

REGULATIONS OF CONNECTICUT STATE AGENCIES

**UNDERGROUND STORAGE TANK
REGULATIONS**

Sections 22a-449(d)-1, and Sections 22a-449(d) 101-113

(Revised July 1994)

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Sec. 22a-449 (d)-1. Control of the nonresidential underground storage and handling of oil and petroleum liquids

(a) Definitions and applicability

(1) Applicability

Owners and operators of the following types of facilities, as defined in subdivision (2) of this subsection, shall comply with the requirements of this section:

(A) Facilities which are not UST systems; and

(B) Facilities which are UST systems listed at subparagraphs 22a-449 (d)-101 (a) (2) (C), (D), (E) and (F) and 101 (a) (3) (C), (D) and (E) of these regulations.

(2) As used in this section:

Definitions

``Abandoned" means rendered permanently unfit for use.

``Abnormal loss or gain" means an apparent loss or gain in liquid exceeding 0.5 percent of (1) the volume of product used or sold by the owner or operator during any seven consecutive day period, or (2) the volumetric capacity of the tank or container; whichever is greater, as determined by reconciliation of inventory measurements made in accordance with subsection 22a-449 (d)-1 (g) of these regulations.

``CFR" means the Code of Federal Regulations revised as of July 1, 1991, unless otherwise specified.

``Discharge" means the emission of any water, substance or material into the waters of the state, whether or not such substance causes pollution.

``Existing facility" means a facility the construction or installation of which began prior to November 1, 1985, including, but not limited to, facilities which are abandoned and facilities which are temporarily out-of-service.

``Facility" means a system of interconnected tanks, pipes, pumps, vaults, fixed containers and appurtenant structures, singly or in any combination, which are used or designed to be used for the storage, transmission or dispensing of oil or petroleum liquids, including any monitoring devices. As used in Section 22a-449 (d)-1 of these regulations, the term ``facility" refers only to nonresidential underground facilities.

``Failure" means a condition which can or does allow the uncontrolled passage of liquid into or out of a facility, and includes but is not limited to a discharge to the waters of the state without a permit issued pursuant to Section 22a-430 of the General Statutes.

``Failure determination" means the evaluation of a facility component in accordance with subsection 22a-449 (d)-1 (i) of these regulations to determine whether a failure has occurred.

``Flammable Liquid" means a flammable liquid as determined in accordance with NFPA 30 and having a flash point below 100 degrees fahrenheit (37.8 degrees centigrade) and having a vapor pressure not exceeding 40 pounds per square inch (absolute) (2,068 millimeters mercury) at 100 degrees fahrenheit (37.8 degrees centigrade).

``Life expectancy" means the time period within which a failure is not expected to occur as determined in accordance with subsection 22a- 449 (d)-1 (h) of these regulations.

``Life expectancy determination" means the evaluation of a facility component in accordance with subsection 22a-449 (d)-1 (h) of these regulations to determine its life expectancy.

``Liquid" means any fluid, including, but not limited to, oil and petroleum fluids.

``Listed" means included in a list published by a testing laboratory which (1) is approved by the Commissioner of Environmental Protection in consultation with the Bureau of the State Fire Marshal, (2) maintains periodic inspection of production of listed equipment or materials, and (3) states in their listing either that the equipment, material or procedure meets appropriate standards or

has been tested and found suitable for use in a specified manner.

“New facility” means a facility the construction or installation of which begins on or after November 1, 1985, including, but not limited to, facilities which replace existing facilities, facilities which are moved from one location to another, facilities which are abandoned, and facilities which are temporarily out-of-service.

“NFPA 30” means National Fire Protection Association publication number 30 entitled, “Flammable and Combustible Liquids Code,” as enforced by the State Fire Marshal pursuant to Section 29-320 of the Connecticut General Statutes and Sections 29-320-1, 29-320-2, and 29-320-3 of the Regulations of Connecticut State Agencies, as of the effective date of these regulations.

“NFPA 329” means National Fire Protection Association publication number 329 entitled, “Underground Leakage of Flammable and Combustible Liquids,” as enforced by the state fire marshal pursuant to Section 29-320 of the Connecticut General Statutes and Sections 29-320-1, 29-320-2, and 29-320-3 of the Regulations of Connecticut State Agencies, as of the effective date of these regulations.

“Nonresidential” when referring to a facility means a facility which serves any commercial, industrial, institutional, public or other building, including, but not limited to, hotels and motels, boarding houses, hospitals, nursing homes and correctional institutions, but not including residential buildings.

“Oil or petroleum liquid” or “product” means oil or petroleum of any kind in liquid form including, but not limited to, waste oils and distillation products such as fuel oil, kerosene, naphtha, gasoline and benzene.

“Operator” means the person or municipality in control of, or having responsibility for, the daily operation of a facility.

“Owner” means the person or municipality in possession of or having legal ownership of a facility.

“Residential building” means any house, apartment, trailer, mobile home, or other structure occupied by individuals as a dwelling provided that if the structure is not used solely as a dwelling, the nominal capacity of the facility, exclusive of piping, serving such structure does not exceed two thousand one hundred (2,100) gallons.

“Substantial modification” means the construction or installation of any addition to a facility or the restoration or renovation of a facility which: increases or decreases the on-site storage capacity of the facility; significantly alters the physical configuration of the facility; or impairs or improves the physical integrity of the facility or its monitoring systems; or modifies the facility so as to comply with the standards for new facilities specified in subdivision 22a-449 (d)-1 (e) (1) of these regulations.

“Substantial modification” shall not include a modification for the purpose of extending life expectancy in accordance with subparagraph 22a-449(d)-1 (h) (2) (D) of these regulations.

“Temporarily out-of-service” means not in use, in that no regular filling or drawing is occurring; or not established and maintained in accordance with these regulations; or not regularly attended and secured.

“Underground” when referring to a facility or facility component means that ten percent or more of the volumetric capacity of the facility or component is below the surface of the ground and that portion which is below the surface of the ground is not fully visible for inspection.

“UST System” means any underground storage tank (“UST”) system as that term is defined in

Section 22a-449 (d)-101 of the Regulations of Connecticut State Agencies.

(b) Discharges prohibited

No owner or operator shall discharge any water, substance or material, including but not limited to oil or petroleum liquids, from any facility to the waters of the state without first obtaining a permit for such discharge pursuant to Section 22a-430 of the General Statutes, as amended.

(c) Exemptions

(1) Facilities which meet all of the following criteria are exempt from subsections 22a-449 (d)-1 (d), (g), (h) and (i) of these regulations:

(A) the nominal capacity exclusive of piping is less than two thousand one hundred (2,100) gallons;

(B) the sole intended use of the oil or petroleum liquid is for on-site heating or intermittent stationary power production such as stand-by electricity generation or irrigation pump power;

(C) the oil or petroleum liquid stored is not intended for resale; and

(D) the facility is not used for the storage or handling of waste oil.

(2) Facilities which are used solely for the storage, transmission or dispensing of viscous oil and petroleum liquids which will not flow at temperatures below sixty degrees Fahrenheit (60°) are exempt from the requirements of these regulations. For the purpose of this subdivision, a liquid will be deemed to flow if, when maintained for at least forty-eight hours at a temperature of sixty degrees Fahrenheit (60°) and at a pressure of 14.7 pounds per square inch absolute, it assumes the shape of a container also maintained at a temperature of sixty degrees Fahrenheit for at least forty-eight hours.

(3) Facilities used solely for on-site heating, process steam generation, other on-site combustion or manufacturing processes or waste oil storage are exempt from subdivision 22a-449 (d)-1 (g) (2).

(d) Reporting

(1) By May 8, 1986, the owner or operator of each existing facility shall notify the commissioner and the office of the local fire marshal of the results of the life expectancy determination required by subsection (h).

(2) Within thirty days following completion of installation of a new facility an owner or operator shall notify the commissioner and the office of the local fire marshal of the results of the life expectancy determination required by subsection (h).

(3) The notification required by subdivisions (1) and (2) of this subsection shall include but not be limited to the following: facility location and capacity, date of installation, contents, type of facility, and type of monitoring systems, if any, results of life expectancy determinations, and any other information which the commissioner deems necessary.

(4) By May 8, 1986, the owner or operator of an abandoned or temporarily out-of-service facility shall notify the commissioner of the location, type and capacity of such facility and the date it was abandoned or removed from service.

(5) Within thirty days of completion of a failure determination required by subsection (i), the owner or operator shall notify the commissioner and the office of the local fire marshal of the result of such failure determination.

(6) Owners and operators shall report any changes in information provided in accordance with this subsection within thirty days.

(7) Each notification required by this subsection shall be submitted on forms furnished or prescribed by the commissioner.

(e) Design, construction, installation, and maintenance

(1) All new facilities and new components of substantially modified facilities shall conform to the following standards:

(A) Each underground tank or container shall:

(i) be a listed fiberglass-reinforced plastic (FRP) tank which is equipped with contact plates under all fill and gauge openings and is chemically compatible with the contained oil or petroleum liquid as determined by the tank or container manufacturer's warranty; or

(ii) be a listed steel tank externally coated with a factory applied corrosion resistant coating approved by the manufacturer for the proposed use, and equipped with cathodic protection and permanent cathodic protection monitoring devices, and contact plates under all fill and gauge openings.

(B) All other underground facility components shall:

(i) be protected against corrosion by use of non-corrosive materials or steel components with factory applied corrosion resistant coating and cathodic protection and permanent cathodic protection monitoring devices;

(ii) be designed, constructed and installed so as to allow failure determination of all underground piping without the need for substantial excavation; and

(iii) be chemically compatible with the contained oil or petroleum liquid as determined by the manufacturer's warranty.

(C) The installation and maintenance of underground components of new facilities and the substantial modification of underground components of new or existing facilities shall be done in accordance with NFPA 30 and the manufacturer's specifications and recommendations. If provisions of NFPA 30 are inconsistent with the manufacturer's specifications or recommendations, the provision which imposes the most stringent and protective requirement shall control. Within thirty (30) days after completion of installation, the owner or operator shall submit to the commissioner a statement signed by the installation contractor, certifying that the installation has been carried out in accordance with this subsection.

(D) All cathodic protection monitoring devices and cathodic protection systems for underground components shall meet the specifications of the manufacturer of the component(s) being protected and shall be installed and maintained in accordance with the specifications and recommendations of the manufacturer(s) of the monitoring device, the cathodic protection system, and the underground component being protected, as applicable. If a manufacturer's specifications or recommendations are inconsistent with any provision of these regulations, the provision which imposes the most stringent and protective requirement shall control. Within thirty (30) days after completion of installation, the owner or operator shall submit to the commissioner a statement signed by the installation contractor, certifying that the installation has been carried out in accordance with this subsection.

(E) All cathodic protection systems which protect underground facility components shall be tested annually. A structure to soil test voltage reading of at least minus 0.85 volts measured between the structure and a copper-copper sulfate electrode must be maintained. Voltage drops other than those across the structure electrolyte boundary must be considered for valid interpretation of the voltage measurements. Impressed current cathodic protection systems shall be checked monthly to assure that the system rectifier providing the source of current is operating properly. A monthly record of rectifier current and voltage output shall be maintained. If any cathodic protection system malfunctions or fails to meet the above structure to soil test voltage requirement, it shall be repaired as quickly as possible but in no event later than thirty (30) days from the date of discovery of the

malfunction. Anodes shall be replaced when all other corrective measures which have been taken are not sufficient to maintain the structure to soil test voltage of at least minus 0.85 volts. Other cathodic protection criteria may be used upon written approval of the commissioner.

(2) No owner or operator of an existing facility shall use or operate any underground component of that facility beyond September 1, 1989, or for longer than five years beyond its life expectancy as determined in accordance with subsection 22a-449 (d)-1 (h) of these regulations, whichever is later, unless such component is modified so as to comply with the standards for new facilities specified in subdivision 22a-449 (d)-1 (e) (1) above. If life expectancy has not been determined in accordance with subsection 22a-449 (d)-1 (h) of these regulations, such component shall not be used or operated unless such component is modified so as to comply with the standards for new facilities specified in subdivision 22a-449 (d)-1 (e) (1) above. If the component is not so modified, it must be removed or abandoned in accordance with procedures specified in NFPA 30.

(3) No underground component of a facility shall be moved from one location to another without prior written approval of the commissioner.

(4) No owner or operator of a facility that complies with the standards for new facilities specified in subdivision 22a-449 (d)-1(e) (1) above shall use or operate any underground component of that facility beyond its life expectancy as determined in accordance with subsection 22a-449 (d)-1 (h) of these regulations. Prior to the last day of the life expectancy of an underground component of a facility that complies with the standards for new facilities specified in subdivision 22a-449 (d)-1 (e)

(1) above, the owner or operator shall remove or abandon the underground component in accordance with the procedures specified in NFPA 30.

(f) Transfer of facilities

(1) No owner or operator shall transfer ownership, possession or control of any new or existing facility without full disclosure to the transferee of the status of the facility with respect to compliance with these regulations at least fifteen (15) days prior to the transfer. Such disclosure shall include an up-to-date copy of the information submitted to the commissioner pursuant to subsection (d).

(g) Records; abnormal loss or gain

(1) Activity records. The owner or operator of a new or existing facility shall assure the maintenance of up-to-date records of significant construction or installation activities; monitoring; substantial modifications; abandonment, removal or replacement of underground components or protective devices for such components; and any other activity required by an order of the commissioner. The owner or operator shall review such records and attest to their accuracy by signing them no later than seven days following completion of the recorded activity.

(2) Daily inventory records

(A) The owner or operator of a new or existing facility shall assure that the following information is recorded: on a daily basis, the amount of product sold, used and received, and the level of water and product in the tank or container; and on a weekly basis, a reconciliation comparing these figures to determine whether an abnormal loss or gain has occurred. Separate records shall be maintained for each system of interconnected tanks or containers and serving pumps or dispensers. The owner or operator shall review such records and attest to their accuracy by signing them no later than seven days following their recording.

(B) Daily inventory measurements shall be made by gauge or gauge stick or by readout from a listed automatic monitoring device. Such measuring devices shall be calibrated in accordance with

the manufacturer's specifications and recommendations.

(C) Daily inventory measurements need not be recorded on those days when a facility is not in operation, except that if such period exceeds fifteen consecutive days inventory measurements shall be recorded on every fifteenth day. A day on which product is delivered to the facility shall be considered a day of operation.

(D) The commissioner may require an owner or operator to perform a failure determination of any facility for which daily inventory records are not maintained in accordance with this subsection.

(E) When inventory reconciliation indicates an abnormal loss or gain which is not explainable by spillage, temperature variations or other known causes, the owner or operator shall assure the immediate investigation and correction of the source of the abnormal loss or gain. At a minimum, the owner or operator shall take as many of the following steps as necessary to confirm an abnormal loss or gain:

(i) When an inventory record error is not apparent, a recalculation to determine abnormal loss or gain shall be made starting from a point where the records indicate no abnormal loss or gain;

(ii) A detailed visual inspection of those components of the facility which are readily accessible for evidence of failure shall be performed;

(iii) The dispensers of the particular oil or petroleum liquid in question shall be checked for proper calibration;

(iv) A failure determination shall be performed on the piping system between the storage tank or container and dispenser(s) in accordance with subsection (i) of these regulations; and

(v) A failure determination shall be performed on the tank or container in accordance with subsection (i) of these regulations.

(F) When an abnormal loss or gain is confirmed, the owner or operator shall immediately report the abnormal loss or gain to the state police in accordance with Section 22a-450 of the General Statutes, as amended.

(3) All records required by subdivisions (1) and (2) of this subsection shall be kept on the premises of the facility for a period of at least five years and shall be available for immediate inspection by the commissioner or his or her representative during reasonable hours.

(h) Life Expectancy

This subsection, in conjunction with subsection 22a-449 (d)-1 (i) of these regulations, specifies when a failure determination must be performed, and when the owner and operator must discontinue use of a facility component in accordance with subdivisions 22a-449 (d)-1 (e) (2) and (e) (4) of these regulations.

(1) Life expectancy determinations shall be conducted for underground components of new facilities within thirty (30) days following completion of installation or substantial modification of the component, and shall be conducted for underground components of existing facilities by May 8, 1986, as specified in subsection 22a-449 (d)-1 (d) of this section.

(2) Life expectancy shall be as follows:

(A) For fiberglass-reinforced plastic (FRP) facility components, the period of the manufacturer's corrosion or structural warranty, whichever is shorter.

(B) For cathodically protected facility components that meet the requirements of subdivision 22a-449 (d)-1 (e) (1) of these regulations, the period of the manufacturer's corrosion or structural warranty, whichever is shorter, or the life expectancy of the existing or replacement anode(s) as calculated using standard formulae approved in writing by the commissioner. If the cathodic

protection system malfunctions or fails to meet the structure to soil voltage requirement in subparagraph 22a-449 (d)-1 (e) (1) (E) of these regulations, and is not repaired or replaced within thirty days, the life expectancy of the facility components protected by the system shall be reestablished in accordance with either subparagraph (2) (C) or subdivision (3) of this subsection. If life expectancy must be reestablished in accordance with subparagraph 22a-449 (d)-1 (2) (C) of these regulations, the period specified by subparagraph 22a-449 (d)-1 (2) (C) of these regulations shall be deemed to have begun on the earliest date of malfunction or the earliest date on which the structure to soil test voltage reading was less negative than minus 0.85 volts, as applicable, provided that the period specified by subparagraph 22a-449 (d)-1 (2) (C) of these regulations shall not extend beyond the last day of the component's initial life expectancy period.

(C) For facility components not covered in subparagraphs (2) (A) and (2) (B) of this subsection, fifteen years from the date of installation. If the date of installation cannot be documented, the life expectancy shall be determined by a method approved by the commissioner.

(D) The life expectancy of existing facility components which are not in compliance with the standards listed in subdivision 22a-449 (d)-1 (e) (1) of these regulations may be extended by any method, provided:

(i) a failure of the facility component in question has never occurred, as determined by a failure determination conducted in accordance with subdivision 22a-449 (d)-1 (i) (1) of these regulations, or by an alternative method used with the prior written approval of the commissioner;

(ii) the facility component shall not be used or operated for longer than five years beyond its extended life expectancy;

(iii) no tank or container shall be lined more than once to extend its life expectancy;

(iv) the period for which the life expectancy will be extended shall be determined by the owner or operator in a manner approved in writing by the commissioner;

(v) the facility component has not exceeded its original life expectancy as of the date of lining installation; and

(vi) the facility component is not used to store gasoline or other flammable liquids.

(3) The life expectancy of a facility component may be determined by a method other than those set forth in subdivision (2) of this subsection upon written approval of the commissioner.

(1) Failure determination

(1) Failure determinations shall consist of any test that takes into consideration the temperature coefficient of expansion of the product being tested as related to any temperature change during the test, and is capable of detecting a loss of 0.05 gallons per hour. Such test shall be conducted in accordance with NFPA 329. Failure determination equipment and any methods of release detection shall be installed, calibrated, operated and maintained in accordance with the manufacturer's instructions including routine maintenance and service checks for operability and running condition.

(2) Failure determinations shall be conducted by the owner or operator for all underground components of new and existing facilities as follows:

(A) On all fiberglass-reinforced plastic (FRP) facility components, within three to six months after their installation, and within twenty-four to twenty-one months and within twelve to nine months prior to the end of their life expectancy.

(B) On all cathodically protected facility components, within twenty-four to twenty-one months and within twelve to nine months prior to the end of their life expectancy.

(C) Beginning on November 1, 1988, on all existing facility components which are not in

compliance with the standards listed in subdivision 22a-449 (d)-1 (e) (1) of these regulations, within thirty-six to thirty-three months prior to the end of their life expectancy and annually thereafter.

(3) Alternative methods and schedules for failure determination may be used with the prior written approval of the commissioner.

(j) Failures

(1) An owner or operator of a new or existing facility shall report any failure to the state police immediately, in accordance with Section 22a-450 of the Connecticut General Statutes, as amended.

(2) The owner or operator of a new or existing facility at which a failure occurs shall immediately empty and discontinue the use of the failed facility component and:

(A) Remove or abandon it within ninety days in accordance with procedures specified in NFPA 30; or

(B) Repair it within sixty days; or

(C) Replace all damaged components in accordance with the standards listed in subdivision (e) (1) of these regulations.

(3) The owner or operator of a new or existing facility which discharges oil or petroleum liquids without a permit issued pursuant to Section 22a-430 of the General Statutes shall immediately cease such discharge and reclaim, recover and properly dispose of the discharged liquid and any other substance contaminated by it, restore the environment to a condition and quality acceptable to the commissioner, and repair damage caused by the discharge, all to the satisfaction of the commissioner.

(4) When a failure occurs at a new or existing facility, all of such facility's components shall be evaluated within thirty days to determine whether similar conditions to that which caused the failure exist. Within ten (10) days following such evaluation, the owner or operator shall notify the commissioner in writing of the methods and results of each such evaluation. If an additional failure is detected, the owner or operator shall act in accordance with this subsection.

(k) Abandoned and temporarily out-of-service facilities

(1) An owner or operator shall notify the commissioner in writing within thirty days when a new or existing facility is abandoned or rendered temporarily out-of-service.

(2) A facility or facility component shall be abandoned in accordance with procedures specified in NFPA 30.

(3) No person or municipality shall use or operate an abandoned facility.

(4) No person or municipality shall use or operate a temporarily out-of-service facility without giving prior written notice to the commissioner that such facility will be used or operated.

(l) Variances

(1) The commissioner may grant a variance or partial variance from one or more of the provisions of this section provided such variance will not endanger the public health, safety or welfare or allow pollution of the air, land or waters of the state. An application for a variance shall be submitted by the owner or operator on a form furnished or prescribed by the commissioner and shall include such information as he or she requires.

(2) Failure to supply all information necessary to enable the commissioner to make a determination regarding the application shall be cause for rejection of the application.

(3) In acting on a request for a variance, the commissioner shall balance the degree to which compliance with the requirement in question would create an undue hardship for the applicant,

against the benefit to the environment and the public from the applicant's strict compliance with that requirement.

(4) The commissioner may reject an application for a variance as untimely if it is received less than ninety days prior to the required date of compliance for which the variance is sought or if the facility is not in compliance with the requirement for which the variance is sought. For those existing facilities or underground components which are required to be removed or modified by September 1, 1989 in accordance with subparagraph (e) (2) of this section, no application for a variance from the requirements of that subparagraph shall be accepted after August 1, 1988, which date was the original deadline for such applications when these regulations were first adopted.

(5) The commissioner may limit the duration of a variance and include in a variance any conditions which he or she deems necessary. A variance may be revoked or modified for failure to comply with any such conditions.

(Effective July 28, 1994)

Secs. 22a-449 (d)-2 - 22a-449 (d)-100. Reserved

Sec. 22a-449 (d)-101. Technical standards and corrective action requirements for owners and operators of underground storage tanks-program scope and interim prohibition

(a) Applicability of sections 22a-449 (d)-101 through 22a-449 (d)-113.

