4) compatible with the stored substance; and

(5) tested liquid tight before backfilling the secondary containment and placing the dispenser into service according to part 7150.0216, subparts 1 and 4.

C. Owners and operators must ensure that underdispenser containment installed after the effective date of this part allows for visual inspection and access to the components in the containment system.

D. Owners and operators performing dispenser repair are not required to install secondary containment.

E. The following ~~code~~ codes of practice ~~shall~~ are incorporated by reference under part 7150.0500 and must be used to meet the requirements of this subpart, as applicable:

(1) Underwriters' Laboratories of Canada, Under-Dispenser Sumps, ~~ULC/ORD-C107.21-1992 (1992). The code is incorporated by reference under part 7150.0500.~~ ULC/ORD-C107.21; and

(2) Underwriters Laboratories, Outline of Investigation for Containment Sumps, Fittings and Accessories for Fuels, UL 2447.

Subp. 8. **Emergency stops.** Owners and operators must have an emergency disconnect switch that is readily available to persons dispensing a regulated substance to disconnect electric power to pumps and dispensers, in accordance with the Minnesota State Fire Code, in the event of an emergency.

7150.0215 ~~OPERATION AND MAINTENANCE OF CATHODIC~~ OPERATING AND MAINTAINING CORROSION PROTECTION.

Subpart 1. ~~**General**~~ **Operating and maintaining cathodic protection.** ~~Cathodic protection~~ Owners and operators of a UST system must operate and maintain cathodic-protection systems ~~must be operated and maintained~~ to continuously provide cathodic protection to the metal components of the parts of the tank and piping that routinely contain regulated substances and are in contact with the ground.

Subp. 2. ~~**Sacrificial anode**~~ **Sacrificial-anode systems.** ~~Sacrificial anode cathodic protection systems~~ Owners and operators with a sacrificial-anode system for cathodic protection must ~~be tested~~ test for proper operation according to the following requirements:

A. systems must be tested by a ~~cathodic protection~~ cathodic-protection tester:

(1) within six months of installation and at least every three years thereafter~~,~~; and

(2) within six months after any repairs and at least every three years thereafter;

B. ~~the criteria that are~~ one of the codes of practice under subpart 5 must be used to determine that cathodic protection is adequate as required by this subpart ~~must be according to National Association of Corrosion Engineers, Corrosion Control of Underground Storage Tank Systems by Cathodic Protection, RP0285-2002 (2002), incorporated by reference under part 7150.0500~~; and

C. ~~systems designed with external testing stations must be tested using a voltmeter according to this subpart, but do not require testing by a cathodic protection tester.~~ repairs to sacrificial-anode systems must be conducted within 60 days of failing test results and must be:

(1) conducted according to one of the industry standards under subpart 5 by a certified tank contractor under chapter 7105, a cathodic-protection tester, or a corrosion expert; or

(2) conducted according to the design and recommendations of a corrosion-protection expert by a certified tank contractor under chapter 7105, a cathodic-protection tester, or a corrosion expert.

Subp. 3. **~~Impressed current~~ Impressed-current systems.** ~~Impressed current cathodic protection systems~~ Owners and operators with an impressed-current system for cathodic protection must ~~be tested~~ test for proper operation according to the following requirements:

A. the rectifier must be read every 60 days to ensure that current is being delivered to the system, and the voltage and amperage readings ~~shall~~ must be recorded;

B. systems must be tested by a corrosion expert or a ~~cathodic protection~~ cathodic-protection tester:

(1) within six months of installation and at least annually thereafter~~,~~; and

(2) within six months after any repairs and at least annually thereafter; ~~and~~

C. ~~the criteria that are~~ one of the codes of practice under subpart 5 must be used to determine that cathodic protection is adequate as required by this subpart ~~must be according to National Association of Corrosion Engineers, Corrosion Control of Underground Storage Tank Systems by Cathodic Protection, RP0285-2002 (2002), incorporated by reference under part 7150.0500.~~; and

D. repairs to the impressed-current system must be conducted:

(1) within 60 days of a failing test result;

(2) by a certified tank contractor under chapter 7105, a cathodic-protection tester, or a corrosion expert; and

(3) in accordance with the design and written approval of a corrosion expert.

Subp. 4. **Internally lined tanks.**

A. Owners and operators must ensure that a tank with an internal lining for corrosion protection is internally inspected and evaluated within ten years after lining and every five years thereafter and found to be structurally sound with the lining performing according to original design specifications as follows:

(1) internal inspection and evaluation must be conducted according to American Petroleum Institute, Interior Lining and Periodic Inspection of Underground Storage Tanks, API 1631, incorporated by reference under part 7150.0500;

(2) the lining inspector must be approved by the manufacturer of the lining, if an approval process exists, or must be qualified by training and experience in the application and inspection of the type of internal lining to be inspected;

(3) the owners, operators, or lining inspector must notify the agency at least ten days before performing an inspection according to part 7150.0090, subpart 1;

(4) inspections must include a thorough cleaning of the lining; visual inspection of the lining for cracking, blistering, perforation, disbonding, and excessive wear; ultrasonic thickness testing; holiday (spark) testing for lining continuity; lining thickness measurement; lining hardness testing; and representative photographs of internal surfaces;

(5) inspections must be primarily by manned entry. Video-camera observation alone is not allowed;

(6) minor abnormal conditions of the lining, such as short cracks or localized disbonding, may be repaired if the conditions do not constitute more than five percent of the lining surface area and the repairs will return the lining to substantially the original design specifications; and

(7) if a repair to the tank or to the internal lining as allowed under subitem (6) is performed, the tank must pass a tightness test according to part 7150.0330, subpart 4, before or within 30 days after returning the tank to service.

B. A written inspection report must be produced that describes the results of all tests and evaluations required by item A, subitem (4), and the results of tightness testing under item A, subitem (7). The report must identify any abnormal conditions found during the inspection and the measures taken to correct the conditions. The inspector must certify in the report that, in the professional judgment of the inspector, the tank is structurally sound, the lining is performing according to original design specifications, and the tank and lining will maintain their integrity for at least five years under the anticipated conditions of use. The inspection report must be submitted to the agency within 60 days after the internal inspection.

C. A tank with an internal lining as the sole method of corrosion protection must be permanently closed and site assessment completed according to parts 7150.0345 and 7150.0410 if at any time abnormal conditions other than minor abnormal conditions described in item A, subitem (6), are found to exist. The lining may not be replaced, nor may the tank

be upgraded with cathodic protection or another corrosion-protection method to meet the requirements of this subpart.

Subp. 5. **Codes of practice.** The following codes of practice for operating and maintaining cathodic protection must be used to comply with this part, as applicable, and the codes are incorporated by reference under part 7150.0500:

A. NACE International, Control of External Corrosion on Underground or Submerged Metallic Piping Systems, SP0169-2013;

B. NACE International, Corrosion Control of Underground Storage Tank Systems by Cathodic Protection, SP0285-2011;

C. NACE International, Measurement Techniques Related to Criteria for Cathodic Protection of Underground Storage Tank Systems, TM101-2012;

D. NACE International, Measurement Techniques Related to Criteria for Cathodic Protection on Underground or Submerged Metallic Piping Systems, TM0497-2012;

E. Petroleum Equipment Institute, Recommended Practices for Installation of Underground Liquid Storage Systems, PEI/RP100-11;

F. Steel Tank Institute, Cathodic Protection Testing Procedures for sti-P3® UST's, R051;

G. Steel Tank Institute, Recommended Practice for Corrosion Protection of Underground Piping Networks Associated with Liquid Storage and Dispensing Systems, R892; and

H. Steel Tank Institute, Recommended Practice for the Addition of Supplemental Anodes to sti-P3® UST's, R972.

7150.0216 OPERATING, MAINTAINING, AND TESTING UST SYSTEMS.

Subpart 1. **General.**

A. Owners and operators must maintain, test, operate, and inspect tanks, piping, and associated components of a UST system as described in this part and in accordance with:

(1) requirements of the manufacturer;

(2) the following codes of practice developed by a nationally recognized association and incorporated by reference under part 7150.0500:

(a) Petroleum Equipment Institute, Recommended Practices for the Testing and Verification of Spill, Overfill, Leak Detection and Secondary Containment Equipment at UST Facilities, PEI/RP1200; and

(b) Petroleum Equipment Institute, Recommended Practices for the Inspection and Maintenance of UST Systems, PEI/RP900; or

(3) requirements determined by the commissioner to be equivalent and no less protective of human health and the environment than subitems (1) and (2).

