# Chapter 695: RULES FOR UNDERGROUND HAZARDOUS SUBSTANCE STORAGE FACILITIES

SUMMARY: The proposed rule sets standards for the underground storage of certain virgin chemicals which are classified as hazardous substances. It includes registration requirements; design and installation requirements for tanks and piping; leak detection requirements; monitoring and operating procedures, discharge reporting, removal, investigation, and remediation procedures; a compliance schedule for existing facilities; and closure requirements.

**1. Legal Authority.** This rule is authorized by 38 MRSA §1364(2) which provides that the board may adopt rules relating to the handling of hazardous substances. Handle, as defined in 38 MRSA §1303-C(14), means to store, transfer, collect, separate, salvage, process, recycle, reduce, incinerate, dispose of or treat.

**2. Preamble.** It is the purpose of the Department of Environmental Protection, consistent with legislative policy, to provide necessary controls over underground hazardous substance storage facilities so as to ensure the protection of Maine's ground and surface water resources, and of public health, safety, welfare, and the overall environment.

**3. Prohibition.** No person may install or operate an underground hazardous substance storage tank or facility, or store a hazardous substance or substances in such a tank or facility, unless the tank or facility is designed, constructed. registered, installed, maintained and operated in accordance with the requirements of this Chapter and in a manner that will prevent releases for its operating life due to manufacturing defects, structural failure, corrosion, or improper installation.

**4. Definitions.** The following terms as used in this rule shall have the following meaning unless the context indicates otherwise:

**A. Ancillary equipment.** "Ancillary equipment" means any devices including, but not limited to, piping, fittings, flanges, valves, pumps, line leak detection, and meters used to distribute, meter, or control the flow of regulated substances to and from an underground hazardous substance storage tank.

**B. Board.** "Board" means the Maine Board of Environmental Protection.

**C. Cathode.** "Cathode" means the electrode of an electrolytic cell at which reduction occurs.

**D. Cathodically protected**. "Cathodically protected" means the use of a technique, consistent with the National Association of Corrosion Engineers publication, Recommended Practice for Control of External Corrosion of Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems, RP-02-85, April 1985, to prevent the corrosion of a metal surface by making that surface the cathode of an electrochemical cell.

**E. Cathodic protection monitoring**. "Cathodic protection monitoring" means a process of measuring the structure to electrolyte potential to determine whether a cathodically protected structure is being adequately protected against corrosion. Cathodic protection monitoring shall be performed according to the requirements of Appendix F.

**F. Cathodic protection tester.** "Cathodic protection tester" means a underground storage tank installer certified by the Maine Board of Underground Storage Tank Installers, or a person who can otherwise demonstrate to the Department's satisfaction an understanding of the principles and measurements of all common types of cathodic protection systems as applied to buried metal piping and tank systems. At a minimum. such persons must have education and experience in soil resistivity, stray current, structure-to-soil potential, and component electrical isolation measurements of buried metal piping and tank systems.

**G. Change-in-service.** "Change-in-service" means changing the hazardous substance stored in the tank or facility to a different hazardous substance or to a non-hazardous substance.

**H. Chemically compatible.** "Chemically compatible" means the ability of two or more substances to maintain their respective physical and chemical properties upon contact with on, another for extended periods of time under varied environmental conditions.

**I. Claims-made policy.** "Claims-made policy" means an insurance policy that provides coverage for an occurrence for which a claim arising out of the occurrence is made during the term of the policy or any extension thereof.

**J. Class one liquids**. "Class One liquids" means liquids having a flash point below 1000° F.

**K. Commissioner.** "Commissioner" means the Commissioner of the Maine Department of Environmental Protection.

**L. Continuous electronic Monitoring.** "Continuous electronic monitoring" means the use of a monitoring device capable of automatic, unattended operation, which will provide a clear, audible or visual indication of the presence of liquid hazardous substances or hazardous substance vapors outside of a primary hazardous substance container.

**M. Corrosion expert.** "Corrosion expert" means a person who is approved by the department by reason of thorough knowledge of the physical sciences and the principals of engineering and mathematics acquired by a professional education and related practical experience, is qualified to engage in the practice of corrosion control on buried or submerged metal piping systems and metal-tanks. Such a person must be accredited as being qualified by the National Association of Corrosion Engineers or be a Maine registered professional engineer who has certification or licensing that includes education and experience in corrosion control of buried or submerged metal piping systems and metal tanks.

**N. Corrosion-induced leak.** "Corrosion-induced leak" means any discharge of a hazardous substance from an underground hazardous substance storage facility or tank caused by the deterioration of materials which comprise the facility or tank, because of a reaction with the internal or external environment of the facility or tank.

**0. Department.** "Department" means the Department of Environmental Protection of the State of Maine.

**P. Discharge.** "Discharge" means any spilling, leaking, pumping, pouring, emitting, escaping, emptying or dumping.

**Q. Existing underground hazardous substance storage facility or tank.** "Existing underground hazardous substance storage facility" and "existing underground hazardous substance storage tank" means any facility or tank, fully installed prior to the effective date of this rule and the location of which has not changed.

**R. Facility.** "Facility" means any underground hazardous substance storage tank or tanks located under any land at a single location together with associated piping, dispensing or ancillary equipment and used or intended to be used, for the storage or supply of hazardous substances, as defined in this rule.

**S. Free product.** "Free product" refers to a hazardous substance that is present as a non aqueous phase liquid (e.g. a liquid not dissolved in water).

**T. Gallon.** "Gallon" means a unit of volume in the U. S. Customary System. used in liquid measure, equal to 4 quarts, or 3.785 liters.

**U. Hazardous Substance.** "Hazardous substance" means any liquid containing a hazardous substance as defined under 38 MRSA §1362, except that, for the purpose of this rule, a liquid is not a hazardous substance because it contains:

1. a substance identified as hazardous waste under chapter 850 of department rules;

2. oil as defined in 38 MRSA §562-A(15); or

3. waste oil as defined in 38 MRSA §1303-C(42).

For the purpose of this rule, "hazardous substance" does not include: liquids containing hazardous substances in such low concentrations that the liquid meets state and federal standards for human consumption; and liquids that the commissioner determines will have no adverse human health or environmental impact if released to the environment.

**V. Heating fuel.** "Heating fuel" means residual petroleum hydrocarbon fuel oil including the following technical grades or equivalents: No. 1, No. 2, heavy no. 4, light no. 4, heavy no. 5, light no. 5 and no. 6. Heating fuels must be intended for use in heating equipment, boilers, or furnaces.

**W. Hydrostatic piping test.** "Hydrostatic piping test" means a test in which the piping components of a facility are pressurized with liquid in accordance with the requirements contained in Appendix D and monitored to determine the existence of a leak.

**X. Impressed current cathodic protection system.**  "Impressed current cathodic protection system" means a cathodic protection system which relies on direct current continuously supplied by a power source external to the electrode system.

**Y. In service tank or facility.** "In service tank or facility" means a tank or facility to or from which product has been added or removed for its intended use during a consecutive twelve (12) month period.

**Z. Interstitial monitoring.** "Interstitial monitoring" means monitoring the space between the primary and secondary containment structures for leaks.

**AA. Leak.** "Leak" means:

(1) A loss or gain of 0.1 gallons or more per hour as determined by a precision test, defined in paragraph LL below;

(2) A loss or gain as determined by a leak detection system in accordance with sections 8, 9 and 10 of this rule; or

(3) The presence, in the excavation zone or backfill, of contamination by the hazardous substance most recently stored in the tank, as confirmed by environmental sampling or site assessment.

**BB. Liner.** "Liner" means a coating of non-corrosive material resistant to the product stored and bonded firmly to the interior surface of the tank.

**CC. Lubricating oil.** "Lubricating oil" means any petroleum hydrocarbon oil intended to be used in the lubrication of motor engines.

**DD. Material Safety Data Sheet**. "Material safety data sheet" means a written document describing the hazards and properties of an individual hazardous substance or a mixture containing a hazardous substance. The document must be prepared in accordance with the requirements of 29 CFR Part 1910.1200 as published July 1, 1988.

**EE. Monitoring well**. "Monitoring well" means a dug or drilled, cased well or other device that can be used for detecting the presence of hazardous substances below ground level.

**FF. Motor fuel.** "Motor fuel" means a petroleum hydrocarbon or a petroleum hydrocarbon based substance that is motor gasoline, aviation gasoline, no. 1 or no. 2 diesel fuel or any grade of Gasohol that is typically used in the operation of a motor engine.

**GG. Operator.** "Operator" means any person who is in control of, operates, or is otherwise responsible for the daily operation of an underground hazardous substance storage facility or tank.

**HH. Out of service underground hazardous substance storage facility or tank.** "Out-of-service underground hazardous substance storage facility" and "out-of service underground hazardous substance storage tank" mean any such facility or tank, as defined in subsections VV and WW, neither receiving nor dispensing a hazardous substance. but to be returned to service or awaiting closure pursuant to Section 13 of this rule.

**II. Owner.**  "Owner" means any person who alone, or in conjunction with others owns an underground hazardous substance storage facility.

**JJ. Person.**  "Person" means any individual person, firm, association, partnership, corporation. trust, the State and any agency of the State, governmental entity, quasi-governmental entity, the United States and any agency of the United States and any other legal entity.

**KK. Pneumatic test** "Pneumatic test" means an air pressure test performed in accordance with the requirements of Appendix C.

**LL. Precision test**. "Precision test" means a tank or piping line tightness test, approved by the commissioner, that is:

(1) Capable of detecting a leak, loss or gain of 0.1 gallons per hour with a probability of detection of 95 percent and a probability of false alarm of 5 percent as determined by an independent testing laboratory using U.S. Environmental Protection Agency approved protocols; and

(2) Conducted in strict accordance with the tank and piping manufacturer's operating procedures and any protocols identified by an independent testing laboratory as required to meet the performance standards of paragraph 1.

**MM. Primary sand and gravel recharge area**. "Primary sand and gravel recharge area" means the surface area directly overlying sand and gravel formations that provide direct replenishment of groundwater to sand and gravel or fractured bedrock aquifers. The term does not include areas overlying formations that have been identified as unsaturated and not contiguous with saturated formations.

**NN. Private water supply.** "Private water supply" means any dug, drilled or other type of well or spring or other source of water which collects water for human or animal consumption and is not a public water supply.