(1) The requirements of sections 22a-449 (d)-101 through 22a-449 (d)-113 shall apply to all owners and operators of an UST system, as defined in section 22a-449 (d)-101 (d), except as otherwise provided in subdivisions (a) (2), (a) (3), and (a) (4) of section 22a-449 (d)-101. Any UST system listed in subdivision (a) (3) of section 22a-449 (d)-101 shall meet the requirements in subsection (b) of section 22a-449 (d)-101. Any UST system listed in subparagraphs (a) (2) (C), (a) (2) (D), (a) (2) (E) and (a) (2) (F) and in subparagraphs (a) (3) (C), (a) (3) (D), and (a) (3) (E) of section 22a-449 (d)-101 which is used for the storage, transmission or dispensing of oil or petroleum liquids, as defined in section 22a-449 (d)-1 (a) of the Regulations of Connecticut State Agencies ("RCSA"), shall meet the requirements of section 22a-449 (d)-1.

(2) The following UST systems are excluded from the requirements of section 22a-449 (d)-101 through section 22a-449 (d)-113 of these regulations:

(A) Any UST system holding hazardous wastes listed or identified under Subtitle C of the Solid Waste Disposal Act, or a mixture of such hazardous waste and other regulated substances;

(B) Any wastewater treatment tank system that is part of a wastewater treatment facility regulated under section 402 or 307 (b) of the Clean Water Act;

(C) Equipment or machinery that contains regulated substances for operational purposes such as hydraulic lift tanks and electrical equipment tanks;

(D) Any UST system whose capacity is 110 gallons or less;

(E) Any UST system that contains a de minimis concentration of regulated substances; and

(F) Any emergency spill or overflow containment UST system that is expeditiously emptied after use.

(3) Deferrals. Sections 22a-449 (d)-102, 103, 104, 105, and 107 do not apply to any of the following types of UST systems:

(A) Wastewater treatment tank systems;

(B) Any UST systems containing radioactive material that are regulated under the Atomic Energy Act of 1954 (42 U.S.C. 2011 and following);

(C) Any UST system that is part of an emergency generator system at nuclear power generation facilities regulated by the Nuclear Regulatory Commission under 10 CFR part 50, appendix A;

(D) Airport hydrant fuel distribution systems; and

(E) UST systems with field-constructed tanks.

(4) Deferrals. Section 22a-449 (d)-104 does not apply to any UST system that stores fuel solely for use by emergency power generators, provided however that the owner and operator of any such UST system shall comply with the requirements of subsection 22a-449 (d)-1 (i) if the nominal capacity of such system, exclusive of piping, is greater than two thousand one hundred (2,100) gallons.

(b) Interim prohibition for deferred UST systems.

(1) No person may install an UST system listed in subparagraph (a) (3) of section 22a-449 (d)-101 for the purpose of storing regulated substances unless the UST system (whether of single- or double-wall construction):

(A) Shall prevent releases due to corrosion or structural failure for the operational life of the UST system;

(B) Is cathodically protected against corrosion, constructed of noncorrodible material, steel clad with a noncorrodible material, or designed in a manner to prevent the release or threatened release of any stored substance; and

(C) Is constructed or lined with material that is compatible with the stored substance.

(2) Notwithstanding subdivision (b) (1) of section 22a-449 (d)-101, an UST system without corrosion protection may be installed at a site that is determined by a corrosion expert not to be corrosive enough to cause it to have a release due to corrosion during its operating life. Owners and operators shall maintain records that demonstrate compliance with the requirements of this paragraph for the remaining life of the tank.

(3) The National Association of Corrosion Engineers Standard RP-02-85, "Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems," may be used as guidance for complying with subdivision (b) (2) of section 22a-449 (d)-101.

(c) General.

Nothing in sections 22a-449 (d)-101 through 22a-449 (d)-113 of these regulations shall affect the Commissioner's authority to enforce statutes, regulations, permits or orders administered, adopted or issued by the Commissioner, including, but not limited to, the Commissioner's authority to issue an order to prevent or abate pollution and potential source of pollution.

(d) Definitions.

When used in sections 22a-449 (d)-101 to 22a-449 (d)-113, inclusive of these regulations, the following terms shall have the meanings given below:

(1) "Abandoned" means rendered permanently closed and unfit for use, in accordance with subsection 22a-449 (d)-107 (b) of these regulations;

(2) "Abnormal loss or gain" means an apparent loss or gain in liquid exceeding 0.5 percent of (1) the volume of product used or sold by the owner or operator during any seven consecutive day period, or (2) the volumetric capacity of the tank or container; whichever is greater, as determined by reconciliation of inventory measurements made in accordance with section 22a-449 (d)-104 of

these regulations;

(3) "Aboveground release" means any release to the surface of the land or to surface water. This includes, but is not limited to, releases from the above-ground portion of an UST system and aboveground releases associated with overfills and transfer operations as the regulated substance moves to or from an UST system;

(4) "Ancillary equipment" means any devices including, but not limited to, such devices as piping, fittings, flanges, valves, and pumps used to distribute, meter, or control the flow of regulated substances to and from an UST;

(5) "Belowground release" means any release to the subsurface of the land and to ground water. This includes, but is not limited to, releases from the belowground portions of an underground storage tank system and belowground releases associated with overfills and transfer operations as the regulated substance moves to or from an underground storage tank;

(6) "Beneath the surface of the ground" means beneath the ground surface or otherwise covered with earthen materials;

(7) "Cathodic protection" is a technique to prevent corrosion of a metal surface by making that surface the cathode of an electrochemical cell. For example, a tank system can be cathodically protected through the application of either galvanic anodes or impressed current;

(8) "Cathodic protection tester" means a person who can demonstrate an understanding of the principles and measurements of all common types of cathodic protection systems as applied to buried or submerged metal piping and tank systems. At a minimum, such persons shall have education and experience in soil resistivity, stray current, structure-to-soil potential, and component electrical isolation measurements of buried metal piping and tank systems;

(9) "CERCLA" means the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended;

(10) "CFR" means the Code of Federal Regulations revised as of July 1, 1991, unless otherwise specified;

(11) "Commissioner" means the Commissioner of Environmental Protection of the State of Connecticut, or the Commissioner's designee;

(12) "Compatible" means the ability of two or more substances to maintain their respective physical and chemical properties upon contact with one another for the design life of the tank system under conditions likely to be encountered in the UST;

(13) "Connected piping" means all underground piping including valves, elbows, joints, flanges, and flexible connectors attached to a tank system through which regulated substances flow. For the purpose of determining how much piping is connected to any individual UST system, the piping that joins two UST systems should be allocated equally between them;

(14) "Consumptive use with respect to heating oil" means consumed on the premises;

(15) "Corrosion expert" means a person who, by reason of thorough knowledge of the physical sciences and the principles of engineering and mathematics acquired by a professional education and related practical experience, is qualified to engage in the practice of corrosion control on buried or submerged metal piping systems and metal tanks. Such a person shall be accredited or certified as being qualified by the National Association of Corrosion Engineers or be a 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;

(16) "Day" means calendar day, unless otherwise specified;

- (17) "Department" or "DEP" means the Connecticut Department of Environmental Protection;
- (18) "Dielectric material" means a material that does not conduct direct electrical current. Dielectric coatings are used to electrically isolate UST systems from the surrounding soils. Dielectric bushings are used to electrically isolate portions of the UST system including, but not limited to, tank from piping;
- (19) "Discharge" means the emission of any water, substance or material into the waters of the state, whether or not such substance causes pollution;
- (20) "Electrical equipment" means underground equipment that contains dielectric fluid that is necessary for the operation of equipment such as transformers and buried electrical cable;
- (21) "Excavation zone" means the volume containing the tank system and backfill material bounded by the ground surface, walls, and floor of the pit and trenches into which the UST system is placed at the time of installation;
- (22) "Existing tank system" means a tank system used to contain an accumulation of regulated substances or for which installation has commenced on or before December 22, 1988. Installation is considered to have commenced if:
- (a) The owner or operator has obtained all federal, state, and local approvals or permits necessary to begin physical construction of the site or installation of the tank system; and if,
 - (b) (1) Either a continuous on-site physical construction or installation program has begun; or,
 - (2) The owner or operator has entered into contractual obligations-which cannot be canceled or modified without substantial loss-for physical construction at the site or installation of the tank system to be completed within a reasonable time;
- (23) "Failure" means a condition which can or does allow the uncontrolled passage of liquid into or out of an UST system, and includes but is not limited to a discharge to the waters of the state without a permit issued pursuant to Section 22a-430 of the General Statutes;
- (24) "Farm tank" is a tank located on a tract of land devoted to the production of crops or raising animals, including fish, and associated residences and improvements. A farm tank shall be located on the farm property. "Farm" includes fish hatcheries, rangeland and nurseries with growing operations;
- (25) "Flow-through process tank" is a tank that forms an integral part of a production process through which there is a steady, variable, recurring, or intermittent flow of materials during the operation of the process. Flow-through process tanks do not include tanks used for the storage of materials prior to their introduction into the production process or for the storage of finished products or by-products from the production process;
- (26) "Free product" refers to a regulated substance that is present as a non-aqueous phase liquid including, but not limited to, liquid not dissolved in water;
- (27) "Gathering lines" means any pipeline, equipment, facility, or building used in the transportation of oil or gas during oil or gas production or gathering operations;
- (28) "Hazardous substance UST system" means an underground storage tank system that contains a hazardous substance defined in section 101 (14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 but not including any substance regulated as a hazardous waste under subtitle C of the Resource Conservation and Recovery Act or any mixture of such substances and petroleum, and which is not a petroleum UST system;
- (29) "Heating oil" means petroleum that is No. 1, No. 2, No. 4-light, No. 4-heavy, No. 5-light, No. 5-heavy, and No. 6 technical grades of fuel oil; other residual fuel oils (including Navy Special

Fuel Oil and Bunker C); and other fuels when used as substitutes for one of these fuel oils. Heating oil is typically used in the operation of heating equipment, boilers, or furnaces;

(30) "Hydraulic lift tank" means a tank holding hydraulic fluid for a closed-loop mechanical system that uses compressed air or hydraulic fluid to operate lifts, elevators, and other similar devices;

(31) "Implementing agency" means the Connecticut Department of Environmental Protection;

(32) "Life expectancy" means the period of time within which a failure is not expected to occur as determined in accordance with section 22a-449 (d)-111;

(33) "Life expectancy determination" means the evaluation of an UST system component in accordance with section 22a-449 (d)-111 to determine its life expectancy;

(34) "Liquid trap" means sumps, well cellars, and other traps used in association with oil and gas production, gathering, and extraction operations (including gas production plants), for the purpose of collecting oil, water, and other liquids. These liquid traps may temporarily collect liquids for subsequent disposition or reinjection into a production or pipeline stream, or may collect and separate liquids from a gas stream;

(35) "Maintenance" means the normal operational upkeep to prevent an underground storage tank system from releasing product;

(36) "Motor fuel" means petroleum or a petroleum-based substance that is motor gasoline, aviation gasoline, No. 1 or No. 2 diesel fuel, or any grade of gasohol, and is typically used in the operation of a motor engine;

(37) "New tank system" means a tank system that shall be used to contain an accumulation of regulated substances and for which installation has commenced after December 22, 1988, including UST systems that are moved from one location to another. (See also "Existing Tank System");

(38) "Noncommercial purposes with respect to motor fuel" means not for resale;

(39) "On the premises where stored with respect to heating oil" means UST systems located on the same property where the stored heating oil is used;

(40) "Operational life" refers to the period beginning when installation of the tank system has commenced until the time the tank system is properly closed under section 22a-449 (d)-107 of these regulations;

(41) "Operator" means any person in control of, or having responsibility for, the daily operation of the UST system;

(42) "Overfill release" is a release that occurs when a tank is filled beyond its capacity, resulting in a discharge of the regulated substance to the environment;

(43) "Owner" means the person or municipality in possession of or having legal ownership of an UST system;

(44) "Person" means an individual, trust, firm, joint stock company, Federal agency, corporation, state, municipality, commission, political subdivision of a state, or any interstate body. "Person" also includes a consortium, a joint venture, a commercial entity, and the United States Government;

(45) "Petroleum UST system" means an underground storage tank system that contains petroleum or a mixture of petroleum with de minimis quantities of other regulated substances. Such systems include those containing motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents, and used oils;

(46) "Pipe or piping" means a hollow cylinder or tubular conduit that is constructed of non-earthen materials;

(47) "Pipeline facilities (including gathering lines)" are new and existing pipe rights-of-way and any associated equipment, facilities, or buildings;

(48) "Regulated substance" means:

(a) Any substance defined in section 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980 (but not including any substance regulated as a hazardous waste under subtitle C of the Resource, Conservation and Recovery Act), and

(b) Petroleum, including crude oil or any fraction thereof that is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute). The term "regulated substance" includes but is not limited to petroleum and petroleum-based substances comprised of a complex blend of hydrocarbons derived from crude oil through processes of separation, conversion, upgrading, and finishing, such as motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents, and used oils;

(49) "Release" means any spilling, leaking, emitting, discharging, escaping, leaching or disposing from an UST into ground water, surface water or subsurface soils;

(50) "Release detection" means determining whether a release of a regulated substance has occurred from the UST system into the environment or into the interstitial space between the UST system and its secondary barrier or secondary containment around it;

(51) "Repair" means to restore a tank or UST system component that has caused a release of product from the UST system;

(52) "Residential tank" is a tank located on property used primarily for dwelling purposes;

(53) "SARA" means the Superfund Amendments and Reauthorization Act of 1986;

(54) "Septic tank" is a water-tight covered receptacle designed to receive or process, through liquid separation or biological digestion, the sewage discharged from a building sewer. The effluent from such receptacle is distributed for disposal through the soil and settled solids and scum from the tank are pumped out periodically and hauled to a treatment facility;

(55) "Storm-water or wastewater collection system" means piping, pumps, conduits, and any other equipment necessary to collect and transport the flow of surface water run-off resulting from precipitation, or domestic, commercial, or industrial wastewater to and from retention areas or any areas where treatment is designated to occur. The collection of storm water and wastewater does not include treatment except where incidental to conveyance;

(56) "Substantial modification" means the construction or installation of any addition to an UST system or any restoration or renovation of an UST system which: increases or decreases the on-site storage capacity of the UST system; significantly alters the physical configuration of the UST system; or impairs or improves the physical integrity of the UST system or its monitoring system; or modifies the UST system so as to comply with the standards specified in subsection 22a-449 (d)-102 (a) of these regulations;

(57) "Surface impoundment" is a natural topographic depression, man-made excavation, or diked area formed primarily of earthen materials (although it may be lined with man-made materials) that is not an injection well;

(58) "Tank" is a stationary device designed to contain an accumulation of regulated substances and constructed of non-earthen materials including, but not limited to, concrete, steel, and plastic that provide structural support;

(59) "Underground area" means an underground room, such as a basement, cellar, shaft or vault, providing enough space for physical inspection of the exterior of the tank situated on or above the

surface of the floor;

(60) "Underground release" means any belowground release;

(61) "Underground storage tank or UST" means any one or combination of tanks (including underground pipes connected thereto) that is used or designed to contain an accumulation of regulated substances, and the volume of which (including the volume of underground pipes connected thereto) is 10 percent or more beneath the surface of the ground. This term does not include any:

(a) Farm or residential tank of 1,100 gallons or less capacity used for storing motor fuel for noncommercial purposes;

(b) Tank used for storing heating oil for consumptive use on the premises where stored;

(c) Septic tank;

(d) Pipeline facility (including gathering lines) regulated under:

(1) The Natural Gas Pipeline Safety Act of 1968 (49 U.S.C. App. 1671, et seq.), or

(2) The Hazardous Liquid Pipeline Safety Act of 1979 (49 U.S.C. App. 2001, et seq.), or

(3) Which is an intrastate pipeline facility regulated under state laws comparable to the provisions of the law referred to in paragraph (d) (1) or (d) (2) of this definition;

(e) Surface impoundment, pit, pond, or lagoon;

(f) Storm-water or wastewater collection system;

(g) Flow-through process tank;

(h) Liquid trap or associated gathering lines directly related to oil or gas production and gathering operations; or

(i) Storage tank situated in an underground area including, but not limited to, a basement, cellar, mineworking, drift, shaft, or tunnel if the storage tank is situated upon or above the surface of the floor. The term "underground storage tank" or "UST" does not include any pipes connected to any tank which is described in paragraphs (a) through (i) of this definition;

(62) "Upgrade" means the addition or retrofit of some systems such as cathodic protection, lining, or spill and overfill controls to improve the ability of an underground storage tank system to prevent the release of product;

(63) "UST system or tank system" means an underground storage tank, connected underground piping, underground ancillary equipment, and containment system, if any; and

(64) "Wastewater treatment tank" means a tank that is designed to receive and treat an influent wastewater through physical, chemical, or biological methods.

(65) The following terms are defined as provided in section 22a-449 (d)-1 of these regulations: "liquid"; "listed"; "NFPA 30"; and "temporarily out-of-service."

(Effective July 28, 1994)

Sec. 22a-449 (d)-102. Ust systems: design, construction installation and notification

(a) Performance standards for new UST systems.

In order to prevent releases due to structural failure, corrosion, or spills and overfills for the operational life of the UST system, all owners and operators of new UST systems shall meet the following requirements. Any substantial modification of UST systems shall meet the following requirements:

(1) Tanks. Each tank shall be listed and properly designed and constructed, and any portion underground that routinely contains product shall be protected from corrosion, in accordance with a

code of practice developed by a nationally recognized association or independent testing laboratory as specified below:

(A) The tank is constructed of fiberglass-reinforced plastic; or

(B) The tank is constructed of steel and cathodically protected including a permanent cathodic protection monitoring device in the following manner:

(i) The tank is coated with a factory applied suitable dielectric material approved by the manufacturer for the proposed use;

(ii) Field-installed cathodic protection systems are designed by a corrosion expert;

(iii) Impressed current systems are designed to allow determination of current operating status as required in subdivision 22a-449 (d)-103 (b) (3) of these regulations; and

(iv) Cathodic protection systems are operated and maintained in accordance with subsection 22a-449 (d)-103 (b) of these regulations and manufacturer's specifications to the extent such specifications are no less stringent than subsection 22a-449 (d)-103 (b) of these regulations, or according to guidelines established by the implementing agency and have permanent monitoring devices; or

(C) The tank construction and corrosion protection are determined by the implementing agency to be designed to prevent the release or threatened release of any stored regulated substance in a manner that is no less protective of human health and the environment than subdivisions 22a-449 (d)-102 (a) (1) (A) and (B) of these regulations and such protection has been approved in writing by the implementing agency prior to installation of the UST system.

(2) Tank Notes

(A) The following industry codes may be used to comply with subdivision 22a-449 (d)-102 (a) (1) (A) of these regulations: Underwriters Laboratories Standard 1316, "Standard for Glass-Fiber-Reinforced Plastic Underground Storage Tanks for Petroleum Products"; Underwriter's Laboratories of Canada CAN4-S615-M83, "Standard for Reinforced Plastic Underground Tanks for Petroleum Products"; or American Society of Testing and Materials Standard D4021-86, "Standard Specification for Glass-Fiber-Reinforced Polyester Underground Petroleum Storage Tanks."

(B) The following codes and standards may be used to comply with subdivision 22a-449 (d)-102 (a) (1) (B) of these regulations:

(i) Steel Tank Institute "Specification for STI-P3 System of External Corrosion Protection of Underground Steel Storage Tanks";

(ii) Underwriters Laboratories Standard 1746, "Corrosion Protection Systems for Underground Storage Tanks";

(iii) Underwriters Laboratories of Canada CAN4-S603-M85, "Standard for Steel Underground Tanks for Flammable and Combustible Liquids," and CAN4-G03.1-M85, "Standard for Galvanic Corrosion Protection Systems for Underground Tanks for Flammable and Combustible Liquids," and CAN4-S631-M84, "Isolating Bushings for Steel Underground Tanks Protected with Coatings and Galvanic Systems"; or

(iv) National Association of Corrosion Engineers Standard RP-02-85, "Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems," and Underwriters Laboratories Standard 58, "Standard for Steel Underground Tanks for Flammable and Combustible Liquids."

(3) Piping. The piping that routinely contains regulated substances and is not in contact with the ground shall meet the requirements in subparagraph 22a-449 (d)-102 (a) (9) of these regulations. The

piping that routinely contains regulated substances and is in contact with the ground shall be properly designed, constructed, and protected from corrosion in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory as specified below:

(A) The piping is constructed of fiberglass-reinforced plastic; or

(B) The piping is constructed of steel and cathodically protected in the following manner:

(i) The piping is coated with a suitable dielectric material;

(ii) Field-installed cathodic protection systems are designed by a corrosion expert;

(iii) Impressed current systems are designed to allow determination of current operating status as required in subdivision 22a-449 (d)-103 (b) (3) of these regulations; and

(iv) Cathodic protection systems shall have permanent monitoring devices and shall be operated and maintained in accordance with subsection 22a-449 (d)-103 (b) of these regulations and manufacturer's specifications to the extent such specifications are no less stringent than subsection 22a-449 (d)-103 (b) of these regulations, or according to guidelines established by the implementing agency; or

(C) The piping construction and corrosion protection are determined by the implementing agency to be designed to prevent the release or threatened release of any stored regulated substance in a manner that is no less protective of human health and the environment than the requirements in subparagraphs 22a-449 (d)-102 (a) (3) (A) and (B) of these regulations and such protection has been approved in writing by the implementing agency and have permanent monitoring services; prior to the installation of the UST system.

(4) Piping Notes

(A) The following codes and standards may be used to comply with subparagraph 22a-449 (d)-102 (a) (3) (A) of these regulations:

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

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

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

(iv) Underwriters Laboratories of Canada Standard CAN 4-S633-M81, "Flexible Underground Hose Connectors."

(B) The following codes and standards may be used to comply with subparagraph 22a-449 (d)-102 (a) (3) (B) of these regulations:

(i) National Fire Protection Association Standard 30, "Flammable and Combustible Liquids Code";

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

(iii) American Petroleum Institute Publication 1632, "Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems"; and

(iv) National Association of Corrosion Engineers Standard RP-01-69, "Control of External Corrosion on Submerged Metallic Piping Systems."

(5) Spill and overflow prevention equipment.

(A) Except as provided in subparagraph 22a-449 (d)-102 (a) (5) (B) of these regulations to prevent spilling and overflowing associated with product transfer to the UST system, owners and

operators shall use the following spill and overflow prevention equipment:

(I) Spill prevention equipment that shall prevent release of product to the environment when the transfer hose is detached from the fill pipe (for example, a spill catchment basin); and

(ii) Overflow prevention equipment that shall:

(a) Automatically shut off flow into the tank when the tank is no more than 95 percent full, or

(b) Alert the transfer operator when the tank is no more than 90 percent full by restricting the flow into the tank or triggering a high-level alarm.

(B) Owners and operators are not required to use the spill and overflow prevention equipment specified in subparagraph 22a-449 (d)-102 (a) (5) (A) of these regulations if:

(I) Alternative equipment is used that is determined by the implementing agency to be no less protective of human health and the environment than the equipment specified in subparagraphs 22a-449 (d)-102 (a) (5) (A) (i) and (ii) of these regulations and such equipment has been approved in writing by the implementing agency prior to installation of the UST system; or

(ii) The UST system is filled by transfers of no more than 25 gallons at one time.