B. Wastes from testing, such as hydrostatic testing water, must be properly disposed of according to state and local regulations. Documentation demonstrating that testing wastes were properly disposed of according to state and local regulations must be maintained according to part 7150.0450.

Subp. 2. **Periodic operation and maintenance inspections.**

A. Owners and operators of a UST system must ensure the proper maintenance and operation of the UST system. At a minimum, owners and operators must conduct a monthly walk-through inspection of the UST system. During the inspection, the owners and operators must:

(1) visually check dispenser sumps, spill buckets, transition sumps, and submersible pump sumps for leaks and equipment defects;

(2) investigate and remedy the source of any spill, drip, or leak from the UST system;

(3) remove any liquid or debris from containment sumps used for interstitial monitoring and spill buckets;

(4) remove any liquid or debris from sumps to allow the piping, pump head, and other appurtenances in the sump to be inspected;

(5) ensure that release-detection equipment is operating with no alarms or other unusual operating conditions present and that records of release detection are reviewed and current;

(6) ensure that riser caps are tight and that there are no obstructions in the fill risers that would prevent an overfill device from functioning properly; and

(7) ensure that the bottom of the tank is monitored for water to the nearest one-eighth of an inch through electronic or manual gauging at least once a month.

B. Submersible pump sumps are exempt from inspections under item A if the sump is secondarily contained and equipped with a leak-sensing device that alerts the operator of a regulated substance or water in the sump and the sump sensor is tested annually for proper function.

C. Spill buckets are exempt from inspections under item A if the UST system receives deliveries at intervals greater than 30 days and the spill bucket is inspected before and immediately after each delivery. Owners and operators must maintain delivery records to verify infrequent deliveries.

D. Owners and operators must maintain records of inspections under this subpart. Records must include a list of each area checked, whether each area checked was compliant or needed action taken, and a description of any compliance actions taken.

Subp. 3. **Release-detection equipment.**

A. Owners and operators must test and maintain release-detection equipment to ensure that the equipment can detect a release from any part of the UST system that routinely contains product.

B. Owners and operators must annually test electronic, mechanical, and handheld components of release-detection equipment for serviceability and proper operation. Beginning no later than October 13, 2020, owners and operators must annually inspect components listed under item C using an agency-approved tester.

C. As applicable to the facility, testing under this subpart must, at a minimum, include the following components and criteria:

(1) for automatic tank gauges and other controllers, test alarms, verify system configuration, and test battery backup.

(2) for probes and sensors, inspect for residual buildup, ensure floats move freely, ensure the shaft is not damaged, ensure cables are free of kinks and breaks, and test alarm operability and communication with controller;

(3) for automatic line-leak detectors, test the operation to meet the criteria under part 7150.0340, subpart 2, item D;

(4) for vacuum pumps and pressure gauges, ensure proper communication with sensors and controllers;

(5) for spill buckets and containment sumps, visually inspect spill buckets and containment sumps used for interstitial monitoring, including seals at piping, electrical, and other penetration points, for deficiencies; and

(6) for handheld leak-detection materials, ensure that any measuring sticks, fuel-finding pastes, or other handheld items used for leak detection are in a functional condition.

Subp. 4. **Spill buckets and containment sumps.**

A. Owners and operators must ensure spill buckets and containment sumps used for interstitial monitoring of piping prevent releases to the environment by:

(1) testing spill buckets and containment sumps at least once every three years to ensure the equipment is liquid tight; or

(2) monitoring spill buckets and containment sumps that are double walled monthly to ensure the integrity of both walls, checking for leaks into the interstitial area or equipment.

B. Any automatic leak-sensing device used to monitor spill bucket or containment sump interstitial areas must be tested annually for proper function.

C. Beginning no later than October 13, 2020, testing under items A, subitem (1), and B must be performed by an agency-approved tester.

Subp. 5. **Overfill-prevention equipment.** Owners and operators must ensure overfill-prevention equipment is inspected at least every three years. The inspection must ensure that the overfill-prevention equipment is set to activate at the correct level and will activate when a regulated substance reaches that level. Beginning no later than October 13, 2020, inspections under this subpart must be performed by an agency-approved tester.

Subp. 6. **Agency-approved testers.**

A. To become agency-approved testers, individuals must:

(1) apply to the commissioner for approval every four years in a format prescribed by the commissioner. The application must include the applicant name, mailing address, telephone number, and information demonstrating compliance with subitems (2) and (3);

(2) be certified by the manufacturers of components of a UST system being tested and the manufacturers of equipment used to test UST systems, if the manufacturers offer certification; and

(3) meet one of the following criteria:

(a) be an employee of an agency-certified tank contractor under chapter 7105; or

(b) be an employee of an independent company that specializes in testing UST systems, is not affiliated with the owner or operator of the UST system being tested, and has comprehensive general liability insurance with pollution liability coverage no less than $1,000,000.

B. The commissioner must deny an application for an agency-approved tester or suspend, restrict, or revoke approval of an agency-approved tester if the commissioner finds the applicant or tester:

(1) failed to meet the approval requirements in item A;

(2) failed to comply with inspection and testing requirements in this chapter;

(3) submitted false or misleading information to obtain or renew agency approval under this part or certification under chapter 7105; or

(4) engaged in fraudulent activities related to records, test results, or repairs while performing duties as an agency-approved tester.

C. The commissioner must provide written notice by mail to the subject of the action under item B describing, as applicable, the effective date of the action, the basis for the action under item B, the facts supporting the action, and the specific steps necessary to become an approved tester. The notice must contain a statement that any request for a contested case hearing must, within ten calendar days exclusive of the day of service, be filed as a written request with the commissioner. If a contested case hearing is requested, the action is stayed pending the outcome of the hearing. If the individual does not request a hearing, the subject of the action forfeits any opportunity for a hearing. An agency-approved tester or applicant whose approval is revoked or denied may not apply for approval for one year after the effective date of revocation or denial.

7150.0250 RESTORATION, CORRECTIVE ACTIONS, AND REQUIRED PERMANENT CLOSURE.

Subpart 1. **Unusual operating conditions.**

A. Owners and operators must immediately investigate and remedy all unusual operating conditions in a UST system. The owner or operator must take the UST system out of service unless:

(1) the unusual operating condition is investigated and resolved in accordance with this chapter;

(2) any defective components are isolated from the UST system to prevent a leak; or

(3) any defective components or equipment are repaired by a person certified under chapter 7105.

B. The owner or operator must report unresolved unusual operating conditions that may have resulted in a leak or that indicate a release has occurred according to part 7150.0345, subpart 2.

Subp. 2. **Repairs.**

A. Owners and operators must maintain a UST system according to the manufacturer's instructions. If instructions are not available, owners and operators must maintain the functions of a UST system as intended by the manufacturer or according to industry standards. Repairs must ensure that releases due to structural failures, equipment failures, or corrosion do not occur while storing regulated substances in a UST system or while operating the UST system.

B. Within 30 days after completing a repair, owners and operators must ensure that:

(1) a repaired tank passes a tightness test according to part 7150.0330, subpart 4;

(2) repaired piping passes a tightness test according to part 7150.0340, subpart 3, item A; and

(3) repaired secondary-containment areas of tanks, piping used for interstitial monitoring, and containment sumps used for interstitial monitoring or piping passes an integrity test according to part 7150.0216, subpart 4.