**00. Public drinking water supply.**  "Public drinking water supply" means any well or other source of water which furnishes water to the public for human consumption for at least 15 connections, or regularly serves an average of at least 25 individuals daily at least 30 days out of the year, or which supplies bottled water for sale. This may include schools, public buildings, restaurants, convenience stores, etc.

**PP. Sacrificial Anode.**  "Sacrificial anode" means a metal anode that, because of its electrolytic potential and relative position in the galvanic series, will provide sacrificial corrosion protection to the metals from which underground tanks and/or piping are constructed when the sacrificial anode and underground tanks and/or piping are constructed and connected in accordance with National Association of Corrosion Engineers (NACE) Recommended Practice RP-02-85, 'Recommended Practice For Control Of External Corrosion On Metallic Buried, Partially Buried, Or Submerged Liquid Storage Systems' (April, 1985).

**QQ. Secondary containment.** "Secondary containment" means a system installed so that any material that is discharged or has leaked from the primary containment is prevented from reaching the soil or ground water outside the system for the anticipated period of time necessary to detect and recover the discharged material.

**RR. Sensitive geologic areas.**  "Sensitive geologic areas" means any of the following: 1) significant ground water aquifers as defined in subsection SS below; 2) primary sand and gravel recharge areas as defined in subsection MM above; 3) locations within 1,000 feet of a public drinking water supply; or 4) locations within 300 feet of a private drinking water supply.

**SS. Significant ground water aquifer**. "Significant ground water aquifer" means a porous formation of ice-contact and glacial outwash sand and gravel, as identified by the current Maine Geological Survey maps, that contains a significant recoverable quantity of water which is likely to provide drinking water supplies.

**TT. Tank.** "Tank" means any container including piping, 10% or more of the volume of which is beneath the surface of the ground and which is used, or intended to be used, for the storage or supply of a hazardous substance as defined in this section, but does not include any tanks situated in an underground area if these tanks are situated upon or above the surface of a floor and in such a manner that the entire exterior surface of the tank may be readily inspected.

**UU. Temporarily out-of-service facility or tank.** "Temporarily out-of-service facility" and "temporarily out-of-service tank" mean a facility which has received written permission from the Department to remain inactive for an additional twelve (12) months, in accordance with the requirements of Section 13A of this rule.

**VV. Underground hazardous substance storage facility.**  "Underground hazardous substance storage facility," also referred to as "facility," means any underground hazardous substance storage tank or tanks as defined in subsection WW, together with associated piping and dispensing facilities located under any land at a single location and used, or intended to be used, for the storage or supply of hazardous substances as defined in this rule.

**WW. Underground hazardous substance storage tank.** "Underground hazardous substance storage tank" also referred to as "tank" as defined in Section 4(TT), means any container, including piping, 102 or more of the volume of which is beneath the surface of the ground and which is used, or intended to be used, for the storage or supply of a hazardous substance as defined in this section, but does not include any tanks situated in an underground area if these tanks or containers are situated upon or above the surface of a floor and in such a manner that the entire exterior surface of the tank may be readily inspected.

**XX. Underground Hazardous Substance Storage Tank Installer.** "Underground hazardous substance storage tank installer" means a person certified pursuant to 32 MRSA, §10001 et seq., to install and remove underground hazardous substance storage tanks.

**5. Registration of Underground Hazardous Substance Storage Facilities**

**A. Applicability.** All underground hazardous substance storage tanks (“tanks”) and underground hazardous substance storage facilities ("facilities”) must be registered with the Department and the local fire department within whose jurisdiction the tank or facility is located regardless of the size or use of the tanks or facilities, or the type of hazardous substance stored in the tanks or facilities, or whether or not the tanks or facilities are out-of-service.

**B. Registration Procedures**

(1) The owner of an underground hazardous substance storage facility shall register such a facility with the Department and the local fire department by filing a registration form provided by the Department which is completed in accordance with this Section. The registration form shall be filed at least 10 business days prior to installation of the facility. The information required to be provided on the registration form by the owner shall include but not be limited to the following:

(a) The name, mailing address, and telephone number of the owner of the underground hazardous substance storage facility to be registered;

(b) The name, mailing address, and telephone number of the operator of the underground hazardous substance storage facility to be registered;

(c) The name, location, and telephone number of the business or residence where the facility will be located. A description of the location of the facility must include allocation map or a description sufficient for the Department to locate the facility an the most recent U.S. Geological Survey typographical map of the area;

(d) The name, mailing address, and telephone number of an individual to contact regarding the registration materials submitted;

(e) Documentation that the facility meets the requirements for financial assurance or insurance as specified in Section 12 of this regulation;

(f) The size of each tank measured in gallons;

(g) The type of each tank, associated piping, and pump system, including the type of materials used for construction;

(h) The name of the hazardous substances and product(s) stored or contained in each tank and Chemical Abstracts Registry Service Numbers for the hazardous substances;

(i) The name and certification number of the underground hazardous substance storage tank installer who will install the tank and piping, or the name and registration number of the Maine registered professional engineer who will certify that the installation meets the requirements of this rule;

(j) Repealed.

(k) For a new or replacement tank or facility, a site drawing of the facility which includes the location of all new or replacement tanks, including distance and direction measurements that are sufficient to locate all underground portions of the facility; details of any secondary containment, leak detection, cathodic protection or monitoring (including anodes, wiring) measures as required by sections 6, 7, 8 or 9 of this rule; and locations of all piping associated with the facility;

(1) The expected date of installation for the each tank or facility; or, if installed prior to the effective date of this rule, the age or date of installation;

(m) Certification by the tank owner or the owner's designated representative and the certified underground hazardous substance storage tank installer supervising the installation on site or the Maine registered professional engineer certifying the installation that:

(i) New or replacement tanks, piping and ancillary equipment meet the requirements of sections 3, 6, 7, 8 and 9 of this rule;

(ii) Primary and secondary containment materials likely to be in contact with the hazardous substance stored are compatible with the hazardous substance stored according to written documentation provided by the manufacturers of the primary and secondary containment structures; and

(iii) The information provided on this form is accurate and complete to their best knowledge and belief.

(n) Certification by the tank owner and operator. or by the owner's and operator's designated representatives, that the requirements of Section 12 of this rule have been met; and

(o) Any other information required by federal law or regulations.

(2) Registration forms not completed in accordance with this section will not be accepted by the department and the facility will not be considered properly registered.

NOTE: 1984 Amendments to Federal law (Subtitle I of the Resource Conservation and Recovery Act, Section 9002 et seq.) mandate a Federal underground tank notification program and specify informational requirements for that program. Registration forms used by the Department meet all Federal and State informational requirements. A tank owner is not required to send a copy of the completed form to the U. S. Environmental Protection Agency so long as the facility has been properly registered with the Department.

(3) Material safety data sheets as defined in Section 4(DD) for the hazardous substance(s) being stored shall be submitted to the Department and the fire department in whose jurisdiction the facility Is located along with the registration form.

(4) Upon registration of the facility, the Department will provide a registration certificate and unique registration number for each underground hazardous substance storage facility or tank as acknowledgment that the facility or tank has-been registered with the Department. The owner or operator of the facility shall then display the registration certificate at all times in a prominent location at the facility location.

(5) The owner or operator of an underground hazardous substance storage facility shall immediately file an amended registration form with the Department and a copy to the fire department in whose jurisdiction the facility is located when ever there is any change in the information submitted on the facility's registration form on file with the Department including a change-in-service. If the change includes new or replacement tanks, piping or ancillary equipment the amended information shall be accompanied by the certifications required under Sections 5(B)(1)(m) and (n).

(6) The owner or operator of the facility shall make available a copy of the facility's registration certificate for inspection on site by the Department, its authorized representatives and authorized municipal or public safety officials.

(7) Where the facility owner cannot be determined or is disputed it shall be the responsibility of the owner of the real estate which includes the facility to register the tank or facility.

**C. Registration Fees**

(1) The owner or operator of an in-service or out-of-service underground hazardous substance storage facility that has not been closed in accordance with Section 13 shall pay the annual fee of $100.00 to the Department for each tank. The initial fee payment shall accompany the initial registration form. Annual fees thereafter shall be paid on or before January 1 of each calendar year.

(2) If an owner or operator fails to pay the appropriate fee by the due date, the owner or operator must pay a late payment fee of three times the amount otherwise owed.

(3) The owner or operator of a facility is not required to pay a fee for an amended registration form filed with the Department.

(4) The fee shall be paid by check or money order to the: Department of Environmental Protection, Bureau of Remediation and Waste Management, 17 SHS, Augusta, ME 04333.

NOTE: The facility's registration number should be placed on the check or money order to assure proper credit of payment.

**D. Required notice prior to sale or transfer**

(1) The owner or operator of an in-service or out-of-service underground hazardous substance tank or facility or the real estate which includes such tank or facility shall provide the following information to prospective buyers or lessees of the real estate, tank or facility in writing before entering into a purchase and sale agreement, option agreement, lease or any contract transferring rights in or responsibilities for the real estate, tank or facility:

(a) The property includes an underground hazardous substance storage tank or facility;

(b) The registration number of the facility;

(c) The location of the facility;

(d) The facility is subject to regulation by the Department including registration and annual fee requirements; and

(e) Whether or not the facility has been closed in place and whether or not the closure was completed in accordance with Section 13 of this regulation.

NOTE: Although not required to do so under this provision, the facility owner is encouraged to record the Notice in the Registry of Deeds for the county where the facility is located to secure a record of the owner's compliance with the notice requirements.

(2) Any person who sells a tank to be used as an underground hazardous substance storage tank shall notify the purchasers of such tank of the owner's registration obligations under this section.

**6. Design and Installation Requirements for new and replacement tanks**

**A. Construction Materials**

(1) All new and replacement tanks, including the outer wall of the tank, shall be constructed of fiberglass, cathodically protected steel or other non-corrosive material approved by the commissioner. The tank owner shall demonstrate to the satisfaction of the commissioner that the materials are non-corrosive and meet or exceed the intended performance standards.

(2) All new or replacement tanks and facilities shall be approved and constructed in accordance with the standards contained in the following:

For steel tanks, Underwriters Laboratories 58;

For fiberglass tanks, Underwriters Laboratories 1316;

For cathodically protected tanks, National Association of Corrosion Engineers, RP-02-95 or Steel Tank Institute (STI) Tank Standard R892-91; and

For composite tanks, Association for Composite Tanks ACT-100, UL 1746 or Steel Tank Institute (STI) Composite Tanks Standard F894-89.