(6) Installation. All tanks and piping shall be properly installed and maintained in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory and in accordance with the manufacturer's instructions, NFPA 30 requirements and sections 22a-449 (d)-102 and 22a-449 (d)-103 of these regulations. If the provisions of these requirements are inconsistent, the provision which imposes the most stringent and protective requirement shall control. All underground piping shall be designed, constructed and installed so as to allow line and tank tightness testing in accordance with section 22a-449 (d)-104 of these regulations without the need for substantial excavation.

(7) Tank and piping system installation practices and procedures described in the following codes, to the extent such practices and procedures are no less stringent and protective than the requirements of NFPA 30, may be used to comply with the requirements of subdivision 22a-449 (d)-102 (a) (6) of these regulations:

(A) American Petroleum Institute Publication 1615, "Installation of Underground Petroleum Storage System"; or

(B) Petroleum Equipment Institute Publication RP100, "Recommended Practices for Installation of Underground Liquid Storage Systems"; or

(C) American National Standards Institute Standard B31.3, "Petroleum Refinery Piping," and American National Standards Institute Standard B31.4 "Liquid Petroleum Transportation Piping System."

(8) Certification of Installation. Within thirty (30) days after completion of installation of an UST system component, the owner or operator shall submit to the Commissioner a statement signed by the installation contractor, certifying that the installation has been carried out in accordance with sections 22a-449 (d)-101 through 22a-449 (d)-113 of these regulations. In addition all owners and operators shall ensure that one or more of the following methods of certification, testing, or inspection is used to demonstrate compliance with subdivision 22a-449 (d)-102 (a) (6) of these regulations by providing a certification of compliance on the UST notification form in accordance with subsection 22a-449 (d)-102 (b) of these regulations:

(A) The installer has been certified by the tank and piping manufacturers; or

(B) The installer has been certified or licensed by the implementing agency; or

(C) The installation has been inspected and certified by a registered professional engineer with

education and experience in UST system installation; or

(D) The installation has been inspected and approved in writing by the implementing agency; or

(E) All work listed in the manufacturer's installation checklists has been completed; or

(F) The owner and operator have complied with another method for ensuring compliance with subdivision 22a-449 (d)-102 (a) (6) of these regulations that is determined by the implementing agency by prior written approval to be no less protective of human health and the environment.

(9) Piping. The metallic piping that routinely contains regulated substances and is not in contact with the ground shall be properly maintained and designed, constructed and protected from contact with the ground and ground water for its operational life. Such piping protection shall be continuously monitored during its operational life for failure. Records of such monitoring shall be maintained to demonstrate compliance with this protection and monitoring requirement in accordance with subsection 22a-449 (d)-103 (e).

(10) Cathodic protection systems. All cathodic protection systems shall have permanent monitoring devices and all cathodic protection monitoring devices and cathodic protection systems for UST system components shall meet the specifications of the manufacturer of the component(s) being protected and shall be installed and maintained in accordance with the specifications and recommendations of the manufacturer(s) of the monitoring device, the cathodic protection system, and the component being protected, as applicable. If a manufacturer's specifications and recommendations are inconsistent with any provision of sections 22a-449 (d)-102 and 22a-449 (d)-103 of these regulations, the provision which imposes the most stringent and protective requirement shall control. Within thirty (30) days after completion of installation, the owner or operator shall submit to the commissioner a statement signed by the installation contractor, certifying that the installation has been carried out in accordance with section 22a-449 (d)-102 and 22a-449 (d)-103 of these regulations.

(b) Notification requirements.

(1) Any owner or operator of an UST system shall give notice to the commissioner in accordance with this subsection.

(2) By May 8, 1986, the owner or operator of each petroleum UST system, the construction or installation of which began prior to November 1, 1985, shall notify the commissioner and the office of the local fire marshal of the results of the life expectancy determination required by section 22a-449 (d)-111 of these regulations.

(3) Within 180 days of the effective date of these regulations, the owner or operator of each hazardous substance UST system, the construction or installation of which began prior to the effective date of these regulations, shall notify the commissioner and the office of the local fire marshal of the results of the life expectancy determination required by section 22a-449 (d)-111 these regulations.

(4) Within thirty (30) days following the completion of installation of a petroleum UST system, the construction or installation of which begins on or after November 1, 1985, including, but not limited to, UST systems which replace UST systems and UST systems which are moved from one location to another; an owner or operator shall notify the commissioner and the office of the local fire marshal of the results of the life expectancy determination required by section 22a-449 (d)-111 of these regulations.

(5) Within thirty (30) days following the completion of installation of a hazardous substance UST system, the construction or installation of which began on or after the effective date of these

regulations, including, but not limited to, UST systems which replace UST systems and UST systems which are moved from one location to another; an owner or operator shall notify the commissioner and the office of the local fire marshal of the results of the life expectancy determination required by section 22a-449 (d)-111 of these regulations.

(6) The notification required by subdivisions 22a-449 (d)-102 (b) (2), (3), (4), and (5) of these regulations shall include but not be limited to the following: UST system location and capacity, date of installation, contents, type of UST system, and type of monitoring systems, if any, results of life expectancy determinations, and other information which the commissioner deems necessary.

(7) By May 8, 1986, the owner or operator of an abandoned or temporarily out-of-service UST system shall notify the commissioner of the location, type, and capacity of such UST system and the date it was abandoned or removed from service.

(8) An owner or operator of a UST system shall notify the commissioner in writing within thirty (30) days when a UST system is abandoned or rendered temporarily out-of-service.

(9) No person or municipality shall use or operate a temporarily out-of-service UST system without giving prior written notice to the commissioner that such UST system shall be used or operated.

(10) Within thirty (30) days of completion of a tank tightness test or line tightness test required by sections 22a-449 (d)-101 through 22a-449 (d)-113 of these regulations, the owner or operator shall notify the commissioner and the office of the local fire marshal of the result of such tightness test.

(11) Owners and operators shall report any changes in information provided in accordance with section 22a-449 (d)-102 of these regulations within thirty (30) days.

(12) Each notification required by this section shall be submitted on forms furnished or prescribed by the commissioner.

(13) Notices required to be submitted in accordance with subsection 22a-449 (d)-102 (b) of these regulations for tanks installed after December 22, 1988 shall also provide all of the information in section VII of the form as required in subsection 22a-449 (d)-109 (x) for each tank for which notice shall be given.

(14) All owners and operators of new UST systems shall certify in the notification form compliance with the following requirements:

(A) Installation of tanks and piping under subdivision 22a-449 (d)-102 (a) (8) of these regulations;

(B) Cathodic protection of steel tanks and piping under subdivisions 22a-449 (d)-102 (a) (1) and (3) of these regulations;

(C) Financial responsibility under section 22a-449 (d)-109 of these regulations; and

(D) Release detection under subsection 22a-449 (d)-104 (c) and (d) of these regulations.

(15) All owners and operators of new UST systems shall ensure that the installer certifies in the notification form that the methods used to install the tanks and piping complies with the requirements in subdivision 22a-449 (d)-102 (a) (6) of these regulations.

(16) Beginning October 24, 1988, any person who sells a tank intended to be used as an underground storage tank shall notify the purchaser of such tank of the owner's notification obligations under 40 CFR 280.22 (a). The form provided in subsection 22a-449 (d)-109 (z) of these regulations may be used to comply with this requirement.

(Effective July 28, 1994)

Sec. 22a-449 (d)-103. General operating requirements

(a) Spill and overflow control.

(1) Owners and operators shall ensure that releases due to spilling or overfilling do not occur. The owner and operator shall ensure that the volume available in the tank is greater than the volume of product to be transferred to the tank before the transfer is made and that the transfer operation is monitored constantly to prevent overfilling and spilling.

(2) The owner and operator shall report, investigate, and clean up any spills and overfills in accordance with subsection 22a-449 (d)-105 (d) of these regulations.

(3) The transfer procedures described in National Fire Protection Association Publication 385 may be used to comply with subdivision 22a-449 (d)-103 (a) (1) of these regulations. Further guidance on spill and overflow prevention appears in American Petroleum Institute Publication 1621, "Recommended Practice for Bulk Liquid Stock Control at Retail Outlets," and National Fire Protection Association Standard 30, "Flammable and Combustible Liquids Code."

(b) Operation and maintenance of corrosion protection.

All owners and operators of steel UST systems with corrosion protection shall comply with the following requirements to ensure that releases due to corrosion are prevented for the operational life of the UST system:

(1) All corrosion protection systems shall be operated and maintained to continuously provide corrosion protection to the metal components of that portion of the tank and piping that routinely contain regulated substances and are in contact with the ground.

(2) All UST systems equipped with cathodic protection systems shall be inspected for proper operation by a qualified cathodic protection tester in accordance with the following requirements:

(A) Frequency. All cathodic protection systems shall be tested within six months of installation and at least annually thereafter or according to another reasonable time frame established by the implementing agency; and

(B) Inspection criteria. The criteria that are used to determine that cathodic protection is adequate as required by this section shall be in accordance with a code of practice developed by a nationally recognized association. A structure to soil test voltage reading of a least minus 0.85 volts measured between the structure and a copper-copper sulfate electrode shall be maintained. Voltage drops other than those across the structure electrolyte boundary shall be considered for valid interpretation of the voltage measurements. Other cathodic protection criteria may be used upon written approval of the commissioner.

(3) UST systems with impressed current cathodic protection systems shall also be inspected every thirty days to ensure the equipment is running properly and a monthly record of rectifier current and voltage output shall be maintained in accordance with subsection 22a-449 (d)-103 (e) of these regulations.

(4) For UST systems using cathodic protection, records of the operation of the cathodic protection shall be maintained (in accordance with subsection 22a-449 (d)-103 (e) of these regulations) to demonstrate compliance with the performance standards in subsection 22a-449 (d)-103 (d) of these regulations. These records shall provide the following:

(A) The results of all inspections required in subdivision 22a-449 (d)-103 (b) (3) of these regulations; and

(B) The results of testing from all inspections required in subdivision 22a-449

(d)-103 (b) (2) of these regulations.

(5) If any cathodic protection system malfunctions or fails to meet the above structure to soil test voltage requirement, it shall be immediately repaired. Anodes shall be replaced when all other corrective measures which have been taken are not sufficient to maintain the structure to soil test voltage of at least minus 0.85 volts.

(6) National Association of Corrosion Engineers Standard RP-02-85, "Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems," may be used to comply with subparagraph 22a-449 (d)-103 (b) (2) (B).

(c) Compatibility.

Owners and operators shall use an UST system made of or lined with materials that are compatible with the substance stored in the UST system.

(1) Owners and operators storing alcohol blends may use the following codes to comply with the requirements of this section:

(A) American Petroleum Institute Publication 1626, "Storing and Handling Ethanol and Gasoline-Ethanol Blends at Distribution Terminals and Service Stations"; and

(B) American Petroleum Institute Publication 1627, "Storage and Handling of Gasoline-Methanol/Cosolvent Blends at Distribution Terminals and Service Stations."

(d) Repairs allowed.

Owners and operators of UST systems shall ensure that repairs shall prevent releases due to structural failure or corrosion as long as the UST system is used to store regulated substances. The repairs shall meet the following requirements:

(1) Repairs to UST systems shall be properly conducted in accordance with a code of practice developed by a nationally recognized association or an independent testing laboratory provided that such codes and standards are no less stringent and protective than the requirement in NFPA 30.

(2) Repairs to fiberglass-reinforced plastic tanks may be made by the manufacturer's authorized representatives or in accordance with a code of practice developed by a nationally recognized association or an independent testing laboratory.

(3) Metal pipe sections and fittings that have released product as a result of corrosion or other damage shall be replaced. Fiberglass pipes and fittings may be repaired in accordance with the manufacturer's specifications.

(4) Repaired tanks and piping shall be tightness tested in accordance with 22a-449 (d)-104 (e) (3) and subdivision 22a-449 (d)-104 (f) (2) of these regulations within thirty days following the date of the completion of the repair except as provided in subparagraphs 22a-449 (d)-103 (d) (1), (2), and (3) of these regulations:

(A) The repaired tank is internally inspected in accordance with a code of practice developed by a nationally recognized association or an independent testing laboratory; or

(B) The repaired portion of the UST system is monitored monthly for releases in accordance with a method specified in 22a-449 (d)-104 (e) (4), (5), (6), and (7) of these regulations; or

(C) Another test method is used that is determined by prior written approval of the implementing agency to be no less protective of human health and the environment than those listed above.

(5) Within six months following the repair of any cathodically protected UST system, the cathodic protection system shall be tested in accordance with subdivisions 22a-449 (d)-103 (b) (2) and (3) of these regulations to ensure that it is operating properly.

(6) UST system owners and operators shall maintain records of each repair for the remaining

operating life of the UST system that demonstrate compliance with the requirements of subsection 22a-449 (d)-103 (d) of these regulations.

(7) Repairs to UST systems shall be properly conducted in accordance with NFPA 30 and the performance standards in subsection 22a-449 (d)-102 (a) of these regulations.

(8) The following codes and standards may be used to comply with subdivision 22a-449 (d)-103 (d) (1) of these regulations. National Fire Protection Association Standard 30, "Flammable and Combustible Liquids Code"; American Petroleum Institute Publication 2200, "Repairing Crude Oil, Liquefied Petroleum Gas, and Product Pipelines"; American Petroleum Institute Publication 1631, "Recommended Practice for the Interior Lining of Existing Steel Underground Storage Tanks"; and National Leak Prevention Association Standard 631, "Spill Prevention, Minimum 10 Year Life Extension of Existing Steel Underground Tanks by Lining Without the Addition of Cathodic Protection."

(e) Reporting and record keeping.

Owners and operators of UST systems shall cooperate fully with inspections, monitoring and testing conducted by the implementing agency, as well as requests for document submission, testing, and monitoring by the owner or operator pursuant to section 9005 of Subtitle I of the Federal Resource Conservation and Recovery Act, as amended.

(1) Reporting. Owners and operators shall submit the following information to the implementing agency:

(A) Notification for all UST systems (subsection 22a-449 (d)-102 (b) of these regulations), which includes certification of installation for new UST systems (subdivision 22a-449 (d)-102 (a) (8) of these regulations),

(B) Reports of all releases including suspected releases (subsection 22a-449 (d)-105 (a) of these regulations), spills and overfills (subsection 22a-449 (d)-105 (d) of these regulations), and confirmed releases (subsection 22a-449 (d)-106 (c) of these regulations);

(C) Corrective actions planned or taken including initial abatement measures (subsection 22a-449 (d)-106 (d) of these regulations), initial site characterization (subsection 22a-449 (d)-106 (e) of these regulations), free product removal (subsection 22a-449 (d)-106 (f) of these regulations), investigation of soil and ground-water cleanup (subsection 22a-449 (d)-106 (h) of these regulations), and corrective action plan (subsection 22a-449 (d)-106 (i) of these regulations); and

(D) A notification before permanent closure or change-in-service (subsection 22a-449 (d)-107 (b) of these regulations).

(E) An owner or operator of an UST system shall report any failure to the commissioner immediately, in accordance with section 22a-450 of the general statutes, as amended.

(2) Record keeping. Owners and operators shall maintain the following information:

(A) Documentation of operation of corrosion protection equipment (subsection 22a-449 (d)-103 (b) of these regulations).

(B) Documentation of UST system repairs (subdivision 22a-449 (d)-103 (d) (6) of these regulations);

(C) Recent compliance with release detection requirements (subsection 22a-449 (d)-104 (g) of these regulations);

(D) Results of the site investigation conducted at permanent closure (subsection 22a-449 (d)-107 (e) of these regulations);

(E) Documentation of compliance with the requirements in subdivision 22a-449 (d)-102 (a) (9) of

these regulations.

(3) The owner or operator of an UST system shall assure the maintenance of up-to-date records of significant construction or installation activities; monitoring; substantial modifications; abandonment, removal, or replacement of UST system components or protective devices for such components; and any other activity required by an order of the commissioner. The owner or operator shall review such records and attest to their accuracy by signing them no later than seven days following the completion of the recorded activity.

(4) Availability and Maintenance of Records. Owners and operators shall keep and maintain the records required by these regulations for at least five years beyond the operational life of the UST system either:

(A) At the UST site and immediately available for inspection by the implementing agency; or

(B) For records greater than five (5) years old or with prior written approval by the commissioner at a readily available alternative site and be immediately provided for inspection to the implementing agency upon request.

(Effective July 28, 1994)

Sec. 22a-449 (d)-104. Release detection

(a) General requirements for all UST systems.

(1) Owners and operators of new and existing UST systems shall provide a method, or combination of methods, of release detection that:

(A) Can detect a release from any portion of the tank and the connected underground piping except vent and vapor recovery piping unless such vent and vapor recovery piping routinely contains product;

(B) Is installed, calibrated, operated, and maintained in accordance with the manufacturer's instructions, including routine maintenance and service checks for operability or running condition; and

(C) Meets the performance requirements in subsections 22a-449 (d)-104 (e) or (f) of these regulations, with any performance claims and their manner of determination described in writing by the equipment manufacturer or installer. In addition, methods used after the date shown in the following table corresponding with the specified method except for methods permanently installed prior to that date, shall be capable of detecting the leak rate or quantity specified for that method in the corresponding section of the rule (also shown in the table) with a probability of detection (Pd) of 0.95 and a probability of false alarm (Pfa) of 0.05.

Method	Subdivision of this section 22a-449 (d)-104	Date after which Pd/Pfa must be demonstrated
Manual Tank Gauging	(e) (2)	December 22, 1990.
Tank Tightness Testing	(e) (2)	December 22, 1990.
Automatic Tank Gauging.		

.	(e) (4)	December 22, 1990.
Automatic Line Leak Detectors . . .	(f) (1)	September 22, 1991.
Line Tightness Testing	(f) (2)	December 22, 1990.
.		

(2) When a release detection method operated in accordance with the performance standards in subsections 22a-449 (d)-104 (e) and (f) of these regulations indicates a release may have occurred, owners and operators shall notify the implementing agency in accordance with section 22a-449 (d)-105 of these regulations.

(3) Owners and operators of all UST systems shall comply with the release detection requirements of section 22a-449 (d)-104 of these regulations by December 22 of the year listed in the following table:

Schedule for Phase-in of Release Detection

<i>Year system was installed</i>	<i>Year when release detection is required (by December 22nd of the year indicated.)</i>				
	1989	1990	1991	1992	1993
Before 1965 or date unknown	RD	P			
1965-69		P/RD			
1970-74		P	RD		
1975-79		P		RD	
1980-88		P			RD
New tanks (after December 22) immediately upon installation.					

P = Shall begin release detection for all pressurized piping as defined in subdivision 22a-449 (d)-104 (c) (2) (A) of these regulations.

RD = Shall begin release detection for tanks and suction piping in accordance with subdivisions 22a-449 (d)-104 (c) (1), (c) (2) (B) and subsection 22a-449 (d)-104 (d) of these regulations.

(4) Any existing UST system that cannot apply a method of release detection that complies with the requirements of section 22a-449 (d)-104 of these regulations shall complete the closure procedures in section 22a-449 (d)-107 of these regulations by the date on which release detection is required for that UST system under subdivision 22a-449 (d)-104 (a) (3) of these regulations.

(b) Additional Requirements

(1) Failure determination. On and after the effective date of RCSA section 22a-449 (d)-104 the owner and operator of an UST system which was regulated under RCSA section 22a-449 (d)-1 prior to the effective date of these regulations, shall perform and report failure determinations in accordance with RCSA section 22a-449 (d)-1 until the date that release detection is provided and performed in accordance with all the requirements in subsection 22a-449 (d)-104 (c) of these regulations including any tightness testing that is required thereunder.

(2) Tank tightness test. In addition to the tank testing requirements in these regulations, the owner

or operator of a fiberglass-reinforced plastic UST system shall conduct a tank tightness test in accordance with subdivision 22a-449 (d)-104 (e) (3) of these regulations within three to six months after the installation of such system.

(3) Inventory.

(A) On and after the effective date of RCSA section 22a-449 (d)-104 the owner and operator of an UST system which was regulated under RCSA section 22a-449 (d)-1 prior to the effective date of these regulations, shall perform and maintain daily inventory records in accordance with RCSA section 22a-449 (d)-1 including, but not limited to, the confirmation and reporting of an abnormal loss or gain until the date that release detection is provided and performed in accordance with all the requirements in subsection 22a-449 (d)-104 (c) of these regulations including any monthly inventory control that is required thereunder.

(B) The commissioner may require an owner or operator to perform a failure determination, in accordance with RCSA section 22a-449 (d)-1, of any UST system for which daily inventory records are not maintained in accordance with this subdivision.

(c) Requirements for petroleum UST systems.

Owners and operators of petroleum UST systems shall provide release detection for tanks and piping as follows:

(1) Tanks. Daily measurements for any water level in the bottom of the tank shall be made to the nearest one-eighth of an inch and recorded, except such measurements for water are not required for double wall tanks with interstitial monitoring performed in accordance with section 22a-449 (d)-104 these regulations. Tanks shall be monitored at least every thirty (30) days for releases using one of the methods listed in subdivisions 22a-449 (d)-104 (e) (4), (5), (6), (7) and (8) of these regulations except that:

(A) UST systems that meet the performance standards in subsection 22a-449 (d)-102 (a) of these regulations and the monthly inventory control requirements in subdivisions 22a-449 (d)-104 (e) (1) or (2) of these regulations may use tank tightness testing, conducted in accordance with subdivision 22a-449 (d)-104 (e) (3) at least every five years and at thirty-six to thirty-three months prior to the end of their life expectancy and annually thereafter until December 22, 1998, or until ten years after the tank is installed, whichever is later;

(B) UST systems that do not meet the performance standards in subsection 22a-449 (d)-102 (a) of these regulations may use monthly inventory controls, conducted in accordance with subdivisions 22a-449 (d)-104 (e) (1) or (2) of these regulations, and annual tank tightness testing, conducted in accordance with subdivision 22a-449 (d)-104 (e) (3) of these regulations, until the closure date specified in subsections 22a-449 (d)-110 (a) and (b) of these regulations for that UST system or December 22, 1998, whichever date is earlier.

(C) Tanks with capacity of 550 gallons or less may use weekly tank gauging, conducted in accordance with subdivision 22a-449 (d)-104 (e) (2) of these regulations.

(2) Piping. Underground piping that routinely contains regulated substances shall be monitored for releases in a manner that meets one of the following requirements:

(A) Pressurized piping. Underground piping that conveys regulated substances under pressure shall:

(i) Be equipped with an automatic line leak detector conducted in accordance with subdivision 22a-449 (d)-104 (f) (1) of these regulations; and

(ii) Have an annual line tightness test conducted in accordance with subdivision 22a-449 (d)-104 (f) (2) of these regulations or have monthly monitoring conducted in accordance with subdivision 22a-449 (d)-104 (f) (3) of these regulations.