C. Subitems (1) to (3) are codes of practice for repaired secondary-containment areas of tanks, piping, or containment sumps used for interstitial monitoring. The codes are incorporated by reference under part 7150.0500 and must be used to comply with this part:

(1) Fiberglass Tank and Pipe Institute, Field Test Protocol for Testing the Annular Space of Installed Underground Fiberglass Double and Triple-Wall Tanks with Dry Annular Space, RP 2007-2;

(2) Steel Tank Institute, Recommended Practice for Interstitial Tightness Testing of Existing Underground Double Wall Steel Tanks, R012; and

(3) Petroleum Equipment Institute, Recommended Practices for the Testing and Verification of Spill, Overfill, Leak Detection and Secondary Containment Equipment at UST Facilities, PEI/RP1200.

D. Within six months after a cathodic-protection system is repaired, the cathodic-protection system must be tested according to part 7150.0215 to ensure that it is operating properly. Impressed-current systems must be repaired according to part 7150.0215, subpart 3, item D. Sacrificial-anode systems must be repaired according to part 7150.0215, subpart 2, item C.

E. Within 30 days of any repair to spill-prevention or overfill-prevention equipment, the repaired spill-prevention or overfill-prevention equipment must be tested or inspected to ensure it is operating properly according to part 7150.0216.

F. Within 30 days of any repair to components of a UST system that are used for leak detection, the repaired or replaced component must be tested or inspected to ensure it is operating properly according to part 7150.0216.

G. Owners and operators must ensure repairs to UST systems are properly conducted according to one of the codes of practice in this item developed by a nationally recognized association or independent testing laboratory and incorporated by reference under part 7150.0500, except that repairs to fiber-reinforced plastic tanks may be made by the manufacturer's authorized representative.

(1) American Petroleum Institute, Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems, API RP 1632.

(2) American Petroleum Institute, Repairing Hazardous Liquid Pipelines, API RP 2200.

(3) American Petroleum Institute, Interior Lining and Periodic Inspection of Underground Storage Tanks, API STD 1631.

(4) Fiberglass Tank and Pipe Institute, Remanufacturing of Fiberglass Reinforced Plastic (FRP) Underground Storage Tanks, RP T-95-1.

(5) NACE International, Corrosion Control of Underground Storage Tank Systems by Cathodic Protection, SP0285-2011.

(6) National Fire Protection Association, Flammable and Combustible Liquids Code, NFPA 30.

(7) National Fire Protection Association, Standard for the Safeguarding of Tanks and Containers for Entry, Cleaning, or Repair, NFPA 326.

(8) National Leak Prevention Association, Entry, Cleaning, Interior Inspection, Repair, and Lining of Underground Storage Tanks, NLPA 631, Chapter A.

(9) Steel Tank Institute, Recommended Practice for the Addition of Supplemental Anodes to sti-P3® UST's, R972.

Subp. 3. **Replacement.**

A. Components of a UST system that do not meet the performance standards in part 7150.0100 must be repaired or replaced. Owners and operators must replace:

(1) any component that has corrosion that may cause the component to not function as intended by the manufacturer or that may cause a release of a regulated substance; and

(2) any component not functioning properly according to this chapter.

B. The entire piping run, not including a submersible pump or any dispenser, must be replaced with secondary-containment piping according to part 7150.0205, subpart 3, if:

(1) metal segments are found to have pitting-type corrosion damage;

(2) metal or noncorrodible piping segments have released a regulated substance;

(3) pipe segments are found to have degraded because of age, incompatibility, or poor installation practices; or

(4) 50 percent or more of the piping run is replaced.

C. Piping may be repaired and the entire piping run need not be replaced if:

(1) the piping is secondarily contained according to part 7150.0205, subpart 3;

(2) a release is due to an external, onetime cause, such as damage during excavation; or

(3) a release occurring on a piping appurtenance, such as a flex connector, shear valve, or check valve, did not occur as a result of corrosion.

Subp. 4. **Required permanent closure.** Owners and operators must ensure that a tank system or pipe system is permanently closed according to part 7150.0410 and a site assessment is completed according to part 7150.0345, subpart 3, if:

A. a tank has shifted upward from its original burial position to the extent that the UST has caused a bulge in the concrete or cover material over the tank or components secured to the top of the UST are contacting access covers, unless repairs can be made to the UST system to prevent the tank from shifting and ensure that the UST system has not been, nor will be, damaged;

B. a UST that is not secondarily contained has released a regulated product to the environment, unless the UST can be retrofitted according to part 7150.0205, subpart 1; or

C. the inner or outer shell of a secondarily contained UST, including retrofit tanks, or pipe is not liquid tight, unless the tank or pipe can be repaired according to subpart 2.

7150.0300 RELEASE DETECTION.

Subpart 1. **General.** With the exception of emergency generator tanks that must comply with parts 7150.0300 to 7150.0340 by October 13, 2020, owners and operators of ~~underground storage tank~~ UST systems must provide a method, or combination of methods, of release detection for tanks, piping, dispensers, and submersible pumps that:

A. can detect a ~~release~~ leak from any part of the tank and the connected underground piping, dispensers, and submersible pumps that routinely contains product;

[For text of item B, see M.R.]

C. meets the performance standards in part 7150.0330 or 7150.0340. The performance of release detection equipment, as certified by an independent testing laboratory or a nationally recognized association, must be documented with written specifications supplied by the equipment manufacturer or installer. Methods of release detection for tanks and piping must be capable of detecting the leak rate or quantity specified for that method in parts 7150.0330 and 7150.0340.

Subp. 2. [See repealer.]

[For text of subps 3 and 4, see M.R.]

Subp. 5. **Tanks.** Tanks must be monitored at least every 30 days for ~~releases~~ leaks using one of the following methods or combination of methods, except that hazardous ~~materials~~ substance tanks and tanks installed on or after December 22, 2007, must comply with item B:

A. automatic tank gauging according to part 7150.0330, subpart 5~~, combined with inventory control in accordance with part 7150.0330, subpart 2~~;

B. interstitial monitoring according to part 7150.0330, subpart 6;

C. ~~inventory control according to part 7150.0330, subpart 2, subject to the following conditions:~~ statistical inventory reconciliation according to part 7150.0330, subpart 6a;

~~(1) tank tightness testing shall be performed according to part 7150.0330, subpart 4, within five years after installation; and~~

~~(2) inventory control shall be discontinued within ten years after tank installation and another method of release detection shall be substituted;~~

~~D. for tanks with capacities of greater than 1,000 gallons and less than 2,000 gallons, manual tank gauging according to part 7150.0330, subpart 3, subject to the following conditions:~~

~~(1) tank tightness testing shall be performed according to part 7150.0330, subpart 4, within five years after installation; and~~

~~(2) manual tank gauging shall be discontinued within ten years after tank installation and another method of release detection shall be substituted;~~

~~E.~~ D. for tanks with capacities of 1,000 gallons or less, manual tank gauging according to part 7150.0330, subpart 3; or

~~F.~~ E. another method of release detection according to part 7150.0330, subpart 7.

Subp. 6. **Piping.** ~~Underground~~ Piping that routinely contains regulated substances must be monitored for releases using one of the ~~following~~ methods or combination of methods~~, except that piping installed on or after December 22, 2007, must comply with item A, subitem (3) or (4)~~ under items A to C:

A. This item applies to pressure piping. Underground piping that conveys regulated substances under pressure must use one of the ~~following~~ methods~~:~~ under this item, except

that piping installed on or after December 22, 2007, must comply with subitem (3). Piping that is positioned lower than the top of the tank must be equipped with an antisiphon device and use one of the methods under this item:

[For text of subitem (1), see M.R.]

(2) line leak detection conducted according to part 7150.0340, subpart 2, and monthly line tightness testing conducted according to part 7150.0340, subpart 3, item B; or

(3) line leak detection conducted according to part 7150.0340, subpart 2, and ~~monthly~~ interstitial monitoring conducted according to part 7150.0340, subpart ~~4, item A, subitem (2); or~~.