(3) Repealed.

(4) Impressed current cathodic protection systems for new and replacement tanks or facilities shall be designed according to the standards described in National Association of Corrosion Engineers (NACE) Recommended Practice RP-02-95, and installed by a NACE certified engineer or technician.

(5) All tank construction materials, fittings, or adhesives likely to come in contact with the stored hazardous substance during normal operations or during a leak or spill shall be compatible with the product stored within the tank.

**B. Secondary Containment**

(1) Underground tanks for the storage of hazardous substances shall be double wall tanks constructed such that the outer wall completely encloses the inner wall to provide 360 degree double wall protection.

(2) All tanks and piping must be equipped with a monitoring device or devices in accordance with Sections 8 and 9 of this rule.

**C. Spill and Overfill Protection**

(1) During the transfer of the hazardous substance into the facility the owner or operator of the facility and transporter of the hazardous substance shall ensure that a person capable of monitoring and shutting off the transfer is physically present to observe the transfer and shut off the flow of product immediately when a spill or leak occurs or is likely to occur.

(2) An underground hazardous substance storage tank shall include a spill containment basin of at least 5 gallons capacity around the fill pipe and one of the following overfill protection systems or an equivalent system acceptable to the Department in order to ensure that the volume available in the tank is greater than the volume of hazardous substance to be transferred.

(a) A device to shut off flow into the tank at a level which will allow draining of hoses, fittings and associated tank filling equipment into the tank without release of any of the hazardous substances to the environment. As a minimum the device shall shut off flow into the tank when the tank is no more than 95% full; or

(b) A sensor to sound an alarm or valve capable to reducing flow to alert the person monitoring the transfer when the tanks is 90% full.

**D. Installation**

(1) New and replacement tanks shall be installed in conformance with the requirements contained in Appendix B and in accordance with one of the following:

(a) American Petroleum Institute Publication 1615, "Installation of Underground Petroleum Storage Systems";

(b) Petroleum Equipment Institute Publication RP100-94; or

(c) American National Standards Institute Standard B31.1, Chemical Plant and Petroleum Refinery Piping".

(2) No underground hazardous substance storage facility or tank may be installed unless the entire facility has been registered in accordance with section 5 of this rule.

(3) Repealed.

(4) New and replacement underground hazardous substance tanks and piping may only be installed by an underground hazardous substance storage tank installer certified by the Maine Board of Underground Storage Tank Installers (BUSTI) under 32 MRSA §10001 et seq., or by a BUSTI-certified underground oil storage tank installer if supervised on-site by a registered Maine professional engineer with training and experience in underground storage facility installation.

(5) A certified underground hazardous substance storage tank installer may not install an underground storage tank if the installer has been placed on inactive status or if the installer's certification has been suspended or revoked pursuant to 5 MRSA §10004 or 32 MRSA §§10001-10015, and has not been reinstated.

**E. Reinstallation**

(1) No used fiberglass or cathodically protected steel tank or other tank constructed of materials approved by the Department may be re-installed, unless the owner or operator has supplied the Department with documentation that the manufacturer will warranty the tank against internal and external corrosion and structural failure, for a period of at least ten (10) years, after which the tank must be properly abandoned in accordance with the requirements of Section 13 of this rule. Single-walled tanks may not be reinstalled.

(2) Prior to reinstallation tanks shall be removed in accordance with Section 13 and Appendix H.

(3) Reinstallation shall be completed in accordance with the requirements of Section 6 of this rule.

**F. Relining**

(1) Tanks not in conformance with the design and installation requirements of Section 6 of this rule may not be relined. At the time of relining the tank must be structurally sound and relined in a manner that will prevent releases due to structural failure or corrosion during the operational life of the tank.

(2) Tanks must pass a precision test or other test acceptable to the Department and must be internally inspected before relining. Results of all tests shall be submitted to the Department for approval prior to relining.

(3) Chemical compatibility of the liner material with the substance to be stored must be certified by the tank owner and the lining manufacturer. Certification must be provided to the Department in writing.

(4) The liner applicator must certify that the liner was installed according to the liner manufacturer's instructions and specifications.

(5) After relining and before reuse the tank must be internally inspected and found to be structurally sound.

(6) Liners may not be installed by hand troweling except for minor repairs or joint connections.

(7) Relining of steel tanks must be completed in accordance with API Publication 1631: Recommended Practice For The Interior Lining Of Existing Steel Underground Storage Tanks, unless otherwise approved by the Department except that tank testing and inspection must be completed in accordance with this rule.

(8) The liner manufacturer or applicator must warranty the liner against internal corrosion and contact of the product with the tank for a minimum of 10 years.

(9) Records demonstrating compliance with relining and upgrading requirements must be maintained for one year at the facility and thereafter at the facility or an alternative site under control of the current owner or operator of the facility from which they shall be made available to upon request to the Department or local public safety officials.

(10) Within 10 years after relining, and every 5 years thereafter, the lined tank must be internally inspected by the lining applicator or manufacturer and found to be structurally sound with the lining still performing in accordance with the original design specifications.

(11) At the end of the lining manufacturer's or applicator's warranty period, the tank must be relined as appropriate for the hazardous substance currently stored, or must be abandoned in accordance with section 13 of this rule.

**G. Repair**

(1) Tanks to be repaired must conform to current design and installation standards of Section 6 of this rule. Nonconforming leaking tanks must be closed in accordance with Section 13. If the tank must be replaced, all nonconforming piping must also be replaced.

(2) At the time of repair the tank must he structurally sound and repaired in a manner that will prevent releases due to structural failure or corrosion during the operational life.

(3) Repair of a tank after a leak must be done according to the manufacturer's recommendation and under the supervision on site of a manufacturer's authorized representative.

(4) The tank manufacturer must re-warranty the repaired tank for a minimum of ten years. The tank shall be properly abandoned in accordance with Section 13 at the end of the warranty period.

(5) Repaired tanks or tanks to be repaired must be excavated and the outer wall must be externally inspected and tested for defects by a method approved by the Department before the tank is put back into service.

(6) Repaired inner walls of tanks must be tested by a precision test or alternative method approved by the Department before being put back into service.

(7) Repair of a tank shall only be allowed once. Upon confirmation of additional leaks, the tank shall be properly abandoned in accordance with Section 13. The owner or operator of a facility must notify the Department prior to any repairs to be done after a tank leak and submit written notification to the Department after the repairs have been performed.

(8) Records demonstrating compliance with repair and upgrading requirements must be maintained for one year at the facility and thereafter at the facility or an alternative site under control of the current owner or operator of the facility from which they shall be made available to the Department or local public safety officials upon request.

**7. Design and Installation Requirements for new and Replacement Piping**

**A. Construction Materials**

(1) All underground piping, including all piping connectors, shall be constructed of fiberglass, cathodically protected steel or other non-corrosive materials which may be approved by the Department.

(2) All piping materials including adhesives must be chemically compatible with the hazardous substance to be stored.

(3) All nonmetallic piping shall be approved and constructed in accordance with the standards contained in the following:

Underwriters Laboratories (UL) Subject 971, "UL Listed Non-metal Pipe";

Underwriters Laboratories (UL) Standard 567, "Pipe Connectors for Flammable and Combustible and LP Gas";

Underwriters Laboratories of Canada (ULC) Guide ULC-107, "Glass Fiber Reinforced Plastic Pipe and Fittings for Flammable Liquids"; or

Underwriters Laboratories of Canada (ULC) Standard CAN4-S633-M84, "Flexible Underground Hose Connectors".

(4) All cathodically protected steel piping shall be constructed and installed in conformance with the National Association of Corrosion Engineers, Recommended Practices, Publication Number RP-02-85.

**B. Secondary Containment**

(1) All underground piping systems for underground hazardous substance storage facilities shall be constructed of double wall piping such that the outer wall completely encloses the inner wall to provide 360 degree double wall protection that will completely contain hazardous substance leaks.

(2) A leak detection system for all piping shall be installed in accordance with the requirements of Section 8 and 9 of this rule.

**C. Installation**

(1) Underground piping shall be installed in conformance with the requirements contained in Appendix E.

(2) Underground piping shall be installed in accordance with manufacturer's instructions and recommendations.

(3) Repealed.

(4) Underground piping may only be installed by an underground hazardous substance storage tank installer certified by the Maine Board of Underground Storage Tank Installers (BUSTI) under 32 MRSA §10001 et seq., or by a BUSTI-certified underground oil storage tank installer if supervised on-site by a registered Maine professional engineer with training and experience in underground storage facility installation.

**D. Relining and Reinstallation**

Underground piping-may not be relined or reinstalled.

**E. Repair After a Leak**

(1) Repair of underground piping and metal parts of ancillary equipment shall not be allowed. Piping sections and metal parts of ancillary equipment which leak must be replaced.

(2) The entire leaking underground piping system must be replaced if a leak is detected in a piping system which does not conform to the requirements of this regulation.

**8. Leak Detection Methods**

**A.** All new and replacement underground hazardous substance storage facilities, including piping, must include a leak detection system operating between the inner and outer walls of the tanks and piping. In addition, pressurized piping systems must include a line leak detector that meets the requirements of Section 8C.

**B.** All leak detection systems must meet the following requirements an a minimum:

(1) All leak detection systems at all facilities must be capable of detecting a leak from any portion of the inner tank or piping;

(2) All leak detection systems must be designed, installed, calibrated, operated, and maintained in accordance with the manufacturer's instructions and recommendations including routine maintenance and service checks for operability or running condition;

(3) All leak detection systems must have a probability of leak detection of .95 or greater and a probability of false alarm of .05 or less;

(4) A product tight and water tight non corrosive, product-compatible manway that provides visual access shall enclose any pump, leak detection, or ancillary equipment that contains product outside of the double wall tank or piping system; and

(5) Monitoring methods for tracer substances or substances other than the specific hazardous substance or substances stored must be approved by the Department.

NOTE: Electronic or manual, vapor or free product detection methods that meet the requirements of this section are acceptable.

**C. Additional Leak Detection Requirements for Piping Systems**

(1) Suction pump piping systems must include a single check valve located immediately upstream from the pump such that a leak in any portion of the below ground piping will prevent the pump from operating properly thus alerting the owner or operator that a leak may be present.