(B) Suction piping. Underground piping that conveys regulated substances under suction shall either have a line tightness test conducted at least every three years until thirty-six to thirty-three months prior to the end of their life expectancy, on which date and annually thereafter line tightness tests shall be conducted, and all such line tightness tests shall be conducted and in accordance with subdivision 22a-449 (d)-104 (f) (2) of these regulations, or use a monthly monitoring method conduct in accordance with subdivision 22a-449 (d)-104 (f) (3) of these regulations. For suction piping that is designed and constructed to meet the following standards, a line tightness test shall be conducted thirty-six to thirty-three months prior to the end of their life expectancy and annually thereafter and such line tightness shall be conducted in accordance with subdivision 22a-449 (d)-104 (f) (2) of these regulations:

- (i) The below-grade piping operates at less than atmospheric pressure;
- (ii) The below-grade piping is sloped so that the contents of the pipe shall drain back into the storage tank if the suction is released;
- (iii) Only one check valve is included in each suction line;
- (iv) The check valve is located directly below and as close as practical to the suction pump; and
- (v) A method is provided that allows compliance with subparagraphs 22a-449 (d)-104 (c) (2) (B) (ii), (iii) and (iv) of these regulations of this section to be readily determined.

(d) Requirements for hazardous substance UST systems.

Owners and operators of hazardous substance UST systems shall provide release detection that meets the following requirements:

(1) Release detection at existing UST systems shall meet the requirements for petroleum UST systems in subsection 22a-449 (d)-104 (c) of these regulations. By December 22, 1998, all existing hazardous substance UST systems shall meet the release detection requirements for new systems in subdivision 22a-449 (d)-104 (d) (2) of these regulations.

(2) Release detection at new hazardous substance UST systems shall meet the following requirements:

- (A) Secondary containment systems shall be designed, constructed and installed to:
 - (I) Contain regulated substances released from the tank system until they are detected and removed;
 - (ii) Prevent the release of regulated substances to the environment at any time during the operational life of the UST system; and
 - (iii) Be checked for evidence of a release at least every thirty days.
- (B) Double-walled tanks shall be designed, constructed, and installed to:
 - (I) Contain a release from any portion of the inner tank within the outer wall; and
 - (ii) Detect the failure of the inner wall.
- (C) External liners (including vaults) shall be designed, constructed, and installed to:
 - (i) Contain 100 percent of the capacity of the largest tank within its boundary;
 - (ii) Prevent the interference of precipitation or ground-water intrusion with the ability to contain or detect a release of regulated substances; and
 - (iii) Surround the tank completely so that it is capable of preventing lateral as well as vertical migration of regulated substances.

(D) Underground piping shall be equipped with secondary containment that satisfies the requirements of subdivision 22a-449 (d)-104 (d) (2) (A) of these regulations, including, but not limited to, trench liners and jacketing of double-walled pipe. In addition, underground piping that conveys regulated substances under pressure shall be equipped with an automatic line leak detector in accordance with subdivision 22a-449 (d)-104 (f) (1) of these regulations.

(E) Other methods of release detection may be used if owners and operators:

(i) Demonstrate to the implementing agency that an alternate method can detect a release of the stored substance as effectively as any of the methods allowed in subdivisions 22a-449 (d)-104 (e) (2) to (8), inclusive, of these regulations can detect a release of petroleum;

(ii) Provide information to the implementing agency on effective corrective action technologies, health risks, and chemical and physical properties of the stored substance, and the characteristics of the UST site; and,

(iii) Obtain prior written approval from the implementing agency to use the alternate release detection method before the installation and operation of the new UST system.

(F) The provisions of 40 CFR 265.193, Containment and Detection of Releases, may be used to comply with these requirements of subdivision 22a-449 (d)-104 (d) (2) of these regulations.

(e) Methods of release detection for tanks.

Each method of release detection for tanks used to meet the requirements of subsection 22a-449 (d)-104 (c) of these regulations shall be conducted in accordance with the following:

(1) Inventory control. The owner or operator of an UST system shall assure that the following information is recorded: on a daily basis, the amount of regulated substances sold, used and received, and the level of water and product in the tank or container; and on a weekly basis, a reconciliation comparing these figures to determine whether an abnormal loss or gain has occurred. Separate records shall be maintained for each system of interconnected tanks or containers and serving pumps or dispensers. The owner or operator shall review such records and attest to their accuracy by signing them no later than seven days following their recording.

Inventory control shall also be conducted in the following manner:

(A) The equipment used is capable of measuring the level of product over the full range of the tank's height to the nearest one-eighth of an inch;

(B) The regulated substance inputs are reconciled with delivery receipts by measurement of the tank inventory volume before and after delivery;

(C) Deliveries are made through a drop tube that extends to within one foot of the tank bottom;

(D) Product dispensing is metered and recorded within the local standards for meter calibration or an accuracy of 6 cubic inches for every 5 gallons of product withdrawn, except that if the local standards for meter calibration is more stringent than an accuracy of 6 cubic inches for every 5 gallons of product withdrawn, the product dispensing shall be calibrated to the local standards; and

(E) The measurement of any water level in the bottom of the tank is made to the nearest one-eighth of an inch at least once a day.

(F) The commissioner may require an owner or operator to perform a tank and line tightness test in accordance with subdivisions 22a-449 (d)-104 (e) (3) and (f) (2) of these regulations of any UST system for which daily inventory records are not maintained in accordance with the requirements in these regulations;

(G) When inventory reconciliation indicates an abnormal loss or gain which is not explainable by spillage, temperature variations or other known causes, the owner or operator shall assure the

immediate investigation and correction of the source of the abnormal loss or gain. At a minimum, the owner or operator shall take as many of the steps listed below in subparagraph (i), (ii), and (iii) as necessary to confirm an abnormal loss or gain. In addition, if an abnormal loss or gain is measured during a weekly reconciliation and there were four (4) consecutive days of loss or four (4) consecutive days of gain during the ten (10) day period prior to reconciliation, or abnormal losses or abnormal gains are measured during two consecutive weekly reconciliations, the owner or operator shall take as many of the steps listed below in subparagraph (iv), (v), and (vi) as necessary to confirm an abnormal loss or gain.

(i) When an inventory record error is not apparent, a recalculation to determine abnormal loss or gain shall be made starting from a point where records indicate no abnormal loss or gain;

(ii) A detailed visual inspection of these components of the facility which are readily accessible for evidence of failure shall be performed;

(iii) The dispensers of the particular regulated substances in question shall be checked for proper calibration;

(iv) A line tightness test shall be performed on the piping system between the storage tank or container and dispenser(s) in accordance with subdivision 22a-449 (d)-104 (f) (2) of these regulations;

(v) A tank tightness test shall be performed on all other piping attached to the tank in accordance with subdivision 22a-449 (d)-104 (e) (3) of these regulations; and

(iv) A line tightness test shall be performed on all other piping attached to the tank in accordance with subdivision 22a-449 (d)-104 (f) (2) of these regulations.

(H) When an abnormal loss or gain is confirmed, the owner or operator shall immediately report the abnormal loss or gain to the commissioner in accordance with Section 22a-450 of the General Statutes as amended.

(1) Practices described in the American Petroleum Institute Publication 1621, "Recommended Practice for Bulk Liquid Stock Control at Retail Outlets," may be used, where applicable, as guidance in meeting the requirements of subdivision 22a-449 (d)-104 (e) (1) of these regulations.

(2) Manual tank gauging. Manual tank gauging shall meet the following requirements:

(A) Tank liquid level measurements are taken and recorded, including date and time of measurements, at the beginning and ending of a period of at least 36 hours during which no liquid is added to or removed from the tank;

(B) Level measurements are based on an average of two consecutive stick readings at both the beginning and ending of the period;

(C) The equipment used is capable of measuring the level of product over the full range of the tank's height to the nearest one-eighth of an inch;

(D) A leak is suspected and subject to the requirements of section 22a-449 (d)-105 of these regulations if the variation between beginning and ending measurements exceeds the weekly or monthly standards in the following table:

Nominal tank capacity	Weekly standard (one test)	Monthly standard (average of four tests)
550 gallons or less	10 gallons	5 gallons.

551-1,000 gallons	13 gallons	7 gallons.
1,001-2,000 gallons	26 gallons	13 gallons.

(E) Only tanks of 550 gallons or less nominal capacity may use this as the sole method of release detection. Tanks of 551 to 2,000 gallons may use the method in place of manual inventory control in subdivision 22a-449 (d)-104 (e) (1) of these regulations except that this method shall not be used for compliance with the requirements in subdivision 22a-449 (d)-104 (e) (4) (B) of these regulations. Tanks of greater than 2,000 gallons nominal capacity shall not use this method to meet the requirements of section 22a-449 (d)-104 of these regulations;

(F) Daily measurements are taken for any water level in the bottom of the tank to the nearest one eighth of an inch except such measurement for water shall not be required for double wall tanks with interstitial monitoring performed in accordance with subsection 22a-449 (d)-104 (e) of these regulations.

(3) Tank tightness testing. Tank tightness testing or another test of equivalent performance shall be capable of detecting a 0.1 gallon per hour leak rate from any portion of the tank while accounting for the effects of thermal expansion or contraction of the product, vapor pockets, tank deformation, evaporation or condensation, and the location of the water table.

(4) Automatic tank gauging. Equipment for automatic tank gauging that tests for the loss of product and conducts inventory control shall meet the following requirements:

(A) The automatic product level monitor test can detect a 0.2 gallon per hour leak rate from any portion of the tank that routinely contains product; and

(B) Inventory control or another test of equivalent performance is conducted in accordance with the requirements of subdivision 22a-449 (d)-104 (e) (1) of these regulations.

(5) Vapor monitoring. Testing or monitoring for vapors within the soil gas of the excavation zone shall meet the following requirements:

(A) The materials used as backfill are sufficiently porous, including, but not limited to, gravel, sand and crushed rock to readily allow diffusion of vapors from releases into the excavation area;

(B) The stored regulated substance, or a tracer compound placed in the tank system, is sufficiently volatile, including, but not limited to, gasoline, to result in a vapor level that is detectable by the monitoring devices located in the excavation zone in the event of a release from the tank;

(C) The measurement of vapors by the monitoring device is not rendered inoperative by the ground water, rainfall, or soil moisture or other known interferences so that a release could go undetected for more than 30 days;

(D) The level of background contamination in the excavation zone shall not interfere with the method used to detect releases from the tank;

(E) The vapor monitors are designed and operated to detect any significant increase in concentration above background of the regulated substance stored in the tank system, a component or components of that substance, or a tracer compound placed in the tank system;

(F) In the UST excavation zone, the site is assessed to ensure compliance with the requirements in subparagraphs 22a-449 (d)-104 (e) (5) (A), (B), (C), and (D) of these regulations and to establish the number and positioning of monitoring wells that shall detect releases within the excavation zone from any portion of the tank that routinely contains product; and

(G) Monitoring wells are clearly marked and secured to avoid unauthorized access and tampering.

(6) Groundwater monitoring. Testing or monitoring for liquids on the ground water shall meet the following requirements:

(A) The regulated substance stored is immiscible in water and has a specific gravity of less than one;

(B) Groundwater is never more than 20 feet from the ground surface and the hydraulic conductivity of the soil(s) between the UST system and the monitoring wells or devices is not less than 0.01 cm/sec. The soil shall be a permeable material, including, but not limited to, gravels, coarse to medium sands, coarse silts or other permeable materials;

(C) The slotted portion of the monitoring well casing shall be designed to prevent migration of natural soils or filter pack into the well and to allow entry of regulated substance on the water table into the well under both high and low ground-water conditions;

(D) Monitoring wells shall be sealed from the ground surface to the top of the filter pack;

(E) Monitoring wells or devices intercept the excavation zone or are as close to it as is technically feasible;

(F) The continuous monitoring devices or manual methods used can detect the presence of at least one-eighth of an inch of free product on top of the ground water in the monitoring wells;

(G) Within and immediately below the UST system excavation zone, the site is assessed to ensure compliance with the requirements in subparagraphs 22a-449 (d)-104 (e) (6) (A), (B), (C), (D), and (E) of these regulations and to establish the number and positioning of monitoring wells or devices that shall detect releases from any portion of the tank that routinely contains product; and

(H) Monitoring wells are clearly marked and secured to avoid unauthorized access and tampering; and

(I) Groundwater samples shall be obtained monthly from each monitoring well and checked by visual and vapor testing methods to determine the presence of a release.

(7) Interstitial monitoring. Interstitial monitoring between the UST system and a secondary barrier immediately around or beneath it may be used, but only if the system is designed, constructed and installed to detect a leak from any portion of the tank that routinely contains product and also meets one of the following requirements:

(A) For double-walled UST systems, the sampling or testing method can detect a release through the inner wall in any portion of the tank that routinely contains product;

(i) The provisions outlined in the Steel Tank Institute's "Standard for Dual Wall Underground Storage Tanks" may be used as guidance for aspects of the design and construction of underground steel double-walled tanks.

(B) For UST systems with a secondary barrier within the excavation zone, the sampling or testing method used can detect a release between the UST system and the secondary barrier;

(i) The secondary barrier around or beneath the UST system consists of artificially constructed material that is sufficiently thick and impermeable (at least 10⁻⁶ m/sec for the regulated substance stored) to direct a release to the monitoring point and permit its detection;

(ii) The barrier is compatible with the regulated substance stored so that a release from the UST system shall not cause a deterioration of the barrier allowing a release to pass through undetected;

(iii) For cathodically protected tanks, the secondary barrier shall be installed so that it does not interfere with the proper operation of the cathodic protection system;

(iv) The ground water, soil moisture, or rainfall shall not render the testing or sampling method used inoperative so that a release could go undetected for more than 30 days;

(v) The site is assessed to ensure that the secondary barrier is always above the ground water and not in a 25-year flood plain, unless the barrier and monitoring designs are for use under such conditions; and,

(vi) Monitoring wells are clearly marked and secured to avoid unauthorized access and tampering.

(C) For tanks with an internally fitted liner, an automated device can detect a release between the inner wall of the tank and the liner, and the liner is compatible with the substance stored.

(8) Other methods. Any other type of release detection method, or combination of methods, can be used if the implementing agency gives prior, written approval including any conditions as deemed necessary and if:

(A) It can detect a 0.2 gallon per hour leak rate or a release of 150 gallons within a month with a probability of detection of 0.95 and a probability of false alarm of 0.05; or

(B) The implementing agency may approve another method if the owner and operator can demonstrate that the method can detect a release as effectively as any of the methods allowed in subdivisions 22a-449 (d)-104 (e) (3), (4), (5), (6), (7) and (8) of these regulations. In comparing methods, the implementing agency shall consider the size of release that the method can detect and the frequency and reliability with which it can be detected. If the method is approved, the owner and operator shall comply with any conditions imposed by the implementing agency on its use to ensure the protection of human health and the environment.

(f) Methods of release detection for piping.

Each method of release detection for piping used to meet the requirements of subsection 22a-449 (d)-104 (c) of these regulations shall be conducted in accordance with the following:

(1) Automatic line leak detectors. Methods which alert the operator to the presence of a leak by restricting or shutting off the flow of regulated substances through piping or triggering an audible or visual alarm may be used only if they detect leaks of 3 gallons per hour at 10 pounds per square inch line pressure within 1 hour. An annual test of the operation of the leak detector shall be conducted in accordance with the manufacturer's requirements.

(2) Line tightness testing. A periodic test of piping may be conducted only if it can detect a 0.1 gallon per hour leak rate at one and one-half times the operating pressure.

(3) Applicable tank methods. Any of the methods in subdivisions 22a-449 (d)-104 (e) (5), (6), (7) and (8) of these regulations may be used if they are designed to detect a release from any portion of the underground piping that routinely contains regulated substances.

(g) Release detection recordkeeping.

All UST system owners and operators shall maintain records in accordance with subsection 22a-449 (d)-103 (e) of these regulations demonstrating compliance with all applicable requirements of section 22a-449 (d)-104 of these regulations. These records shall include the following:

(1) All written performance claims pertaining to any release detection system used, and the manner in which these claims have been justified or tested by the equipment manufacturer or installer, shall be maintained for 5 years beyond the operational life of the UST system;

(2) The results of any sampling, testing, or monitoring shall be maintained for at least 5 years beyond the operational life of the UST system; and

(3) Written documentation of all calibration, maintenance, and repair of release detection equipment permanently located on-site shall be maintained for at least 5 years beyond the operational life of the UST system. Any schedules of required calibration and maintenance provided by the release detection equipment manufacturer shall be retained for 5 years beyond the operational

life of the UST system.
(Effective July 28, 1994)

Sec. 22a-449 (d)-105. Release reporting, investigation, and confirmation

(a) Reporting of suspected releases.

Owners and operators of UST systems shall report to the implementing agency within 24 hours, or any time period provided under applicable law, including, but not limited to, section 22a-450 of the general statutes, as amended and any implementing regulations, whichever is earliest, and follow the procedures in subsection 22a-449 (d)-105 (c) of these regulations for any of the following conditions:

(1) The discovery by owners and operators or others of released regulated substances at the UST site or in the surrounding area including, but not limited to, the presence of free product or vapors in soils, basements, sewer and utility lines, and nearby surface water.

(2) Unusual operating conditions observed by owners and operators, including, but not limited to, the erratic behavior of product dispensing equipment, the sudden loss of product from the UST system, or an unexplained presence of water in the tank, unless system equipment is found to be defective but not leaking, and is immediately repaired or replaced; and,

(3) Monitoring results from a release detection method required under subsections 22a-449 (d)-104 (c) and (d) of these regulations that indicate a release may have occurred unless the monitoring device is found to be defective, and is immediately repaired, recalibrated or replaced, and additional monitoring does not confirm the initial result;

(4) The owner or operator of UST systems shall submit a written report to the commissioner within 3 working days of a release including, but not limited to, estimated amount of product lost, location of release and identification of leaking components of the UST system.

(b) Investigation due to off-site impacts.

When required by the implementing agency, owners and operators of UST systems shall follow the procedures in subsections 22a-449 (d)-105 (c) of these regulations to determine if the UST system is the source of off-site impacts. These impacts include the discovery of regulated substances including, but not limited to, the presence of free product or vapors in soils, basements, sewer and utility lines, and nearby surface and drinking waters that has been observed by the implementing agency or brought to its attention by another party.

(c) Release investigation and confirmation steps.

Unless corrective action is initiated in accordance with section 22a-449 (d)-106 of these regulations, owners and operators shall immediately investigate and confirm all suspected releases of regulated substances requiring reporting under subsections 22a-449 (d)-105 (a) of these regulations within 7 days, or another time period specified in writing by the implementing agency, using either the following steps or another procedure given prior written approval by the implementing agency:

(1) System test. Owners and operators shall conduct tests according to the requirements for tightness testing in subdivisions 22a-449 (d)-104 (e) (3) and (f) (2) of these regulations that determine whether a leak exists in any portion of the tank, or the attached piping other than vent and vapor recovery piping that does not routinely contain product unless the commissioner requests that such piping be tested, or any combination of such tank and piping.

(A) Owners and operators shall repair, replace or upgrade the UST system, and begin corrective

action in accordance with section 22a-449 (d)-106 of these regulations if the test results for the system, tank, or delivery piping indicate that a leak exists.

(B) Further investigation shall not be required if the test results for the system, tank, and delivery piping do not indicate that a leak exists and if environmental contamination is not the basis for suspecting a release.

(C) Owners and operators shall conduct a site check as described in subdivision 22a-449 (d)-105 (c) (2) of these regulations if the test results for the system, tank, and delivery piping do not indicate that a leak exists but environmental contamination is the basis for suspecting a release.

(2) Site check. Owners and operators shall measure for the presence of a release where contamination is most likely to be present at the UST site and such measurements shall include but not be limited to the selection of samples for analysis to determine the presence of a release where contamination is most likely to be present at the UST site. Such samples and measurements shall be conducted in a manner to determine compliance with all applicable laws and regulations. In selecting sample types, sample locations, and measurement methods, owners and operators shall consider the nature of the stored substance, the type of initial alarm or cause for suspicion, the type of backfill, the depth of ground water, and other factors appropriate for identifying the presence and source of the release. Sample collection and analysis shall comply with the appropriate chain-of-custody procedures to ensure sample integrity and all samples shall be analyzed by a laboratory certified by the Connecticut Department of Health Services to perform such analyses.

(A) If the test results for the excavation zone or the UST site indicate that a release has occurred, owners and operators shall begin corrective action in accordance with section 22a-449 (d)-106 of these regulations;

(B) If the test results for the excavation zone or the UST site do not indicate that a release has occurred, further investigation shall not be required.

(d) Reporting and cleanup of spills and overfills.

(1) Owners and operators of UST systems shall immediately contain and immediately clean up a spill or overfill and report to the implementing agency within 24 hours, or any time period provided under applicable law including, but not limited to, section 22a-450 of the general statutes, as amended, and any implementing regulations, whichever is earliest, and begin corrective action in accordance with section 22a-449 (d)-106 of these regulations in the following cases:

(A) Spill or overfill of petroleum that results in a release to the environment, and

(B) Spill or overfill of a hazardous substance that results in a release to the environment that equals or exceeds its reportable quantity under CERCLA (40 CFR part 302).

(2) Owners and operators of UST systems shall immediately contain and immediately clean up a spill or overfill of a hazardous substance that is less than the reportable quantity. If cleanup cannot be accomplished within 24 hours, or another time period established in writing by the implementing agency, owners and operators shall immediately notify the implementing agency.

(3) Pursuant to 40 CFR sections 302.6 and 355.40, a release of a hazardous substance equal to or in excess of its reportable quantity shall also be reported immediately (rather than within 24 hours) to the National Response Center under sections 102 and 103 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 and to appropriate state and local authorities under Title III of the Superfund Amendments and Reauthorization Act of 1986.

(Effective July 28, 1994)

Sec. 22a-449 (d)-106. Release response and corrective action for ust systems containing petroleum or hazardous substances

(a) General.

Owners and operators of petroleum or hazardous substance UST systems shall, in response to a confirmed release from the UST system, comply with the requirements of this section except for USTs excluded under subdivision 22a-449 (d)-101 (a) (2) of these regulations and UST systems subject to the Resource Conservation and Recovery Act Subtitle C corrective action requirements under section 3004 (u) of the Resource Conservation and Recovery Act, as amended.

(b) Additional Requirements.

The following requirements shall apply in addition to those in this section:

(1) Discharges prohibited. No owner or operator shall discharge any water, substance or material, including, but not limited to, regulated substances, from any UST system to the waters of the state without first obtaining a permit for such discharge pursuant to section 22a-430 of the general statutes, as amended.

(2) Corrective action. The owner or operator of an UST system which discharges regulated substances without a permit issued pursuant to section 22a-430 of the general statutes, as amended, shall immediately cease such discharge and reclaim, recover and properly dispose of the discharged liquid and any other substance contaminated by it, restore the environment to a condition and quality acceptable to the commissioner, and repair damage caused by the discharge, and comply with the requirements in subdivision 22a-449 (d)-106 (d) (1) and (b) (3) of these regulations, all to the satisfaction of the commissioner.

(3) Failures.

(A) The owner or operator of an UST system at which a failure occurs shall immediately empty and discontinue the use of the failed component and:

(i) Remove or abandon it within ninety days in accordance with the applicable procedures in NFPA 30 and in accordance with sections 22a-449 (d)-101 to 22a-449 (d)-113, inclusive, of these regulations; or

(ii) Repair it within sixty days in accordance with sections 22a-449 (d)-101 to 22a-449 (d)-113, inclusive, of these regulations; or

(iii) Replace all damaged components in accordance with sections 22a-449 (d)-101 to 22a-449 (d)-113, inclusive, of these regulations.