~~(4) continuous interstitial monitoring conducted according to part 7150.0340, subpart 4, item A, subitem (1).~~

B. This item applies to suction piping.

(1) Except as described in subitem (2), underground piping that conveys regulated substances under suction must be equipped with an antisiphon device if piping is positioned lower than the top of the tank and:

(a) have a line tightness test conducted at least every three years if it can detect a 0.1 gallon per hour leak rate at ~~one and one-half times the operating pressure~~ 50 pounds per square inch; or

[For text of unit (b), see M.R.]

[For text of subitem (2), see M.R.]

C. ~~Other methods.~~ Another method of release detection may be used according to part 7150.0340, subpart 5.

Subp. 7. [See repealer.]

7150.0330 METHODS OF RELEASE DETECTION FOR TANKS.

[For text of subp 1, see M.R.]

Subp. 2. [See repealer.]

Subp. 3. **Manual tank gauging.**

A. Manual tank gauging must ~~be conducted in the following manner~~ comply with this subpart:

~~A.~~ (1) ~~tank liquid level~~ measurements ~~are~~ of the level of liquid in a tank must be taken at the beginning and ending of a period of at least 36 hours during which no liquid is added to or removed from the tank;

~~B.~~ (2) level measurements ~~are~~ must be based on an average of two consecutive stick readings at both the beginning and ending of the period; and

~~C.~~ (3) the equipment used ~~is~~ must be capable of measuring the level of product over the full range of the tank's height to the nearest one-eighth of an inch.

B. A leak is suspected ~~and subject to the requirements of Minnesota Statutes, section 115.061,~~ if the variation between beginning and ending measurements under item A exceeds the weekly or monthly standards in the following table:

Tank Capacity	Weekly Standard (one-test)	Monthly Standard (four-test avg.)	Minimum Duration of Test
~~If manual tank gauging is the ONLY leak detection method used:~~			
up to 550 gallons	10 gallons	5 gallons	36 hours
551-1,000 gallons (when largest tank is 64" x 73")	9 gallons	4 gallons	44 hours
1,000 gallons (if tank is 48" x 128")	12 gallons	6 gallons	58 hours

~~If manual tank gauging is combined with Tank Tightness Testing:~~

~~1,001-2,000 gallons~~	~~26 gallons~~	~~13 gallons~~	~~36 hours~~

[For text of subp 4, see M.R.]

Subp. 5. **Automatic tank gauging.** ~~Equipment for~~ Use of automatic tank gauging that tests for the loss of product ~~and conducts inventory control~~ must ~~meet the following requirements~~ comply with this subpart:

A. the automatic product level monitor test ~~can~~ must be able to detect a 0.2 gallon per hour leak rate from any part of the tank that routinely contains product; and

B. ~~inventory control is conducted according to the requirements of subpart 2.~~ owners and operators must ensure testing is performed with the system operating in one of the following modes:

(1) in-tank static testing conducted at least once every 30 days; or

(2) continuous in-tank leak detection operating without interruption or operating to allow the system to gather incremental measurements to determine the leak status of the tank at least once every 30 days.

Subp. 6. **Interstitial monitoring.**

A. Interstitial monitoring of ~~secondary containment~~ secondary-containment tanks ~~shall~~ must be conducted:

(1) continuously, by ~~means of~~ an automatic leak-sensing device that signals the operator of the presence of any liquid in the interstitial space; or

(2) monthly, by ~~means of~~ a procedure capable of detecting the presence of any liquid in the interstitial space.

B. The interstitial space ~~shall~~ must be maintained free of water, debris, or anything that could interfere with leak detection capabilities.

C. ~~On an annual basis,~~ Any automatic leak-sensing device ~~shall~~ must be annually tested for proper function.

Subp. 6a. **Statistical inventory reconciliation.**

A. A release-detection method based on applying statistical principles to inventory data must:

(1) report a quantitative result with a calculated leak rate;

(2) report a test result of pass, fail, or inconclusive;

(3) be capable of detecting a leak rate of 0.2 gallons per hour or a release of 150 gallons within 30 days; and

(4) use a threshold that does not exceed one-half the minimum detectable leak rate.

B. An inconclusive test result under item A, subitem (2), means the requirements of part 7150.0300, subpart 5, have not been met and the test results must be investigated according to part 7150.0345, subpart 1, item B.

Subp. 7. **Other methods.** Any other type of ~~release detection~~ release-detection method, or combination of methods, can be used if:

[For text of item A, see M.R.]

B. ~~the owner~~ owners and ~~operator~~ operators can demonstrate to the commissioner that the method can detect a release as effectively as any of the methods allowed in this part and obtain the commissioner's prior written approval of the method. In comparing methods, the commissioner ~~shall~~ must consider the size of release that the method can detect and the frequency and reliability with which ~~it~~ a release can be detected. If the method is approved by the commissioner, ~~the owner~~ owners and ~~operator~~ operators must comply with any

conditions imposed by the commissioner on ~~its~~ the method's use to ensure the protection of human health and the environment.

7150.0340 METHODS OF RELEASE DETECTION FOR PIPING.

[For text of subp 1, see M.R.]

Subp. 2. **Automatic ~~line leak~~ line-leak detectors.** ~~Methods that continuously alert the operator to the presence of a leak by restricting or shutting off the flow of regulated substances through piping, or by triggering an audible or visual alarm, may be used only if they~~

A. An automatic line-leak detector must be able to detect leaks of three gallons per hour at ~~ten pounds per square inch~~ ten-pounds-per-square-inch line pressure within one hour. ~~An annual test of the operation of any line leak detector must be conducted. Testing shall:~~

~~A. be conducted by a person:~~

~~(1) certified under chapter 7105;~~

~~(2) approved by the manufacturer of the equipment to test the detector; or~~

~~(3) qualified by reason of training or experience to test the detector;~~

~~B. comply with the manufacturer's testing requirements;~~

~~C. involve creation of a physical leak in a piping segment; and~~

~~D. verify the leak detection threshold of three gallons per hour at ten pounds per square inch line pressure within one hour.~~

B. At facilities where an operator is present during business hours, the leak-detection system must alert the operator of a leak by restricting or shutting off the flow of a regulated substance through piping or by triggering an audible or visual alarm.

C. At unattended card-lock facilities, the leak-detection system must alert the operator of a leak by shutting off the flow of a regulated substance.

D. The operation of any line-leak detector must be tested annually according to part 7150.0216. Testing must:

(1) be conducted by an agency-approved tester;

(2) create a physical leak or simulate a leak in the pipe system; and

(3) verify the leak-detection threshold of three gallons per hour at ten-pounds-per-square-inch line pressure within one hour.

Subp. 3. **Line tightness testing.** A periodic test of piping ~~may~~ must be conducted:

A. annually by an agency-approved tester, if it can detect a 0.1 gallon per hour leak rate at one and one-half times the operating pressure; or

[For text of item B, see M.R.]

Subp. 4. **Interstitial and sump monitoring.**

A. Interstitial monitoring of ~~secondary containment~~ secondary-containment piping ~~shall~~ must be conducted:

(1) continuously, by ~~means of~~ an automatic leak-sensing device that signals the operator of the presence of any regulated substance in the interstitial space or sump; or

(2) monthly, by ~~means of~~ a procedure, such as visual monitoring, capable of detecting the presence of any regulated substance in the interstitial space or sump.

B. The interstitial space or sump ~~shall~~ must be maintained free of water, debris, or anything that could interfere with leak detection capabilities.

C. ~~On an annual basis, any sump shall be visually inspected for integrity of sides and floor and tightness of piping penetration seals. Any automatic~~ Sumps and leak-sensing

~~device shall~~ devices must be inspected and tested ~~for proper function~~ annually according to part 7150.0216, subpart 3.

Subp. 5. **Other methods.** Any other type of ~~release detection~~ release-detection method, or combination of methods, may be used if:

[For text of item A, see M.R.]