(2) Pressurized piping systems must include both a line leak detector capable of detecting a leak at 3 gallons per hour at 10 pounds per square inch line pressure within 5 minutes, and a continuous leak detection system in the interstitial space. Systems that combine line leak detection and interstitial space monitoring are acceptable. In addition, the line leak detector must incorporate one of the following:

(a) An automatic shut off device;

(b) A flow restriction device; or

(c) An alarm that indicates a leak.

(3) Line leak detectors shall be tested annually to be sure that they are operating properly. If a leak detector in not operating properly the facility shall cease operations until the leak detector is repaired or replaced.

**D.** All written performance claims pertaining to any release detection system used at the facility, and the manner in which these claims have been justified or tested by the equipment manufacturer or installer, shall be maintained at the facility or at the owner or operators place of business and shall be made available to Department employees or local public safety officer upon request.

**9. Monitoring and Operating Procedures**

**A. Monitoring and operating requirements for owners and operators of all facilities**

(1) Hazardous substances stored must be compatible with adhesives used in the construction of tanks and piping.

(2) Hazardous substances stored must be compatible with all internal surfaces of tanks, piping, and fittings that the hazardous substance is likely to come in contact with during normal operations or a leak event.

(3) A written, step by step, monitoring manual describing all monitoring procedures to meet the requirements of this regulation shall be kept at the facility. The signatures of employees trained and authorized to perform the monitoring shall be attached to the manual in a manner that indicates they have read and understand the description of monitoring procedures. No employees shall perform monitoring procedures until they have signed and attached their names to the manual. The monitoring manual and signatures of authorized employees shall be made available to state and local officials upon request for the purpose of reviewing and/or copying the information.

(4) Results of all inspections, monitoring, and testing required by this rule; as well as records of repairs, relining, or upgrading of any part of the facility; and records of manufacturer's suggested or required calibration and maintenance of leak detection equipment must be kept in log books from the effective date of this rule or from the installation date of the facility, whichever is later. The name of the person who completes the inspection, monitoring. testing, repairs, relining, upgrading. calibration, or maintenance must be included in the log book along with the results of each procedure. All such log book entries shall be maintained at the facility for a minimum of one year and thereafter at the facility or an alternative site under control of the current owner or operator of the facility. All log books shall be made available to the Department or local public safety officials upon request for the purpose of reviewing and/or copying the information.

(5) Monitoring equipment and test stations shall be properly labeled and differentiated from fill openings.

(6) A copy of an 'as built' drawing of the facility shall be kept on site to be made available upon request to state and local officials for the purpose of reviewing and/or copying the information. The drawing need not be an engineering plan but must show accurate locations of tanks, piping, fittings, dispensing equipment, anodes, and monitoring equipment including cathodic protection wiring.

(7) All monitoring equipment shall be installed, maintained, and operated in accordance with manufacturer's instructions and recommendations.

**B. Minimum monitoring and operating requirements for owners and operators of existing facilities**

(1) All accessible facility components including but not limited to pumps, leak detectors, dispensers, valves, monitoring wells, tank or pipe fittings, etc., that contain or may contain hazardous substances shall be inspected weekly for evidence of leaks. Accessible components Include those from which covers can be removed without interrupting operation of the system.

(2) The log book for recording inspection results must specify which components are inspected, the results, and the name of the inspector.

(3) All existing facilities must be tested for leaks by precision testing or an alternative method approved by the Department when they reach 15 years of age and annually thereafter. Facilities whose age is unknown shall be presumed to be 15 years old as of October 1, 1989.

**C. Monitoring and operating requirements for owners and operators of new and replacement facilities upon installation and existing facilities in accordance with the compliance schedules of Section 11.**

(1) Electronic monitoring systems for leak detection shall be tested at least once per week. If the electronic monitoring system is not operating, or is operating at a reduced capacity, the estimated duration of and the reason for the system being out of operation shall be recorded in the testing and monitoring log book. Operational problems that may indicate the presence of a leak must be reported to the Department in accordance with Section 10 of this rule.

(2) If an electronic or manual monitoring system for leak detection remains inoperative for more than 7 days and cannot be replaced by alternative monitoring procedures that meet the requirements of this rule, the stored hazardous substance shall be pumped out of the tank and piping system and stored so as to prevent release of the hazardous substance to the environment until the monitoring system can be repaired or replaced.

(3) Monitoring of manual leak detection systems or sumps shall be accomplished weekly.

(4) Line leak detectors shall be tested annually in accordance with Section 8(C) of this rule.

(5) Monitoring requirements for galvanic cathodic protection systems.

(a) All cathodically protected tanks and piping shall have an accurate structure to soil potential reading performed by a cathodic protection tester as defined in Section 4F within 6 months of installation and annually thereafter.

(b) When underground work is performed at the site, the cathodic protection shall be monitored by a cathodic protection tester as defined in Section 4(F) 6 to 12 weeks after such work has been completed, to assure that the system is functioning properly.

(c) Monitoring shall be performed in accordance with the requirements of Appendix F. The owner and operator must take immediate action to correct any deficiencies detected during monitoring.

(6) Monitoring requirements for impressed current cathodic protection systems

(a) All monitoring measurements and inspections required by this section must be done by a cathodic protection tester as defined in Section 4F.

(b) A monthly inspection shall be performed of the rectifier meter on all facilities utilizing the impressed current system of corrosion protection. All readings shall be recorded in a log book which must be kept at the facility.

(c) An on-site test and inspection shall be made at least once per year and must include measurement of structure to soil and structure to structure potentials. the rectifier voltage and current output.

(d) The owner and operator must take immediate action to correct any deficiencies detected during monitoring.

(7) All accessible underground hazardous substance storage system components, including but not limited to pumps. leak detectors, valves. tank or pipe fittings, that contain or may contain hazardous substances shall be inspected weekly for evidence of leaks. Accessible components include those from which covers can be removed without interrupting operation of the system.

**D.** The following procedures shall be completed before a change-in-service.

(1) Prior to a change-in-service from one hazardous substance to another hazardous substance the facility owner or operator shall do one of the following to demonstrate to the Department's satisfaction, that the tank(s) and/or piping are not leaking:

(a) Perform on the facility or on the affected tanks and piping a precision test or equivalent test approved by the Department;

(b) Perform a site assessment of the facility or the affected tanks and piping in accordance with the requirements of Appendix G; or

(c) Submit to the Department documentation and certification that the facility or the affected tanks and piping conform to the requirements of Sections 8 and 9 of this rule and that leak detection monitoring records for the facility are complete. accurate, and up to date from the date the facility was installed and do not indicate a leak.

(2) Prior to a change-in-service from a hazardous substance to a non hazardous substance the facility owner or operator shall perform a site assessment in accordance with the requirements of Section 13 (D) and Appendix G.

(3) The owner or operator of a facility shall submit written notice of a change-in-service to the Department 10 days prior to the change-in-service. The notice shall be accompanied by a site assessment or certification by the owner or operator or their authorized full time employee that leak detection records are complete and current and show that the facility is not leaking. The site assessment or leak detection records must meet the requirements of Section 13D.

(4) The Department may require remedial action for leaks or spills before the change-in-service occurs.

**E. Tank and Piping Testing Methods**

(1) The commissioner may require precision testing of all tanks and piping at a facility showing evidence of a leak, as defined in section 10(A). Hydrostatic tests of piping must be conducted in accordance with the requirements of Appendix D.

(2) Precision testers actually performing a precision test on site on any underground hazardous substance storage tank must be currently certified to perform the test by the vendor of the test procedure and equipment. A precision tester shall present documentation of current certification upon request by the Department.

(3) Alternative testing methods shall be used when precision testing or hydrostatic testing methods are not feasible. Alternative testing methods must be approved by the Department.

**F. Testing of Existing Facilities**

(1) All facilities operating without leak detection systems installed and operated in conformance with this rule shall be tested for leaks by precision testing or an alternative method approved by the Department when they reach 15 years of age and annually thereafter.

(2) Facilities whose age is unknown shall be presumed to be 15 years old as of October 1, 1989.

**G. Inspection of Relined Tanks.** Within 10 years after relining, and every 5 years thereafter the relined tank must be internally inspected and found to be structurally sound with the lining still performing in accordance with the original design specifications.

**H. Site Access for Official Purposes.** Department officials may enter any site or premises subject to underground hazardous substance storage facility regulations, or in which relevant records of such facilities are stored, to copy records, obtain samples of regulated substances and inspect or conduct the monitoring or testing of the underground hazardous substance storage tank or facility.

**10. Leak or Discharge Reporting, Removal, Investigation and Mediation**

**A. Evidence of a Leak or Discharge**

(1) Leak Detection Systems Evidence

(a) A positive analysis for the stored hazardous substance in the interstitial space of a double wall tank or piping system;

(b) Any sheen or other visual or olfactory evidence of the hazardous substance in the interstitial space of a double wall tank or piping system;

(c) Any unexplained loss or gain of .5 percent of the through put of each storage system over a 30 day period, as indicted by the recording and reconciliation of daily inventory records;

(d) Failure of a hydrostatic piping test, as defined in Section 4(W), which indicates a pressure drop of more than 5 psig per minute. Hydrostatic piping tests shall be performed in accordance with the requirements of Appendix D.

(e) Failure of a precision test as defined in Section 4(LL) which indicates a loss or gain of greater than .05 gallons/hour;

(f) Unexplained losses detected through a statistical analysis of inventory records or an indication in the statistical inventory analysis that the inventory data provided were insufficient to perform an accurate analysis;

(g) The excessive accumulation of water in a tank or interstitial space, evidenced by a rise in water level of greater than 112 inch for an 8 to 12 hour period;

(h) Loss of pressure in a remote pumping system equipped with a line leak detection device;

(i) Pump hesitation, vibration, meter skipping or air elimination, attributable to a loss of prime for product lines which operate under a suction system; or

(j) The sounding of any audible alarms associated with electronic monitoring devices.

(2) Environmental Evidence

(a) A positive analysis for the presently or previously stored hazardous substance in a monitoring well or private or public drinking water supply.

(b) Any sheen or other visual or olfactory evidence of a presently or previously stored hazardous substance in a monitoring well or private or public drinking water well.

(c) The presence of free or dissolved product of any presently or previously stored hazardous substance or its vapors on site or off site in the soil, groundwater, surface water, sewer lines, utility lines, water supply liner, basements, crawl spaces or on the ground surface.