(B) When a failure occurs at an UST system, all of such UST system's components shall be evaluated within thirty days to determine whether similar conditions to that which caused the failure exist. Within ten (10) days following such evaluation, the owner or operator shall notify the commissioner in writing of the methods and results of each such evaluation. If an additional failure is detected, the owner or operator shall act in accordance with sections 22a-449 (d)-101 to 22a-449 (d)-113, inclusive, of these regulations.

(c) Initial response.

Upon confirmation of a release in accordance with subsection 22a-449 (d)-105 (c) of these regulations or after a release from the UST system is identified in any other manner, owners and operators shall perform the following initial response actions within 24 hours of a release or within another reasonable period of time determined by applicable law or the implementing agency:

(1) Report the release to the implementing agency by telephone, or electronic mail; and notify the

appropriate emergency fire response and public safety and health personnel;

(2) Take immediate action to prevent any further release of the regulated substance into the environment including emptying and discontinuing use of any leaking UST system component and any UST system component which has been subject to a failure; and

(3) Identify and mitigate fire, explosion, and vapor hazards.

(d) Initial abatement measures and site check.

(1) Unless directed in writing to do otherwise by the implementing agency, owners and operators shall perform the following abatement measures:

(A) Remove all of the regulated substance from the UST system to prevent further release to the environment;

(B) Visually inspect any aboveground releases or exposed belowground releases and prevent further migration of the released substance into surrounding soils and ground water;

(C) Continue to monitor and mitigate any additional fire and safety hazards posed by vapors or free product that have migrated from the UST excavation zone and entered into subsurface structures including, but not limited to, sewers or basements;

(D) Remedy hazards posed by contaminated soils and other materials that are excavated or exposed as a result of release confirmation, site investigation, abatement, or corrective action activities. If these remedies include treatment or disposal of soils, the owner and operator shall comply with applicable State and local requirements;

(E) Measure for the presence of a release where contamination is most likely to be present at the UST site, unless the presence and source of the release have been confirmed in accordance with the site check required by subdivision 22a-449 (d)-105 (c) (2) of these regulations or the closure site assessment of subdivision 22a-449 (d)-107 (c) (1) of these regulations. Such measurements shall include but not be limited to the selection of samples for analysis to determine the presence of a release where contamination is most likely to be present at the UST site. Such samples and measurements shall be conducted in a manner to determine compliance with all applicable laws and regulations. Sample collection and analysis shall comply with appropriate chain-of-custody procedures to ensure sample integrity and all samples shall be analyzed by a laboratory certified by the department of public health and addiction services to perform such analyses. In selecting sample types, sample locations, and measurement methods, the owner and operator shall consider the nature of the stored substance, the type of backfill, depth to ground water and other factors as appropriate for identifying the presence and source of the release; and

(F) Investigate to determine the possible presence of free product, and begin free product removal as soon as practicable and in accordance with subsection 22a-449 (d)-106 (f) of these regulations.

(2) Within 20 days after release confirmation, or within another reasonable period of time specified in writing by the implementing agency, owners and operators shall submit a report to the implementing agency summarizing the initial abatement steps taken under subdivision 22a-449 (d)-106 (d) (1) of these regulations and any resulting information or data.

(e) Initial site characterization.

(1) Unless directed in writing to do otherwise by the implementing agency, owners and operators shall assemble information about the site and the nature of the release, including information gained while confirming the release or completing the initial abatement measures in subsections 22a-449 (d)-106 (a) and (c) of these regulations. This information shall include, but shall not necessarily be limited to the following:

(A) Data on the nature and estimated quantity of release;

(B) Data from available sources and/or site investigations concerning the following factors: surrounding populations, water quality, use and approximate locations of wells potentially affected by the release, subsurface soil conditions, locations of subsurface sewers, climatological conditions, and land use;

(C) Results of the site check required under subdivision 22a-449 (d)-106 (d) (1) (E) of these regulations; and

(D) Results of the free product investigations required under subdivision 22a-449 (d)-106 (d) (1) (F) of these regulations, to be used by owners and operators to determine whether free product shall be recovered under subsection 22a-449 (d)-106 (f).

(2) Within 45 days of release confirmation or another reasonable period of time specified in writing by the implementing agency, owners and operators shall submit the information collected in compliance with subdivision 22a-449 (d)-106 (e) (1) of these regulations to the implementing agency in a manner that demonstrates its applicability and technical adequacy, or in a format and according to the schedule required by the implementing agency.

(f) Free product removal.

At sites where investigations under subdivision 22a-449 (d)-106 (d) (1) (F) of these regulations indicate the presence of free product, owners and operators shall remove free product to the maximum extent practicable as determined by the implementing agency while continuing, as necessary, any actions initiated under subsections 22a-449 (d)-106 (c), (d) and (e) of these regulations, or preparing for actions required under subsections 22a-449 (d)-106 (g) and (h) of these regulations. In meeting the requirements of this section, owners and operators shall:

(1) Conduct free product removal in a manner that minimizes the spread of contamination into previously uncontaminated zones by using recovery and disposal techniques appropriate to the hydrogeologic conditions at the site, and that properly treats, discharges or disposes of recovery byproducts in compliance with applicable local, State and Federal regulations;

(2) Use abatement of free product migration as a minimum objective for the design of the free product removal system;

(3) Handle any flammable products in a safe and competent manner to prevent fires or explosions; and

(4) Unless directed in writing to do otherwise by the implementing agency, prepare and submit to the implementing agency, within 45 days after confirming a release, a free product removal report that provides at least the following information:

(A) The name of the person(s) responsible for implementing the free product removal measures;

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

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

(D) Whether any discharge shall take place on-site or off-site during the recovery operation and where this discharge shall be located;

(E) The type of treatment applied to, and the effluent quality expected from, any discharge;

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

(G) The disposition of the recovered free product.

(g) Investigations for soil and ground-water cleanup.

(1) In order to determine the full extent and location of soils contaminated by the release and the

presence and concentrations of dissolved product contamination in the ground water, owners and operators shall conduct investigations of the release, the release site, and the surrounding area possibly affected by the release if any of the following conditions exist:

(A) There is evidence that ground-water wells have been affected by the release, including, but not limited to, evidence found during release confirmation or during previous corrective action measures;

(B) Free product is found to need recovery in compliance with subsection 22a-449 (d)-106 (f) of these regulations;

(C) There is evidence that contaminated soils may be in contact with ground water, including, but not limited to, evidence found during conduct of the initial response measures or investigations required under subsections 22a-449 (d)-106 (a), (c), (d), (e) and (f) of these regulations; and

(D) The implementing agency requests an investigation, based on the potential effects of contaminated soil or ground water on nearby surface water and ground-water resources.

(2) Owners and operators shall submit the information collected under subdivision 22a-449 (d)-106 (g) (1) of these regulations as soon as practicable or in accordance with a schedule established by the implementing agency.

(h) Corrective action plan.

(1) At any point after reviewing the information submitted in compliance with subsections 22a-449 (d)-106 (c), (d), and (e) of these regulations implementing agency may require owners and operators to submit additional information or to develop and submit a corrective action plan for responding to contaminated soils and ground water. If a plan is required, owners and operators shall submit the plan according to a schedule and format established by the implementing agency. Alternatively, owners and operators may, after fulfilling the requirements of subsections 22a-449 (d)-106 (c), (d) and (e) of these regulations, choose to submit a corrective action plan for responding to contaminated soil and ground water. In either case, owners and operators are responsible for submitting a plan that provides for adequate protection of human health and the environment as determined by the implementing agency, and shall modify their plan as necessary to meet this standard.

(2) The implementing agency shall approve the corrective action plan only after ensuring that implementation of the plan shall adequately protect human health, safety, and the environment. In making this determination, the implementing agency shall consider the following factors as appropriate:

(A) The physical and chemical characteristics of the regulated substance, including its toxicity, persistence, and potential for migration;

(B) The hydrogeologic characteristics of the facility and the surrounding area;

(C) The proximity, quality, and current and future uses of nearby surface water and ground water;

(D) The potential effects of residual contamination on nearby surface water and ground water;

(E) An exposure assessment; and

(F) Any information assembled in compliance with section 22a-449 (d)-106 of these regulations.

(3) Upon approval of the corrective action plan or as directed by the implementing agency, owners and operators shall implement the plan, including modifications to the plan made by the implementing agency. They shall monitor, evaluate, and report the results of implementing the plan in accordance with a schedule and in a format established by the implementing agency.

(4) Owners and operators may, in the interest of minimizing environmental contamination and

promoting more effective cleanup, begin cleanup of soil and ground water before the corrective action plan is approved provided that they:

(A) Notify the implementing agency of their intention to begin cleanup;

(B) Comply with any conditions imposed by the implementing agency, including halting cleanup or mitigating adverse consequences from cleanup activities; and

(C) Incorporate these self-initiated cleanup measures in the corrective action plan that is submitted to the implementing agency for approval.

(i) Public participation.

(1) For each confirmed release that requires a corrective action plan, the implementing agency shall provide notice to the public by means designed to reach those members of the public directly affected by the release and the planned corrective action. This notice may include, but is not limited to, public notice in local newspapers, block advertisements, public service announcements, publication in a state register, letters to individual households, or personal contacts by field staff.

(2) The implementing agency shall ensure that site release information and decisions concerning the corrective action plan are made available to the public for inspection upon request.

(3) Before approving a corrective action plan, the implementing agency may hold a public meeting to consider comments on the proposed corrective action plan if there is sufficient public interest, or for any other reason.

(4) The implementing agency shall give public notice that complies with subdivision 22a-449 (d)-106 (i) (1) of these regulations if implementation of an approved corrective action plan does not achieve the established cleanup levels in the plan and termination of that plan is under consideration by the implementing agency.

(Effective July 28, 1994)

Sec. 22a-449 (d)-107. Out-of-service Ust systems and closure

(a) Temporary closure.

(1) When an UST system is temporarily closed, owners and operators shall continue operation and maintenance of corrosion protection in accordance with subsections 22a-449 (d)-103 (b) of these regulations, and any release detection in accordance with section 22a-449 (d)-104 of these regulations. Section 22a-449 (d)-105 and section 22a-449 (d)-106 of these regulations shall be complied with if a release is suspected or confirmed. However, release detection other than monthly measurement recording for residue and water level in the UST system in accordance with section 22a-449 (d)-104 of these regulations shall not be required as long as the UST system is empty and has never been subject to a failure. The UST system is empty when all materials have been removed using commonly employed practices so that no more than 2.5 centimeters (one inch) of residue, or 0.3 percent by weight of the total capacity of the UST system, remain in the system.

(2) When an UST system is temporarily closed for 3 months or more, owners and operators shall also comply with the following requirements:

(A) Leave vent lines open and functioning; and

(B) Cap and secure all other lines, pumps, manways, and ancillary equipment.

(3) When an UST system is temporarily closed for more than 12 months, owners and operators shall permanently close the UST system if it does not meet either performance standards in subsection 22a-449 (d)-102 (a) of these regulations for new UST systems or the upgrading requirements in section 22a-449 (d)-110 of these regulations, except that the spill and overflow

equipment requirements do not have to be met. Owners and operators shall permanently close the substandard UST systems at the end of this 12-month period in accordance with subsections 22a-449 (d)-107 (b), (c), (d) and (e) of these regulations, unless the implementing agency provides prior written approval for extension of the 12-month temporary closure period. Owners and operators shall complete a site assessment in accordance with subsection 22a-449 (d)-107 (c) of these regulations before such an extension can be applied for.

(b) Permanent closure.

(1) At least 30 days before beginning permanent closure under subdivision 22a-449 (d)-107 (b) (2) of these regulations, or within another reasonable time period determined in writing by the implementing agency, owners and operators shall notify the implementing agency of their intent to permanently close, unless such action is in response to corrective action. The required assessment of the excavation zone under subsection 22a-449 (d)-107 (c) of these regulations shall be performed after notifying the implementing agency but before completion of the permanent closure.

(2) To permanently close an UST system, owners and operators shall comply with NFPA 30 and empty and clean it by removing all liquids and accumulated sludges. All UST systems taken out of service permanently shall also be either removed from the ground or filled with an inert solid material.

(3) The following cleaning and closure procedures may be used to comply with subsection 22a-449 (d)-107 (b) of these regulations:

(A) American Petroleum Institute Recommended Practice 1604, "Removal and Disposal of Used Underground Petroleum Storage Tanks";

(B) American Petroleum Institute Publication 2015, "Cleaning Petroleum Storage Tanks";

(C) American Petroleum Institute Recommended Practice 1631, "Interior Lining of Underground Storage Tanks," may be used as guidance for compliance with this section; and

(D) The National Institute for Occupational Safety and Health "Criteria for a Recommended Standard * * * Working in Confined Space" may be used as guidance for conducting safe closure procedures at some hazardous substance tanks.

(c) Assessing the site at closure.

(1) Before permanent closure is completed, owners and operators shall measure for the presence of a release where contamination is most likely to be present at the UST site. Such measurements shall include but not be limited to the selection of samples for analysis to determine the presence of a release where contamination is most likely to be present at the UST site. Such samples and measurements shall be conducted in a manner to determine compliance with all applicable laws and regulations. In selecting sample types, sample locations, and measurement methods, owners and operators shall consider the method of closure, the nature of the stored substance, the type of backfill, the depth to ground water, and other factors appropriate for identifying the presence of a release. Sample collection and analysis shall comply with appropriate chain-of-custody procedures to ensure sample integrity and all samples shall be analyzed by a laboratory certified by the Connecticut Department of Health Services to perform such analyses. The requirements of this section are satisfied if one of the external release detection methods allowed in subdivisions 22a-449 (d)-104 (e) (5) and (6) of these regulations is operating in accordance with the requirements in subsection 22a-449 (d)-104 (e) of these regulations at the time of closure and has been and is in compliance with section 22a-449 (d)-104 of these regulations, and indicates no release has occurred.

(2) If contaminated soils, contaminated ground water, or free product as a liquid or vapor is

discovered under subdivision 22a-449 (d)-107 (c) (1) of these regulations, or by any other manner, owners and operators shall begin corrective action in accordance with section 22a-449 (d)-106 of these regulations.

(d) Applicability to previously closed UST systems.

When directed by the implementing agency, the owner and operator of an UST system permanently closed before December 22, 1988 shall assess the excavation zone and close the UST system in accordance with this subsection if releases from the UST may, in the judgment of the implementing agency, pose a current or potential threat to human health and the environment, or if, in the judgement of the implementing agency, the owner or operator of the UST system has violated any of the requirements in these regulations.

(e) Closure records.

Owners and operators shall maintain records in accordance with subsection 22a-449 (d)-103 (e) of these regulations that are capable of demonstrating compliance with closure requirements under section 22a-449 (d)-107 of these regulations. The results of the excavation zone assessment required in subsection 22a-449 (d)-107 (e) of these regulations shall be maintained for at least 5 years beyond completion of the UST system permanent closure in the following ways:

(1) By the owners and operators who took the UST system out of service, and
By the current owners and operators of the UST system site.

(f) Abandoned UST Systems.

No person or municipality shall use or operate an abandoned UST system.

(Effective July 28, 1994)

Sec. 22a-449 (d)-108. Reserved

Sec. 22a-449 (d)-109. Financial responsibility

(a) Applicability.

(1) Section 22a-449 (d)-109 of these regulations applies to owners and operators of all petroleum underground storage tank (UST) systems except as otherwise provided in subsection 22a-449 (d)-109 (a) of these regulations.

(2) Owners and operators of petroleum UST systems are subject to these requirements if they are in operation on or after the date for compliance established in subsection 22a-449 (d)-109 (b) of these regulations.

(3) State and Federal government entities whose debts and liabilities are the debts and liabilities of a state or the United States are exempt from the requirements of this section.

(4) The requirements of this section do not apply to owners and operators of any UST system described in subdivisions 22a-449 (d)-101 (a) (2) and (3) of these regulations.

(5) If the owner and operator of a petroleum underground storage tank are separate persons, only one person is required to demonstrate financial responsibility; however, both parties are liable in event of noncompliance. Regardless of which party complies, the date set for compliance at a particular facility is determined by the characteristics of the owner as set forth in subsection 22a-449 (d)-109 (b) of these regulations.

(b) Compliance dates. Owners of petroleum underground storage tanks are required to comply

with the requirements of section 22a-449 (d)-109 of these regulations by the following dates:

(1) All petroleum marketing firms owning 1,000 or more USTs and all other UST owners that report a tangible net worth of \$20 million or more to the U.S. Securities and Exchange Commission (SEC), Dun and Bradstreet, the Energy Information Administration, or the Rural Electrification Administration; January 24, 1989, except that compliance with subdivision 22a-449 (d)-109 (e) (2) of these regulations is required by: July 24, 1989.

(2) All petroleum marketing firms owning 100-999 USTs; October 26, 1989.

(3) All petroleum marketing firms owning 13-99 USTs at more than one facility; April 26, 1991.

(4) All petroleum UST owners not described in subdivisions 22a-449 (d)-109

(b) (1), (2) and (3) of these regulations, excluding local government entities; October 26, 1991.

(5) All local government entities; one year from the date of promulgation of additional mechanisms for use by local government entities to comply with financial responsibility requirements for underground storage tanks containing petroleum.

(c) Definition of terms.

When used in section 22a-449 (d)-109 of these regulations, the following terms shall have the meanings given below:

(1) Accidental release means any sudden or nonsudden release of petroleum from an underground storage tank that results in a need for corrective action and/or compensation for bodily injury or property damage neither expected nor intended by the tank owner or operator;

(2) Bodily injury shall have the meaning given to this term by applicable state law; however, this term shall not include those liabilities which, consistent with standard insurance industry practices, are excluded from coverage in liability insurance policies for bodily injury;

(3) Controlling interest means direct ownership of at least 50 percent of the voting stock of another entity;

(4) Director of the Implementing Agency means the Commissioner of Environmental Protection of the State of Connecticut, or the Commissioner's designee;

(5) Financial reporting year means the latest consecutive twelve-month period for which any of the following reports used to support a financial test is prepared:

(A) A 10-K report submitted to the SEC;

(B) An annual report of tangible net worth submitted to Dun and Bradstreet; or

(C) Annual reports submitted to the Energy Information Administration or the Rural Electrification Administration. ``Financial reporting year" may thus comprise a fiscal or a calendar year period;

(6) Legal defense cost is any expense that an owner or operator or provider of financial assurance incurs in defending against claims or actions brought,

(A) By EPA or a state to require corrective action or to recover the costs of corrective action;

(B) By or on behalf of a third party for bodily injury or property damage caused by an accidental release; or

(C) By any person to enforce the terms of a financial assurance mechanism;

(7) Occurrence means an accident, including continuous or repeated exposure to conditions, which results in a release from an underground storage tank;

(A) This definition is intended to assist in the understanding of these regulations and is not intended either to limit the meaning of ``occurrence" in a way that conflicts with standard insurance usage or to prevent the use of other standard insurance terms in place of ``occurrence";

(8) Owner or operator, when the owner or operator are separate parties, refers to the party that is obtaining or has obtained financial assurances;

(9) Petroleum marketing facilities include all facilities at which petroleum is produced or refined and all facilities from which petroleum is sold or transferred to other petroleum marketers or to the public;

(10) Petroleum marketing firms are all firms owning petroleum marketing facilities. Firms owning other types of facilities with USTs as well as petroleum marketing facilities are considered to be petroleum marketing firms;

(11) Property damage shall have the meaning given this term by applicable state law. This term shall not include those liabilities which, consistent with standard insurance industry practices, are excluded from coverage in liability insurance policies for property damage. However, such exclusions for property damage shall not include corrective action associated with releases from tanks which are covered by the policy;

(12) Provider of financial assurance means an entity that provides financial assurance to an owner or operator of an underground storage tank through one of the mechanisms listed in subsections 22a-449 (d)-109 (f) to (n), inclusive, of these regulations, including a guarantor, insurer, risk retention group, surety, issuer of a letter of credit, issuer of a state-required mechanism, or a state;

(13) Substantial business relationship means the extent of a business relationship necessary under applicable state law to make a guarantee contract issued incident to that relationship valid and enforceable. A guarantee contract is issued "incident to that relationship" if it arises from and depends on existing economic transactions between the guarantor and the owner or operator;

(14) Tangible net worth means the tangible assets that remain after deducting liabilities; such assets do not include intangibles such as goodwill and rights to patents or royalties. For purposes of this definition, "assets" means all existing and all probable future economic benefits obtained or controlled by a particular entity as a result of past transactions; and

(15) Termination under subdivisions 22a-449 (d)-109 (h) (2) (A) and (B) of these regulations means only those changes that could result in a gap in coverage as where the insured has not obtained substitute coverage or has obtained substitute coverage with a different retroactive date than the retroactive date of the original policy.

(d) Amount and scope of required financial responsibility.

(1) Owners or operators of petroleum underground storage tanks shall demonstrate financial responsibility for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of petroleum underground storage tanks in at least the following per-occurrence amounts:

(A) For owners or operators of petroleum underground storage tanks that are located at petroleum marketing facilities, or that handle an average of more than 10,000 gallons of petroleum per month based on annual throughput for the previous calendar year; \$1 million.

(B) For all other owners or operators of petroleum underground storage tanks; \$500,000.

(2) Owners or operators of petroleum underground storage tanks shall demonstrate financial responsibility for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of petroleum underground storage tanks in at least the following annual aggregate amounts:

(A) For owners or operators of 1 to 100 petroleum underground storage tanks, \$1 million; and

(B) For owners or operators of 101 or more petroleum underground storage tanks, \$2 million.

(3) For the purposes of subdivisions 22a-449 (d)-109 (d) (2) and (6) of these regulations, only, "a petroleum underground storage tank" means a single containment unit and does not mean combinations of single containment units.

(4) Except as provided in subdivisions 22a-449 (d)-109 (d) (5) of these regulations, if the owner or operator uses separate mechanisms or separate combinations of mechanisms to demonstrate financial responsibility for:

(A) Taking corrective action;

(B) Compensating third parties for bodily injury and property damage caused by sudden accidental releases; or

(C) Compensating third parties for bodily injury and property damage caused by nonsudden accidental releases, the amount of assurance provided by each mechanism or combination of mechanisms shall be in the full amount specified in subdivisions 22a-449 (d)-109 (d) (1) and (2) of these regulations.

(5) If an owner or operator uses separate mechanisms or separate combinations of mechanisms to demonstrate financial responsibility for different petroleum underground storage tanks, the annual aggregate required shall be based on the number of tanks covered by each such separate mechanism or combination of mechanisms.

(6) Owners or operators shall review the amount of aggregate assurance provided whenever additional petroleum underground storage tanks are acquired or installed. If the number of petroleum underground storage tanks for which assurance shall be provided exceeds 100, the owner or operator shall demonstrate financial responsibility in the amount of at least \$2 million of annual aggregate assurance by the anniversary of the date on which the mechanism demonstrating financial responsibility became effective. If assurance is being demonstrated by a combination of mechanisms, the owner or operator shall demonstrate financial responsibility in the amount of at least \$2 million of annual aggregate assurance by the first-occurring effective date anniversary of any one of the mechanisms combined (other than a financial test or guarantee) to provide assurance.

(7) The amounts of assurance required under section 22a-449 (d)-109 of these regulations exclude legal defense costs.