B. ~~the owner and operator~~ owners and operators can demonstrate to the commissioner that the method can detect a release as effectively as any of the methods allowed in subparts 2 to 4 and obtain the commissioner's prior written approval of the method. In comparing methods, the commissioner ~~shall~~ must consider the size of release that the method can detect and the frequency and reliability with which ~~it~~ a release can be detected. If the method is approved by the commissioner, ~~the owner~~ owners and ~~operator~~ operators must comply with any conditions imposed by the commissioner on the method's use to ensure the protection of human health and the environment.

REPORTING, INVESTIGATING, AND CONFIRMING RELEASES

7150.0345 REPORTING, INVESTIGATING, AND CONFIRMING RELEASES.

Subpart 1. **Investigating and confirming.**

A. Owners and operators must immediately investigate, confirm, and remedy all suspected releases.

B. Within 24 hours of discovering an unusual operating condition while conducting leak detection according to part 7150.0330 or 7150.0340, owners and operators must investigate the condition by:

(1) conducting a visual inspection of aboveground and exposed below-grade components of a UST system for leaks and deficiencies; and

(2) if applicable, repeating any leak test that indicated an unusual operating condition, conducted according to part 7150.0330, subpart 5, 6, or 6a, or 7150.0340, subpart 2, item A; 3, item B; or 4, item A.

C. Within 24 hours of discovering an unusual operating condition or confirming an unusual operating condition according to item B, subitem (2), the owners and operators must initiate:

(1) tightness testing according to part 7150.0330, subpart 4, or 7150.0340, subpart 3, item A, on the component suspected of leaking; and

(2) if applicable, integrity testing, using an agency-approved tester, of interstitial and secondary-containment areas used for leak detection.

D. If the investigation under item B or the testing under item C indicates that the UST system is not leaking, owners and operators may resume leak testing the UST system according to part 7150.0300.

E. If testing confirms a leak, owners and operators must immediately remove the regulated substance from the leaking component to prevent further releases and must repair, replace, upgrade, or permanently close the UST system.

Subp. 2. **Reporting releases or suspected releases.** A person who has knowledge of a release from a UST system must immediately notify the Minnesota duty officer upon discovering the release by calling 1-800-422-0798 and must begin recovering the substance according to Minnesota Statutes, section 115.061. Notice under this subpart is also required if:

A. the owners and operators discover a release of a regulated substance at the underground tank site or in the surrounding area;

B. an unusual operating condition exists, unless:

(1) the system component is immediately repaired or replaced; and

(2) for secondarily contained systems, any liquid in the interstitial space not used for monitoring is immediately removed; or

C. monitoring results from a release-detection method or alarm indicates a release may have occurred, unless:

(1) the monitoring device or alarm is found to be defective and is immediately repaired, recalibrated, or replaced, and additional monitoring does not confirm the initial results;

(2) the leak is contained in a secondary-containment space and:

(a) any liquid in the secondary-containment space not used for monitoring is immediately removed; and

(b) any defective system equipment or component is immediately repaired or replaced; or

(3) the alarm is investigated and determined to be a nonrelease event.

Subp. 3. **Assessing site; permanent closure or status change.**

A. Before completing a tank or piping system closure according to part 7150.0410 or changing the status of storing a nonregulated substance, owners and operators must measure, by laboratory analysis, for the presence of a release.

B. Sampling under item A must be according to the commissioner's requirements. The requirements must be based upon where contamination is most likely to be present, taking into consideration the method of closure, nature of the stored substance, type of backfill, depth to groundwater, and other factors relevant to identifying the presence of a release.

C. If contaminated soils, contaminated groundwater, or free product as a liquid or vapor is discovered by measurement under this subpart or by any other means, the Minnesota duty officer must be immediately notified by calling 1-800-422-0798 and corrective action must be started according to Minnesota Statutes, section 115.061.

~~OUT-OF-SERVICE UNDERGROUND STORAGE TANK SYSTEMS AND~~ UST SYSTEM CLOSURE

7150.0400 TEMPORARY CLOSURE.

[For text of subp 1, see M.R.]

Subp. 2. **Tanks out of service less than 90 days.** When ~~an underground storage tank~~ a UST system is out of service for less than 90 days, owners and operators must continue operation and maintenance of corrosion protection according to part 7150.0215, and any release detection according to parts 7150.0300 to 7150.0340. Release detection is not required as long as the ~~underground storage tank~~ UST system is empty. The ~~underground storage tank~~ UST system is empty when all materials have been removed using commonly employed practices so that no more than 2.5 centimeters, or one inch, of residue remains in the system as measured through any part of the ~~tank~~ UST system.

[For text of subp 3, see M.R.]

Subp. 4. **Tanks out of service one year.** When ~~an underground storage tank~~ a UST system is out of service for one year or more, owners and operators must permanently close the ~~underground storage tank~~ UST system according to part 7150.0410, unless the owner or operator requests an extension of the closure period by submitting an application for an extension on a form approved by the commissioner and the commissioner approves the extension in writing based on compliance with this part. Conditions of extension ~~shall~~ must include record keeping requirements according to part 7150.0450 and the continued operation and maintenance of ~~cathodic~~ corrosion protection according to part 7150.0215. The ~~underground storage tank~~ UST system may not be returned to service without the written

approval of the commissioner, based on compliance with the applicable requirements of this chapter.

Subp. 5. **Tanks out of service five years.** All ~~underground storage tank~~ UST systems must be permanently closed if the ~~tank~~ UST system is out of service for five years or more.

7150.0410 PERMANENT CLOSURE AND CHANGE IN STATUS TO STORAGE OF NONREGULATED SUBSTANCES.

Subpart 1. **Requirements.** In addition to the requirements of the most current Minnesota Fire Code, owners and operators must comply with ~~the provisions in~~ subparts ~~2~~ 3 to 7 relating to permanent closure or change in status to storage of nonregulated substances.

Subp. 2. [See repealer.]

Subp. 3. **Permanent closure.**

A. To permanently close a ~~tank~~ piping system, owners and operators must empty and clean ~~it~~ the piping by removing all liquids. To permanently close a UST system, owners and operators must empty and clean the tank and piping by removing all liquids and accumulated sludges ~~from the tank and piping~~.

B. All tanks and piping ~~taken out of service~~ permanently closed must ~~also~~ be ~~either~~:

(1) removed from the ground; or

(2) completely filled in with an inert solid material and free of voids that could allow flammable or hazardous vapors or liquids to accumulate in the voids.

C. A site assessment must be conducted according to part 7150.0345, subpart 3, for all tanks and piping permanently closed.

D. When a tank is retrofitted according to part 7150.0205, subpart 1, the original tank upon which the retrofitted tank is secured is considered permanently closed and a site assessment must be conducted according to part 7150.0345, subpart 3.

Subp. 4. **~~Storage of~~ Storing nonregulated substances.** Continued use of ~~an underground storage tank~~ a UST system to store a nonregulated substance is considered a change in status. Before a change in status to storage of a nonregulated substance, owners and operators must empty and clean the tank and piping by removing all liquid and accumulated sludge and conduct a site assessment according to part ~~7150.0420~~ 7150.0345, subpart 3.

Subp. 5. **Certification of ~~closers~~ closure.** Owners and operators must ensure that persons performing permanent closures under subpart 3 or changes in status under subpart 4:

A. are in compliance with certification requirements imposed by chapter 7105~~. Such persons must~~;

B. furnish copies of current certificates issued by the ~~agency~~ commissioner to the owner and operator before beginning a permanent closure ~~under subpart 3~~ or a change in status ~~under subpart 4.~~; and

C. certify on the notification form required under part 7150.0090, subpart 2, that the methods used to perform the permanent closure or change in status complied with this part.

Subp. 6. [See repealer.]