(3) Any other combination of unusual operating conditions and/or release detection signals and/or environmental conditions on or offsite which suggest that a release of a hazardous substance may have occurred.

**B. Leak Investigation and Confirmation Requirements**

(1) Immediately upon discovery and reporting of evidence of a leak, the owner or operator must undertake an investigation to confirm or rule out the presence of a leak within 7 days in accordance with one or more of the following:

(a) A leak is confirmed if interstitial leak detection equipment indicates a leak. Leak detection equipment may be tested, calibrated, repaired or replaced to ensure that it is operating properly prior to testing of the tank or facility for confirmation of a leak. Any testing, calibration, repair or replacement of leak detection equipment must take place within 48 hours of the initial leak indication or the Department may require precision testing, excavation of the tank. piping or facility, or other appropriate testing.

(b) A leak is confirmed if a precision test of the tank and piping conducted separately and in accordance with all manufacturer's recommended procedures by a technician currently certified by the manufacturer indicates a leak. The precision test results must be reviewed and approved by the Department. If precision testing is not technologically feasible then alternative testing methods may be used if approved by the Department.

(c) A leak is confirmed if, upon excavation of the tank/and or piping, visual inspection or the testing approved by the Department indicates the presence of a leak.

(2) If any environmental evidence of a leak is present on or off site whether or not a leak to the environment from a facility is confirmed in accordance with the requirements of Section 10(B)(1), the owner or operator must complete a site assessment in accordance with the requirements of Appendix G and submit a report to the Department within 45 days of discovery of evidence of a leak. The environmental contamination may he due to a hazardous substance presently or previously stored at the facility.

(3) If a leak is confirmed in the inner and outer walls of a double wall facility or the wall of a single wall facility and environmental evidence of the leak has not been discovered the owner or operator must complete a site assessment in accordance with Appendix G and submit a report to the Department within 45 days.

(4) Further investigation is not required and a leak is not considered to be present if not confirmed In accordance with Section 10(B)(1) and if no environmental evidence of a leak is present.

**C. Reporting, Removal, and Initial Abatement Requirements**

(1) Any person who discovers contaminated soil or water or other evidence of a leak or discharge of any amount of a hazardous substance is required to report the contamination to the Department of Public Safety (State Police) as soon as possible but not later than 24 hours after the discovery has occurred.

NOTE: To report a spill call the 24 hour toll free number 1-800-452-4664. A spill that exceeds its reportable quantity under 40 CFR Part 302 must be reported immediately to the National Response Center at 1-800-424-8802 as well as appropriate state and local authorities.

(2) A tank owner or operator shall report to the Department as soon as possible but no later than within 24 hours any evidence of a possible leak or discharge of any amount of a hazardous substance from its primary container, including but not limited to those types of evidence listed in Section 10(A).

(3) The Department, at its discretion. may order complete removal of all product from a facility or portion of a facility upon receiving evidence of a leak from the facility or portion of a facility.

(4) All product must immediately be removed in a manner protective of public health, safety, welfare and the environment from any facility or portion of a facility in which a leak has been confirmed. No hazardous or non hazardous substance may be introduced until the facility has been repaired or replaced in accordance with this rule.

(5) Any person discharging or suffering the discharge by a surface spill or a leak confirmed in accordance with section 10(c) of a hazardous substance into or upon any coastal waters, estuaries, tidal flats, beaches and lands adjoining the seacoast of the State, or into or upon any lake, pond. river. stream. sewer, surface water drainage, ground water or other waters of the State or any public or private water supply or onto any lands of the state shall immediately do the following:

(a) Take appropriate action to prevent further releases to the environment, including removal of product from the facility or portion of the facility where the leak is or may be present.' Estimate by appropriate measurements and investigation of the amount of hazardous substance leaked to the environment.

(b) Identify and mitigate any fire. explosion, vapor or other environmental or public health and safety hazards; and

(c) Remove the discharge to the Department's satisfaction including free product recovery and removal or clean up of contaminated soil in a manner protective of public health, safety, welfare and the environment.

(d) Identify and notify any other persons on site or off site, whose health and safety might in the future be threatened by migration of contamination in the form of vapors, free product or dissolved contamination. In particular, the owner or operator should evaluate the potential for explosive or toxic vapors to move into utility lines, basements, etc. and the potential for contamination of public and private drinking water supplies.

(6) Within 20 days of discovery or confirmation of the leak or discharge submit a written report to the Department describing completed, proposed, and in progress actions to meet the requirements of Section 10(C)(5). If free product removal is necessary the report should include the information required in section 10 (D)(2)(c).

**D. Requirements for Remedial Action**

(1) Following a site assessment done in accordance with Appendix G that documents environmental contamination, the owner or operator of the facility must undertake remedial action. The remedial action must commence within 90 days following confirmation of the leak or discovery of environmental contamination unless a longer time period is allowed by the Department due to seasonal construction limitations.

(2) At sites where the site assessment indicates the presence of free product in the environment the owner or operator must remove the free product to the maximum extent practicable as determined by the Department in accordance with the following requirements:

(a) Free product should be removed in a manner that minimizes the spread of free product or dissolved contamination and that properly treats. disposes of, or discharges recovered byproducts.

(b) Abatement of free product migration must be the minimum objective of the free product removal system.

(c) Provide the following information in a report to the Department within 20 days of initiating free product removal.

(i) The name of the person responsible for implementing the free product removal measure;

(ii) The estimated quantity, type and thickness of free product observed or measured in wells, boreholes and excavations;

(iii) The type of free product recovery system used;

(iv) The location of any discharges and whether they will be offsite or on site;

(v) The type of treatment applied to any discharge and the estimated contaminant concentration in any discharge.

(vi) The steps that have been or are being taken to obtain the necessary permits for any discharge; and

(vii) The disposition of the recovered free product.

(3) The owner or operator must provide the Department with bimonthly reports on the current status of the remedial action program until the program has been completed to the satisfaction of the Department or until an alternative reporting schedule has been approved by the Department.

(4) The Department may require changes in the remediation program based on changes in site conditions, the effectiveness or lack thereof of currently operating remedial methods or the availability of new information, methods or technologies.

(5) The department will provide public notice for all releases, except those requiring immediate action to protect public health, safety, welfare and the environment, that require remedial action including making available to the general public for inspection site assessment reports and remedial action recommendations. All such reports and recommendations will be available at the Department headquarters in Augusta, the appropriate Department field office, and in the town office of the town or towns where the release has occurred and/or migrated. Notice will also be published in appropriate regional and/or local newspapers. Any significant changes after approval of the remedial action plan including changes in clean up levels will be given the same public notice. The Department may. at its discretion, hold a public meeting for any site that requires remedial action.

**11. Compliance Schedule for Existing Facilities**

**A. Closure Schedule For Existing Facilities With Single Wall Tanks Or Single Wall Piping.** All existing facilities with single wall tanks or single wall piping must be upgraded to meet the requirements of Sections 6, 7, 8 and 9, or be properly closed in accordance with Section 13 according to the following schedule:

(1) Tanks or piping installed before 1976 and located in a sensitive geologic area, or installed before January 1, 1970 shall be properly upgraded or closed by October 1, 1990.

(2) All existing facilities with either single wall tanks or single wall piping shall be properly upgraded or closed by October 1, 1991.

**B. Upgrade and Closure Schedule For Existing Facilities With Both Double Wall Tanks and Double Wall Piping**. All existing facilities with both double wall tanks and double wall piping must be upgraded to meet the requirements of sections 6, 7, 8 and 9 or be properly closed in accordance with section 13 according to the following schedule:

(1) Tanks and piping installed before 1976 and located in a sensitive geologic area, or installed before January 1, 1970, shall be properly upgraded or closed by October 1, 1990;

(2) Tanks and piping installed before 1977 and located in a sensitive geologic area, or installed from 1970 through 1974 shall be properly upgraded or closed by October 1, 1991;

(3) Tanks and piping installed from 1975 through 1979 shall be properly upgraded or closed by October 1, 1992; and

(4) Tanks and piping installed after 1979 shall be properly upgraded or closed by October 1, 1993.

**C. Closure Schedule For Existing Facilities With Pressurized (Positive Pressure) Piping Systems.** All existing facilities utilizing pressurized piping systems must meet the requirements of Sections 6, 7, 8 and 9 or be properly closed in accordance with Section 13 by October 1, 1990.

**D.** Retrofitting of impressed current or galvanic cathodic protection systems to existing facilities will not meet the requirements of this rule for cathodic protection.

**E.** Prior to upgrading a facility to meet the requirements of this section, the facility owners or operators must demonstrate, to the Department's satisfaction, that the facility or the affected tanks and piping are not leaking by one of the following:

(1) Perform on the facility or the affected tanks and piping a precision test or equivalent test approved by the Department; or

(2) Perform a site assessment of the facility or the affected tanks and piping in accordance with the requirements of Appendix G; or

(3) Submit to the Department documentation and certification that the facility or the affected tanks and piping conform to the requirements of Sections 8 and 9 of this rule and that leak, detection monitoring records for the facility are complete, accurate, and up to date from the date the facility was installed and do not indicate a leak.

**12. Financial Assurance and Insurance Regulations (RESERVED)**

**13. Closure of Underground Hazardous Substance Storage Facilities and Tanks.**

NOTE: Tanks that contain hazardous waste as identified in chapter 850 of department rules are subject to the closure requirements of chapter 851.

**A. Out of Service and Temporarily Out of Service Facilities**

(1) All underground hazardous substance storage facilities and tanks that have been, or are intended to be, taken out-of-service for a period of more than twelve (12) consecutive months shall be properly closed in accordance with this rule within 90 days unless the tank owner has received written permission from the Department of Environmental Protection to remain temporarily out of service in accordance with the requirements of Section 13 (A)(5).

(2) All out of service facilities regardless of the length of time they have been or will continue to be out of service must be in compliance with all Sections of this rule.

(3) Closure of out-of-service underground hazardous substance storage facilities must be supervised by an independent Maine-registered professional engineer with demonstrated education and experience in underground storage tank installation or removal or with demonstrated education and experience in hazardous waste clean-up or management.