(8) The required per-occurrence and annual aggregate coverage amounts do not in any way limit the liability of the owner or operator.

(e) Allowable mechanisms and combinations of mechanisms.

(1) Subject to the limitations of subdivision 22a-449 (d)-109 (e) (2) and (3) of these regulations, an owner or operator may use any one or combination of the mechanisms listed in subsections 22a-449 (d)-109 (f) to (n), inclusive, of these regulations to demonstrate financial responsibility under this section for one or more underground storage tanks.

(2) An owner or operator may use a guarantee or surety bond to establish financial responsibility only if the Attorney(s) General of the state(s) in which the underground storage tanks are located has (have) submitted a written statement to the implementing agency that a guarantee or surety bond executed as described in this section is a legally valid and enforceable obligation in that state.

(3) An owner or operator may use self-insurance in combination with a guarantee only if, for the purpose of meeting the requirements of the financial test under this rule, the financial statements of the owner or operator are not consolidated with the financial statements of the guarantor.

(f) Financial test of self-insurance.

(1) An owner or operator, and/or guarantor, may satisfy the requirements of subsection 22a-449

(d)-109 (d) of these regulations by passing a financial test as specified in this section. To pass the financial test of self-insurance, the owner or operator, and/or guarantor shall meet the criteria of subdivisions 22a-449 (d)-109 (f) (2) or (3) of these regulations based on year-end financial statements for the latest completed fiscal year.

(2) (A) The owner or operator, and/or guarantor, shall have a tangible net worth of at least ten times:

(i) The total of the applicable aggregate amount required by subsection 22a-449 (d)-109 (d) of these regulations, based on the number of underground storage tanks for which a financial test is used to demonstrate financial responsibility to EPA under this section or to a state implementing agency under a state program approved by EPA under 40 CFR part 281;

(ii) The sum of the corrective action cost estimates, the current closure and post-closure care cost estimates, and amount of liability coverage for which a financial test is used to demonstrate financial responsibility to EPA under 40 CFR 264.101, 264.143, 264.145, 265.143, 165.145, 264.147, and 265.147 or to a state implementing agency under a state program authorized by EPA under 40 CFR part 271; and

(iii) The sum of current plugging and abandonment cost estimates for which a financial test is used to demonstrate financial responsibility to EPA under 40 CFR 144.63 or to a state implementing agency under a state program authorized by EPA under 40 CFR part 145.

(B) The owner or operator, and/or guarantor, shall have a tangible net worth of at least \$10 million.

(C) The owner or operator, and/or guarantor, shall have a letter signed by the chief financial officer worded as specified in subdivision 22a-449 (d)-109 (f) (4) of these regulations.

(D) The owner or operator, and/or guarantor, shall either:

(i) File financial statements annually with the U.S. Securities and Exchange Commission, the Energy Information Administration, or the Rural Electrification Administration; or

(ii) Report annually the firm's tangible net worth to Dun and Bradstreet, and Dun and Bradstreet shall have assigned the firm a financial strength rating of 4A or 5A.

(E) The firm's year-end financial statements, if independently audited, cannot include an adverse auditor's opinion, a disclaimer of opinion, or a "going concern" qualification.

(3) (A) The owner or operator, and/or guarantor shall meet the financial test requirements of 40 CFR 264.147 (f) (1), substituting the appropriate amounts specified in subdivisions 22a-449 (d)-109 (d) (2) (A) and (B) of these regulations for the "amount of liability coverage" each time specified in that section.

(B) The fiscal year-end financial statements of the owner or operator, and/or guarantor, shall be examined by an independent certified public accountant and be accompanied by the accountant's report of the examination.

(C) The firm's year-end financial statements cannot include an adverse auditor's opinion, a disclaimer of opinion, or a "going concern" qualification.

(D) The owner or operator, and/or guarantor, shall have a letter signed by the chief financial officer, worded as specified in subdivision 22a-449 (d)-109 (f) (4) of these regulations.

(E) If the financial statements of the owner or operator, and/or guarantor, are not submitted annually to the U.S. Securities and Exchange Commission, the Energy Information Administration or the Rural Electrification Administration, the owner or operator, and/or guarantor, shall obtain a special report by an independent certified public accountant stating that:

(i) He has compared the data that the letter from the chief financial officer specifies as having been derived from the latest year-end financial statements of the owner or operator, and/or guarantor, with the amounts in such financial statements; and

(ii) In connection with that comparison, no matters came to his attention which caused him to believe that the specified data should be adjusted.

(4) To demonstrate that it meets the financial test under subdivisions 22a-449 (d)-109 (f) (2) or (3) of these regulations, the chief financial officer of the owner or operator, or guarantor, shall sign, within 120 days of the close of each financial reporting year, as defined by the twelve-month period for which financial statements used to support the financial test are prepared, a letter worded exactly as follows, except that the instructions in brackets are to be replaced by the relevant information and the brackets deleted:

LETTER FROM CHIEF FINANCIAL OFFICER

I am the chief financial officer of [insert: name and address of the owner or operator, or guarantor]. This letter is in support of the use of [insert: "the financial test of self-insurance," and/or "guarantee"] to demonstrate financial responsibility for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage"] caused by [insert: "sudden accidental releases" and/or "nonsudden accidental releases"] in the amount of at least [insert: dollar amount] per occurrence and [insert: dollar amount] annual aggregate arising from operating (an) underground storage tank(s).

Underground storage tanks at the following facilities are assured by this financial test or a financial test under an authorized State program by this [insert: "owner or operator," and/or "guarantor"]: [List for each facility: the name and address of the facility where tanks assured by this financial test are located, and whether tanks are assured by this financial test or a financial test under a State program approved under 40 CFR part 281. If separate mechanisms or combinations of mechanisms are being used to assure any of the tanks at this facility, list each tank assured by this financial test or a financial test under a State program authorized under 40 CFR part 281 by the tank identification number provided in the notification submitted pursuant to subsection 22a-449 (d)-102 (b) of these regulations or the corresponding State requirements.]

A [insert: "financial test," and/or "guarantee"] is also used by this [insert: "owner or operator," or "guarantor"] to demonstrate evidence of financial responsibility in the following amounts under other EPA regulations or state programs authorized by EPA under 40 CFR parts 271 and 145:

EPA Regulations	Amount
Closure (40 CFR 264.143 and 265.143)	\$ _____
Post-Closure Care (40 CFR 264.145 and 165.145)	\$ _____
Liability Coverage (40 CFR 264.147 and 265.147)	\$ _____
Corrective Action (40 CFR 264.101 (b))	\$ _____
Plugging and Abandonment (40 CFR 144.63)	\$ _____
Closure	\$ _____

Post-Closure Care	\$ _____
Liability Coverage	\$ _____
Corrective Action	\$ _____
Plugging and Abandonment	\$ _____
Total	\$ _____

This [insert: "owner or operator," or "guarantor"] has not received an adverse opinion, a disclaimer of opinion, or a "going concern" qualification from an independent auditor on his financial statements for the latest completed fiscal year.

[Fill in the information for Alternative I if the criteria of subdivisions 22a-449 (d)-109 (f) (2) of these regulations are being used to demonstrate compliance with the financial test requirements. Fill in the information for Alternative II if the criteria of subdivisions 22a-449 (d)p109 (f) (3) of these regulations are being used to demonstrate compliance with the financial test requirements.]

Alternative I

1. Amount of annual UST aggregate coverage being assured by a financial test, and/or guarantee \$ _____
 2. Amount of corrective action, closure and post-closure care costs, liability coverage, and plugging and abandonment costs covered by a financial test, and/or guarantee \$ _____
 3. Sum of lines 1 and 2 \$ _____
 4. Total tangible assets \$ _____
 5. Total liabilities [if any of the amount reported on line 3 is included in total liabilities, you may deduct that amount from this line and add that amount to line 6] \$ _____
 6. Tangible net worth [subtract line 5 from line 4]. \$ _____
- Yes No
7. Is line 6 at least \$10 million? \$ _____
 8. Is line 6 at least 10 times line 3? \$ _____
 9. Have financial statements for the latest fiscal year been filed with the Securities and Exchange Commission? \$ _____
 10. Have financial statements for the latest fiscal year been filed with the

- Energy Information Administration? \$ _____
- 11. Have financial statements for the latest fiscal year been filed with the Rural Electrification Administration? \$ _____
- 12. Has financial information been provided to Dun and Bradstreet, and has Dun and Bradstreet provided a financial strength rating of 4A or 5A? [Answer "Yes" only if both criteria have been met.] \$ _____

Alternative II

- 1. Amount of annual UST aggregate coverage being assured by a test, and/or guarantee. \$ _____
- 2. Amount of corrective action, closure and post-closure care costs, liability coverage, and plugging and abandonment costs covered by a financial test, and/or guarantee \$ _____
- 3. Sum of lines 1 and 2 \$ _____
- 4. Total tangible assets \$ _____
- 5. Total liabilities [if any of the amount reported on line 3 is included in total liabilities, you may deduct that amount from this line and add that amount to line 6] \$ _____
- 6. Tangible net worth [subtract line 5 from line 4] \$ _____
- 7. Total assets in the U.S. [required only if less than 90 percent of assets are located in the U.S.] \$ _____

- | | Yes | No |
|---|----------|-------|
| 8. Is line 6 at least \$10 million? | \$ _____ | _____ |
| 9. Is line 6 at least 6 times line 3? | \$ _____ | _____ |
| 10. Are at least 90 percent of assets located in the U.S.? [If "No," complete line 11.] | \$ _____ | _____ |
| 11. Is line 7 at least 6 times line 3? [Fill in either lines 12-15 or lines 16-18:]. | \$ _____ | _____ |

- 12. Current assets \$ _____
- 13. Current liabilities. \$ _____
- 14. Net working capital [subtract line 13 from line 12] \$ _____
- 15. Is line 14 at least 6 times line 3?..... \$ _____
- 16. Current bond rating of most recent bond issue. \$ _____
- 17. Name of rating service \$ _____
- 18. Date of maturity of bond. \$ _____
- 19. Have financial statements for the latest fiscal year been filed with the
SEC, the Energy Information Administration, or the Rural
Electrification Administration? \$ _____

[If "No," please attach a report from an independent certified public accountant certifying that there are no material differences between the data as reported in lines 4-18 above and the financial statements for the latest fiscal year.]

[For both Alternative I and Alternative II complete the certification with this statement.]

I hereby certify that the wording of this letter is identical to the wording specified in subdivision 22a-449 (d)-109 (f) (4) of these regulations as such regulations were constituted on the date shown immediately below.

[Signature]

[Name]

[Title]

[Date]

(5) If an owner or operator using the test to provide financial assurance finds that he or she no longer meets the requirements of the financial test based on the year-end financial statements, the owner or operator shall obtain alternative coverage within 150 days of the end of the year for which financial statements have been prepared.

(6) The Director of the implementing agency may require reports of financial condition at any time from the owner or operator, and/or guarantor. If the Director finds, on the basis of such reports or other information, that the owner or operator, and/or guarantor, no longer meets the financial test requirements of subdivisions 22a-449 (d)-109 (f) (2) or (3) and (4) of these regulations, the owner or operator shall obtain alternate coverage within 30 days after notification of such a finding.

(7) If the owner or operator fails to obtain alternate assurance within 150 days of finding that he or she no longer meets the requirements of the financial test based on the year-end financial statements, or within 30 days of notification by the Director of the implementing agency that he or she no longer meets the requirements of the financial test, the owner or operator shall notify the Director of such failure within 10 days.

(g) Guarantee.

(1) An owner or operator may satisfy the requirements of subsections 22a-449 (d)-109 (d) of these regulations by obtaining a guarantee that conforms to the requirements of section 22a-449 (d)-109 (g) of these regulations. The guarantor shall be:

(A) A firm that

(i) possesses a controlling interest in the owner or operator;

(ii) possesses a controlling interest in a firm described under subparagraph 22a-449 (d)-109 (g)

(1) (A) (i) of these regulations; or,

(iii) is controlled through stock ownership by a common parent firm that possesses a controlling interest in the owner or operator; or,

(B) A firm engaged in a substantial business relationship with the owner or operator and issuing the guarantee as an act incident to that business relationship.

(2) Within 120 days of the close of each financial reporting year the guarantor shall demonstrate that it meets the financial test criteria of subsection 22a-449 (d)-109 (f) of these regulations based on year-end financial statements for the latest completed financial reporting year by completing the letter from the chief financial officer described in subdivision 22a-449 (d)-109 (f) (4) of these regulations and shall deliver the letter to the owner or operator. If the guarantor fails to meet the requirements of the financial test at the end of any financial reporting year, within 120 days of the end of that financial reporting year the guarantor shall send by certified mail, before cancellation or nonrenewal of the guarantee, notice to the owner or operator. If the Director of the implementing agency notifies the guarantor that he no longer meets the requirements of the financial test of subdivisions 22a-449 (d)-109 (f) (2) or (3) and (4) of these regulations, the guarantor shall notify the owner or operator within 10 days of receiving such notification from the Director. In both cases, the guarantee shall terminate no less than 120 days after the date the owner or operator receives the notification, as evidenced by the return receipt. The owner or operator shall obtain alternative coverage as specified in subdivision 22a-449 (d)-109 (u) (3) of these regulations.

(3) The guarantee shall be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

GUARANTEE

Guarantee made this [date] by [name of guaranteeing entity], a business entity organized under the laws of the state of [name of state], herein referred to as guarantor, to [the state implementing agency] and to any and all third parties, and obligees, on behalf of [owner or operator] of [business address].

Recitals

(1) Guarantor meets or exceeds the financial test criteria of subdivisions 22a-449 (d)-109 (f) (2) or (3) and (4) of these regulations and agrees to comply with the requirements for guarantors as specified in subdivisions 22a-449 (d)-109 (g) (2) of these regulations.

(2) [Owner or operator] owns or operates the following underground storage tank(s) covered by this guarantee: [List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number

provided in the notification submitted pursuant to subsection 22a-449 (d)-102 (b) of these regulations or the corresponding state requirement, and the name and address of the facility.]

This guarantee satisfies section 22a-449 (d)-109 of these regulations requirements or assuring funding for [insert: ``taking corrective action" and/or ``compensating third parties for bodily injury and property damage caused by" either ``sudden accidental releases" or ``nonsudden accidental releases" or ``accidental releases"; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the above-identified underground storage tank(s) in the amount of [insert dollar amount] per occurrence and [insert dollar amount] annual aggregate.

(3) [Insert appropriate phrase: ``On behalf of our subsidiary" (if guarantor is corporate parent of the owner or operator); ``On behalf of our affiliate" (if guarantor is a related firm of the owner or operator); or ``Incident to our business relationship with" (if guarantor is providing the guarantee as an incident to a substantial business relationship with owner or operator)] [owner or operator], guarantor guarantees to [implementing agency] and to any and all third parties that:

In the event that [owner or operator] fails to provide alternative coverage within 60 days after receipt of a notice of cancellation of this guarantee and the [Director of the Implementing Agency] has determined or suspects that a release has occurred at an underground storage tank covered by this guarantee, the guarantor, upon instructions from the [Director], shall fund a standby trust fund in accordance with the provisions of subsection 22a-449 (d)-109 (s) of these regulations, in an amount not to exceed the coverage limits specified above.

In the event that the [Director] determines that [owner or operator] has failed to perform corrective action for releases arising out of the operation of the above-identified tank(s) in accordance with section 22a-449 (d)-106 of these regulations, the guarantor upon written instructions from the [Director] shall fund a standby trust in accordance with the provisions of subsection 22a-449 (d)-109 (s) of these regulations in an amount not to exceed the coverage limits specified above.

If [owner or operator] fails to satisfy a judgment or award based on a determination of liability for bodily injury or property damage to third parties caused by [``sudden" and/or ``nonsudden"] accidental releases arising from the operation of the above-identified tank(s), or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the guarantor, upon written instructions from the [Director], shall fund a standby trust in accordance with the provisions of subsections 22a-449 (d)-109 (s) of these regulations to satisfy such judgment(s), award(s), or settlement agreement(s) up to the limits of coverage specified above.

(4) Guarantor agrees that if, at the end of any fiscal year before cancellation of this guarantee, the guarantor fails to meet the financial test criteria of subdivisions 22a-449 (d)-109 (f) (2) or (3) and (4) of these regulations, guarantor shall send within 120 days of such failure, by certified mail, notice to [owner or operator]. The guarantee shall terminate 120 days from the date of receipt of the notice by [owner or operator], as evidenced by the return receipt.

(5) Guarantor agrees to notify [owner or operator] by certified mail of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code naming guarantor as debtor, within 10 days after commencement of the proceeding.

(6) Guarantor agrees to remain bound under this guarantee notwithstanding any modification or alteration of any obligation of [owner or operator] pursuant to sections 22a-449 (d)-101 to 109, inclusive, of these regulations.

(7) Guarantor agrees to remain bound under this guarantee for so long as [owner or operator] shall comply with the applicable financial responsibility requirements of section 22a-449 (d)-109 of these regulations for the above-identified tank(s), except that guarantor may cancel this guarantee by sending notice by certified mail to [owner or operator], such cancellation to become effective no earlier than 120 days after receipt of such notice by [owner or operator], as evidenced by the return receipt.

(8) The guarantor's obligation does not apply to any of the following:

(a) Any obligation of [insert owner or operator] under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;

(b) Bodily injury to an employee of [insert owner or operator] arising from, and in the course of, employment by [insert owner or operator];

(c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;

(d) Property damage to any property owned, rented, loaded to, in the care, custody, or control of, or occupied by [insert owner or operator] that is not the direct result of a release from a petroleum underground storage tank;

(e) Bodily damage or property damage for which [insert owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of subsection 22a-449 (d)-109 (d) of these regulations.

(9) Guarantor expressly waives notice of acceptance of this guarantee by [the implementing agency], by any or all third parties, or by [owner or operator].

I hereby certify that the wording of this guarantee is identical to the wording specified in subdivision 22a-449 (d)-109 (g) (3) of these regulations as such regulations were constituted on the effective date shown immediately below.

Effective date: _____

[Name of guarantor]

[Authorized signature for guarantor]

[Name of person signing]

[Title of person signing]

Signature of witness or notary: _____

(4) An owner or operator who uses a guarantee to satisfy the requirements of subsection 22a-449 (d)-109 (d) of these regulations shall establish a standby trust fund when the guarantee is obtained. Under the terms of the guarantee, all amounts paid by the guarantor under the guarantee shall be deposited directly into the standby trust fund in accordance with instructions from the Director of the implementing agency under subsection 22a-449 (d)-109 (s) of these regulations. This standby trust fund shall meet the requirements specified in subsection 22a-449 (d)-109 (n) of these regulations.

(h) Insurance and risk retention group coverage.

(1) An owner or operator may satisfy the requirements of subsection 22a-449 (d)-109 (d) of these

regulations by obtaining liability insurance that conforms to the requirements of this section from a qualified insurer or risk retention group. Such insurance may be in the form of a separate insurance policy or an endorsement to an existing insurance policy.

(2) Each insurance policy shall be amended by an endorsement worded as specified in subdivision 22a-449 (d)-109 (h) (2) (A) of these regulations of this section, or evidenced by a certificate of insurance worded as specified in subdivision 22a-449 (d)-109 (h) (2) (B) of these regulations, except that instructions in brackets shall be replaced with the relevant information and the brackets deleted:

(A) Endorsement

Name: [name of each covered location]

Address: [address of each covered location]

Policy Number: _____

Period of Coverage: [current policy period]

Name of [Insurer or Risk Retention Group]:

Address of [Insurer or Risk Retention Group]:

Name of Insured: _____

Address of Insured:

ENDORSEMENT:

1. This endorsement certifies that the policy to which the endorsement is attached provides liability insurance covering the following underground storage tanks:

[List the number of tanks at each facility and the name(s) and address(es) of the facility(ies)]

where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to subsection 22a-449 (d)-102 (b) of these regulations, or the corresponding state requirement, and the name and address of the facility.] for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"; in accordance with and subject to the limits of liability, exclusions, conditions, and other terms of the policy; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the underground storage tank(s) identified above.

The limits of liability are [insert the dollar amount of the "each occurrence" and "annual aggregate" limits of the Insurer's or Group's liability; if the amount of coverage is different for different types of coverage or for different underground storage tanks or locations, indicate the amount of coverage for each type of coverage and/or for each underground storage tank or location], exclusive of legal defense costs, which are subject to a separate limit under the policy. This coverage is provided under [policy number]. The effective date of said policy is [date].

2. The insurance afforded with respect to such occurrences is subject to all of the terms and conditions of the policy; provided, however, that any provisions inconsistent with subsections (a) to (e), inclusive, of this Paragraph 2 are hereby amended to conform with subsections (a) to (e), inclusive;

a. Bankruptcy or insolvency of the insured shall not relieve the ["Insurer" or "Group"] of its obligations under the policy to which this endorsement is attached.

b. The ["Insurer" or "Group"] is liable for the payment of amounts within any deductible applicable to the policy to the provider of corrective action or a damaged third-party, with a right of reimbursement by the insured for any such payment made by the ["Insurer" or "Group"]. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated under another mechanism or combination of mechanisms as specified in subsections 22a-449 (d)-109 (f) to (m), inclusive, of these regulations.

c. Whenever requested by [a Director of an implementing agency], the ["Insurer" or "Group"] agrees to furnish to [the Director] a signed duplicate original of the policy and all endorsements.

d. Cancellation or any other termination of the insurance by the ["Insurer" or "Group"], except for non-payment of premium or misrepresentation by the insured, shall be effective only upon written notice and only after the expiration of 60 days after a copy of such written notice is received by the insured. Cancellation for non-payment of premium or misrepresentation by the insured shall be effective only upon written notice and only after expiration of a minimum of 10 days after a copy of such written notice is received by the insured.

[Insert for claims-made policies:

e. The insurance covers claims otherwise covered by the policy that are reported to the ["Insurer" or "Group"] within six months of the effective date of cancellation or non-renewal of the policy except where the new or renewed policy has the same retroactive date or a retroactive date earlier than that of the prior policy, and which arise out of any covered occurrence that commenced after the policy retroactive date, if applicable, and prior to such policy renewal or termination date. Claims reported during such extended reporting period are subject to the terms, conditions, limits, including limits of liability, and exclusions of the policy.]

I hereby certify that the wording of this instrument is identical to the wording in subdivision 22a-449 (d)-109 (h) (2) (A) of these regulations and that the ["`Insurer" or "`Group"] is ["`licensed to transact the business of insurance or eligible to provide insurance as an excess or surplus lines insurer in one or more states"].

[Signature of authorized representative of Insurer or Risk Retention Group]

[Name of person signing]

[Title of person signing], Authorized Representative of [name of Insurer or Risk Retention Group]

[Address of Representative]

(B) Certificate of Insurance

Name: [name of each covered location]

Address: [address of each covered location]

Policy Number:Endorsement (if applicable): _____

Period of Coverage: [current policy period]

Name of [Insurer or Risk Retention Group]:

Address of [Insurer or Risk Retention Group]:

Name of Insured:Address of Insured:

Certification:

1. [Name of Insurer or Risk Retention Group], [the ``Insurer" or ``Group"], as identified above, hereby certifies that it has issued liability insurance covering the following underground storage tank(s):

[List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to subsection 22a-449 (d)-102 (b) of these regulations, or the corresponding state requirement, and the name and address of the facility.]

for [insert: ``taking corrective action" and/or ``compensating third parties for bodily injury and property damage caused by" either ``sudden accidental releases" or ``nonsudden accidental releases" or ``accidental releases"; in accordance with and subject to the limits of liability, exclusions, conditions, and other terms of the policy; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the underground storage tank(s) identified above.