Subp. 7. **Cleaning and closure procedures.** The cleaning and closure procedures listed in one of the following documents must be used ~~as guidance for complying~~ to comply with this part. The documents are incorporated by reference under part 7150.0500:

A. American Petroleum Institute, Closure of Underground Petroleum Storage Tanks, API RP 1604 ~~(1996)~~;

B. American Petroleum Institute, Interior Lining and Periodic Inspection of Underground Storage Tanks, API STD 1631 ~~(2001)~~; ~~or~~

C. American Petroleum Institute, Requirements for Safe Entry and Cleaning of Petroleum Storage Tanks, API STD 2015 ~~(2001).~~;

D. American Petroleum Institute, Guidelines and Procedures for Entering and Cleaning Petroleum Storage Tanks, API RP 2016;

E. National Fire Protection Association, Standard for the Safeguarding of Tanks and Containers for Entry, Cleaning, or Repair, NFPA 326; and

F. National Institute for Occupational Safety and Health, Criteria for a Recommended Standard: Working in Confined Spaces, DHEW (NIOSH) Publication No. 80-106.

7150.0430 PREVIOUSLY CLOSED ~~UNDERGROUND STORAGE TANK~~ UST SYSTEMS.

When directed by the commissioner, ~~the owner~~ owners and ~~operator~~ operators of ~~an underground storage tank~~ a UST system permanently closed before December 22, 1988, must assess the excavation zone according to part ~~7150.0420~~ 7150.0345, subpart 3, and close the ~~underground storage tank~~ UST system according to part 7150.0410 if releases from the underground storage tank may, in the judgment of the commissioner, pose a current or potential threat to human health and the environment.

OPERATOR REQUIREMENTS, REPORTING, AND RECORD KEEPING

7150.0445 CLASS A, B, AND C OPERATOR REQUIREMENTS.

Subpart 1. **General.**

A. Owners and operators of a UST system are responsible for ensuring that class A, B, and C operators fulfill their responsibilities under this chapter.

B. Class A, B, and C operators must be the owner or operator of the UST system or a designated employee of the owner or operator.

C. Owners or operators of a UST system must designate a class A, B, and C operator for the UST system, except that owners or operators are not required to designate a class C operator for unattended card-lock facilities.

D. During business hours, a class A, B, or C operator must be on site during operation of the UST system except at unattended card-lock facilities. Unattended card-lock facilities must post a legible sign in a conspicuous location with the facility name, facility address, telephone numbers for the facility owner and operator, and telephone number for local emergency response.

E. Each individual that meets the definition of a class C operator must be designated as a class C operator.

Subp. 2. **Class A operator responsibilities.** The class A operator is responsible for managing resources and personnel to achieve and maintain compliance with this chapter. At a minimum, a class A operator must be knowledgeable about the purpose, methods, and function of:

A. spill and overfill prevention;

B. release detection;

C. corrosion protection;

D. emergency response;

E. product and equipment compatibility;

F. notification under part 7150.0090, subpart 2;

G. temporary and permanent closure;

H. testing, reporting, and record keeping for UST systems;

I. environmental and regulatory consequences of releases;

J. financial responsibility; and

K. training.

Subp. 3. **Class B operator responsibilities.**

A. The class B operator is responsible for daily operation and maintenance of the UST system. The class B operator must be on site at least once each month to ensure proper operation and maintenance of the UST systems, except that the class B operator of an unattended card-lock facility must be on site at least once each week.

B. Each month, the class B operator must validate that:

(1) release-detection monitoring is being performed according to parts 7150.0300 to 7150.0340;

(2) reporting is being performed and records are being maintained according to part 7150.0450;

(3) spill-, overfill-, and corrosion-protection systems are in place and operating according to part 7150.0205;

(4) cathodic-protection testing is being performed according to part 7150.0215;

(5) unusual operating conditions or release-detection system indications are being reported and investigated according to Minnesota Statutes, section 115.061; and

(6) routine operation and maintenance activities are being done according to part 7150.0216.

C. At a minimum, a class B operator must be knowledgeable about the purpose, methods, and function of:

(1) operating and maintaining the UST system;

(2) spill and overfill prevention;

(3) release detection and related reporting;

(4) corrosion protection;

(5) emergency response;

(6) product and equipment compatibility;

(7) testing, inspection, and record keeping for UST systems;

(8) environmental and regulatory consequences of a release; and

(9) training requirements for class C operators.

Subp. 4. **Class C operator responsibilities.** The class C operator must be:

A. on site daily and responsible for handling emergencies and alarms pertaining to a spill or release from a UST system, including reporting spills and releases;

B. trained by a class A or B operator before assuming responsibility for the tank system; and

C. trained to take action according to this chapter in response to emergencies or alarms caused by spills or releases resulting from operating the UST system or from dispensing activities.

Subp. 5. **Class A and B operator examinations.**

A. Class A and B operators must pass an agency-administered examination with a score of 75 percent or higher to verify knowledge of the UST system. Class A and B operators must pass the agency-administered examination within 30 days after being designated by the owner or operator of the UST system.

B. A class B operator must retake the examination under item A within 30 days after a change in any of the following components of a UST system:

(1) tank or piping construction material;

(2) tank or piping release-detection method; or

(3) type of cathodic-protection system.

C. Notwithstanding item A, if a designated class A or B operator is certified in another state as a class A or B operator for underground storage tanks, the owner or operator may apply to the commissioner for a waiver of the examination requirement in item A. To get approval of a waiver application, the owner or operator must submit to the commissioner a copy of the designated class A or B operator's current certification issued by another state and information to demonstrate that the other state's operator certification examination is equivalent in content to the agency-administered examination under item A. The commissioner must approve in writing a waiver application that complies with this item and demonstrates the required equivalency. Owners and operators are subject to the commissioner's conditions of approval and to the other requirements in this part, including the reexamination requirements in item B and the training and reexamination requirements in subpart 6, item B.

Subp. 6. **Class A and B operator training requirements.**

A. If the class A or B operator does not receive a passing score of 75 percent or higher on the examination under subpart 5, the class A or B operator must attend an agency-approved training course and retake and pass an agency-administered examination with a score of 75 percent or higher. The class A or B operator must pass the examination within 60 days after the commissioner notifies the class A or B operator of a failing score on the original examination.

B. If the commissioner determines that the owner or operator of a UST system has violated part 7150.0205, subpart 5; 7150.0215; 7150.0216; 7150.0300; 7150.0330; 7150.0340; or 7150.0400, the class B operator of the UST system must attend an agency-approved training course and retake and pass an agency-administered examination with a score of 75 percent or higher. The class B operator must pass the examination within 30 days after the commissioner notifies the class B operator of the requirement.

Subp. 7. **Training course approval.**

A. A person seeking to train class A or B operators must apply for agency approval of the training course according to this subpart.

B. A training provider must submit to the commissioner an application on a form provided by the commissioner. The application must contain:

(1) the course sponsor's name, address, and telephone number;

(2) a list of states that approve the training course at the time the application is submitted;

(3) the course curriculum, including topics to be covered and length of the training;

(4) a letter from the course sponsor that explains how the course meets the requirements of this chapter;

(5) a copy of all course materials, such as student manuals, instructor notebooks, and handouts;

(6) a copy of the certificate that will be issued to students who attend the course; and

(7) other information determined relevant by the commissioner for evaluating whether the course will train operators to meet the requirements of this chapter.

C. Training must provide the knowledge necessary for class A or B operators to monitor and maintain UST systems in a manner that complies with this chapter, prevents releases to the environment, minimizes the size of accidental releases through early detection, and mitigates damage from releases with proper emergency response.

D. The commissioner must suspend or revoke approval of a training course if the commissioner finds that the course no longer provides training that meets the requirements of this chapter.

E. Except as provided in item D, approval of a training course is effective until the commissioner determines that the training course does not meet the requirements of this chapter. Upon making the determination, the commissioner must notify the approved training provider that changes in the course are required to maintain commissioner approval. The training provider must then submit a revised training course to the commissioner for approval.

7150.0450 REPORTING AND RECORD KEEPING.

[For text of subp 1, see M.R.]

Subp. 2. **Reporting.** Owners and operators must submit the following information to the commissioner within the applicable time frames:

[For text of items A and B, see M.R.]