(4) When a facility is out-of-service for 3 consecutive months or more owners and operators must comply with the following requirements:

(a) All product must be removed using commonly employed practices so that no more than one inch of residue or 0.3% by weight of the total capacity of the facility remains in the facility;

(b) Vent pipes must be open and functioning;

(c) All other piping, pumps, manways and ancillary equipment must be capped and secured. Product shall be removed from piping, pumps, manways, and ancillary equipment to the extent it is technically feasible; and

(d) Leak detection equipment must remain in operation in accordance with Section 8 and 9 of this rule during the out-of-service period or the facility must be properly closed in accordance with the requirements of Section 13.

(e) All corrosion protection equipment shall remain in operation in accordance with this rule.

(5) For a facility to remain temporarily out of service for more than twelve (12) months, the tank owner or operator must receive written approval from the Department. Written approval to remain out of service may remain in effect for up to twelve (12) months by which time the owner or operator must have received written permission from the Department for a twelve (12) month extension or must have closed the facility in accordance with this rule. Permission to remain temporarily out of service for more than twelve (12) months may only be granted when:

(a.) The requirements of Section 13 (A)(4) of this rule are being met; and

(b) The facility has been designed and installed in accordance with Sections 6, 7, and 8 of this rule; and

(c) The owner or operator can demonstrate, to the Department's satisfaction, that the facility is not leaking by one of the following methods:

(i) A precision test, or equivalent test approved by the Department, of the facility or the affected tanks and piping; or

(ii) A site assessment of the facility or the affected tanks and piping in accordance with the requirements of Appendix G; or

(iii) Submit to the Department documentation and certification that the facility or the affected tanks and piping conform to the requirements of Sections 8 and 9 of this rule and that leak detection monitoring records for the facility are complete, accurate, and up to date from the date the facility was installed and do not indicate a leak.

(6) All underground hazardous substance storage facilities taken out of service before the effective date of this rule must be permanently closed in accordance with this Section if the Department determines that any such facility poses a current or potential threat to human health safety, welfare or the environment.

**B. Rebuttable Presumption of Hazardous Waste Generation at Closure.** All sludges, tank bottoms, or residual liquids including all cleaning fluids that are contained in or have passed through a facility to be closed shall be handled and disposed of as hazardous waste in accordance with Chapter 851 of the Maine Hazardous Waste Management Rules, unless the owner or operator demonstrates to the Department's satisfaction by testing or other appropriate methods approved by the Department that the substances are not subject to the Maine Hazardous Waste Management Rules.

NOTE: The Maine Hazardous Waste Management Rules include requirements that hazardous waste be transported by licensed hazardous waste transporters, disposed of at approved hazardous waste disposal facilities, and be properly manifested from the site of generation to the site of final disposal.

**C. Notification Requirements**

(1) The owner or operator of a facility or tank which is to be closed shall notify the Department and the local fire department having jurisdiction. This notice shall be in writing and received by the Department at least thirty (30) days prior to closure. When ownership of the facility or tank is unknown, the current property owner shall be responsible for compliance with the requirements of this section. This notice shall include:

(a) The name, mailing address, and telephone number of the owner;

(b) The mailing address and location of the facility;

(c) The size(s) and locations of tank(s) and piping to be abandoned;

(d) The type(s) of products(s) stored in each tank during its operational life or since the last site assessment of the tank or facility completed in accordance with the requirements of this rule;

(e) The registration number of the facility and tank(s) or, if unregistered, a properly executed registration form along with the appropriate fee;

(f) The methods by which the tank or facility will be cleaned;

(g) Methods of inserting, venting or otherwise rendering the tank or facility safe for removal or filling place;

(h) Name and address of the Maine registered professional engineer who will supervise closure and certify that the facility has been closed properly and in accordance with this section;

(i) Name, address and certification number of the Maine certified geologist who will supervise the site assessment in accordance with Section 13D and Appendix G;

(j) The method and site of disposal;

(k) The name, address and phone number of any person(s) or company(s) that will be responsible for cleaning, removal, storage, or disposal of the tank or facility;

(1) If filling in place is planned, the criteria used for justifying filling in place, as listed in Section 13F;

(m) The age or approximate age of the tank, if known; and

(n) The date upon which the facility or tank is to be removed or when a variance has been granted pursuant to section 13(F) of this rule, the date on which the tank or facility will be properly filled in place. If the date of removal or filling-in-place is subsequently changed the owner must notify the Department and the fire department in whose jurisdiction the tank or facility is located, of the new date before the tank is removed or filled-in-place.

(2) The tank owner is responsible for attaching to the deed of the property on which a filled-in-place tank is located a notice that an underground hazardous substance storage tank which has been closed in accordance with this rule by filling-in-place pursuant to Section 13(F), exists on the property. The deed notation shall be executed within 30 days of completion of the closure. A copy of the registered notation showing book and page number shall be submitted to the Department within 90 days following completion of closure.

**D. Site Assessment Requirements**

(1) An independent Maine Certified Geologist shall supervise completion of a site assessment during the closure process or before a change-in-service of the tank or facility unless exempted by section 9(D). The site assessment shall determine the character, quantity, and extent of any subsurface pollution that may have occurred from spills or leaks during the operational life of the tank system and shall make recommendations for remediation of any such pollution. Minimum requirements for a site assessment are outlined in Appendix G.

(2) A report detailing the results of the site assessment and recommendations for remedial action shall be submitted to the Department within 90 days following tank removal or filling in place, or, if applicable, 10 days before a change-in-service of the tank or facility. The Department may require remedial action before the change-in-service takes place.

(3) Site remediation shall be completed by the owner or operator of the facility to the satisfaction of the Department.

**E. Closure By Removal**

(1) Removal of tanks and facilities shall be conducted in accordance with the requirements contained in Appendix H and to the satisfaction of the commissioner.

(2) Connections or disconnections to be made to or from any in-service facility during removal of the out-of-service facility shall be made by an underground hazardous substance storage tank installer certified by the Maine Board of Underground Storage Tank Installers (BUSTI) under 32 MRSA §10001 et seq. or by a BUSTI-certified underground oil storage tank installer if supervised on-site by a registered Maine professional engineer with training and experience in underground storage facility installation.

(3) Removed tanks shall be properly disposed of in accordance with section 13(H) within 30 days following removal.

**F. Closure By Filling In Place**

(1) Out-of-service facilities and tanks shall be removed, except where the owner can demonstrate to the Department that removal is not physically possible or practicable because the tank or other component of the facility to be removed is:

(a) Located-beneath a building or other permanent structure which cannot be practically replaced;

(b) Of a size and type of construction that it cannot be removed;

(c) Inaccessible to heavy equipment necessary for removal; or

(d) Positioned in a manner that removal would endanger the structural integrity of nearby tanks.

(2) A facility or tank owner may apply to the commissioner for a variance to fill in place a facility or tank rather than remove the tank or facility. The Commissioner may grant such a variance request if he or she finds that:

(a) Closure by removal is not possible or practicable due to circumstances other than those listed in paragraph 1 above;

(b) The procedures outlined in Appendix I for filling in place will be followed in sequence, and

(c) The granting of a variance does not pose a threat to a private or public drinking water supply or the quality of groundwater, and is consistent with the intent of this rule.

(3) After December 31, 1990 any connections or disconnections to be made to or from any in-service facility during filling-in-place of an out-of-service facility shall be made by an underground hazardous substance storage tank installer certified pursuant to 32 M.R.S.A. Chapter 104-A.

(4) Prior to January 1, 1990 any connections or disconnections to be made to or from any in-service facility during filling in place of an out-of-service facility must be made by an underground oil storage tank installer certified pursuant to 32 M.R.S.A. Chapter 104-A.

(5) Filling-in-place of tanks and facilities shall be conducted in conformance with the requirements contained in Appendix I and to the satisfaction of the Department.

(6) A deed notation shall be executed in accordance with the requirements of Section 13(C)(3).

**G. Tank Cleaning**

(1) All tanks including removed tanks and tanks to be filled-in-place shall be cleaned such that all liquids, sludges, and residues are removed from the tank.

(2) All tank bottoms, sludges, and scale shall be handled, transported and disposed of in accordance with State of Maine Hazardous Matter and Hazardous Waste Management Rules.

(3) Tank cleaning sites for tanks removed from the facility site must meet the following requirements in addition to any other applicable local and state requirements:

(a) Sites must be approved by local public safety officials with authority for the site;

(b) Sites must not be located within a sensitive geological area;

(c) Sites must not be within 300 feet of a classified body of surface water; and

(d) Sites must not be within 100 feet of an adjacent property boundary.

**H. Disposal of Removed Tanks.** Disposal of removed tanks shall be by the following methods only:

(1) Acceptance by a junk or scrap dealer;

(2) Disposal at a site approved by the Department in conformance with the requirements of Appendix L: "Requirements for Underground Oil Storage Tank Disposal Facilities," in Chapter 691 of the Department's rules;

(3) Disposal by a licensed hazardous waste disposal facility; and

(4) Other techniques for disposal provided that written approval has been obtained from the Department and the State Fire Marshal's Office.

**I. Certification of Closure.** The owner or operator of the facility shall submit to the Department within 30 days of completion of closure, certification by the owner or operator, and the independent Maine registered professional engineer who supervised closure that:

(1) Tanks, piping and ancillary equipment have been properly cleaned and disposed of in accordance with the requirements of this rule;

(2) Information provided on the notification of closure form is accurate or that accurate amended information has been provided along with this certification;

(3) Any and all wastes, hazardous wastes or hazardous waste residues generated by closure of the facility have been removed to an entity licensed to handle the waste; and

(4) All elements of the facility including containers, tanks, liners, bases, materials, equipment, structures, backfill and soil containing or contaminated with hazardous waste or hazardous waste residues have been decontaminated or disposed of at an entity licensed to handle the waste.

**J. Final Closure at End of Warranty Period.** Underground hazardous substance storage facilities, including tanks and piping, shall be properly closed in accordance with this section within 30 years and 30 days following installation of the facility unless the tank and piping manufacturers provide longer or extended warranties in which case the facility shall be properly closed at the end of the earliest warranty period for the tank or piping.