The limits of liability are [insert the dollar amount of the ``each occurrence" and ``annual aggregate" limits of the Insurer's or Group's liability; if the amount of coverage is different for different types of coverage or for different underground storage tanks or locations, indicate the amount of coverage for each type of coverage and/or for each underground storage tank or location], exclusive of legal defense costs, which are subject to a separate limit under the policy. This coverage is provided under [policy number]. The effective date of said policy is [date].

2. The [``Insurer" or ``Group"] further certifies the following with respect to the insurance described in Paragraph 1:

a. Bankruptcy or insolvency of the insured shall not relieve the [``Insurer" or ``Group"] of its obligations under the policy to which this certificate applies.

b. The [``Insurer" or ``Group"] is liable for the payment of amounts within any deductible applicable to the policy to the provider of corrective action or a damaged third-party, with a right of reimbursement by the insured for any such payment made by the [``Insurer" or ``Group"]. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated under another mechanism or combination of mechanisms as specified in subsections 22a-449 (d)-109 (f) to (m), inclusive, of these regulations.

c. Whenever requested by [a Director of an implementing agency], the [``Insurer" or ``Group"] agrees to furnish to [the Director] a signed duplicate original of the policy and all endorsements.

d. Cancellation or any other termination of the insurance by the [``Insurer" or ``Group"], except for non-payment of premium or misrepresentation by the insured, shall be effective only upon written notice and only after the expiration of 60 days after a copy of such written notice is received by the insured. Cancellation for non-payment of premium or misrepresentation by the insured shall be effective only upon written notice and only after expiration of a minimum of 10 days after a copy of such written notice is received by the insured.

[Insert for claims-made policies:

e. The insurance covers claims otherwise covered by the policy that are reported to the [``Insurer" or ``Group"] within six months of the effective date of cancellation or non-renewal of the policy

except where the new or renewed policy has the same retroactive date or a retroactive date earlier than that of the prior policy, and which arise out of any covered occurrence that commenced after the policy retroactive date, if applicable, and prior to such policy renewal or termination date. Claims reported during such extended reporting period are subject to the terms, conditions, limits, including limits of liability, and exclusions of the policy.]

I hereby certify that the wording of this instrument is identical to the wording in subdivision 22a-449 (d)-109 (h) (2) (B) of these regulations and that the ["`Insurer" or "`Group"] is ["`licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more states"].

[Signature of authorized representative of Insurer]

[Type name]

[Title], Authorized Representative of [name of Insurer or Risk Retention Group]

[Address of Representative]

(3) Each insurance policy shall be issued by an insurer or a risk retention group that, at a minimum, is licensed to transact the business of insurance or eligible to provide insurance as an excess or surplus lines insurer in one or more states.

(i) Surety bond.

(1) An owner or operator may satisfy the requirements of subsection 22a-449 (d)-109 (d) of these regulations by obtaining a surety bond that conforms to the requirements of this section. The surety company issuing the bond shall be among those listed as acceptable sureties on federal bonds in the latest Circular 570 of the U.S. Department of the Treasury.

(2) The surety bond shall be worded as follows, except that instructions in brackets shall be replaced with the relevant information and the brackets deleted:

PERFORMANCE BOND

Date bond executed: _____

Period of coverage: _____

Principal: [legal name and business address of owner or operator]

Type of organization: [insert "`individual," "`joint venture," "`partnership," or "`corporation"]

State of incorporation (if applicable):

Surety(ies): [name(s) and business address(es)]

Scope of Coverage: [List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to subsection 22a-449 (d)-102 (b) of these regulations, or the corresponding state requirement, and the name and address of the facility. List the coverage guaranteed by the bond: ``taking corrective action" and/or ``compensating third parties for bodily injury and property damage caused by" either ``sudden accidental releases" or ``nonsudden accidental releases" or ``accidental releases" ``arising from operating the underground storage tank"].

Penal sums of bond:

Per occurrence \$ _____

Annual aggregate \$ _____

Surety's bond number: _____

Know All Persons by These Presents, that we, the Principal and Surety(ies), hereto are firmly bound to [the implementing agency], in the above penal sums for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally; provided that, where the Surety(ies) are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sums jointly and severally only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sums only as is set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sums.

Whereas said Principal is required under Subtitle I of the Resource Conservation and Recovery Act (RCRA), as amended, to provide financial assurance for [insert: ``taking corrective action" and/or ``compensating third parties for bodily injury and property damage caused by" either ``sudden accidental releases" or ``nonsudden accidental releases" or ``accidental releases"; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the underground storage tanks identified above, and

Whereas said Principal shall establish a standby trust fund as is required when a surety bond is used to provide such financial assurance;

Now, therefore, the conditions of the obligation are such that if the Principal shall faithfully [``take corrective action, in accordance with section 22a-449 (d)-106 of these regulations and the Director of the state implementing agency's instructions for," and/or ``compensate injured third parties for bodily injury and property damage caused by" either ``sudden" or ``nonsudden" or ``sudden and nonsudden"] accidental releases arising from operating the tank(s) identified above, or if the Principal shall provide alternate financial assurance, as specified in section 22a-449 (d)-109 of these regulations, within 120 days after the date the notice of cancellation is received by the Principal

from the Surety(ies), then this obligation shall be null and void; otherwise it is to remain in full force and effect.

Such obligation does not apply to any of the following:

(a) Any obligation of [insert owner or operator] under a workers compensation, disability benefits, or unemployment compensation law or other similar law;

(b) Bodily injury to an employee of [insert owner or operator] arising from, and in the course of, employment by [insert owner or operator];

(c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;

(d) Property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by [insert owner or operator] that is not the direct result of a release from a petroleum underground storage tank;

(e) Bodily injury or property damage for which [insert owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of subsection 22a-449 (d)-109 (d) of these regulations.

The Surety(ies) shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above.

Upon notification by [the Director of the Implementing Agency] that the Principal has failed to [``take corrective action, in accordance with section 22a-449 (d)-106 of these regulations and the Director's instructions," and/or ``compensate injured third parties"] as guaranteed by this bond, the Surety(ies) shall either perform [``corrective action in accordance with sections 22a-449 (d)-101 to 113, inclusive, of these regulations and the Director's instructions," and/or ``third-party liability compensation"] or place funds in an amount up to the annual aggregate penal sum into the standby trust fund as directed by [the Director of the Implementing Agency] under subsections 22a-449 (d)-109 (s) of these regulations.

Upon notification by [the Director] that the Principal has failed to provide alternate financial assurance within 60 days after the date the notice of cancellation is received by the Principal from the Surety(ies) and that [the Director] has determined or suspects that a release has occurred, the Surety(ies) shall place funds in an amount not exceeding the annual aggregate penal sum into the standby trust fund as directed by [the Director] under subsection 22a-449 (d)-109 (s) of these regulations.

The Surety(ies) hereby waive(s) notification of amendments to applicable laws, statutes, rules, and regulations and agrees that no such amendment shall in any way alleviate its (their) obligation on this bond.

The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the annual aggregate to the penal sum shown on the face of the bond, but in no event shall the obligation of the Surety(ies) hereunder exceed the amount of said annual aggregate penal sum.

The Surety(ies) may cancel the bond by sending notice of cancellation by certified mail to the Principal, provided, however, that cancellation shall not occur during the 120 days beginning on the date of receipt of the notice of cancellation by the Principal, as evidenced by the return receipt.

The Principal may terminate this bond by sending written notice to the Surety(ies).

In Witness Whereof, the Principal and Surety(ies) have executed this Bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies) and that the wording of this surety bond is identical to the wording specified in subdivision 22a-449 (d)-109 (i) (2) of these regulations as such regulations were constituted on the date this bond was executed.

Principal

[Signature(s)] _____

[Names(s)] _____

[Title(s)] _____

[Corporate seal]

Corporate Surety(ies)

[Name and address] _____

[State of Incorporation]: _____

[Liability limit]: \$ _____

[Signature(s)] _____

[Names(s) and title(s)] _____

[Corporate seal]

[For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for Surety above.]

Bond premium: \$ _____

(3) Under the terms of the bond, the surety shall become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond. In all cases, the surety's liability is limited to the per-occurrence and annual aggregate penal sums.

(4) The owner or operator who uses a surety bond to satisfy the requirements of subsection 22a-449 (d)-109 (d) of these regulations shall establish a standby trust fund when the surety bond is acquired. Under the terms of the bond, all amounts paid by the surety under the bond shall be deposited directly into the standby trust fund in accordance with instructions from the Director under subsection 22a-449 (d)-109 (s) of these regulations. This standby trust fund shall meet the requirements specified in subsection 22a-449 (d)-109 (n) of these regulations.

(j) **Letter of credit.**

(1) An owner or operator may satisfy the requirements of subsection 22a-449 (d)-109 (d) of these regulations by obtaining an irrevocable standby letter of credit that conforms to the requirements of

this section. The issuing institution shall be an entity that has the authority to issue letters of credit in each state where used and whose letter-of-credit operations are regulated and examined by a federal or state agency.

(2) The letter of credit shall be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

IRREVOCABLE STANDBY LETTER OF CREDIT

[Name and address of issuing institution]

[Name and address of Director(s) of state implementing agency(ies)]

Dear Sir or Madam: We hereby establish our Irrevocable Standby Letter of Credit No. -- in your favor, at the request and for the account of [owner or operator name] of [address] up to the aggregate amount of [in words] U.S. dollars (\$[insert dollar amount]), available upon presentation [insert, if more than one Director of a state implementing agency is a beneficiary, ``by any one of you"] of

(1) your sight draft, bearing reference to this letter of credit, No. --, and

(2) your signed statement reading as follows: ``I certify that the amount of the draft is payable pursuant to regulations issued under authority of Subtitle I of the Resource Conservation and Recovery Act of 1976, as amended."

This letter of credit may be drawn on to cover [insert: ``taking corrective action" and/or ``compensating third parties for bodily injury and property damage caused by" either ``sudden accidental releases" or ``nonsudden accidental releases" or ``accidental releases"] arising from operating the underground storage tank(s) identified below in the amount of [in words] \$[insert dollar amount] per occurrence and [in words] \$[insert dollar amount] annual aggregate:

[List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to subsection 22a-449 (d)-102 (b) of these regulations, or the corresponding state requirement, and the name and address of the facility.]

The letter of credit may not be drawn on to cover any of the following:

(a) Any obligation of [insert owner or operator] under workers compensation, disability benefits, or unemployment compensation law or other similar law;

(b) Bodily injury to an employee of [insert owner or operator] arising from, and in the course of, employment by [insert owner or operator];

(c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;

(d) Property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by [insert owner or operator] that is not the direct result of a release from a petroleum underground storage tank;

(e) Bodily injury or property damage for which [insert owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of subsection 22a-449 (d)-109 (d) of these regulations.

This letter of credit is effective as of [date] and shall expire on [date], but such expiration date

shall be automatically extended for a period of [at least the length of the original term] on [expiration date] and on each successive expiration date, unless, at least 120 days before the current expiration date, we notify [owner or operator] by certified mail that we have decided not to extend this letter of credit beyond the current expiration date. In the event that [owner or operator] is so notified, any unused portion of the credit shall be available upon presentation of your sight draft for 120 days after the date of receipt by [owner or operator], as shown on the signed return receipt.

Whenever this letter of credit is drawn on under and in compliance with the terms of this credit, we shall duly honor such draft upon presentation to us, and we shall deposit the amount of the draft directly into the standby trust fund of [owner or operator] in accordance with your instructions.

We certify that the wording of this letter of credit is identical to the wording specified in subdivision 22a-449 (d)-109 (j) (2) of these regulations as such regulations were constituted on the date shown immediately below.

[Signature(s) and title(s) of official(s) of issuing institution]

[Date]

This credit is subject to [insert "the most recent edition of the Uniform Customs and Practice for Documentary Credits, published by the International Chamber of Commerce," or "the Uniform Commercial Code"].

(3) An owner or operator who uses a letter of credit to satisfy the requirements of subsection 22a-449 (d)-109 (d) of these regulations shall also establish a standby trust fund when the letter of credit is acquired. Under the terms of the letter of credit, all amounts paid pursuant to a draft by the Director of the Implementing Agency shall be deposited by the issuing institution directly into the standby trust fund in accordance with instructions from the Director under subsection 22a-449 (d)-109 (s) of these regulations. This standby trust fund shall meet the requirements specified in subsection 22a-449 (d)-109 (n) of these regulations.

(4) The letter of credit shall be irrevocable with a term specified by the issuing institution. The letter of credit shall provide that credit be automatically renewed for the same term as the original term, unless, at least 120 days before the current expiration date, the issuing institution notifies the owner or operator by certified mail of its decision not to renew the letter of credit. Under the terms of the letter of credit, the 120 days shall begin on the date when the owner or operator receives the notice, as evidenced by the return receipt.

(k) Use of state-required mechanism.

(1) For underground storage tanks located in a state that does not have an approved program, and where the state requires owners or operators of underground storage tanks to demonstrate financial responsibility for taking corrective action and/or for compensating third parties for bodily injury and property damage, an owner or operator may use a state-required financial mechanism to meet the requirements of subsection 22a-449 (d)-109 (d) of these regulations if the Director of the Implementing Agency determines that the state mechanism is at least equivalent to the financial mechanisms specified in this section.

(2) The Director of the Implementing Agency shall evaluate the equivalency of a state-required mechanism principally in terms of: certainty of the availability of funds for taking corrective action and/or for compensating third parties; the amount of funds that shall be made available; and the

types of costs covered. The Director of the Implementing Agency may also consider other factors as is necessary.

(3) The state, an owner or operator, or any other interested party may submit to the Director of the Implementing Agency, a written petition requesting that one or more of the state-required mechanisms be considered acceptable for meeting the requirements of subsection 22a-449 (d)-109 (d) of these regulations. The submission shall include copies of the appropriate state statutory and regulatory requirements and shall show the amount of funds for corrective action and/or for compensating third parties assured by the mechanism(s). The Director of the Implementing Agency may require the petitioner to submit additional information as is deemed necessary to make this determination.

(4) Any petition under this section may be submitted on behalf of all of the state's underground storage tank owners and operators.

(5) The Director of the Implementing Agency shall notify the petitioner of his determination regarding the mechanism's acceptability in lieu of financial mechanisms specified in this section. Pending this determination, the owners and operators using such mechanisms shall be deemed to be in compliance with the requirements of subsection 22a-449 (d)-109 (d) of these regulations for underground storage tanks located in the state for the amounts and types of costs covered by such mechanisms.

(1) State fund or other state assurance.

(1) An owner or operator may satisfy the requirements of subsection 22a-449 (d)-109 (d) of these regulations for underground storage tanks located in Connecticut, where the Connecticut Department of Environmental Protection is administering the requirements of section 22a-449 (d)-109 of these regulations, which assures that monies shall be available from a state fund or state assurance program to cover costs up to the limits specified in subsection 22a-449 (d)-109 (d) of these regulations or otherwise assures that such costs shall be paid if the Director of the Implementing Agency determines that the state's assurance is at least equivalent to the financial mechanisms specified in section 22a-449 (d)-109 of these regulations.

(2) The Director of the Implementing Agency shall evaluate the equivalency of a state fund or other state assurance principally in terms of: Certainty of the availability of funds for taking corrective action and/or for compensating third parties; the amount of funds that shall be made available; and the types of costs covered. The Director of the Implementing Agency may also consider other factors as is necessary.

(3) The state shall submit to the Director of the Implementing Agency, a description of the state fund or other state assurance to be supplied as financial assurance, along with a list of the classes of underground storage tanks to which the funds may be applied. The Director of the Implementing Agency may require the state to submit additional information as is deemed necessary to make a determination regarding the acceptability of the state fund or other state assurance. Pending the determination by the Director of the Implementing Agency, the owner or operator of a covered class of USTs shall be deemed to be in compliance with the requirements of subsection 22a-449 (d)-109 (d) of these regulations for the amounts and types of costs covered by the state fund or other state assurance.

(4) The Director of the Implementing Agency shall notify the state of his determination regarding the acceptability of the state's fund or other assurance in lieu of financial mechanisms specified in section 22a-449 (d)-109 of these regulations. Within 60 days after the Director of the Implementing

Agency notifies a state that a state fund or other state assurance is acceptable, the state shall provide to each owner or operator for which it is assuming financial responsibility a letter or certificate describing the nature of the state's assumption of responsibility. The letter or certificate from the state shall include, or have attached to it, the following information: the facility's name and address and the amount of funds for corrective action and/or for compensating third parties that is assured by the state. The owner or operator shall maintain this letter or certificate on file as proof of financial responsibility in accordance with subdivision 22a-449 (d)-109 (r) (2) (E) of these regulations.

(m) Trust fund.

(1) An owner or operator may satisfy the requirements of subsection 22a-449 (d)-109 (d) of these regulations by establishing a trust fund that conforms to the requirements of this section. The trustee shall be an entity that has the authority to act as a trustee and whose trust operations are regulated and examined by a federal agency or an agency of the state in which the fund is established.

(2) The wording of the trust agreement shall be identical to the wording specified in subdivision 22a-449 (d)-109 (n) (2) (A) of these regulations, and shall be accompanied by a formal certification of acknowledgement as specified in subdivision 22a-449 (d)-109 (n) (2) (B) of these regulations.

(3) The trust fund, when established, shall be funded for the full required amount of coverage, or funded for part of the required amount of coverage and used in combination with other mechanism(s) that provide the remaining required coverage.

(4) If the value of the trust fund is greater than the required amount of coverage, the owner or operator may submit a written request to the Director of the implementing agency for release of the excess.

(5) If other financial assurance as specified in section 22a-449 (d)-109 is substituted for all or part of the trust fund, the owner or operator may submit a written request to the Director of the implementing agency for release of the excess.

(6) Within 60 days after receiving a request from the owner or operator for release of funds as specified in subdivisions 22a-449 (d)-109 (m) (4) or (5) of these regulations, the Director of the implementing agency shall instruct the trustee to release to the owner or operator such funds as the Director specifies in writing.

(n) Standby trust fund.

(1) An owner or operator using any one of the mechanisms authorized by subsections 22a-449 (d)-109 (g), (i) or (j) of these regulations shall establish a standby trust fund when the mechanism is acquired. The trustee of the standby trust fund shall be an entity that has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal agency or an agency of the state in which the fund is established.

(2) (A) The standby trust agreement, or trust agreement, shall be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

TRUST AGREEMENT

Trust agreement, the ``Agreement," entered into as of [date] by and between [name of the owner or operator], a [name of state] [insert ``corporation," ``partnership," ``association," or ``proprietorship"], the ``Grantor," and [name of corporate trustee], [insert ``Incorporated in the state of _____" or ``a national bank"], the ``Trustee."

Whereas, the United States Environmental Protection Agency, ``EPA," an agency of the United

States Government, has established certain regulations applicable to the Grantor, requiring that an owner or operator of an underground storage tank shall provide assurance that funds shall be available when needed for corrective action and third-party compensation for bodily injury and property damage caused by sudden and nonsudden accidental releases arising from the operation of the underground storage tank. The attached Schedule A lists the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located that are covered by the standpoint trust agreement.

[Whereas, the Grantor has elected to establish [insert either "a guarantee," "surety bond," or "letter of credit"] to provide all or part of such financial assurance for the underground storage tanks identified herein and is required to establish a standby trust fund able to accept payments from the instrument (This paragraph is only applicable to the standby trust agreement.);

Whereas, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this agreement, and the Trustee is willing to act as trustee;

Now, therefore, the Grantor and the Trustee agree as follows:

Section 1. Definitions

As used in this Agreement:

(a) The term "Grantor" means the owner or operator who enters into this Agreement and any successors or assigns of the Grantor.

(b) The term "Trustee" means the Trustee who enters into this Agreement and any successor Trustee.

Section 2. Identification of the Financial Assurance Mechanism

This Agreement pertains to the [identify the financial assurance mechanism, either a guarantee, surety bond, or letter of credit, from which the standby trust fund is established to receive payments (This paragraph is only applicable to the standby trust agreement.)].

Section 3. Establishment of Fund

The Grantor and the Trustee hereby establish a trust fund, the "Fund," for the benefit of [implementing agency]. The Grantor and the Trustee intend that no third party have access to the Fund except as herein provided. [The Fund is established initially as a standby to receive payments and shall not consist of any property.] Payments made by the provider of financial assurance pursuant to [the Director of the implementing agency's] instruction are transferred to the Trustee and are referred to as the Fund, together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement.

The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the Grantor as provider of financial assurance, any payments necessary to discharge any liability of the Grantor established by [the state implementing agency]

Section 4. Payment for ["Corrective Action" and/or

``Third-Party Liability Claims''

The Trustee shall make payments from the Fund as [the Director of the implementing agency] shall direct, in writing, to provide for the payment of the costs of [insert: ``taking corrective action'' and/or compensating third parties for bodily injury and property damage caused by either ``sudden accidental releases'' or ``nonsudden accidental releases'' or ``accidental releases''] arising from operating the tanks covered by the financial assurance mechanism identified in this Agreement.

The Fund may not be drawn upon to cover any of the following:

- (a) Any obligation of [insert owner or operator] under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;
- (b) Bodily injury to an employee of [insert owner or operator] arising from, and in the course of employment by [insert owner or operator];
- (c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;
- (d) Property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by [insert owner or operator] that is not the direct result of a release from a petroleum underground storage tank;
- (e) Bodily injury or property damage for which [insert owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of subsection 22a-449 (d)-109 (d) of these regulations.

The Trustee shall reimburse the Grantor, or other persons as specified by [the Director], from the Fund for corrective action expenditures and/or third-party liability claims in such amounts as [the Director] shall direct in writing. In addition, the Trustee shall refund to the Grantor such amounts as [the Director] specifies in writing. Upon refund, such funds shall no longer constitute part of the Fund as defined herein.

Section 5. Payments Comprising the Fund

Payments made to the Trustee for the Fund shall consist of cash and securities acceptable to the Trustee.

Section 6. Trustee Management

The Trustee shall invest and reinvest the principal and income of the Fund and keep the Fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this Section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge his duties with respect to the trust fund solely in the interest of the beneficiaries and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

- (i) Securities or other obligations of the Grantor, or any other owner or operator of the tanks, or

any of their affiliates as defined in the Investment Company Act of 1940, as amended, 15 U.S.C. 80a-2 (a), shall not be acquired or held, unless they are securities or other obligations of the federal or a state government;

(ii) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the federal or state government; and

(iii) The Trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. Commingling and Investment

The Trustee is expressly authorized in its discretion:

(a) To transfer from time to time any or all of the assets of the Fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and

(b) To purchase shares in any investment company registered under the Investment Company Act of 1940, 15 U.S.C. 80a-1 et seq., including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 8. Express Powers of Trustee

Without in any way limiting the powers and discretions conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

(a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the Trustee shall be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;

(b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;

(c) To register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;

(d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the federal or state government; and

(e) To compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. Taxes and Expenses

All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements of the Trustee shall be paid from the Fund.