C. reports of all releases under part 7150.0345 and Minnesota Statutes, section 115.061, including suspected releases, spills and overfills, and confirmed releases;

[For text of items D and E, see M.R.]

F. inspection reports for internally lined tanks under part ~~7150.0205~~ 7150.0215, subpart ~~1~~ 4, ~~item E, subitem (1)~~ items A and B.

Subp. 3. **Record retention.** Owners and operators must maintain the following information in a legible manner for the specified time frame:

A. the commissioner's determination under part 7150.0205, subpart 1, item ~~F~~ B, subitem (5); subpart 3, item ~~F~~ A, subitem (3); or subpart 5, item B, subitem (1), that alternative ~~corrosion protection~~ equipment for corrosion protection or spill and overfill prevention ~~equipment~~ may be used, ~~shall~~ must be maintained for the life of the ~~tank~~ UST system;

[For text of item B, see M.R.]

C. documentation of ~~underground storage tank system~~ repairs for UST systems, including the nature of each repair~~,~~ and results of required integrity testing~~, and any commissioner's written determination~~ under part ~~7150.0100, subpart 10, item C~~ 7150.0250, subpart 2, ~~shall~~ must be maintained for the life of the ~~tank~~ UST system;

D. documentation of compliance with release detection requirements under parts 7150.0300 to 7150.0340, as follows:

(1) all written performance claims pertaining to any release detection system used~~,~~ and the manner in which these claims have been justified or tested by the equipment manufacturer or installer, including documentation of ~~"safe suction" design according to~~ suction piping meeting the design requirements of part 7150.0300, subpart 6, item B, subitem

(2), must be maintained for as long as the system is being used to comply with the requirements of this chapter;

(2) the results of any ~~sampling,~~ testing~~,~~ or monitoring must be maintained for at least ~~ten~~ five years, including:

(a) monthly ~~tank inventory control according to part 7150.0330, subpart 2~~ statistical inventory reconciliation results according to part 7150.0330, subpart 6a;

[For text of unit (b), see M.R.]

(c) ~~monthly or annual~~ tank tightness testing according to part 7150.0330, subpart 4;

[For text of unit (d), see M.R.]

(e) monthly interstitial monitoring of ~~secondary containment~~ secondary-containment tanks according to part 7150.0330, subpart 6, item A~~, subitem (2)~~;

[For text of units (f) to (i), see M.R.]

(j) monthly interstitial monitoring of ~~secondary containment~~ secondary-containment piping according to part 7150.0340, subpart 4;

(k) monthly results of an alternative ~~piping release detection~~ method for detecting releases in piping according to part 7150.0340, subpart 5; and

~~(l) monthly sump and basin monitoring according to part 7150.0300, subpart 7; and~~

~~(m)~~ (l) annual testing of any automatic leak-sensing device in any secondarily contained tank according to part 7150.0330, subpart 6, item C, or submersible pump sump according to part 7150.0340, subpart 4, item C;

(3) written documentation of all calibration, maintenance, and repair of release detection equipment permanently located on site must be maintained for at least ~~ten~~ five years after the servicing work is completed. Any schedules of required calibration and maintenance provided by the release detection equipment manufacturer must be retained as long as the system is being used to comply with the requirements of this chapter; and

[For text of subitem (4), see M.R.]

E. documentation that shows that testing wastes generated during sump and spill-bucket testing have been disposed of properly in accordance with state and local regulations must be maintained for at least five years after the testing;

~~E.~~ F. results of the site assessment conducted at permanent closure or change in status to a nonregulated substance under part ~~7150.0420~~ 7150.0345 and any other records that are capable of demonstrating compliance with closure requirements under parts 7150.0400 and 7150.0410~~. The results of the site assessment required in part 7150.0420~~ must be maintained for at least three years after completion of permanent closure or change in status in one of the following ways:

(1) at the facility by the owners and operators who took the ~~underground storage tank~~ UST system out of service;

(2) at the facility by the current owners and operators of the ~~underground storage tank~~ UST system site; or

(3) by mailing these records to the commissioner if the records cannot be maintained at the closed facility;

~~F.~~ G. certification that the facility's class A operator and class B operator have passed the operator examination requirements or documentation of current certification in another state if the commissioner has approved a waiver of the agency-administered examination~~. Certifications on current personnel~~ must be kept until closure of the facility~~.~~

~~Certifications on former personnel must be kept for at least three years from the date of the employee's termination~~ or until the class A or B operator is no longer employed at the facility, whichever occurs first;

~~G.~~ H. records of monthly or weekly on-site presence of the class B operator according to part ~~7150.0211~~ 7150.0445, subpart ~~5~~ 3, must be kept for at least ~~ten~~ five years; ~~and~~

~~H.~~ I. records that document that the class C operator has received the training required in part ~~7150.0211~~ 7150.0445, subpart ~~6~~ 4, including the date of training, who performed the training, and the contents of the training~~. Training records on current personnel~~ must be kept until closure of the facility~~. Training records on former personnel must be kept for at least three years from the date of the employee's termination.~~ or until the class C operator is no longer employed at the facility, whichever occurs first;

J. results of the following testing, inspections, and monitoring must be maintained for at least five years:

(1) periodic operation and maintenance inspections according to part 7150.0216, subpart 2;

(2) leak-detection equipment inspections and testing according to part 7150.0216, subpart 3;

(3) testing or monitoring spill buckets or containment sumps according to part 7150.0216, subpart 4;

(4) overfill-prevention equipment inspection and testing according to part 7150.0216, subpart 5; and

(5) any other documentation of compliance with part 7150.0216; and

K. documentation that the components of the UST system are compatible with the substance stored according to part 7150.0100, subpart 9, must be maintained for the life of the UST system.

[For text of subp 4, see M.R.]

7150.0451 UST SYSTEMS WITH FIELD-CONSTRUCTED TANKS AND AIRPORT HYDRANT FUEL DISTRIBUTION SYSTEMS.

Code of Federal Regulations, title 40, part 280, subpart K, as amended, entitled "UST Systems with Field-Constructed Tanks and Airport Hydrant Fuel Distribution Systems," is incorporated by reference.

7150.0500 INCORPORATION BY REFERENCE.

Subpart 1. **Scope.** For purposes of this chapter ~~7150~~, the documents in subpart 2 are incorporated by reference. These documents are not subject to frequent change. They can be found at the Minnesota Pollution Control Agency Library, 520 Lafayette Road, Saint Paul, Minnesota 55155, ~~at the addresses indicated,~~ or through the Minitex interlibrary loan system. If any of the documents are amended, ~~and if the amendments are incorporated by reference or otherwise made a part of federal technical rules at Code of Federal Regulations, title 40, part 280,~~ then the amendments to documents are also incorporated by reference in this chapter.

Subp. 2. **Referenced standards.** The documents referenced throughout this chapter are listed in items A to ~~H~~ J:

~~A. American Society of Mechanical Engineers, 345 East 47th Street, New York, New York 10017.~~

~~(1) B31.3, Process Piping (2005); and~~

~~(2) B31.4, Pipeline Transportation Systems for Liquid Hydrocarbons and Other Liquids (2006).~~

~~B.~~ A. American Petroleum Institute~~, 1220 L Street Northwest, Washington, D.C. 20005.~~:

(1) API RP 1007, Loading and Unloading of MC 306/DOT 406 Cargo Tank Motor Vehicles (2001);

(2) API RP 1604, Closure of Underground Petroleum Storage Tanks (1996);

~~(2)~~ (3) API RP 1615, Installation of Underground Petroleum Storage Systems ~~(1996)~~ (2011);

~~(3)~~ (4) API RP 1621, Bulk Liquid Stock Control at Retail Outlets ~~(1987)~~ (1993);

~~(4) API 1626, Storing and Handling Ethanol and Gasoline-Ethanol Blends at Distribution Terminals and Service Stations (1985);~~

(5) API STD 1631, Interior Lining and Periodic Inspection of Underground Storage Tanks (2001);

(6) API RP 1632, Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems (1996);

(7) API STD 2015, Requirements for Safe Entry and Cleaning of Petroleum Storage Tanks ~~(2001)~~ (2014); ~~and~~

(8) API RP 2200, Repairing ~~Crude Oil, Liquefied Petroleum Gas, and Product~~ Hazardous Liquid Pipelines ~~(1994).~~ (2015); and

(9) API RP 2016, Guidelines and Procedures for Entering and Cleaning Petroleum Storage Tanks (2001).