**Appendix A**

**List of Hazardous Substances**

(Reserved)

**Appendix B**

**Installation Requirements Applicable to New and Replacement Tanks**

1. Cathodically protected steel tanks must be set on a firm base and surrounded on all sides with at least 12 inches of noncorrosive inert material, such as clean sand, pea stone, or gravel, well tamped in place. The tanks shall be placed in the hole with care, making sure not to scrape the protective coating off coated tanks, or damage attached cathodic protection components. Cathodic protection systems require electrical wiring which is connected to the tank and shall be accessible for voltage readings at the ground surface as well as a location along the centerline of the tank to place a reference electrode in contact with the soil. If soil is to be covered by asphalt, concrete, or other materials then a test station must be installed over the center of the tank to provide access to the soil for cathodic protection monitoring.

NOTE: To facilitate future precision testing in the event that a leak is indicated, the owner or operator may install access to tank openings for vapor pocket removal, and a monitoring well to determine the location of the water table.

2. Cathodically protected steel underground tanks shall be covered with a minimum of 2 feet of sand, pea stone or gravel or shall be covered with not less than 1 foot of sand on top of which shall be placed a slab of reinforced concrete not less than 4 inches thick. This fill shall be free of debris, boulders. large rocks or other materials, which may cause abrasions to the protective coating of the tank. When tanks are, or are likely to be, subjected to traffic, they shall be protected from damage from vehicles passing over them by at least 3 feet of backfill or, 18 inches of well-tamped backfill plus 6 inches of reinforced concrete of 8 inches or asphalt paving. When asphalt or reinforced concrete paving is used as part of the protection, it shall extend at least I foot horizontally beyond the perimeter of the tank in all directions.

3. All underground hazardous substance storage tanks shall be installed in accordance with the manufacturer's instructions. The minimum depth of cover shall be as specified in paragraph 2 above.

4. New underground tanks shall be pneumatically tested for tightness in conformance with the requirements of Appendix C before being covered or placed in use. Alternative testing methods may be used if approved by the Department.

NOTE: Air pressure testing shall not be conducted after a hazardous substance has been placed in the tank unless approved in writing by the Department. Air pressure testing after certain hazardous substances have been in contact with the tank may result in explosion of the tank.

5. All temporary supports must be removed prior to final backfilling.

6. All electrical wiring shall be performed in accordance with the current State of Maine electrical code.

7. Anchoring of tanks shall be required where tanks will be installed in areas where groundwater will be in contact with the tank. When anchoring tanks equipped with cathodic protection the hold downs must be electrically isolated from the tank. Anchoring of all tanks shall be performed in accordance with the tank manufacturer's specifications.

NOTE: Tank installation instructions may require specific aggregate sized peastone or gravel. Instructions may also specify mechanical compaction or layered placement of bedding and backfill. Always consult the installation instructions provided by the manufacturer, prior to installation.

**Appendix C**

**Requirements for Pneumatic (Air) Testing for Piping and Tanks**

1. When conducting an air pressure test on metallic tanks or piping, all joints, seams and connections shall be soaped. For fiberglass tanks and piping the entire surface as well as joints and connections shall be soaped.

2. The test shall be maintained for a minimum of 1 hour, and all soaped areas shall be visually inspected for bubbles or any other indication of a leak.

3. Any loss of pressure or appearance of bubbles shall constitute failure of the test.

**Piping**

4. Underground piping shall be physically isolated from the tank prior to the test.

5. Underground piping shall be tested to 15O% of the maximum anticipated pressure of the system, but not less than fifty (50) pounds per square inch (psi) gauge at the highest point of the system.

**NOTE:** Flexible connectors should not be connected to piping during the maximum pressure testing of the piping without the approval of the manufacturer of the flexible connectors.

6. Piping shall be re-tested, if necessary, with flexible connectors attached at the maximum pressure allowed by the manufacturer of the flexible connectors.

**Tanks**

7. Air pressure testing of tanks shall only be performed on new, empty tanks, which have never contained product.

8. Tanks shall be tested before being covered, enclosed or placed in service.

9. Tanks shall be tested at not less than three (3) pounds per square inch (psi) and not more than five (5) pounds per square inch (psi) gauge. Gauges used during air testing of tanks shall have a maximum limit of 10-15 pounds per square inch (psi).

**Appendix D: Requirements for Hydrostatic (Liquid) Piping Tests**

**For Both Remote and Suction Pumping Systems:**

1. Bleed all air or vapor pockets from the line before conducting the test.

2. Physically isolate piping from the tank prior to the test.

3. A leak rate of 0.1 gallons per hour or greater indicates a possible leak.

**For Suction Systems:**

4. Conduct the test at 50 pounds per square inch (psi) gauge or greater for not less than 1 hour.

**For Remote Systems:**

5. Close the emergency shut off valve.

6. Install a pressure gauge with a maximum 60 pounds per square inch (psi) gauge range which clearly shows gradations of 1 psi.

7. Start the pump, and record maximum pressure of 25 to 35 pounds per square inch (psi) gauge.

8. Seat the check and relief valves after ensuring that the test pressure will not exceed the set valve pressures.

9. Shut off the pump and record any pressure drop, for at least 1 hour.

**NOTE:** Flexible connectors should not be connected to piping during testing without the approval of the manufacturer of the flexible connectors.

**Appendix E: Installation Requirements Applicable to New and Replacement Piping**

1. Before underground piping is installed, a minimum 6-inch deep bed of well compacted noncorrosive material such as clean sand. pea stone or gravel must be placed in the trench. Trenches must be wide enough to permit at least 6 inches of noncorrosive backfill material around all lines.

2. Before being covered or placed in service, all new and replacement piping must be pneumatically tested for tightness with air pressure in accordance with the requirements of Appendix C, or hydrostatically tested in accordance with the requirements of Appendix D.

3. All temporary supports must be removed prior to final backfilling.

4. All vent piping for storage of Class One liquids must extend at least 12 feet above the ground surface and positioned such that vapors will not pose a hazardous condition.

5. Fill piping for storage of Class One liquids must be at least 5 feet or more from any building opening in accordance with National Fire Protection Association Code 30.

6. All leak detection devices must be tested for proper operation after installation and before initial use of the pumping system, and once annually thereafter. All leak detectors must be capable of detecting a leak at a rate of at least 3 gallons per hour at 10 pounds per square inch line pressure within 5 minutes.

7. Piping systems that use a suction pump(s) must be sloped from the pump(s) toward the tank(s).

8. Conventional suction systems must have no more than one check valve per pump. The check valve must be located as close to the pump as possible, such that any leaks in the line will result in a return of product to the tank.

9. For cathodically protected piping systems, access must be provided to the soil over the piping at the maximum distance from the anodes in order to monitor the cathodic protection in accordance with Appendix F and subsection 9(C) of this rule. This requires providing access through pavement and secondary containment liner systems if necessary.

10. Swing joints must not be used underground without written permission from the department. Flexible connectors must be used where technically feasible. Use of swing joints or other alternative methods will be allowed if the owner or operator demonstrates in writing to the commissioner's satisfaction that flexible connectors are not technically feasible and that swing joints or alternative methods will provide the best available protection of the environment and public health, safety and welfare.

**Appendix F: Requirements for Cathodic Protection Monitoring**

1. All cathodic protection monitoring required by this rule must be performed by a cathodic protection tester as defined in Section K.

2. All measurements must be made by placing a saturated copper or copper sulfate reference electrode in direct contact with the soil electrolyte.

3. The copper or copper sulfate electrode must be placed over the center line of each tank and each piping run.

4. All measurements must be recorded using a direct current voltage measuring device with a minimum of 10 megohms input impedence, accurate to at least plus or minus 1% at 1 volt.

5. A negative voltage of at least 0.85 volts must be recorded for each metallic tank and piping run.

6. The tank owner must maintain, repair or replace the system in accordance with the recommendations of the National Association of Corrosion Engineers, Recommended Practice #RP-0295, Corrosion Control of Underground Storage Tank Systems by Cathodic Protection, 1995, whenever the system does not register a negative voltage reading of at least .85 volts for each tank or piping run, except as provided for in 18, below.

7. Alternate methods of monitoring, as described in RP-0295 may only be used with written approval of the commissioner.

8. The frequency of cathodic protection monitoring must be consistent with the requirements in section 9(C) of this rule.

9. When a negative voltage of at least 0.85 volts is not achieved upon installation, the measurement must be repeated within 6 months. Upon failing to achieve a negative voltage of at least 0.85 volts after the 6 month period, the tank owner must comply with paragraph 6 above.

**NOTE:** Structure to soil potentials measured when the soil Is frozen may be inaccurate because of the increased resistance of the soil electrolyte. Cathodic protection monitoring schedules should be planned to avoid frozen soil conditions.

**Appendix G**

**Minimum Standards for Site Assessments**

1. The site assessment shall be supervised by, and site assessment reports shall be certified by, an independent Maine Certified Geologist.

2. The site shall be sampled in sufficient density for substances which singly or in combination will indicate the presence of all known hazardous substances stored during the operational life of the tank or facility except for those substances which were assessed during a previous site assessment meeting the requirements of this rule and have not since been stored in the facility. A statistically significant sampling program acceptable to the Department must be completed to show that a site is not contaminated.

3. For tank removals the site assessment shall include a thorough visual inspection of the tank exterior for leaks, inspection of the open excavation for physical evidence of a leak, and soil gas screening if appropriate for the hazardous substance stored.

4. The site to be assessed shall be sampled in the areas where contamination is most likely to be present. If contamination is identified during a tank or facility closure, the site investigated shall extend beyond the known contaminated area to include the surrounding area possibly affected by the contamination. If environmental evidence of a leak is present on or off site the area investigated must extend beyond the location of the environmental evidence to include the surrounding area possibly affected by the contamination. If a site assessment is required due to confirmation of a leak without environmental evidence the site shall be sampled where contamination from the leak is most likely to be present.

5. Acceptable sampling methods include soil gas sampling; direct sampling of groundwater, backfill, and native geological materials; and alternative methods acceptable to the Department. If direct sampling methods are used the assessment should include below surface sampling of backfill and native geologic materials sufficient to detect vertical and lateral migration of contaminants. Sampling methods must be appropriate for the parameters being analyzed for, and the parameters being analyzed for must be appropriate for the hazardous substances stored. Sampling methods must also be appropriate for the hydrogeologic conditions at the site.

6. Samples shall be acquired, prepared, preserved, stored. transported, and analyzed by methods that will maintain sample integrity and meet analytical detection limits sufficient to determine the risk to public health and the environment.

7. If contamination is present the site assessment shall quantify and delineate the extent of free product and contaminated backfill, soils, surficial materials, bedrock and groundwater.