Section 10. Advice of Counsel

The Trustee may from time to time consult with counsel, who may be counsel to the Grantor, with respect to any questions arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 11. Trustee Compensation

The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing from time to time with the Grantor.

Section 12. Successor Trustee

The Trustee may resign or the Grantor may replace the Trustee, but such resignation or replacement shall not be effective until the Grantor has appointed a successor trustee and this successor accepts the appointment. The successor trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. Upon the successor trustee's acceptance of the appointment, the Trustee shall assign, transfer, and pay over to the successor trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor trustee or for instructions. The successor trustee shall specify the date on which it assumes administration of the trust in writing sent to the Grantor and the present Trustee by certified mail 10 days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this Section shall be paid as provided in Section 9.

Section 13. Instructions to the Trustee

All orders, requests, and instructions by the Grantor to the Trustee shall be in writing, signed by such persons as are designated in the attached Schedule B or such other designees as the Grantor may designate by amendment to Schedule B. The Trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions. All orders, requests, and instructions by [the Director of the implementing agency] to the Trustee shall be in writing, signed by [the Director], and the Trustee shall act and shall be fully protected in acting in accordance with

such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor or [the director] hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or [the Director], except as provided for herein.

Section 14. Amendment of Agreement

This Agreement may be amended by an instrument in writing executed by the Grantor and the Trustee, or by the Trustee and [the Director of the implementing agency] if the Grantor ceases to exist.

Section 15. Irrevocability and Termination

Subject to the right of the parties to amend this Agreement as provided in Section 14, this Trust shall be irrevocable and shall continue until terminated at the written direction of the Grantor and the Trustee, or by the Trustee and [the Director of the implementing agency], if the Grantor ceases to exist. Upon termination of the Trust, all remaining trust property, less final trust administration expenses, shall be delivered to the Grantor.

Section 16. Immunity and Indemnification

The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this Trust, or in carrying out any directions by the Grantor or [the Director of the implementing agency] issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section 17. Choice of Law

This Agreement shall be administered, construed, and enforced according to the laws of the state of [insert name of state], or the Comptroller of the Currency in the case of National Association banks.

Section 18. Interpretation

As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement.

In Witness whereof the parties have caused this Agreement to be executed by their respective

officers duly authorized and their corporate seals (if applicable) to be hereunto affixed and attested as of the date first above written. The parties below certify that the wording of this Agreement is identical to the wording specified in subdivision 22a-449 (d)-109 (n) (2) (A) of these regulations as such regulations were constituted on the date written above.

[Signature of Grantor]

[Name of the Grantor]

[Title]

Attest:

[Signature of Trustee]

[Name of the Trustee]

[Title]

[Seal]

[Signature of Witness]

[Name of the Witness]

[Title]

[Seal]

(B) The standby trust agreement, or trust agreement shall be accompanied by a formal certification of acknowledgement similar to the following. State requirements may differ on the proper content of this acknowledgment.

State of _____

County of _____

On this [date], before me personally came [owner or operator] to me known, who, being by me duly sworn, did depose and say that she/he resides at [address], that she/he is [title] of [corporation], the corporation described in and which executed the above instrument; that she/he knows the seal of said corporation; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation; and that she/he signed her/his name thereto by like order.

[Signature of Notary Public]

[Name of Notary Public]

(3) The Director of the implementing agency shall instruct the trustee to refund the balance of the standby trust fund to the provider of financial assurance if the Director determines that no additional corrective action costs or third-party liability claims shall occur as a result of a release covered by

the financial assurance mechanism for which the standby trust fund was established.

(4) An owner or operator may establish one trust fund as the depository mechanism for all funds assured in compliance with this rule.

(o) Substitution of financial assurance mechanisms by owner or operator.

(1) An owner or operator may substitute any alternate financial assurance mechanisms as specified in section 22a-449 (d)-109 of these regulations, provided that at all times he maintains an effective financial assurance mechanism or combination of mechanisms that satisfies the requirements of subsection 22a-449 (d)-109 (d) of these regulations.

(2) After obtaining alternate financial assurance as specified in section 22a-449 (d)-109 of these regulations, an owner or operator may cancel a financial assurance mechanism by providing notice to the provider of financial assurance.

(p) Cancellation or nonrenewal by a provider of financial assurance.

(1) Except as otherwise provided, a provider of financial assurance may cancel or fail to renew an assurance mechanism by sending a notice of termination by certified mail to the owner or operator.

(A) Termination of a guarantee, a surety bond, or a letter of credit may not occur until 120 days after the date on which the owner or operator receives the notice of termination, as evidenced by the return receipt.

(B) Termination of insurance or risk retention group coverage, except for non-payment or misrepresentation by the insured, or state-funded assurance may not occur until 60 days after the date on which the owner or operator receives the notice of termination, as evidenced by the return receipt. Termination for non-payment of premium or misrepresentation by the insured may not occur until a minimum of 10 days after the date on which the owner or operator receives the notice of termination, as evidenced by the return receipt.

(2) If a provider of financial responsibility cancels or fails to renew for reasons other than incapacity of the provider as specified in subsection 22a-449 (d)-109 (q) of these regulations, the owner or operator shall obtain alternate coverage as specified in this section within 60 days after receipt of the notice of termination. If the owner or operator fails to obtain alternate coverage within 60 days after receipt of the notice of termination, the owner or operator shall notify the Director of the implementing agency of such failure and submit:

(A) The name and address of the provider of financial assurance;

(B) The effective date of termination; and

(C) The evidence of the financial assistance mechanism subject to the termination maintained in accordance with subdivision 22a-449 (d)-109 (r) (2) of these regulations.

(q) Reporting by owner or operator.

(1) An owner or operator shall submit the appropriate forms listed in subdivision 22a-449 (d)-109 (r) (2) of these regulations documenting current evidence of financial responsibility to the Director of the implementing agency:

(A) Within 30 days after the owner or operator identifies a release from an underground storage tank required to be reported under subsections 22a-449 (d)-105 (d) or 106 (c) of these regulations;

(B) If the owner or operator fails to obtain alternate coverage as required by this section, within 30 days after the owner or operator receives notice of:

(i) Commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming a provider of financial assurance as a debtor,

(ii) Suspension or revocation of the authority of a provider of financial assurance to issue a

financial assurance mechanism,

(iii) Failure of a guarantor to meet the requirements of the financial test,

(iv) Other incapacity of a provider of financial assurance; or

(C) As required by subdivisions 22a-449 (d)-109 (f) (7) and (p) (2) of these regulations.

(2) An owner or operator shall certify compliance with the financial responsibility requirements of sections 22a-449 (d)-101 to 113, inclusive, of these regulations as specified in the new tank notification form when notifying the appropriate state or local agency of the installation of a new underground storage tank under subsection 22a-449 (d)-102 (b) of these regulations.

(3) The Director of the Implementing Agency may require an owner or operator to submit evidence of financial assurance as described in subdivision 22a-449 (d)-109 (r) (2) of these regulations or other information relevant to compliance with this section at any time.

(r) Recordkeeping.

(1) Owners or operators shall maintain evidence of all financial assurance mechanisms used to demonstrate financial responsibility under this section for an underground storage tank until released from the requirements of section 22a-449 (d)-109 of these regulations under subsection 22a-449 (d)-109 (t) of these regulations. An owner or operator shall maintain such evidence at the underground storage tank site or the owner's or operator's place of business. Records maintained off-site shall be made available upon request of the implementing agency.

(2) An owner or operator shall maintain the following types of evidence of financial responsibility:

(A) An owner or operator using an assurance mechanism specified in subsections 22a-449 (d)-109 (f) to (k), inclusive, or subsection 22a-449 (d)-109 (m) of these regulations shall maintain a copy of the instrument worded as specified.

(B) An owner or operator using a financial test or guarantee shall maintain a copy of the chief financial officer's letter based on year-end financial statements for the most recent completed financial reporting year. Such evidence shall be on file no later than 120 days after the close of the financial reporting year.

(C) An owner or operator using a guarantee, surety bond, or letter of credit shall maintain a copy of the signed standby trust fund agreement and copies of any amendments to the agreement.

(D) An owner or operator using an insurance policy or risk retention group coverage shall maintain a copy of the signed insurance policy or risk retention group coverage policy, with the endorsement or certificate of insurance and any amendments to the agreements.

(E) An owner or operator covered by a state fund or other state assurance shall maintain on file a copy of any evidence of coverage supplied by or required by the State under subdivision 22a-449 (d)-109 (l) (4) of these regulations.

(F) An owner or operator using an assurance mechanism specified in subsections 22a-449 (d)-109 (f) to (m), inclusive, of these regulations shall maintain an updated copy of a certification of financial responsibility worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

CERTIFICATION OF FINANCIAL RESPONSIBILITY

[Owner or operator] hereby certifies that it is in compliance with the requirements of section 22a-449 (d)-109 of these regulations.

The financial assurance mechanism[s] used to demonstrate financial responsibility under section 22a-449 (d)-109 of these regulations is [are] as follows:

[For each mechanism, list the type of mechanism, name of issuer, mechanism number (if applicable), amount of coverage, effective period of coverage and whether the mechanism covers "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases."]

[Signature of owner or operator]

[Name of owner or operator]

[Title]

[Date]

[Signature of witness or notary]

[Name of witness or notary]

[Date]

The owner or operator shall update this certification whenever the financial assurance mechanism(s) used to demonstrate financial responsibility change(s).

(s) Drawing on financial assurance mechanisms.

(1) The Director of the implementing agency shall require the guarantor, surety, or institution issuing a letter of credit to place the amount of funds stipulated by the Director, up to the limit of funds provided by the financial assurance mechanism, into the standby trust if:

(A) (i) The owner or operator fails to establish alternate financial assurance within 60 days after receiving notice of cancellation of the guarantee, surety bond, letter of credit, or, as applicable, other financial assurance mechanism; and

(ii) The Director determines or suspects that a release from an underground storage tank covered by the mechanism has occurred and so notifies the owner or operator or the owner or operator has notified the Director pursuant to sections 22a-449 (d)-105 or 106 of these regulations of a release from an underground storage tank covered by the mechanism; or

(B) The conditions of subdivisions 22a-449 (d)-109 (s) (2) (A) or (2) (B) (i) or (2) (B) (ii) of these regulations are satisfied.

(2) The Director of the implementing agency may draw on a standby trust fund when:

(A) The Director makes a final determination that a release has occurred and immediate or long-term corrective action for the release is needed, and the owner or operator, after appropriate notice and opportunity to comply, has not conducted corrective action as required under section 22a-449 (d)-106 of these regulations; or

(B) The Director has received either:

(i) Certification from the owner or operator and the third-party liability claimant(s) and from attorneys representing the owner or operator and the third-party liability claimant(s) that a third-party liability claim should be paid. The certification shall be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

CERTIFICATION OF VALID CLAIM

The undersigned, as principals and as legal representatives of [insert owner or operator] and [insert name and address of third-party claimant], hereby certify that the claim of bodily injury [and/or] property damage caused by an accidental release arising from operating [owner's or operator's] underground storage tank should be paid in the amount of \$[_____].

[Signatures]

Owner or Operator

Attorney for Owner or Operator

(Notary) Date

[Signature(s)]

Claimant(s)

Attorney(s) for Claimant(s)

(Notary) Date

or

(ii) A valid final court order establishing a judgment against the owner or operator for bodily injury or property damage caused by an accidental release from an underground storage tank covered by financial assurance under section 22a-449 (d)-109 of these regulations and the Director determines that the owner or operator has not satisfied the judgment.

(3) If the Director of the implementing agency determines that the amount of corrective action costs and third-party liability claims eligible for payment subdivision 22a-449 (d)-109 (s) (2) of these regulations may exceed the balance of the standby trust fund and the obligation of the provider of financial assurance, the first priority for payment shall be corrective action costs necessary to protect human health and the environment. The Director shall pay third-party liability claims in the order in which the Director receives certifications under subdivision 22a-449 (d)-109 (s) (2) (B) (i) of these regulations, and valid court orders under subdivision 22a-449 (d)-109 (s) (2) (B) (ii) of these regulations.

(t) Release from the requirements.

An owner or operator is no longer required to maintain financial responsibility under this section for an underground storage tank after the tank has been properly closed or, if corrective action is required, after corrective action has been completed and the tank has been properly closed as required by section 22a-449 (d)-107 of these regulations.

(u) Bankruptcy or other incapacity of owner or operator or provider of financial assurance.

(1) Within 10 days after commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming an owner or operator as debtor, the owner or operator shall notify the Director of the implementing agency by certified mail of such commencement and submit the appropriate forms listed in subdivision 22a-449 (d)-109 (r) (2) of these regulations documenting

current financial responsibility.

(2) Within 10 days after commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming a guarantor providing financial assurance as debtor, such guarantor shall notify the owner or operator by certified mail of such commencement as required under the terms of the guarantee specified in subsection 22a-449 (d)-109 (g) of these regulations.

(3) An owner or operator who obtains financial assurance by a mechanism other than the financial test of self-insurance shall be deemed to be without the required financial assurance in the event of a bankruptcy or incapacity of its provider of financial assurance, or a suspension or revocation of the authority of the provider of financial assurance to issue a guarantee, insurance policy, risk retention group coverage policy, surety bond, letter of credit, or state-required mechanism. The owner or operator shall obtain alternate financial assurance as specified in section 22a-449 (d)-109 of these regulations within 30 days after receiving notice of such an event. If the owner or operator does not obtain alternate coverage within 30 days after such notification, he shall notify the Director of the implementing agency.

(4) Within 30 days after receipt of notification that a state fund or other state assurance has become incapable of paying for assured corrective action or third-party compensation costs, the owner or operator shall obtain alternate financial assurance.

(v) Replenishment of guarantees, letters of credit, or surety bonds.

(1) If at any time after a standby trust is funded upon the instruction of the Director of the implementing agency with funds drawn from a guarantee, letter of credit, or surety bond, and the amount in the standby trust is reduced below the full amount of coverage required, the owner or operator shall by the anniversary date of the financial mechanism from which the funds were drawn:

(A) Replenish the value of financial assurance to equal the full amount of coverage required, or

(B) Acquire another financial assurance mechanism for the amount by which funds in the standby trust have been reduced.

(2) For purposes of subsection 22a-449 (d)-109 (v) these regulations, the full amount of coverage required is the amount of coverage to be provided by subsection 22a-449 (d)-109 (d) of these regulations. If a combination of mechanisms was used to provide the assurance funds which were drawn upon, replenishment shall occur by the earliest anniversary date among the mechanisms.

(w) Suspension of enforcement. [Reserved]

(x) 40 CFR Part 280. Appendix I is incorporated by reference in its entirety.

(y) Appendix II to Part 40 CFR 280-List of Agencies Designated To Receive Notifications Connecticut (State Form), Hazardous Materials Management Unit, Department of Environmental Protection, State Office Building, 79 Elm Street, Hartford, Connecticut 06106

(z) Appendix III to 40 CFR Part 280-Statement for Shipping Tickets and Invoices

A Federal law, the Resource Conservation and Recovery Act (RCRA), as amended (Pub. L. 98-616), requires owners of certain underground storage tanks to notify designated State or local agencies by May 8, 1986, of the existence of their tanks. Notifications for tanks brought into use after May 8, 1986, shall be made within 30 days. Consult EPA's regulations, issued on November 8, 1985 (40 CFR part 280) to determine if you are affected by this law.

(Effective July 28, 1994)

Sec. 22a-449 (d)-110. Ust system upgrading, abandonment and removal date

(a) Petroleum UST system of which construction or installation began prior to November 1,

1985.

No owner or operator of a petroleum UST system of which construction or installation began prior to November 1, 1985, shall use or operate any component of that UST system beyond September 1, 1989, or for longer than five years beyond its life expectancy as determined in accordance with section 22a-449 (d)-111 of these regulations, whichever date is later, but in no event later than December 22, 1998, unless such component is modified so as to comply with the standards for new UST systems specified in subdivisions 22a-449 (d)-102 (a) (1), (2), (3), (4), and (10) of these regulations. If life expectancy has not been determined in accordance with section 22a-449 (d)-111 of these regulations, such component shall not be used or operated unless such component is modified so as to comply with the standards for new UST systems specified in subdivisions 22a-449 (d)-102 (a) (1), (2), (3), (4) and (10) of these regulations. Not later than December 22, 1998 all existing UST systems shall be modified to comply with standards specified in subdivision 22a-449 (d)-102 (a) (5) of these regulations. If the UST system is not so modified in accordance with this subsection, it shall be removed or abandoned in accordance with the procedures specified in NFPA 30 and also as of December 22, 1988, the closure requirements in section 22a-449 (d)-107 of these regulations including applicable requirements for corrective action in section 22a-449 (d)-106 of the regulations.

(b) Hazardous substance UST system of which construction or installation began prior to December 22, 1988.

No owner or operator of a hazardous substance UST system of which construction or installation began prior to December 22, 1988, shall use or operate any component of that UST system beyond four years after the effective date of these regulations or for longer than five years beyond its life expectancy as determined in accordance with section 22a-449 (d)-111 of these regulations, whichever is later, but in no event later than December 22, 1998, provided however, that for UST systems used for the storage of benzene that date shall not be beyond September 1, 1989, or five years beyond the life expectancy, whichever is later, unless such component is modified so as to comply with the standards for new UST systems specified in subsection 22a-449 (d)-102 (a) of these regulations. The owner or operator of a hazardous UST system component for which the date of initial installation cannot be documented to the satisfaction of the commissioner and the life expectancy cannot be determined in accordance with section 22a-449 (d)-111 of these regulations, shall not use or operate such component beyond four years after the effective date of these regulations unless such component is modified so as to comply with the standards for new UST systems specified in subsection 22a-449 (d)-102 (a) of these regulations. If the UST system is not so modified in accordance with this subsection, it shall be removed or abandoned in accordance with the applicable procedures specified in NFPA 30 and as of December 22, 1988, the closure requirements in section 22a-449 (d)-107 of these regulations including applicable requirements for corrective action in section 22a-449 (d)-106 of these regulations.

(c) UST systems which comply with the standards specified in subsection 22a-449 (d)-102 (a) of these regulations.

No owner or operator of an UST system which complies with the standards specified in subsection 22a-449 (d)-102 (a) of these regulations shall use or operate any component of that UST system beyond its life expectancy as determined in accordance with section 22a-449 (d)-111 of these regulations. Prior to the last day of the life expectancy of a facility component, the owner or operator shall remove or abandon the UST system component in accordance with the procedures specified in

NFPA 30 and the closure requirements in section 22a-449 (d)-107 of these regulations including applicable requirements for corrective action in section 22a-449 (d)-106 of these regulations.

(Effective July 28, 1994)

Sec. 22a-449 (d)-111. Life expectancy

(a) This subsection, in conjunction with subdivision 22a-449 (d)-104 (b) (2) and subsections 22a-449 (d)-104 (a), (c), (d), (e), (f) and (g) of these regulations specifies when a tank tightness test and line tightness test shall be performed, and when the owner and operator shall discontinue use of an UST system component in accordance with section 22a-449 (d)-110 of these regulations.

(b) Life expectancy determinations shall be conducted as follows:

(1) Life expectancy determinations shall be conducted for components of petroleum UST systems, the construction or installation of which begins on or after November 1, 1985, including, but not limited to, UST systems which replace UST systems and UST systems which are moved from one location to another, within thirty (30) days following completion of installation or substantial modification of the component; and shall be conducted for components of petroleum UST systems, the construction or installation of which began prior to November 1, 1985, by May 8, 1986; as specified in subsection 22a-449 (d)-102 (b) of these regulations.

(2) Life expectancy determinations shall be conducted for components of hazardous substance UST systems, the construction or installation of which begins on or after the effective date of these regulations, including, but not limited to, UST systems which replace UST systems and UST systems which are moved from one location to another, within thirty (30) days following completion of installation or substantial modification of the component; and shall be conducted for components of hazardous substance UST systems, the construction or installation of which began prior to the effective date of these regulations, by 180 days after the effective date of these regulations; as specified in subsection 22a-449 (d)-102 (c) of these regulations.

(3) Life expectancy determinations shall not be required for underground vent and vapor recovery piping.

(c) Life expectancy shall be as follows:

(1) For fiberglass-reinforced plastic (FRP) UST system components, the period of the manufacturer's corrosion or structural warranty, whichever is shorter.

(2) For cathodically protected UST system components that meet the requirements of subsection 22a-449 (d)-102 (a) of these regulations, the period of the manufacturer's corrosion or structural warranty, whichever is shorter, or the life expectancy of the existing or replacement anode(s) as calculated using standard formulae approved in writing by the commissioner. If the cathodic protection system malfunctions or fails to meet the structure to soil test voltage requirement in subsection 22a-449 (d)-103 (b) of these regulations, and is not repaired or replaced within thirty (30) days, the life expectancy of the UST system components protected by the system shall be reestablished in accordance with either subdivision 22a-449 (d)-111 (c) (3) or subsection 22a-449 (d)-111 (d) of these regulations. If life expectancy shall be reestablished in accordance with subdivision 22a-449 (d)-111 (c) (3) of these regulations, the period specified by subdivision 22a-449 (d)-111 (c) (3) of these regulations shall be deemed to have begun on the earliest date of malfunction or the earliest date on which the structure to soil test voltage reading was less negative than minus 0.85 volts, as applicable, provided that the period specified by subdivision 22a-449 (d)-111 (c) (3) of

these regulations shall not extend beyond the last day of the component's initial life expectancy period.

(3) For UST system components not covered in subdivision 22a-449 (d)-111 (c) (1) of these regulations and subdivision 22a-449 (d)-111 (c) (2) of these regulations, fifteen years from the date of installation. If the date of installation cannot be documented, the life expectancy shall be determined by a method approved by the commissioner in writing.

(d) The life expectancy of an UST system component may be determined by a method other than those set forth in subsection 22a-449 (d)-111 (c) of these regulations upon written approval of the commissioner.

(Effective July 28, 1994)

Sec. 22a-449 (d)-112. UST system location transfer

No component of an UST system shall be moved from one location to another without prior written approval of the commissioner.

(Effective July 28, 1994)

Sec. 22a-449 (d)-113. Transfer of UST system ownership, possession or control

(a) As of November 1, 1985, no owner or operator shall transfer ownership, possession or control of any petroleum UST system without full disclosure to the transferee of the status of the UST system with respect to compliance with these regulations at least fifteen (15) days prior to the transfer. Such disclosure shall include an up-to-date copy of the information submitted to the commissioner pursuant to subsection 22a-449 (d)-102 (b) of these regulations and, as of the effective date of these regulations, such disclosure shall include an up-to-date copy of all information submitted to the commissioner pursuant to section 22a-449 (d)-102 of these regulations.

(b) As of the effective date of these regulations, no owner or operator shall transfer ownership, possession or control of any hazardous substance UST system without full disclosure to the transferee of the status of the UST system with respect to compliance with these regulations at least fifteen (15) days prior to the transfer. Such disclosure shall include an up-to-date copy of the information submitted to the commissioner pursuant to section 22a-449 (d)-102 of these regulations.

(Effective July 28, 1994)