B. Fiberglass Tank and Pipe Institute:

(1) RP T-95-1, Remanufacturing of Fiberglass Reinforced Plastic (FRP) Underground Storage Tanks (1995); and

(2) RP 2007-2, Field Test Protocol for Testing the Annular Space of Installed Underground Fiberglass Double and Triple-Wall Tanks with Dry Annular Space (2007).

C. ~~National Association of Corrosion Engineers, Publications Department, P.O. Box 218340, Houston, Texas 77218.~~ NACE International:

(1) ~~SP0169-2007~~ SP0169-2013, Control of External Corrosion on Underground or Submerged Metallic Piping Systems ~~(2007)~~ (2013); ~~and~~

(2) ~~RP0285-2002~~ SP0285-2011, Corrosion Control of Underground Storage Tank Systems by Cathodic Protection ~~(2002).~~ (2011);

(3) TM0101-2012, Measurement Techniques Related to Criteria for Cathodic Protection of Underground Tank Systems (2012); and

(4) TM0497-2012, Measurement Techniques Related to Criteria for Cathodic Protection on Underground or Submerged Metallic Piping Systems (2012).

D. National Fire Protection Association~~, Batterymarch Park, Quincy, Massachusetts 02269.~~:

(1) NFPA 30, Flammable and Combustible Liquids Code ~~(2003)~~ (2015); ~~and~~

(2) NFPA 30A, Code for Motor Fuel Dispensing Facilities and Repair Garages (2015);

(3) NFPA 385, Standard for Tank Vehicles for Flammable and Combustible Liquids ~~(2007).~~ (2012); and

(4) NFPA 326, Standard for the Safeguarding of Tanks and Containers for Entry, Cleaning, or Repair (2015).

E. National Leak Prevention Association, NLPA 631, Chapter A, Entry, Cleaning, Interior Inspection, Repair, and Lining of Underground Storage Tanks (1991).

F. National Institute for Occupational Safety and Health, DHEW (NIOSH) Publication No. 80-106, Criteria for a Recommended Standard: Working in Confined Spaces (1979).

~~E.~~ G. Petroleum Equipment Institute~~, P.O. Box 2380, Tulsa, Oklahoma 74101~~:

(1) ~~RP100~~ PEI/RP 100-11, Recommended Practices for Installation of Underground Liquid Storage Systems ~~(2005).~~ (2011);

(2) PEI/RP900, Recommended Practices for the Inspection and Maintenance of UST Systems (2008);

(3) PEI/RP1000-14, Recommended Practices for the Installation of Marina Fueling Systems (2014); and

(4) PEI/RP1200, Recommended Practices for the Testing and Verification of Spill, Overfill, Leak Detection and Secondary Containment Equipment at UST Facilities (2017).

~~F.~~ H. Steel Tank Institute~~, 570 Oakwood Road, Lake Zurich, Illinois 60047.~~:

~~(1) STI-P3, Specification and Manual for External Corrosion Protection of Underground Steel Storage Tanks (2006);~~

~~(2)~~ (1) ~~STI~~ F841, Standard for Dual Wall Underground Steel Storage Tanks (2006);

~~(3)~~ (2) ~~STI~~ F894, ACT-100® Specification for External Corrosion Protection of FRP Composite Steel ~~Underground Storage Tanks (2006)~~ USTs (2015); ~~and~~

(3) F922, Specification for Permatank® (2014);

(4) F961, ACT-100-U® Specification for External Corrosion Protection of Composite Steel Underground Storage Tanks (2015);

(5) STI-P3®, Specification and Manual for External Corrosion Protection of Underground Steel Storage Tanks (2015);

~~(4)~~ (6) R012, Recommended Practice for Interstitial Tightness Testing of Existing Underground Double Wall Steel Tanks ~~(2006).~~ (2007);

(7) R051, Cathodic Protection Testing Procedures for sti-P3® UST's (2006);

(8) R892, Recommended Practice for Corrosion Protection of Underground Piping Networks Associated with Liquid Storage and Dispensing Systems (2006); and

(9) R972, Recommended Practice for the Addition of Supplemental Anodes to sti-P3® UST's (2010).

~~G.~~ I. Underwriters Laboratories Inc.~~, 333 Pfingsten Road, Northbrook, Illinois 60062.~~:

(1) UL 58, Standard for Steel Underground Tanks for Flammable and Combustible Liquids (1996);

(2) ~~UL 567, Emergency Breakaway Fittings, Swivel Connectors and Pipe-Connection Fittings for Petroleum Products and LP-Gas (2004)~~ UL 971, Standard for Nonmetallic Underground Piping for Flammable Liquids (1995);

(3) UL 971A, Outline of Investigation for Metallic Underground Fuel Pipe (2006);

~~(3)~~ (4) UL 1316, ~~Standard for~~ Glass-Fiber-Reinforced Plastic Underground Storage Tanks for Petroleum Products, Alcohols, and Alcohol-Gasoline Mixtures (2006); ~~and~~

~~(4)~~ (5) UL 1746, Standard for ~~Safety for~~ External Corrosion Protection Systems for Steel Underground Storage Tanks (2007)~~.~~;

(6) UL 1856, Outline of Investigation for Underground Fuel Tank Internal Retrofit Systems (2013); and

(7) UL 2447, Outline of Investigation for Containment Sumps, Fittings and Accessories for Fuels (2012).

~~H.~~ J. Underwriters' Laboratories of Canada~~, 7 Crouse Road, Scarborough, Ontario, Canada M1R 3A9.~~:

~~(1) CAN/ULC-S603.1-03, External Corrosion Protection Systems for Steel Underground Tanks for Flammable and Combustible Liquids (2003);~~

~~(2)~~ (1) ~~CAN/ULC-S603-00~~ CAN/ULC-S603-14, Standard for Steel Underground Tanks for Flammable and Combustible Liquids ~~(2000)~~ (2014);

(2) CAN/ULC-S603.1-11, External Corrosion Protection Systems for Steel Underground Tanks for Flammable and Combustible Liquids (2011);

(3) ~~ULC-S615-98~~ CAN/ULC-S615-14, Standard for Fibre Reinforced Plastic Underground Tanks for Flammable and Combustible Liquids ~~(1998)~~ (2014);

(4) ULC-S631-05, Standard for Isolating Bushings for Steel Underground Tanks Protected with External Corrosion Protection Systems (2005);

(5) ~~CAN/ULC-S633-99, Standard for Flexible Underground Hose Connectors for Flammable and Combustible Liquids (1999);~~ CAN/ULC S660-08, Standard for Nonmetallic Underground Piping for Flammable and Combustible Liquids (2008); and

~~(6) ULC Subject C107C-M1984, Guide for Glass-Fiber-Reinforced Plastic Pipe and Fittings for Flammable Liquids (1984);~~

~~(7)~~ (6) ULC/ORD-C107.21~~-1992~~, Under-Dispenser Sumps (1992)~~; and~~.

~~(8) ULC/ORD-C971-2005, Nonmetallic Underground Piping for Flammable and Combustible Liquids (2005).~~

TERM CHANGE. The term "underground storage tank system" is changed to "UST system," together with any necessary grammatical changes, wherever the term appears in Minnesota Rules, chapter 7150.

REPEALER. Minnesota Rules, parts 7150.0010, subpart 4; 7150.0030, subparts 8, 23, 25a, 44a, and 49; 7150.0100, subparts 10 and 12; 7150.0211; 7150.0300, subparts 2 and 7; 7150.0330, subpart 2; 7150.0410, subparts 2 and 6; and 7150.0420, are repealed.