8. If contamination is present the site assessment shall include determination of the depth to water table and direction of groundwater flow.

9. If contamination is present the site assessment report shall describe soil, surficial materials, bedrock geology, hydrogeology and climate of the site. The site assessment shall also describe potential pathways for contaminant movement including sewer and utility lines.

10. If contamination is present the site assessment shall discuss the toxicity, mobility, and persistence of contaminants in relation to the hydrogeology of the site and in relation to potentially affected receptors.

11. If contamination is present the site assessment shall locate and describe potential receptors of contamination and shall describe the proximity of the contamination to private and public drinking water supplies, surface water bodies, and populated areas. The site assessment shall include a description of the classification under state and local classification systems, if any, of impacted or potentially impacted groundwater or surface water.

12. The site assessment report shall include specific recommendations for additional investigation and/or recommendations and rationales for site remediation including but not limited to free product removal, groundwater treatment, soil removal or treatment, control of vapors, surface water clean-up, or no action if justifiable by hydrogeologic, health, safety or other environmental criteria; descriptions of any remediation work completed or in progress; recommendations and rationales for further work or study as necessary; a map or drawing of the site showing components of the facility and sample locations; analytical results; data logs; a description of quality assurance/quality control procedures: and a summary of all work under taken as part of the site assessment including rationales for sample locations, sample parameters, and sampling methods.

13. A copy of the site assessment shall be sent to the department at the following address:

UST Program Administrator

DEP Bureau of Remediation and Waste Management

17 SHS

Augusta ME 04333

14. The Department reserves the right to reject unsatisfactory site assessments and require additional investigation, information and reporting. The Department also reserve the right to require, for Department review and approval, remedial action plans for cleanup of free product, contaminated soils and groundwater whenever it determines that sufficient data is available for remedial action design.

15. Nothing in this Appendix shall limit the Department's discretion or ability to order and/or undertake immediate remedial action at sites where evidence of contamination by a hazardous substance is present.

16. Determination of the action levels of hazardous substances that require remediation may be made by the Department on a case by case basis. At a minimum any concentrations of hazardous substances in the environment must be cleaned up to the extent necessary to protect human health. safety, and the environment.

**Appendix H**

**Requirements for Closure of Underground Hazardous Substance Storage Facilities by Removal**

1. All tanks shall be rendered safe for cleaning and removal by appropriate methods in accordance with appropriate industry standards and all applicable state and federal regulations.

2. The top of the tank shall be exposed.

3. All piping shall be drained and flushed into the tank or another suitable container such that no waste liquid or product is released to the environment.

4. All liquid which can be pumped out, shall be removed, and any liquids which cannot be used for their originally intended purpose shall be disposed of in accordance with the Department's Hazardous Waste Management Rules Chapters 850, 851, 853 and 857, and Hazardous Matter Rules, Chapters 800 and 801. UL approved explosion proof equipment shall be used to remove Class One liquids. Hoses to remove product shall be inserted to the low end of the tank which may still contain product.

5. The fill (drop) tube shall be removed. Fill, gauge, and product lines shall be disconnected and plugged. All tank openings which will not be used in the inerting procedure shall also be plugged. Only the vent line will remain connected and open until the inerting procedure is complete.

6. All tanks which contain class one liquids shall be inerted by a method approved by the Department prior to entering, cleaning or removal of the tank from the ground. The owner or operator is responsible for developing methods for inerting the tank.

7. All holes, including corrosion holes, shall be plugged or capped before the tank is moved from the site, except that one 1/8 inch vent hole shall be left to prevent the tank from being subjected to an excessive pressure differential caused by extreme temperature changes.

8. If transported, the tanks shall be scraped to remove all loose backfill material adhering to the tank.

9. All tanks removed from the ground, regardless of condition, shall be labeled with the following information:

Tank Has Contained (chemical name), a hazardous substance

**NOTE:** Federal regulations under the authority of the U.S. Department of Transportation (49 CFR Section 172.500 et seq.) also require that tanks which have not been purged but are being transported must be properly placarded on the ends and sides with a 'Flammable' placard with the appropriate UK Number attached.

10. If transported, the tank shall be secured on a truck such that the 1/8 inch vent hole is located on the uppermost point on the tank.

11. All piping shall be removed from the ground whenever practicable. Piping that cannot be removed will be blown clear of residual product with an inert gas and securely plugged at all ends. All necessary precautions to prevent spillage or ignition in the entire area shall be taken.

12. All tanks must be cleaned in accordance with Section 13. Cleaning and temporary storage are not allowed in a sensitive geological area unless they are done at the site of removal.

13. The only acceptable means of disposal of underground hazardous substance storage tanks are: (a) sale to a junk or scrap dealer; (b)disposal by a licensed hazardous waste disposal facility; (c) disposal by a licensed underground oil storage tank disposal facility; or (d) other techniques for disposal of tanks, provided the expressed written approval of the Department of Environmental Protection and the State Fire Marshal's office has been obtained.

14. Tanks will be stored with all bung holes open and positioned at a 45 degree angle down from horizontal to prevent rain from entering the tank and to allow vapors to escape; or, if escaping vapors represent a safety or health hazard, the tank may be stored in a vertical position with all bung holes cloyed except for a one eighth (1/8) inch vent hole to relieve excess pressure due to temperature changes.

15. Alternative methods to those specified in this appendix may be used with written permission from the Department and local public safety officials if they will provide equal or better protection of public health, safety, welfare, or the environment.

**Appendix I**

**Requirements for Closure of Underground Hazardous Substance Storage Facilities by Filing in Place**

1. All tanks shall be rendered safe for filling in place by appropriate methods in accordance with industry standards and all applicable state and federal regulations. The owner or operator is responsible for developing a method for making the tank safe.

2. Piping shall be drained and flushed into the tank.

3. All liquid which can be pumped out, including that liquid requiring a hand pump to remove, shall be removed and any liquids which cannot be used for their originally intended purpose, shall be disposed of in accordance with the Department's Hazardous Waste Management Rules, Chapters 850, 851, 853, and 857; and Hazardous Matter Rules, Chapter 800 and 801.

4. The top of the tank shall be exposed and cut open to provide access for cleaning. All tanks to be filled in place shall be properly cleaned.

5. The fill (drop) tube shall be removed. Fill, gauge, and product lines shall be disconnected. Open ends of all lines, except the vent line, shall be capped or plugged.

6. All tanks which contain class one liquids shall be inerted by a method approved by the Department prior to entering, cleaning, or filling in place.

7. A suitable, solid, inert material shall be introduced through the hole in the top of the tank. The following materials are suitable for this purpose:

(a) Sand. Sand that is free of rocks is suitable for filing. It may be. poured dry as long as it flows freely. When-the tank is nearly full, sand should be washed into the tank with a nominal amount of water and puddled to cause the sand to flow to the tank ends. The use of large amounts of water shall be avoided.

(b) Sand and earth fill. The tank can be filled with sand to about 80% of the calculated capacity, and filled to overflowing for the remaining capacity using a mixture of soil and water in a free-flaking mud.

(c) Concrete.

Other materials may be used with written approval from the department.

STATUTORY AUTHORITY: 38 M.R.S.A. Sec. 1364(2)

EFFECTIVE DATE: January 29, 1990

Electronic conversion: May 4, 1996

Amended: October 22, 1996

Non-substantive corrections: January 2, 1997 (minor punctuation and formatting)

Non-substantive corrections: February 18, 1997 - minor formatting requested by agency.

APAO WORD VERSION CONVERSION (IF NEEDED) AND ACCESSIBILITY CHECK: July 16, 2025

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**BASIS STATEMENT**

The Underground Hazardous Substance Storage Facility Rules will provide a mechanism for the Department to regulate the underground storage of certain virgin chemicals which are classified as hazardous substances. The Department currently has rules in effect which separately control the underground storage of oil (petroleum products) and hazardous wastes. Promulgation of the Underground Hazardous Substance Storage Facility rules will allow the Department to apply to the federal Environmental Protection Agency for authority to manage the entire federally mandated underground storage tanks regulatory program.

The rule includes registration requirements, design and installation requirements; leak detection requirements; monitoring and operating procedures; discharge reporting, removal, investigation, and remediation requirements; a compliance schedule; and closure procedures.

The major reasons for these regulations are to decrease the chance of leaks or spills occurring at underground hazardous substance storage facilities and to increase the chances of detecting and cleaning up such leaks before they become major environmental problems. There are approximately one hundred underground hazardous substance storage facilities registered with the Department. Most of these facilities lack such environmentally desirable features as secondary containment, appropriate leak detection equipment, and effective corrosion protection. The rules will require upgrading or closure of such substandard facilities.

A preliminary draft of this rule was offered to key interested parties for technical review prior to being presented to the Board for posting to public hearing. The interested parties included environmental organizations, members of the Maine Chamber of Commerce and Industry, and all members of the Board of Underground Storage Tank Installers. Very few comments were returned to the Department. The Board of Environmental Protection held a public hearing on the draft rule on August 23, 1989 and written comments were accepted until September 12, 1989.

Written and oral comments received during the public comment period are summarized on the following pages. Each comment is followed by the Department's response. The comments and responses are listed numerically under the same section headings used in the rules.

This publication forms the written statement outlining the department's basis for the adoption of the Regulations for Registration, Installation, Operation, and Closure of Underground Hazardous Substance Storage Facilities.

**BASIS STATEMENT - 1996 AMENDMENTS**

The board amended chapter 695 in 1996 to correct errors, incorporate changes in state and federal law, and update references to technical reports. The 1996 amendments also eliminated the requirement that hazardous substance tanks be installed or removed only by a certified underground hazardous substance tank installer. The latter change was necessary because no one sought such certification, making it impossible to comply with the rule. The rule as amended in 1996 allows hazardous substance tanks to be removed by certified underground oil tank installers if supervised by a professional engineer.

The board did not hold a public hearing on the 1996 amendments. Notice of the proposed amendments was published in the *Bangor Daily News*, *Kennebec Journal*, *Lewiston-Sun Journal*, *Portland Press Herald*, and *Waterville Morning Sentinel* on Wednesday, July 10, 1996. Notice also was mailed to owners of underground hazardous substance storage tanks; to certified underground oil storage tank installers; and to each person who filed a written request for notice of DEP rulemaking. The notice invited interested persons to submit comments by Friday, August 9, 1996. No comments were received.